

THE UNIVERSITY OF MANITOBA

COMMUNITY ASSESSMENT AND THE DECISION TO MIGRATE:
THE CASE OF THOMPSON, MANITOBA

by

PAUL FRANKLIN RATHS

A THESIS
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ABSTRACT

The objective of this thesis is to investigate the role of the environment of a northern community as a factor in the decision to migrate from that community. The area selected for this study is Thompson, Manitoba. The specific objectives are: (i) to outline the basic factors people use in the assessment of a northern community; (ii) to determine which of these factors are related to the decision to migrate; (iii) to develop a generalized profile of the individual who tends to be relatively satisfied with his settlement.

Data are gathered on the respondents' demographic characteristics, past and intended migration behavior, and their assessment of Thompson according to thirty-five attributes. Principal components and multiple regression analyses are used to test the research hypothesis. The findings indicate that the way an individual assesses his community has some influence on the decision to migrate. The major influential factors appear to be: the physical and human environment of the community, certain negative aspects of life on the resource frontier, and feelings of physical, social, and economic constraint. Some implications for planning in northern Canada are suggested.

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CHAPTER 1 INTRODUCTION

1.1 Objectives of the Thesis

The objective of this thesis is to study the problem of population turnover in a northern Canadian community. Turnover, the process whereby residents leave a community and are replaced by new immigrants,¹ is the cumulative effect of many individual decisions to migrate. This thesis will focus specifically on the "community environment" which is generally agreed to play a salient role in the decision to migrate (Riffel, 1975; Lajzerowicz et al., 1976; Bone, 1972). The problem to be studied may be stated as follows:

What factors do people consider important in assessing a northern community and how are these related to the decision to migrate?

The specific research objectives based on this problem are threefold:

1. To outline the basic factors people use in the assessment of a northern community.
2. To determine which of these factors are related to the decision to migrate.
3. To develop a generalized profile of the potential long term resident of a northern community.

1. The concept of turnover is usually applied to labor forces where it is the process whereby workers leave and are replaced by new recruits. The rate of turnover is then calculated as a ratio of the number of changes in the labor force to the total labor force (MacMillan, et al., 1974:6).

1.2 The Organization of the Thesis

The remainder of Chapter 1 will deal with the background to the study: the nature of the problem, its magnitude and its impacts. The contribution which this study will make towards an understanding of population turnover will then be discussed. The chapter will close with a brief description of the study area.

Chapter 2 will survey the related literature. The two major thrusts of geographic research into migration will be discussed. After an overview of the behavioral approach, the discussion will focus on the cognitive-evaluative aspects of behavioral models of migration.

Chapter 3 deals with the research design. The conceptual framework of the study will be explained, followed by a discussion of the methodology used, and the theoretical basis of the techniques used. The nature of the data will then be discussed, including the sources, the collection procedure, and the sample.

Chapter 4, the analysis of the data, will begin with a description of the sample. A descriptive presentation of the data will be followed by a multivariate analysis, which will elicit the "image" of the northern community. The final part of the analysis will determine which of the dimensions of this image are related to the decision to migrate from the community.

Chapter 5 summarizes the results of the analysis, and provides a discussion of some of their implications. Finally, some directions for possible future research will be suggested.

1.3 The Background to the Study

Population and labor turnover, while experienced to some

extent by all industries and communities, is particularly important with respect to northern settlements. While the absolute numbers of people moving to and from a northern town may not be large, these flows may represent high rates of turnover, on a small population base.

Accurate figures on turnover rates for communities are unavailable. However, MacMillan (1974) estimated the average turnover rate for mining companies (often the principal employer in northern towns) to be approximately 80 per cent. More recently, in 1976, the turnover rate at International Nickel Co. (INCO) in Thompson, Manitoba, was 104 per cent (INCO, 1977). Calculated by dividing the number of "quits" by the average size of the labor force, this figure means that to maintain 100 persons in their labor force, during the year INCO had to hire and train 104 new recruits.

High rates of turnover have serious economic consequences for the company and social consequences for the community and the individual. The economic consequences are the costs incurred with the separation of employees, the recruitment and training of replacements, and the production lost while training new workers. MacMillan estimated the cost of turnover to the Canadian mining industry at \$36 million for the year 1972. The Mining Association of Canada estimated the combined cost of labor shortages and turnover to be as high as \$350 million per year (Lajzerowicz et al., 1976).

Social costs, though not easily quantifiable, are nevertheless significant. At the community level, short term residents may be apathetic towards local problems and politics, and make planning for education and social services difficult. At the individual level, high turnover makes

it impossible to maintain a circle of friends or build up inter-personal relationships. It may also contribute to mental health problems, alcoholism, loneliness, feeling of insecurity or "cabin fever" (Siemens, 1973:23).

From this brief discussion, it should be apparent that population and labor turnover is a problem of considerable magnitude and with considerable consequences in northern resource communities.

1.4 The Contributions of the Study

Of all of the factors which may influence the decision to migrate, the community is part of the man-made environment and hence more subject to man's change and control. Thus, an understanding of the role the community plays in the decision to migrate will open avenues through which northern communities may be improved. This study will contribute to this end in three areas. By examining the causes of the decision to migrate, it will yield a greater understanding of the process of population turnover. In linking personal characteristics to intended migration behavior, it will give some insight into the type of individual who tends to be most satisfied with northern living. Finally, in pointing out those aspects of northern communities which influence the decisions to migrate, the study will point to possible ways in which satisfaction with northern communities may be improved through more responsive community planning.

1.5 The Study Area

The study area is Thompson, Manitoba. Thompson is situated in the boreal forest region of the Pre-Cambrian shield, 750 kilometres north

of Winnipeg (see Figure 1). It is a young city, founded in 1957 but constructed largely in the 1960's. With a current population of approximately 18,000, Thompson is one of the largest, most modern mining communities in Canada. The city has a wide range of commercial, medical and social services, and good access to the rest of the province, a paved highway to the south and daily one-hour jet flights to Winnipeg.

Thus, Thompson would appear to be a modern, accessible, frontier community with all the necessary amenities. However, in spite of its apparent benefits, the city is plagued by an abnormally high rate of population turnover. INCO Metals, the main employer, reports a 1976 turnover rate of a staggering 104 per cent. This represents a continuation of the historical pattern (Rogge, 1969) for Thompson to experience generally higher rates of turnover than the other smaller mining centres of northern Manitoba. This suggests an apparent contradiction between Thompson's relatively high quality of life and the inability of the city to achieve a population stability as great as that of the other mining centres of the region. It is this apparent contradiction which forms the basis for the selection of Thompson as the sample location for this study.

1.6 Summary

The purpose of this thesis is to examine the problem of population turnover in northern communities. The three specific objectives of this research are:

1. To outline the basic factors people use in the assessment of a northern community.

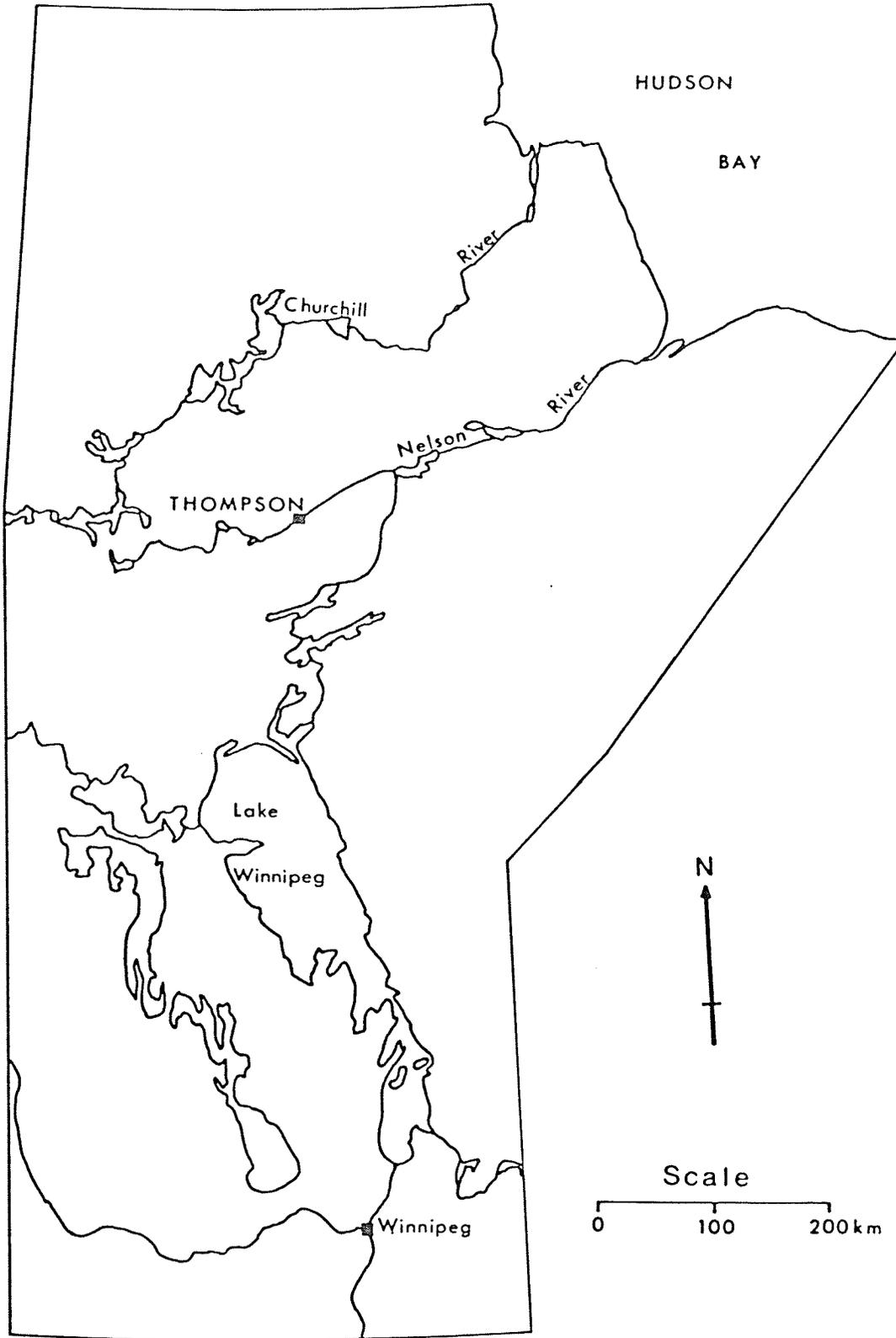


Figure 1: LOCATION OF THE STUDY AREA

2. To determine which of these factors are related to the decision to migrate.

3. To develop a generalized profile of the individual who tends to be relatively satisfied with his northern community.

To provide a background for the study, the nature and the magnitude of the problem of turnover in northern communities are discussed. The contributions which the study offers to this problem are then outlined. The chapter closes with a description of the study area.

CHAPTER 2: REVIEW OF RELATED LITERATURE

Population migration as a form of spatial interaction has long been of interest to geographers (Olsson, 1965a). As traditional descriptive-predictive models of migration become increasingly inadequate, geographers are turning to a behavioral approach to the study of migration. These two approaches are each reviewed in turn and their relation to the research problem is explored.

2.1 Descriptive-Predictive Approaches

The problem of migration has traditionally been approached using what may be called descriptive-predictive models. These models, which seek to describe and predict migration flows, are of two major types: economic models and gravity type models.

Economic models of migration are the type most frequently employed. They are based on the notion that migrants move to improve their economic well-being. Implicit is the assumption that individuals behave in an economically rational manner. Migration flows are explained in terms of the "push and pull" factors associated with the places of in- and out-migration, with little attempt to incorporate the characteristics of the migrant (Wolpert, 1965). A recent example of this approach in a Canadian setting may be found in Grant and Vanderkamp (1976).

The social gravity model (Zipf, 1946) and its variant, the intervening opportunity model (Stouffer, 1940), add a spatial component by explicitly considering the effect of distance. Basically, the inten-

sity of a migration flow is thought to be some function of the population of the places involved and the intervening distance.

Both these models, which are thoroughly reviewed in Olsson (1965a), have weaknesses. Economic models first assume rational behavior, which is unrealistic, and secondly, they can only account for net migration flows and not gross flows. Gravity type models are weakened when disaggregated to small areas and short distances, and are not applicable to individuals. Furthermore, both these models have been losing their explanatory power over the years (Wolpert, 1965).

Olsson (1965b) improved over purely economic models in his study of migration distances in Sweden. He considered some characteristics of the migrants as well as those of the places of out- and in-migration. Migration distance was found to vary according to variation in both the characteristics of the places and those of the migrants. The existence of non-rational behavior led Olsson to test two migration models with behavioristic assumptions derived from central place theory. The test results supported these assumptions, indicating that individual behavior plays a role in producing the actual pattern of migration. Economic and social gravity type models are becoming increasingly inadequate in explaining migration patterns. Human behavior has been shown to be a significant variable intervening into the migration process. These two developments seem to support Wolpert's (1965) proposal of a behavioral approach to the study of migration.

2.2 The Behavioral Approach

Wolpert formulated his behavioral model of migration around

three central concepts: the notion of place utility, the field theory approach to search behavior, and the life cycle approach to threshold formation (Wolpert, 1965:192). Geographers, among others, have adopted this approach to the study of migration. Although there has been research into the role of the search process in migration at the intra-urban level (Brown and Holmes, 1971; Barrett, 1976), much attention has focussed on the notion of place utility. Place utility is defined as "the net composite of utilities which are derived from the individuals' integration at some position in space" (Wolpert, 1965:193). If individuals recognize differences between the expected utility of spatial alternatives, then migration is a reflection of the individual's subjective assessments of those place utilities. This model placed migration in essentially a "stimulus-response" framework: the stimulus being the set of subjective place utility assessments, and the response being the decision to migrate or not to migrate.

Place utility has been approached in two ways; first, through attempts to specify individuals' place utility functions (how individuals trade off between the various objective attributes of spatial alternatives) and secondly, through a cognitive-behavioral approach which recognizes the subjective nature of place perception. The first approach was taken by Brown and Longbrake (1970) who attempted to construct and evaluate the place utility functions of intra-urban migrants in Cedar Rapids, Iowa. However, the subjectiveness of the individual functions proved to be a stumbling block. As the authors concluded, "a migrant's judgement of utility is subjective and often based upon anticipation and optimism rather than fact" (Brown and Longbrake, 1970:372).

The subjective nature of individuals' perception of place utility and the resultant preferences requires a more psychologically and individualistically oriented approach such as the cognitive-behavioral approach. The cognitive-behavioral approach is concerned with the information which individuals hold about the elements of their environment, and the relationship of this information to preferences, decision making and spatial behavior.

It was Gould's (1965) work, "On Mental Maps", which first stimulated studies on spatial preferences. Gould examined the patterns of residential desirability expressed by residents of the United States, Europe and Africa. In stating their residential preferences respondents were required to discriminate between places on the basis of their perceived desirability. If we accept Simmons (1968) simpler definition of place utility as "a measure of the attractiveness or unattractiveness of an area relative to alternative locations, as perceived by the individual decision maker", it becomes clear that Gould's measure of residential desirability is very similar to the notion of place utility. By obtaining these preferences, the reasons for the observed pattern and the environmental attributes used by individuals to produce the preferences may be inferred.

One reason for an observed preference is the degree of familiarity and amount of information possessed regarding a place. Gould and White (1968) in their study of the residential preferences of school leavers in 23 locations in Britain, found a high degree of consensus regarding the residential desirability of the British counties. The

pattern of consensus was broken by what they called the "local dome effect", the tendency for people to favor locations in the immediate area. This effect was found to increase in a northward direction with increasing deviation from the national or consensus preference surface.

The role of familiarity and information in residential preferences prompted Adams (1969) to postulate a sectoral bias in intra-urban migration, due to sectoral mental maps arising from daily travel patterns. Donaldson and Johnston (1973) pursued this idea in their study of intra-city migrants in Christchurch, New Zealand. Respondents rated the city's suburbs according to their degree of familiarity. The matrix of familiarity rankings was factor analyzed. Mapping of the factor loadings of the suburbs indicated a distinct sectoral pattern, thus supporting Adams' hypothesis.

Johnston (1973) continued on the question of the bases of residential preferences in his study of people's evaluations of the suburbs of Christchurch. Semantic differential scales were used to represent the five hypothesized dimensions of residents' evaluations. Principal components analysis yielded three dimensions on which the suburbs are evaluated. These were labelled the impersonal environment, knowledge, and the interpersonal environment.

At the inter-urban scale, Desbarats (1976) examined the attributes of the perceived environment used in the ordering of peoples' preferences among the ten major cities of California. She improved over previous semantic differential studies by using a free association technique which releases respondents from "the arbitrary framework of pre-selected dimensions having varying degrees of relevance" (Desbarats, 1976: 455). Subjects simply responded to the names of the ten cities with

three adjectives or nouns which came to mind. This qualitative data was converted to numerical data and reduced to two proximity matrices measuring within subject and between subject cognition, and a profile matrix of similarities between cities. She found the urban areas to be differentiated largely on the basis of size and location, and that "similar preference scores tend to be verbalized with similar sets of descriptive terms" (p.463). Furthermore, physical factors such as climate or location, were more relevant to spatial images than were functional (economic) factors, such as agricultural versus industrialized.

Demko (1974) studied individuals' cognitions of cities in southern Ontario, specifically in the context of migration. Rankings of eight cities according to their degree of similarity were obtained. Respondents were then grouped on the basis of a factor analysis of the rankings. The similarity rankings of each group were analyzed through multidimensional scaling. The two dimensional solutions obtained indicated that migration decisions are based on at least two composite factors. Further analysis indicated that economic variables, the income potential and cost of living in the cities considered, operated together with socio-environmental variables, the quality of life, to produce the preferential rankings. Demko concluded that "if economic factors were not constraining choice, migration patterns might be significantly altered" (Demko, 1974:31).

At the national level, Lloyd (1976) used student samples from Pennsylvania and South Carolina to study the cognitions of, and the preferences for the American states. Multidimensional scaling was used to derive the cognitive spaces and the preference spaces for each sample.

Canonical correlation analysis showed that the cognitive and preference spaces were closely linked. A behavior space derived from United States census data was found to be very similar to both the cognitive and preference spaces. Lloyd concluded that there are strong linkages between cognitions, preferences and actual behavior.

2.3 Summary and the Place of the Study in the Literature.

Researchers have traditionally employed descriptive-predictive models in the study of migration. Economic and social gravity models seek to explain and predict migration flows in terms of the characteristics of the origins and destinations. The decreasing power of these models and the impact of individual behavior on migration patterns has given rise to a behavioral approach to migration.

It is through a behavioral approach to migration that geographers are able to explore the role of place, and the perception of place utility in the migration decision process. Attempts to specify individuals' place utility functions have not been entirely successful. The closely related notion of residential preferences has been studied using a cognitive-behavioral approach. This approach has been used to examine both the patterns of residential preferences and some of the factors which have produced the observed patterns. These factors include familiarity and information, physical and locational factors, and socio-economic factors. Cognitions and preferences have been demonstrated to be closely related to actual migration behavior. This present work will contribute to the field by examining the assessment of an urban area in a new context, that of northern Canada. It will contribute to the study of migration by

examining the role of this community assessment in the decision to migrate from a northern resource community.

CHAPTER 3: THE HYPOTHESIS AND DATA SOURCES

In this chapter, the hypothesis of the study is formulated. The technique used to test the hypothesis is then discussed in detail. The chapter will close with a description of the sources and the method of collection of the data.

3.1 The Hypothesis

There is considerable agreement that the environment of a community must play a role in the decision to migrate to or from that community. Riffel acknowledged this role stating "Individuals will search for and move to communities providing the largest achievable set of quality of life factors" (Riffel, 1975:5). "Quality of life" was regarded as having two major components, environmental and individual; the environmental component being based almost entirely on the characteristics of the community, and the individual component including income, education, physical and mental well being, etc. Lajzerowicz et al. came to the conclusion that workers in mining communities left because of a combination of job, company and community factors (Lajzerowicz et al., 1976:9). Bone likewise noted the impact that the environment may have on the decision-making process. "Urbanite newcomers to the subarctic are often described as southern transplants, whose willingness to remain in the north is frequently overtaxed by environment" (Bone, 1972:96). Thus the community environment is generally held to play a role in the decision to leave a northern community. The following hypothesis is formulated to test the validity of this assumption:

H: A resident's intention to leave or stay in a northern community is related to that person's assessment of the environment of that community.¹

3.2 Measuring Resident's Community Perception

Previous work on the perception and evaluation of environmental elements (Downs, 1970; Johnston, 1973) have allowed subjects to respond to bipolar adjectival scales representing the hypothesized relevant dimensions of those elements. However, by providing the bipolar adjectives, the researcher offers verbal stimuli which may or may not be meaningful to the subject. Personal Construct Theory, as formulated by George Kelly, offers a solution to this problem by providing a model of the mental organization an individual imposes on his perceptions of the world, and also providing a tool to measure and evaluate these organizations.

Kelly put forth his theory in the form of a basic postulate and eleven corollaries. The basic thrust of the theory is that individuals discriminate among elements of their environment on the basis of the attributes they attach to them. These attributes, or constructs, are operationally considered to be bipolar, that is, to consist of a pair of opposites. Because the individual himself imposes them on the real world, they are called personal constructs. Kelly defined a construct simply as "a way in which two things are alike and by the same token different from a third" (Bannister, 1962).

1. The environment of the community is here considered to consist of the universe of physical, social, economic and biological attributes which may be assigned to that community.

Kelly also provides a technique for eliciting and evaluating personal constructs. The method for eliciting constructs is through "triad sorting". Three objects or elements are presented to the respondent, and he or she is asked to name some way in which two of the elements are similar and different from the third. This differentiation forms the personal construct.

The technique for evaluating personal constructs is called the "Repertory Grid Test". The grid test as originally used by Kelly requires the respondent to decide whether elements possess the attribute in question, or not. In effect, the elements are rated on a dichotomous, or two point scale (Bannister, 1962:112). Dichotomous scales are not always adequate since a given element may possess an intermediate amount of the characteristic in question. Thus three, five, and up to eleven point scales are more often used since they are more sensitive to the varying intensity of the subjects responses to the elements. This technique produces "a matrix that describes quantitatively and individual's repertory of feelings about a set of elements" (Harrison and Sarre, 1971:369). This is the real usefulness of personal construct theory, that it permits the researcher to measure a respondent's assessment of a place on the characteristics he himself considers to be relevant. As Silzer puts it "the essential feature of the theory is that it seeks explanations of behavior in terms of the person's own description of what attributes of environmental elements he is responding to" (Silzer, 1972:5). Personal construct theory thus appears to present a solution to the problem of pre-selected scales forcing respondents to rate objects on the attributes the researcher, rather than the respondent, feel to be relevant.

3.3 Research Design

The use of Personal Construct Theory and the repertory grid methodology is a fairly recent innovation in geographical research. Harrison and Sarre (1971) explored the potential of the theory and the associated methodology for the study of environmental images. In their subsequent research, they used the theory, first, to study the image of an urban area held by a group of residents, and secondly, to examine shopkeepers' images of the retail environment in search of variation attributable to certain characteristics (Harrison and Sarre, 1975). They concluded that Personal Construct Theory and the repertory grid test could be used to obtain data "both on the elements of an image to which respondents attach significance and the way in which respondents evaluate these elements" (Harrison and Sarre, 1975:55). Hudson used the repertory grid methodology to study individuals' images of shops. By having respondents rank constructs in order of importance, and through a principal components analysis of individual grids, Hudson concluded that "not only do people evaluate shops on the basis of a multidimensional set of personal cognitive dimensions, but they weight these axes differently in terms of their importance in choice" (Hudson, 1974:487).

Lloyd used the idea of personal constructs in his conceptual model of spatial behavior. He conceived of the subjective environment (organized using constructs) as being related to preferences and thence to spatial behavior. Using samples of students in Pennsylvania and South Carolina, Lloyd employed the repertory grid test to locate the American states in cognitive space, and compared this to preference space. Finding

the structures to be similar and concluded that there are linkages between cognition, preferences and actual behavior (Lloyd,1976:251).

Personal Construct Theory and the repertory grid methodology have been demonstrated as useful in the study of environmental images. The present study applies the technique in a new context: the study of the assessment of a northern community. In this study the number of elements under consideration is one, the city of Thompson. To ensure comparability it is necessary that respondents be provided with both a standard set of elements and a standard set of constructs. The constructs provided are those elicited from a pre-test sample. These are assumed to be a representative sample of the universe of relevant constructs. While the provision of constructs reduces sensitivity of the technique to individuals it assures the comparability of responses, and greatly facilitates analysis. The supplying of constructs has one other advantage over eliciting constructs from each respondent. Since construct elicitation is a very time-consuming procedure, use of a standard set of constructs enables the researcher to greatly increase the size of the sample.

3.4 The Data

The data are primary data obtained in a questionnaire survey, conducted in the city of Thompson during the period of August 8-16, 1977. The questionnaire was made up of three parts: 1) personal characteristics, 2) a set of personal construct scales, and 3) questions regarding resident's concerns about the city (see Appendix A). The first part of the questionnaire was designed to obtain information about the respondent's personal characteristics, including previous migration behavior and migration intentions. The second part, the set of construct scales, was obtained from the set of personal constructs elicited from a pre-test sample. This pre-test was conducted on a total of 34 persons, 22 residents of Thompson and 12 residents of Winnipeg. The Winnipeg sample was intended to represent the population of potential migrants to Thompson.

Constructs are usually elicited through a process called "triad sorting" in which subjects are asked to name a way in which an element is differentiated from out of a set of three elements. In the present study, since it was concerned with only a single element, the city of Thompson, this procedure was modified. Respondents were asked to express how Thompson was different from each of sixteen other Canadian cities.¹

The pre-test resulted in a total of fifty-three different²

-
1. The cities included in the pre-test were: Flin Flon, Brandon, Winnipeg, Gillam, Churchill, Thunder Bay, Kenora, Moose Jaw, Regina, Prince Albert, Ft. MacMurray, Medicine Hat, Whitehorse, Yellowknife, Kelowna, and Prince George. They were selected to provide a variety in terms of size, economics, function and geographical location.
 2. Many constructs were obtained in several versions which though phased differently, were similar in meaning. Thus they were not considered to be separate constructs.

constructs being elicited, which fell into five basic groups. These were: i/ site and community factors, ii/ location, iii/ economic factors, iv/ social factors, and v/ demographic factors. These formed the basis of the 35 scales used in the study (see Appendix B p.71). This number of scales was selected as large enough to be comprehensive, yet not so large as to result in a tedious or boring interview. The constructs were converted into seven point scales on which the respondents expressed their views of the city of Thompson, regarding the 35 characteristics.

A two-step sampling procedure was employed. First was the selection of the areas of the city to be sampled. Thompson is divided into 25 planning districts, 16 of which are residential. Sampling was conducted in 8 of these residential districts. These districts were selected to provide a cross-section of the socio-economic and housing types which exist in Thompson.

The second stage was a cluster sampling within the eight districts. One block in each district was selected randomly using a random numbers table. One hundred and fifty housing units were approached, of which 80 did not answer the door. Of the remaining 70, 13 refused to complete a questionnaire. The remaining 57 housing units yielded a total sample of 107 respondents. The number of respondents was proportional to the population of the district.

3.5 Summary

Within the objectives of the thesis, the specific hypothesis to be tested is presented. The methodology to be used to test the

hypothesis and its applications in previous geographical research is discussed. The chapter closes with an overview of the nature of the data to be used to test the hypothesis.

CHAPTER 4: THE ANALYSIS

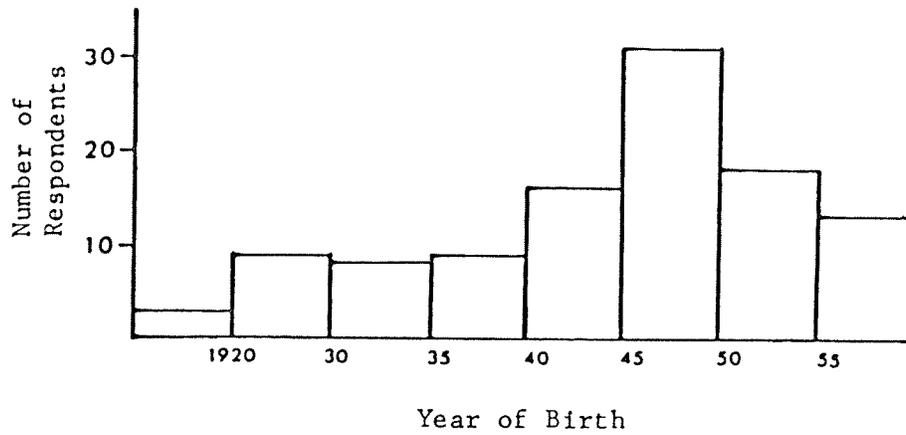
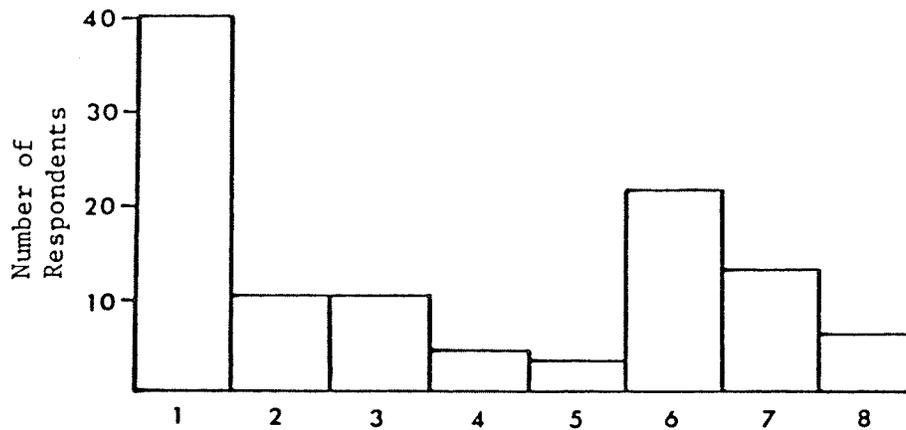
This chapter presents the analysis of the data. After a description of the composition of the sample, the four stages of the analysis are discussed. The first stage deals with the image of Thompson as revealed in the responses to the scales derived from the personal constructs. The second stage examines the correlates of the intention to migrate. The dimensions of the residents image of the city are next derived. The final stage relates these dimensions to the decision to migrate.

4.1 The Composition of the Sample

The questionnaire survey obtained information on three sets of personal characteristics of the respondents. These included the respondents' demographic characteristics, their status in the community, and their past and intended migration behavior.

4.1.1 Demographic Characteristics

Three demographic variables were considered in the survey. They were the respondent's sex, marital status, and age. In terms of sex, the sample included slightly more men (55) than women (52). However, in terms of marital status the sample was very unequal, including 89 married persons (83 per cent) compared to 18 single persons (17 per cent). The age distribution of the sample according to the respondent's year of birth is shown in Figure 2. The relative youth of the sample is evident with the

Figure 2: AGES OF THE RESPONDENTSFigure 3: OCCUPATION OF HEAD OF HOUSEHOLD

1. Managerial or Professional
2. Clerical
3. Sales, Service or Recreation
4. Transportation or Communication
5. Retired
6. Miner(underground)
7. Craftsman or Tradesman
8. Laborer or Other Industrial

mean age of the respondents being approximately 30.7 years.

4.1.2 Community Status

The five community status variables were designed to obtain information regarding the respondent's situation in the community. These were i/ occupation of the head of household, ii/ place of employment of head, iii/ respondent's level of education, iv/ type of residential tenure, and v/ membership in community organizations. The composition of the sample according to these community status variables is presented in Figures 3 to 7.

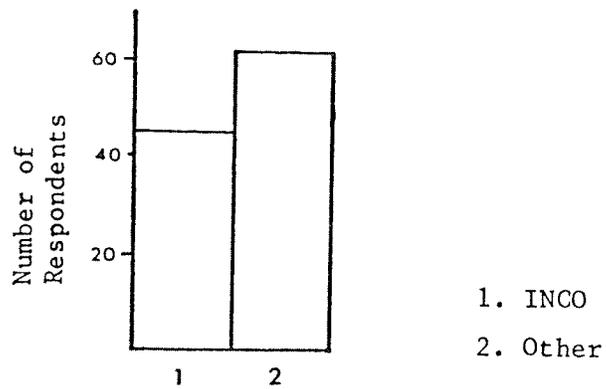
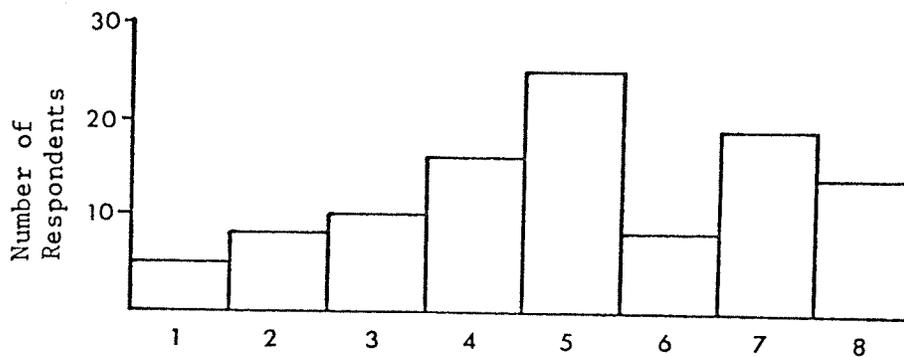
Residences were classified according to type of tenure. Seventy four respondents owned their residences which included homes, townhouses and mobile homes. The 33 renters lived in various housing types including homes, apartments, basement suites and men's residences. Residences were not classified according to quality due to the relative homogeneity of the housing, all being roughly the same age.

4.1.3 Migration Behavior

The third group of variables was concerned with the respondent's past and future migration behavior. The respondent's past migration behavior is assessed in terms of place of birth and place of residence previous to coming to Thompson. The pattern of responses is shown in Table I.

In terms of length of residence, the sample included a large number of "long-term" residents. Thirty-five per cent had lived in Thompson for more than five years.¹ The distribution of the responses is

1. In northern resource communities, 5 years may be considered to be a long-term residence.

Figure 4: PLACE OF EMPLOYMENT OF HEADFigure 5: EDUCATIONAL LEVEL OF THE SAMPLE

1. Grade 8 or less
2. Grade 9
3. Grade 10
4. Grade 11
5. Grade 12 or 13
6. Technical or Trade School
7. University Incomplete
8. University Degree

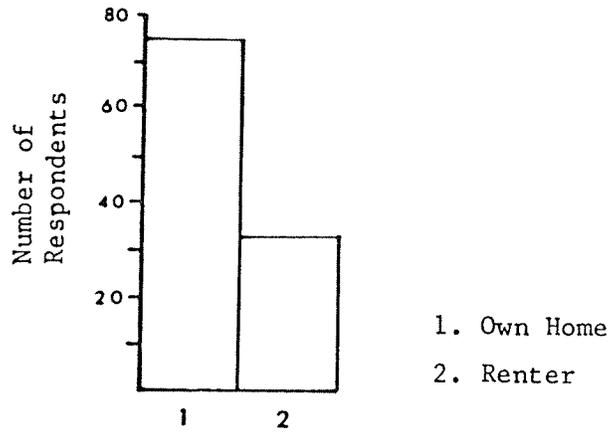
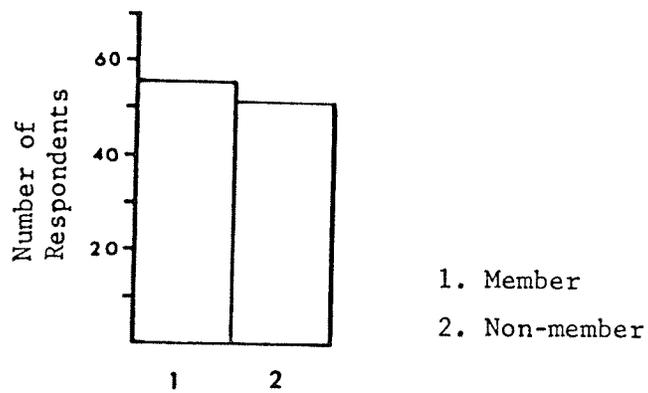
Figure 6: RESIDENTIAL TENUREFigure 7: ORGANIZATIONAL MEMBERSHIP

Table I: RESPONDENTS' MIGRATION BACKGROUNDS

	Place of Birth	Previous Residence
Manitoba	33	41
Alberta/Saskatchewan	24	25
Ontario	17	17
British Columbia	2	2
Québec	2	2
Maritime Provinces	10	10
Northern Europe	15	7
Southern Europe	2	0
Other	3	3

shown in Figure 8.

Future migration behavior is assessed in terms of the respondents' stated intention to leave Thompson (Fig. 9). One-third of respondents indicated they plan to remain in Thompson indefinitely, while only 16 per cent plan to leave within two years. These data should, however, be treated with caution since 35 per cent of the respondents were unable or unwilling to state an intended time of migration.

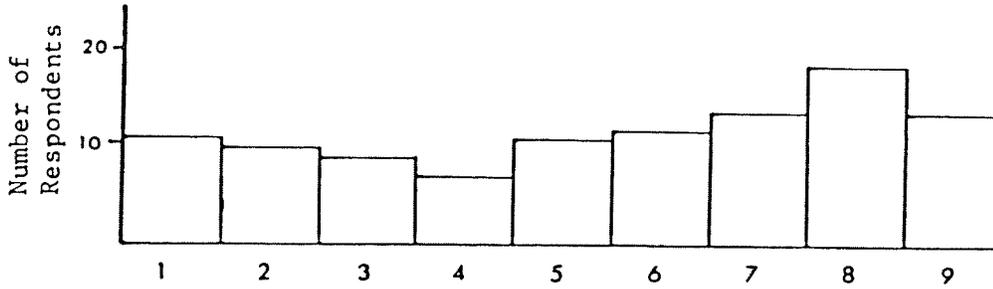
4.2. The Image of Thompson

The responses to the 35 scales used to elicit the respondents' image of Thompson are provided in Table II. The mean scores on each scale represent the consensus view of the city. The standard deviation indicates the degree to which respondents are in agreement.

The scales were 7 point scales, scoring from 1 to 7. Responses have been recoded so that high scores (7) reflect a favorable assessment according to the attribute considered and low scores (1) indicate a negative response. The 35 scales deal with five major aspects of Thompson: i/ site and community factors, ii/ location, iii/ economic factors, iv/ social factors and v/ demographic factors.

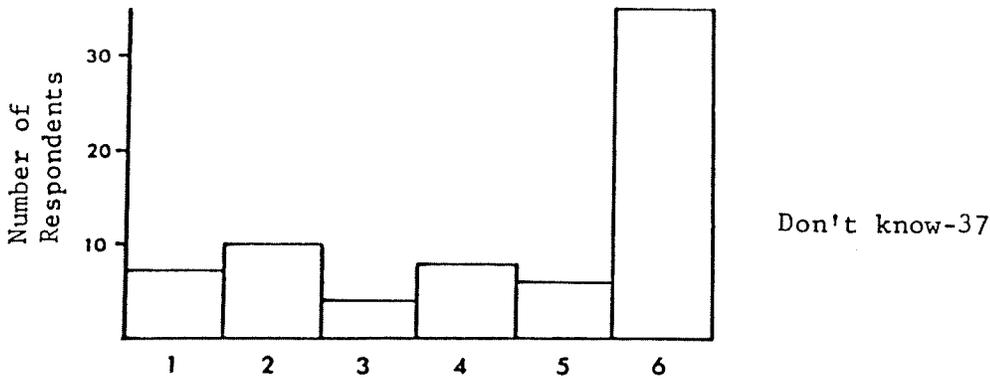
Regarding the site and community factors, respondents view Thompson as well planned (scale 26, $\bar{x}=4.87$) and spacious (scale 23, $\bar{x}=5.3$). They are less decided on four other scales, the mean scores lying near the mid-point. However, they do view Thompson as fairly clean (scale 9, $\bar{x}=4.9$), permanent (scale 22, $\bar{x}=4.7$), cheerful (scale 34, $\bar{x}=4.8$) and residential (scale 10, $\bar{x}=4.6$). Regarding the locational attributes of Thompson, re-

Figure 8: LENGTH OF RESIDENCE OF THE SAMPLE



- 1. less than 1 year
- 2. 1-2 years
- 3. 2-3 years
- 4. 3-4 years
- 5. 4-5 years
- 6. 5-7 years
- 7. 7-10 years
- 8. 10-15 years
- 9. more than 15 years

Figure 9: INTENDED LENGTH OF STAY



- 1. less than 1 year
- 2. 1-2 years
- 3. 2-3 years
- 4. 3-5 years
- 5. 5-10 years
- 6. more than 10 years

Table II: RESPONSES TO THE BIPOLAR ADJECTIVAL SCALES

	\bar{x}	s
1. unstable economy-stable economy	4.944	1.547
2. small-large	3.757	1.295
3. poor transportation-good transportation	2.869	1.791
4. unimportant for government- important administrative centre	4.608	1.516
5. winters boring-winters enjoyable	4.542	2.053
6. rough town-civilized	4.897	1.721
7. poor-prosperous	5.234	1.241
8. cost of living higher than in Winnipeg-cost of living same as in Winnipeg	3.710	1.759
9. polluted-clean	4.850	1.842
10. heavily industrial-residential	4.636	1.262
11. many social problems-no social problems	3.692	1.673
12. bad place for quick money-good place for quick money	3.860	1.495
13. dull population-interesting population	5.224	1.531
14. isolated-accessible	3.636	1.860
15. inadequate range of goods-complete range of goods	4.084	1.760
16. unprogressive-progressive	4.860	1.377
17. lifestyle different fromWinnipeg-lifestyle like in Winnipeg	2.766	1.502
18. poor for recreation-good for recreation	5.103	1.822
19. lacks modern facilities-has all the modern facilities	4.934	1.434
20. extremes of hot and cold-liveable climate	4.056	2.018

Table II: continued

	\bar{x}	s
21. much racial stress-no racial stress	4.664	1.432
22. impermanent-permanent	4.748	1.614
23. congested-lots of space	5.336	1.665
24. in wilderness-in tamed country	4.290	1.682
25. far from a major city-close to a major city	2.065	1.537
26. poorly planned-well planned	4.870	1.672
27. transient population-stable population	2.673	1.484
28. no cultural activity-much cultural activity	4.589	1.566
29. unfriendly people-people friendly	5.888	1.168
30. unfavorable male/female ratio-favorable male/ female ratio	3.738	1.550
31. company town-diverse economy	3.047	1.788
32. little to do-lots to do	4.953	1.915
33. in barren country-scenic location	4.832	1.830
34. dreary-cheerful	4.804	1.593
35. working class town-middle class town	3.598	1.553

spondents agreed overwhelmingly that it is distant from a major city (scale 25, $\bar{x}=2.1$), and that it was scenically located (scale 33, $\bar{x}=4.8$). The respondents had intermediate responses to the city's isolation (scale 14, $\bar{x}=3.6$), extreme climate (scale 20, $\bar{x}=4.1$) and its wilderness location (scale 24, $\bar{x}=4.3$). There is considerable disagreement regarding the northern winters. While scale 5, 'winters boring - winters enjoyable', has a slightly favorable mean of 4.5, the standard deviation is a high 3.056. The modal score was 7, indicating a large segment of the sample enjoy winters with smaller numbers feeling neutral or negative toward winter.

With respect to the economic characteristics of Thompson, the consensus is that the city is prosperous (scale 7, $\bar{x}=5.2$), progressive (scale 16, $\bar{x}=4.9$), economically stable (scale 1, $\bar{x}=5.0$) and a one company town (scale 31, $\bar{x}=3.0$). The cost of living is viewed as somewhat higher than in the south (scale 8, $\bar{x}=3.7$) while the city is not seen as a place for quick money (scale 12, $\bar{x}=3.9$). In terms of size and services Thompson is viewed as a medium sized centre (scale 19, $\bar{x}=3.8$) with an adequate range of goods and services (scale 15, $\bar{x}=4.1$) and facilities (scale 19, $\bar{x}=4.9$). Poor transportation, primarily the condition of the highway south, is seen as one of the city's shortcomings (scale 3, $\bar{x}=2.9$).

Socially, Thompson is regarded as a friendly town (scale 29, $\bar{x}=5.9$) with a lifestyle different from that in Winnipeg (scale 17, $\bar{x}=2.8$). The city is seen as more civilized than rough (scale 6, $\bar{x}=5.9$) but with a fair amount of social problems (scale 11, $\bar{x}=3.7$). With regard to social activities, Thompson is thought to be good for recreation (scale 18, $\bar{x}=5.1$) and cultural activity (scale 28, $\bar{x}=4.6$) with generally a lot to do (scale 32, $\bar{x}=5.0$).

Although it is unknown how Thompson would compare in respondents' minds to other towns, the general view of Thompson appears quite favorable, economically, socially, and environmentally.

4.3 The Correlates of Migration Intentions

The central concern of this study is the investigation of the problem of population turnover in northern communities. Turnover is approached by examining the migration of residents from a community. In the study of migration, unless one is prepared to undertake a longitudinal study and follow individual's movements over the years, the researcher is restricted to two types of migration behavior: past migration behavior or future migration behavior. To study past migration one would need a sample from the population of past migrants. This would be difficult to obtain. Intentions of future migration would appear to be closely related to one's satisfaction with the present community. Furthermore, the respondent's perceptions of, and responses to, the community are current and therefore fresh in the respondent's mind. The study of the intention to migrate is the approach taken in the present work. In the questionnaire respondents were asked, "How much longer do you plan to stay in Thompson?" Of the total sample of 107, 70 respondents were able to state their intended time of departure from Thompson, while 37 responded that they did not know how long they would stay. This results in a one-third reduction in the size of the sample. It appears likely that some of those who were unable to respond may have been more recent immigrants who lacked familiarity with the

city. However, the reason for the majority of the "don't know" responses is unknown. This uncertainty on the part of so many respondents adds an element of uncertainty to the data. Thus these data must be treated with some caution.

4.3.1 Personal Characteristics and Migration Intentions

The initial interest of this study, regarding migration intentions, concerned the identification of those personal characteristics which are related to the intention to leave Thompson. The responses of the sub-sample who expressed an intention were used in this analysis. The data on the demographic characteristics, community status variables, and previous migration are at two levels of measurement, nominal and ordinal. Relationships between intended migration and nominal variables were examined by tabling the data and calculating the contingency coefficients. One significant relationship emerged. Marital status was found to be significantly related to respondents' intended length of stay. These results are shown in Table III. The contingency coefficient $C=.3937$ is based on a X^2 which is significant at the .025 level. This indicates that it is the single individual who anticipates leaving Thompson earlier than those who are married.

Relationships between intended migration and the ordinal level variables were examined using Spearman's non-parametric correlation. Two significant relationships emerged. Intended migration was found to be related to the respondent's age and length of residence. Migration intention were closely related to the respondent's age. The correlation coefficient of .412, significant at the .001 level, indicated that there was tendency for the older respondent to expect to

Table III: MIGRATION INTENTIONS AND MARITAL STATUS

Intended Length of Stay	Marital Status	
	Married	Single
Less than 1 year	4	3
1-2 years	7	3
2-3 years	2	2
3-5 years	6	2
5-10 years	5	1
More than 10 years	34	1
	Total	
	58	12

stay longer. This may be a reflection of the individual's stage in the life cycle, with the younger people being more mobile. It may also reflect an increased awareness on the part of younger people of the conditions and opportunities elsewhere.

Length of residence was also closely related to the intention to stay in Thompson. The longer a person has lived in the city, the more like he or she is to intend to remain. The correlation coefficient of .398 is significant at the .001 level.

These three relationships do not yield great insights into the type of person who migrates. They do, however, permit a generalized profile of the person likely to remain in Thompson as the older, married person, who has already lived there for some length of time. All three variables marital status, length of residence and age are undoubtedly interrelated. While these characterize the long term resident, they do not indicate what type of newcomer to Thompson will assume these characteristics and become a permanent resident.

4.3.2 Community Assessment and Migration Intentions

This thesis is concerned with whether the way an individual assesses a northern community influences the decision to migrate from that community. From section 4.2, we have a sample of the characteristics which respondents attribute to Thompson. This part of the analysis seeks to determine if any of these attributes are related to the respondents' intentions to leave Thompson. To accomplish this, migration intentions were related to the 35 bi-polar adjectival scales using Spearman's non-parametric correlation coefficient. A number of

significant relationships emerged. The most important are shown in Table IV. Fifteen of the scales were significantly related to migration intentions at greater than the .01 level. The coefficients of a further 11 scales were significant at the .05 level. Thus only 9 of the 35 scales were not significantly related to the intention to migrate.

With such a large array of significant and undoubtedly inter-related variables, some means of data reduction appears necessary to permit a more meaningful analysis. In order to reveal the major relationships existing in the data, the scores on the 35 scales were subjected to a principal components analysis.

4.5 Dimensions of the Image of Thompson

The first part of the research question posed in Chapter 1 was, "What factors do people consider in evaluating a northern community?". As an approach to this problem, responses to a set of 35 bipolar adjectival scales based on personal constructs were collected. The scales have been shown to be relevant to the migration decision process through their correlations with migration intentions (section 4.4). However, because of the large numbers of relevant scales and their complex interrelationships it is not possible to ascertain the basic factors involved in an individual's assessment of his community. What is required is a data reduction procedure which will reveal the principal interrelationships which exist in the data.

Kelly used his own version of factor analysis to analyze his repertory grids which were based on dichotomous data (Bannister, 1962).

Table IV: ATTRIBUTES OF THOMPSON CORRELATED WITH
THE INTENTION TO MIGRATE

Scale	r	Sig.
29. people unfriendly-people friendly	.4385	.001
34. dreary-cheerful	.4322	.001
22. impermanent-permanent	.3941	.001
32. little to do-lots to do	.3783	.001
31. company town-diverse economy	.3569	.001
6. rough town-civilized	.3534	.001
33. in barren country-scenic location	.3508	.001
5. winters boring- winters enjoyable	.3465	.002
14. isolated-accessible	.3211	.003
16. unprogressive-progressive	.3095	.005
19. lacks modern facilities-has all the modern facilities	.3042	.005
27. transient population-stable population	.2960	.006
17. lifestyle different from Winnipeg- lifestyle like Winnipeg	.2924	.007
21. much racial stress-no racial stress	.2808	.009
18. poor for recreation-good for recreation	.2805	.009

Harrison and Sarre have stated that the repertory grid permits "the application of any multidimensional method of analysis making use of a matrix" (Harrison & Sarre, 1971:366). Principal components analysis was selected because it is a relatively simple procedure which, since it makes no assumptions about the underlying structure of the variables, is a useful technique for data simplification (Kim, 1975). The analysis of the 35 by 107 data matrix (35 scales by 107 respondents) was carried out by using a Bio-Medical BMDP4M computer program.

The analysis began by calculating the correlations between the variables. Components were then computed, the first component being the single best summary of linear relationships present in the data (Kim, 1975). The second component is the linear combination of variables which accounts for the most residual variance. Computation continued extracting orthogonal components until the variance in the data was exhausted, or the number of components equaled the number of variables.

The number of factors retained was determined using the eigenvalue of 1.0 criterion where the smallest factor retained explains at least as much variance as one of the original variables.

Principal components analysis yields an eleven dimensional solution which collapses 64.8 per cent of the variation present in the data. The solution results in a large number of variables with large loading on the first dimension, and very few large loadings on the other dimensions. The unrotated factor loading matrix is provided in Appendix B. As a consequence of this pattern of loadings, the factors are not easily interpretable. To remedy this, a varimax rotation was

performed which minimizes low loadings and maximizes high loadings. While the unrotated factors are the best linear combinations of the original variables, rotation tends to seek out the clusters of variables which may exist in the data, producing "a simpler, more meaningful factor pattern" (Rummel, 1970). The resulting factor loadings matrix is included in Appendix C. The major loadings, those greater than $\pm .450$, are presented in Table V.

The first factor accounts for the largest proportion of the variance in the data, 10.4 per cent. Eight scales load highly on this factor, reflecting the physical (clean .714, scenic .633, cheerful .544, permanent .490, lots of space .487, and winter enjoyable .601) and the human (lots to do .563, civilized .472) environment. Thus it has been named the "Community Environment" factor. High scores on this component reflect a high degree of overall satisfaction with the general community environment of Thompson.

The second factor accounts for 7.6 per cent of the variance. Four of the six scales that load highly on this factor are of an economic nature. These are: unstable economy .624, prosperous .733, modern facilities .553, and the range of goods .490. Thus, the second factor has been labelled the "Economic Environment". This component reflects the positive and negative aspects of the economy of a northern community. The combination of prosperity with economic instability refers to the volatile "boom and bust" nature of the mining industry. The juxtaposition of modern facilities with the range of goods reflects the high quality but limited choice of services available in the community.

The third factor is the "Frontier" factor. This loads highly



Table V: Rotated Factor Loadings, cont.

	Factor	I	II	III	IV	V	VI	VII	VIII	IX	X	XI
19. modern facilities			.553									
20. liveable climate											-.453	
21. no racial stress						.635						
22. impermanent-permanent	.490											
23. lots of space	.487											
24. wilderness-tamed country												.762
25. far from a major city												
26. poorly-well planned						.559						
27. transient-stable population							.593					
28. cultural activity								.461				
29. friendly people									.473			
30. male/female ratio				.775								
31. company town					.638							
32. little-lots to do	.563											
33. scenic location	.633											
34. dreary-cheerful	.594											
35. working-middle class								.818				

on three scales, all of which typify the popular notions of aspects of life in resource frontier communities. These are the male/female ratio .775, the progressiveness of the city .639, and its isolation .616. This factor explains 6.5 per cent of the total variance.

Factor four accounts for 5.8 per cent of the variance. It is not easily interpretable. Like factor three, it has a fairly high loading on the 'isolated-accessible' scale .484. This, plus the loading on the 'important for government' scale .551, and the 'complete range of goods' scale .552, indicate that this factor refers to the restricted nature of the business environment. This factor has been labelled the "Single Industry" factor since it seems to identify Thompson as a single industry community.

The fifth component is more readily interpreted as the "Social" dimension. Explaining 5.6 per cent of the variance, this component loads highly on the scales of 'racial stress' .635 and 'social problems' .618. The other major loadings are on the 'well planned' scale .559 and the 'residential/industrial' scale .468.

Component six was named the "Northern Adjustment" factor. It was so labelled because its two high loadings are on the 'cost of living' and the 'stable population' scales. The loadings are .664 and .593 respectively. This factor reflects successful adjustment to two of the disadvantages of northern living: the relatively high cost of living and the transience of the population. This factor explains 5.5 per cent of the variance in the data.

The seventh factor is the "Class" dimension. The one very high loading is on the scale 'working class-middle class' .818. This

factor also loads highly on the 'poor for recreation' scale $-.463$ and the scale regarding cultural activity $-.561$. These negative loadings may be indicative that higher class status is associated with a lack of suitable recreation and cultural activity, whereas the types of recreation (largely outdoor) or the cultural activities available have more appeal to the lower social classes. This factor explains 5.2 per cent of the variance.

The eighth factor is the "Small Town" dimension. This factor accounts for 5.0 per cent of the total variation. The major loading, $.752$, is on the 'small-large' scale with a smaller loading, $.473$, on the 'friendly people' scale. This would be a reflection, at least superficially, of the association of friendly people with smaller communities.

Factor nine is the "Quick Money" dimension, so named because of the solitary and very high loading, $.810$, of this factor on the scale "good for quick money-bad for quick money". This factor accounts for 4.9 per cent of the variation.

Factor ten is the "Northern Lifestyle" factor. This factor was so named because of the high loading on the 'lifestyle' scale, $.711$, and also on the scale regarding the liveability of the climate $-.453$. This component reflects the adoption of a lifestyle different from in the south, and an adjustment to the climatic conditions of the north. This factor explains 4.21 per cent of the variance.

The final factor, factor eleven, is the "Wilderness" factor. This label was applied because the factor loads heavily on the 'wilderness-tamed country' scale $.742$. The fairly high loading on the 'dull population' scale $.493$ may hint at feelings of a social wilderness.

People who find the physical surroundings hostile or boring may find the social environment equally uninviting. This component accounts for 4.17 per cent of the variance.

These eleven factors, the basic dimensions of residents' image of the city of Thompson, are summarized in Table VI. They are presented with the scales they load heavily upon and the percentage of variance explained. Since the image of Thompson is quite complex these dimensions have also been classified into three broad types: social economic and environmental. While this classification may be simplistic and rather subjective, the rationale for classifying the factors as they have been should be evident from their scale loadings.

The six social type factors account for virtually half the variation explained (49.28 per cent). The three economic type factors, II, IV and IX are the second most important group comprising 28.29 per cent of the variance. The two environmental factors, I and XI, together explain 22.43 per cent of the variation accounted for.

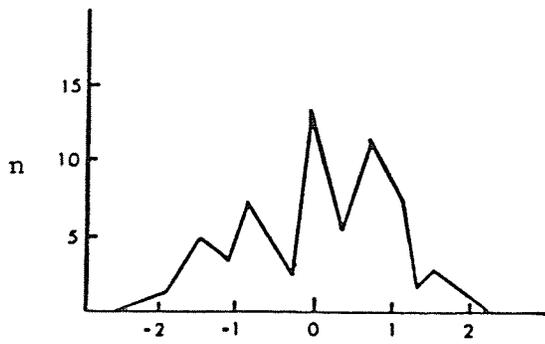
The scores of each respondent on the eleven factors were computed as part of the BMDP4M program. In Figure 10 these factor scores are presented in form of frequency polygons. The kurtosis of these polygons indicated the degree of agreement among respondents. Leptokurtic distributions, such as those for factor V and factor VIII, indicate a high degree of consensus. Platykurtic distributions, such as for factor III and VI indicate less agreement. Bimodal or polymodal distributions such as those for factors I, II, V and X may indicate that there are groups of respondents which have similar assessments of Thompson, along certain dimensions.

Table VI: SUMMARY OF THE FACTORS

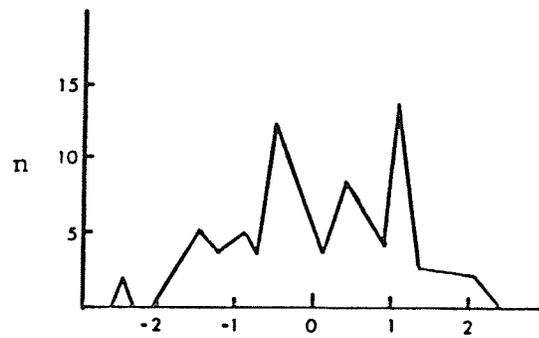
Factor	Type	Variance Explained
I Community Environment	Environmental	10.37%
.714 polluted-clean		
.633 in barren country-scenic location		
.601 winters boring-winters enjoyable		
.594 dreary-cheerful		
.563 little to do-lots to do		
.490 impermanent-permanent		
.487 congested-lots of space		
.472 rough town civilized		
II Economic Environment	Economic	7.61%
.733 poor-prosperous		
.624 unstable-stable economy		
.553 lacks modern facilities-has all the modern facilities		
.491 poor for-good for recreation		
.490 inadequate range of goods-complete range of goods		
.483 dull population-interesting pop- ulation		
III Frontier	Social	6.48%
.775 male/female ratio		
.639 unprogressive-progressive		
.616 isolated-accessible		
IV Single Industry	Economic	5.81%
.638 company town-diverse economy		
.552 inadequate range of goods-complete range of goods		
.551 unimportant for government- important administrative centre		
.484 isolated-accessible		
V Social	Social	5.55%
.635 no racial stress-much racial stress		
.618 many social problems-no social problems		

Table VI: continued

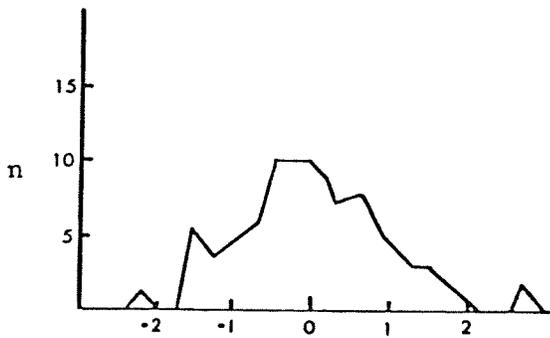
Factor	Type	Variance Explained
.559 poorly planned-well planned .468 heavily industrial-residential		
VI Suburban Adjustment	Social	5.48%
.664 cost of living .593 transient-stable population		
VII Class	Social	5.23%
.818 working class-middle class town -.463 poor for-good for recreation -.461 no cultural activity-much cultural activity		
VIII Small Town	Social	4.98%
.752 small-large .473 unfriendly people-people friendly		
IX Quick Money	Economic	4.93%
.810 bad place for quick money-good place for quick money		
X Northern Lifestyle	Social	4.21%
.711 lifestyle different from Winnipeg-lifestyle like Winnipeg -.453 extremes of hot and cold-liveable climate		
XI Wilderness	Environmental	4.17%
.762 in wilderness-in tamed country .493 dull populatio-interesting population		



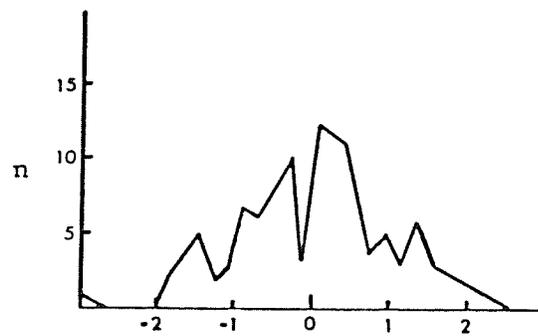
Factor I



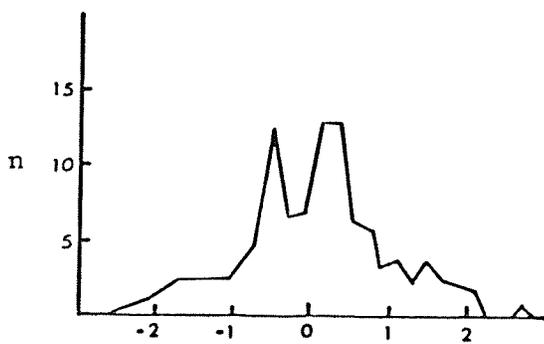
Factor II



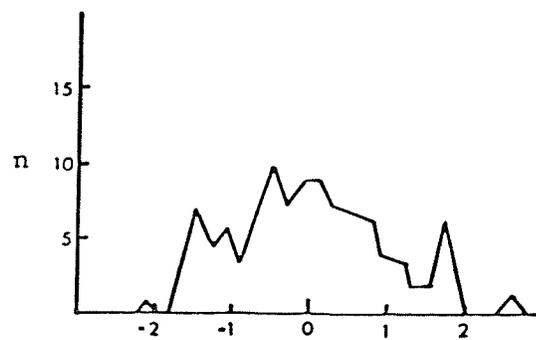
Factor III



Factor IV

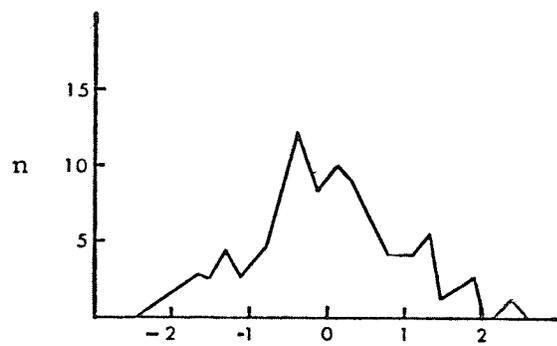


Factor V

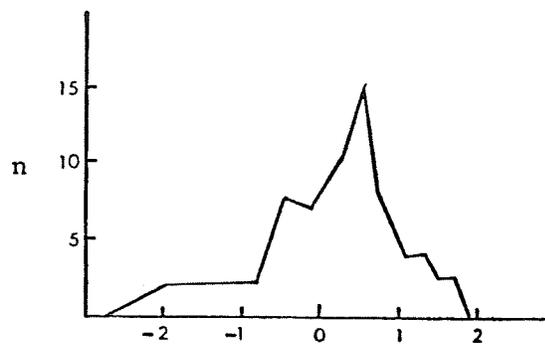


Factor VI

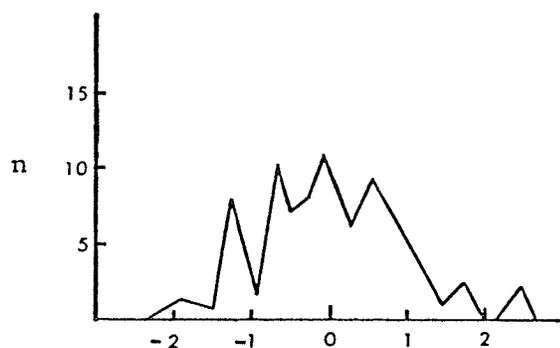
Figure 10: FACTOR SCORE DISTRIBUTIONS



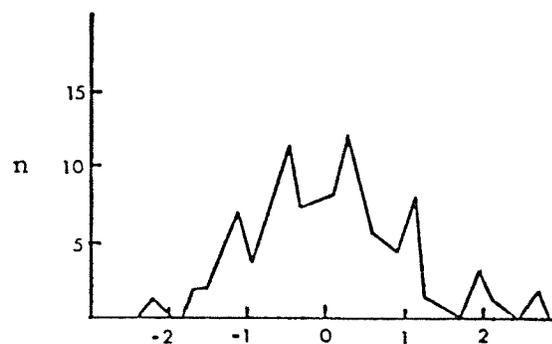
Factor VII



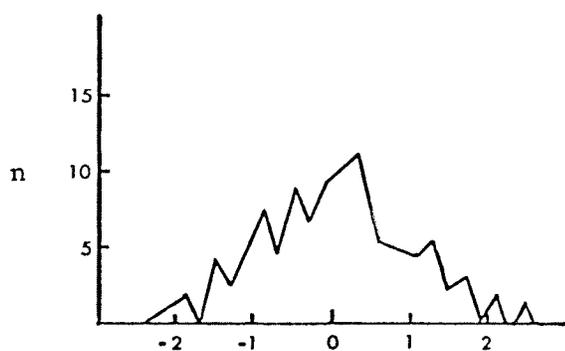
Factor VIII



Factor IX



Factor X



Factor XI

Figure 10 cont.: Factor Score Distributions

4.6 Community Assessment and the Intention to Migrate

The eleven basic dimensions along which residents appear to organize their assessment of Thompson have been outlined. However, while the factors involved in the assessment of the city have been obtained, one cannot yet say which are related to the intention to migrate, and which may, therefore, play a role in the decision making process. In this analysis, we seek to test the research hypothesis that a resident's migration intentions are related to that person's assessment of the community. The scores of the individual on the obtained dimensions are assumed to represent the individual's assessment of Thompson. The hypothesis will be tested through a step-wise multiple regression analysis. The dimensions of the image of Thompson are especially well suited to multiple regression analysis. Since they are orthogonal factors they are uncorrelated. Thus the problem of multicollinearity is avoided, and the interpretation of the results is facilitated.

The analysis was conducted using the BMDP2R program. Migration intentions was the dependent variable. The eleven factors were the independent variables and the factor scores were the observations. The results of this analysis are summarized in Table VII. The eleven factors together accounted for a total of 46.47 per cent of the variation in the intention to migrate. The regression using all eleven independent variables had an F-ratio of 4.63, significant at the .01 level (11 df regression, 58 df residual). Since independent variables are entered into the equation according to their declining contribution to the level of explanation, the later variables contribute relatively

Table VII: SUMMARY OF THE MULTIPLE REGRESSION

Factor	b Coefficient	R ²	R ² incr.	F-ratio
I Community Environment	.615	.1343	13.43%	10.546**
III Frontier	.511	.2098	7.55%	6.404*
IV Single Industry	.372	.2658	5.60%	5.038*
VIII Small Town	.414	.3115	4.57%	4.310*
		<hr/>	<hr/>	<hr/>
		.3115	31.15%	7.35**

**sig. at .01 level

*sig. at .05 level

little. Four of the eleven factors were, however, found to be significant as predictors of intended migration. These were in order of declining importance: Factor I, the Community Environment, factor III, the Frontier factor, factor VIII, the Small Town factor, and factor IV, the Single Industry factor. Together, these four factors account for nearly one-third of the variation in migration intentions, 31.15 per cent. The resulting multiple regression equation has an F - ratio of 7.35, which is significant at the .01 level. This would seem to support the research hypothesis.

The first factor entered into the equation was factor I, community environment. This is the single best explainer of migration intentions, accounting by itself for 13.4 per cent of the variation. The highly significant, positive relationship between community environment and migration intentions indicates that those who assess the community's environment favorable, that is, regard Thompson as clean, scenically located, cheerful, civilized, permanent with enjoyable winters and lots to do, are the ones who expect to stay longer in Thompson.

The second factor to enter the equation was factor III. This factor results in an increase of 7.55 for R^2 , raising the explanation to nearly 21 per cent. Factor III, the Frontier factor, is positively related to the intention to stay in Thompson. Thus, those who feel the progressiveness of the city, and who are not bothered by its isolation or its male to female imbalance, are influenced to remain in Thompson

The third relevant factor was factor VIII, the Small Town factor. Inclusion of this factor in the regression equation raises the R^2 by 5.60 per cent. The b coefficient of .404 leads to an

interesting interpretation. Factor VIII was composed of two scales, 'small-large' and 'people unfriendly-people friendly'. A high score on factor VIII indicates some combination of viewing Thompson as a large place, and also with friendly people. Since this factor is positively related to the intention to stay in the city, the implication is that those who view Thompson as a small, unfriendly community, perhaps those people from larger centres, may feel physically and socially constrained, with the resulting desire to leave.

The last significant factor to enter the equation was factor IV, the Single Industry factor. This factor raised R^2 to .3115, an increase in the level of prediction of 4.57 per cent. This single industry factor once again exerts a positive influence on the intention to remain. Since low scores on this factor represent the view of Thompson as a company town, isolated, with an inadequate range of goods and services, it would appear to reflect feelings of economic constraint. Lack of choice in employment and commercial establishments, compounded by isolation from competing alternatives may influence the individual to leave the city.

Step-wise multiple regression analysis has indicated four factors to have a significant impact on the decision to migrate from Thompson. Together they account for nearly one-third of the variation in migration intentions. The single most important factor was factor I, the Community Environment factor. Satisfaction with the physical and human environment appears to be the major inducement to remain in the city. The Frontier factor, the second most important, reflects certain aspects of life in a resource frontier community: the male/female

imbalance, isolation and the city's progressiveness. The final two factors, the Small Town and Single Industry factors indicate the negative influence of the physical-social constraints and the economic constraints inherent in life in a relatively remote resource frontier community.

CHAPTER 5: SUMMARY AND IMPLICATIONS

This thesis is concerned with the problem of population turnover in northern resource communities, especially the role of the community environment in the decision to migrate. The three specific objectives of this research are: i/ to outline the basic factors people use in the assessment of a northern community, ii/ to determine which of these factors are related to the decision to migrate, and iii/ to outline a generalized profile of the potential long-term resident of a northern community.

The nature of the problem and the social and economic consequences of population turnover are discussed in Chapter 1. The chapter closes with the selection of the study area. Chapter 2 reviews the literature related to the study of population migration. The relationship of this study to the literature is also explained.

5.1 The Research Design

In the literature, the environment of a settlement is generally thought to play a role in the decision to leave a northern community. The research hypothesis was formulated to test whether a resident's intention to leave or stay in a northern community is related to that person's assessment of the community.

The measurement of peoples' assessments of their environment using Personal Construct Theory was discussed. A questionnaire survey of Thompson was conducted to gather data regarding the personal

characteristics of respondents and their assessments of the city . These assessments were according to the 35 constructs, which were administered in the form of bi-polar adjectival scales. The analysis was conducted in four stages: i/ a description of the consensus image of Thompson, ii/ and examination of the correlates of intended migration, iii/ the derivation of the major dimensions of residents' image of the city, and iv/ the relationship of the dimensions to the decision to migrate.

5.2 The Findings

5.2.1 The Image of Thompson

The consensus image of Thompson is represented by the means of the responses to the bi-polar adjectival scales. Respondents generally tend to view the city rather favorable. Some of the more interesting results are that Thompson's isolation and climate do not appear to be major sources of dissatisfaction. The economic aspects are also viewed favorable since the city is seen as prosperous and progressive. Socially, the city is viewed as friendly, civilized, and with little racial stress. People appear to be fairly satisfied with the availability of goods and services, although transportation is a major shortcoming. Finally, Thompson is seen to be an active place both culturally and recreationally. In short, the consensus image of the city is quite favorable. However, how Thompson compares with urban centres is unknown.

5.2.2 The Correlates of Migration Intentions

This thesis was concerned with population turnover and the migration of people from northern communities. Thus, the analysis searches for relationships between respondents' migration intentions and their personal characteristics and assessments of Thompson. Four personal characteristics were significantly related to one's intention to stay in the city. These were the respondent's marital status, age and length of residence. Thus the person most likely to remain in Thompson is the older person who is married and has already lived there for some length of time. Finally, resident's images of the city were related to the decision to migrate. Twenty-six of the 35 scales on which residents expressed their assessments of Thompson, were significantly correlated with the intention to migrate.

5.2.3 Dimensions of the Image of Thompson

This stage of the analysis sought to determine the basic factors involved in an individual's assessment of the community. Principal components analysis was used to reduce the data matrix. An 11 dimensional solution was obtained, accounting for 64.8 per cent of the variance in the data. To aid in interpretation, a varimax rotation was performed. The two major dimensions obtained were concerned with the community environment and the economic environment. The remaining dimensions were related to the social, economic and environmental aspects of Thompson.

5.2.4 Community Assessment and the Intention to Migrate

After outlining the basic dimensions involved in residents'

assessment of Thompson, a step-wise regression analysis was conducted to determine which of these dimensions were related to the intention to migrate. Four of the 11 factors were found to be significant as predictors of intended migration. These were: Factor I, the Community Environment, Factor III, the Frontier factor, Factor VIII, the Small Town factor, and Factor IV, the Single Industry factor. These four factors accounted for 31.15 per cent of the variation in migration intentions. These results support the research hypothesis.

5.3 Implications of the Findings

The principal finding of this thesis is that a resident's assessment of a northern community plays a role in the decision to migrate from that community. This conclusion has two broad implications for planners, resource corporations and governments, which may not be immediately apparent. First of all, the development of a resource frontier townsite must not be viewed as simply the delivery of a certain range of facilities to service a given population size, but as the creation of a lifestyle. While resource settlements are assessed on a number of dimensions, the decision to leave is influenced not only by such standard considerations as isolation, or lack of facilities, but also by a combination of social and environmental factors. Thus, if a development plan is guided primarily by economic criteria the result may be an efficient delivery of services. However, if the exclusion of socio-environmental criteria from the planning process produces a community which suffers a high rate of turnover, the "efficient" development will in the long run prove to be false economy. The consequent social and

economic costs of turnover will be borne for the life of the community.

The second implication is that since individuals' evaluations influence their migration decision making process, it may be possible for concerned groups to have an indirect impact on the process. If governmental or corporate actions could improve residents' assessments of a community, they may be able to increase the propensity of residents to remain. In the case of the present study, those attributes of Thompson which are related to respondent's migration intentions have been discussed on pages 38-39. On the basis of these relationships (see Table IV) five broad suggestions may be made for the city:

1. Public relations efforts should be made to inform residents, especially newcomers, about the organizations, activities and facilities available in the city. People may needlessly suffer from boredom and loneliness simply because they are unaware of all the city has to offer.
2. Personal mobility appears important in combating feelings of isolation. Thompson should be made to seem more accessible by upgrading the road south.
3. The advantages of Thompson's location should be exploited. Develop parks or drives to highlight the more scenic areas around the city. Parks and picnic areas suitable for family outings should be developed within, or close to the city. Parks and landscaping of existing parkland would improve the city's esthetic appeal.
4. To make winters more enjoyable, facilities should be developed to promote winter recreational activities. Summer activities may be

extended in their season through enclosed gardens, tennis courts, pools, etc.

5. To minimize the feeling of impermanence in the city, structures which appear transitory should be discouraged. For example, if mobile homes are necessary they would be treated as houses, located on lots and landscaped.

According to the conclusions drawn from this study, the above measures could improve residents' assessments of Thompson, and may thereby reduce the desire of individuals to leave the city.

5.4 Concluding Remarks

In studying the problem of population turnover in northern communities, this thesis has focussed on the role of the community itself in the decision to migrate. The perception and evaluation of the community has been demonstrated to be relevant to migration behavior. The application of Personal Construct Theory in this thesis represents an extension in the use of the methodology, and an innovation in the study of migration in northern Canada. Although some broad implications for northern communities are outlined, the study is essentially exploratory. In raising more questions regarding community perception and population turnover, the study points to several directions for further research. Similar studies should be conducted to determine if other communities are assessed along similar dimensions, or if the same dimensions are related to the decision to migrate. Research is needed into the type of urban environment expected and desired by northern

residents. Such work would permit planners to design future developments for the needs and aspirations of those who will inhabit them. Through a thorough understanding of how individuals evaluate their communities and what they desire in those communities, progress will be possible towards the solution of the problem of turnover. It is hoped that by exploring the role of the community in the decision to migrate, this thesis has contributed to a deeper understanding of the problem, and pointed to some potentially fruitful avenues for further research.

Appendix A: THE QUESTIONNAIRE

University of Manitoba
Department of Geography
Winnipeg, Manitoba

Thompson Questionnaire August, 1977

The following questionnaire is being conducted by Paul Raths, a master's student of Geography at the University of Manitoba. The purpose of the questionnaire is to find out how you feel about your city, Thompson. I hope that the information gained may help point the way to improving the quality of life in northern communities through improved municipal planning.

The questionnaire has three parts, the first are some questions about you.

Please answer the following questions by checking off the appropriate box.

1. Are you a: single female () married female ()
 single male () married male ()

If you are married, does your husband/wife live in Thompson?

() yes () no

2. In what year were you born?

- () Before 1920
() 1920-1929
() 1930-1934
() 1935-1939
() 1940-1944
() 1945-1949
() 1950-1954
() 1955 or later

3. What is your occupation?

- () managerial or professional
() clerical
() sales, service or recreation
() transportation or communication
() forestry, trapping or fishing
() miner (underground)
() craftsman or tradesman
() laborer or other industrial
() retired

4. Where were you born?

- | | |
|---|--|
| <input type="checkbox"/> B.C. | <input type="checkbox"/> Maritimes |
| <input type="checkbox"/> Alta. or Sask. | <input type="checkbox"/> Territories |
| <input type="checkbox"/> Manitoba | <input type="checkbox"/> Northern Europe |
| <input type="checkbox"/> Ontario | <input type="checkbox"/> Southern Europe |
| <input type="checkbox"/> Québec | <input type="checkbox"/> Other _____ |

5. If you were born outside of Canada, how many years have you been in Canada?

6. What is the highest level of schooling you have received?

- elementary or equivalent
- grade 7 or 8 or equivalent
- grade 9 or equivalent
- grade 10 or equivalent
- grade 11 or equivalent
- grade 12 or 13 or equivalent
- technical or trade school
- some college or university
- university degree
- post graduate degree

7. In what type of residence do you live?

- rent an apartment
- rent a home
- own a mobile home
- own a home
- men's single residence
- other (specify) _____

8. Are you a member of any community sports, service or other organization?

- yes no

9. Are you employed by INCO?

- yes no

Since the way you feel about Thompson may be affected by where you have lived before, the second part of the questionnaire consists of seven questions about where you lived before coming to Thompson.

Once again, please check off the appropriate box.

10. Where did you spend most of your childhood?

- | | |
|---|--|
| <input type="checkbox"/> B.C. | <input type="checkbox"/> Maritimes |
| <input type="checkbox"/> Alta. or Sask. | <input type="checkbox"/> Territories |
| <input type="checkbox"/> Manitoba | <input type="checkbox"/> Northern Europe |
| <input type="checkbox"/> Ontario | <input type="checkbox"/> Southern Europe |
| <input type="checkbox"/> Québec | <input type="checkbox"/> Other _____ |

11. In what size community did you spend your childhood?

- Rural area
- less than 500 people
- 500 to 2,000 people
- 2,000 to 12,000 people
- 12,000 to 25,000 people
- 25,000 to 50,000 people
- 50,000 to 250,000 people
- 250,000 to 1 million people
- 1 million people or larger

12. How long have you lived in Thompson?

- less than 1 year
- 1 to 2 years
- 2 to 3 years
- 3 to 4 years
- 4 to 5 years
- 5 to 7 years
- 8 to 10 years
- 10 to 15 years
- more than 15 years

13. Where did you live before coming to Thompson?

- | | |
|---|--|
| <input type="checkbox"/> B.C. | <input type="checkbox"/> Maritimes |
| <input type="checkbox"/> Alta. or Sask. | <input type="checkbox"/> Territories |
| <input type="checkbox"/> Manitoba | <input type="checkbox"/> Northern Europe |
| <input type="checkbox"/> Ontario | <input type="checkbox"/> Southern Europe |
| <input type="checkbox"/> Québec | <input type="checkbox"/> Other _____ |

14. How long did you live there?

- less than 1 year
- 1 to 2 years
- 2 to 3 years
- 3 to 4 years
- 4 to 5 years
- 5 to 7 years
- 8 to 10 years
- 10 to 15 years
- more than 15 years

15. How much longer do you plan to stay in Thompson?

- I will leave within 1 year
- I will leave within 2 years
- I will leave within 3 years
- I will leave within 5 years
- I will leave within 10 years
- I will be staying indefinitely
- I don't know when I will leave

16. How often do you visit Winnipeg or another large centre?

- () once a month
- () 4 to 11 times a year
- () 3 times a year
- () twice a year
- () once a year
- () never

Finally the third and most important part, how you feel about your city.

Following are some pairs of adjectives which might be used to describe Thompson. I would like you to check a space which shows which word you feel describes Thompson, and how strongly you feel it is appropriate. For example, the pair good/bad, if you felt Thompson was a fairly good place, you would check one of the boxes near the word good, like this

1 2 3 4 5 6 7

good ___:___:___:___:___:___:___ bad

If you felt Thompson was a very good place you would check the box right beside the word good. If you felt it was neither good nor bad, you would check box in the centre, like this

1 2 3 4 5 6 7

good ___:___:___:___:___:___:___ bad

Now try these pairs which describe Thompson:

- | | | |
|------------------------------------|--|----------------------------|
| 1. stable economy | ___:___:___:___:___:___:___
1 2 3 4 5 6 7 | unstable economy |
| 2. large | ___:___:___:___:___:___:___
1 2 3 4 5 6 7 | small |
| 3. good transportation | ___:___:___:___:___:___:___
1 2 3 4 5 6 7 | poor transportation |
| 4. important administrative centre | ___:___:___:___:___:___:___
1 2 3 4 5 6 7 | unimportant for government |
| 5. winters boring | ___:___:___:___:___:___:___
1 2 3 4 5 6 7 | winters enjoyable |
| 6. rough town | ___:___:___:___:___:___:___
1 2 3 4 5 6 7 | civilized |

7. prosperous _____:_____:_____:_____:_____:_____:_____ poor
1 2 3 4 5 6 7
8. high cost of living _____:_____:_____:_____:_____:_____:_____ cost of living same as Winnipeg
1 2 3 4 5 6 7
9. polluted _____:_____:_____:_____:_____:_____:_____ clean
1 2 3 4 5 6 7
10. heavily industrial _____:_____:_____:_____:_____:_____:_____ residential
1 2 3 4 5 6 7
11. many social problems _____:_____:_____:_____:_____:_____:_____ no social problems
1 2 3 4 5 6 7
12. good place for quick money _____:_____:_____:_____:_____:_____:_____ bad place for quick money
1 2 3 4 5 6 7
13. interesting people _____:_____:_____:_____:_____:_____:_____ dull population
1 2 3 4 5 6 7
14. accessible _____:_____:_____:_____:_____:_____:_____ isolated
1 2 3 4 5 6 7
15. complete range of goods and services _____:_____:_____:_____:_____:_____:_____ inadequate range of goods and services
1 2 3 4 5 6 7
16. progressive _____:_____:_____:_____:_____:_____:_____ unprogressive
1 2 3 4 5 6 7
17. lifestyle like in Winnipeg _____:_____:_____:_____:_____:_____:_____ lifestyle much different from Winnipeg's
1 2 3 4 5 6 7
18. good for recreation _____:_____:_____:_____:_____:_____:_____ poor for recreation
1 2 3 4 5 6 7
19. has all the modern facilities _____:_____:_____:_____:_____:_____:_____ lacks modern facilities
1 2 3 4 5 6 7
20. extremes of hot and cold _____:_____:_____:_____:_____:_____:_____ liveable climate
1 2 3 4 5 6 7
21. much racial stress _____:_____:_____:_____:_____:_____:_____ no racial stress
1 2 3 4 5 6 7
22. impermanent _____:_____:_____:_____:_____:_____:_____ permanent
1 2 3 4 5 6 7
23. congested _____:_____:_____:_____:_____:_____:_____ lots of space
1 2 3 4 5 6 7
24. in wilderness _____:_____:_____:_____:_____:_____:_____ in tamed country

Appendix B: Unrotated Factor Loadings Matrix

Factor	I	II	III	IV	V	VI	VII	VIII	IX	X	XI
1. unstable-stable economy	.387	.128	-.159	.327	.317	-.198	.061	-.022	.020	.464	-.022
2. small-large	.173	.181	-.028	-.032	.588	.000	.180	-.152	-.178	-.301	-.215
3. poor-good transportation	.457	.224	-.074	-.223	.180	-.104	-.113	-.113	-.248	-.111	.074
4. important for government	.398	-.072	-.053	-.030	.118	.477	.368	-.105	-.280	-.067	.176
5. winters boring-enjoyable	.476	-.202	.350	.033	.123	-.364	.349	.094	-.008	-.161	.087
6. rough town-civilized	.600	-.143	.101	.264	-.069	.070	.456	.018	.122	-.005	.005
7. poor-prosperous	.504	-.162	-.265	.296	.256	.272	-.130	.162	-.106	.134	.268
8. cost of living	.291	.267	.284	-.217	-.004	-.170	-.315	-.173	.210	.071	.052
9. polluted-clean	.513	-.152	.341	.179	-.169	.043	-.015	.237	.010	-.250	.193
10. industrial-residential	.300	.076	.375	.218	-.412	-.231	-.157	.198	.061	-.086	.000
11. social problems	.128	.558	-.105	.240	-.185	-.182	.053	-.333	.308	.058	-.088
12. quick money	-.091	.339	-.106	.175	.153	-.313	-.117	.513	-.258	-.159	-.152
13. interesting population	.476	-.191	-.041	-.123	.498	.080	-.255	.101	.341	.056	.031
14. isolated-accessible	.523	.319	-.202	-.256	.004	.157	.198	.333	.010	.015	.187
15. range of goods	.517	.271	-.252	-.072	.014	.163	-.133	.087	-.259	.292	.170
16. unprogressive-progressive	.460	.164	-.420	-.102	-.125	-.076	.060	.355	.139	.083	.063
17. lifestyle	.211	.245	-.137	-.459	-.189	.441	-.227	-.035	-.038	-.131	-.287
18. good for recreation	.636	-.342	.001	-.140	.036	-.134	-.332	-.131	-.057	.183	.003

Factor	I	II	III	IV	V	VI	VII	VIII	IX	X	XI
19. modern facilities	.656	-.171	-.128	-.129	-.089	.115	-.181	-.269	-.020	.294	-.074
20. liveable climate	.316	.032	.425	-.110	.206	-.050	.274	.247	.067	.282	.091
21. no racial stress	.434	.050	-.221	.392	-.310	-.027	.177	-.312	-.013	-.034	.190
22. impermanent-permanent	.542	.045	.127	.209	-.113	-.216	-.113	-.073	-.393	-.082	-.096
23. lots of space	.395	-.027	.138	.613	-.013	.086	-.265	.098	-.027	-.037	.075
24. wilderness-tamed country	-.171	-.369	-.085	-.009	.133	.187	-.297	.260	.316	-.163	.355
25. far from a major city	-.037	.570	.118	-.026	.419	-.073	.116	-.125	.188	.059	.142
26. poorly-well planned	.365	.260	-.218	.045	.200	-.057	-.157	-.278	.196	-.286	.351
27. transient-stable population	.213	.330	.585	-.064	-.051	-.107	-.167	.068	.010	.105	-.079
28. cultural activity	.368	-.033	-.378	-.303	.111	-.333	-.094	-.094	.053	-.316	-.115
29. friendly people	.543	-.175	-.114	.092	.177	.067	.235	-.079	.308	-.213	-.329
30. male/female ratio	.279	.069	-.081	-.484	-.377	-.229	.329	.195	.208	.073	-.050
31. company town	.364	.384	.226	-.032	-.144	.223	-.077	-.114	-.301	-.187	.199
32. little to do-lots to do	.699	-.322	.148	-.184	-.098	-.132	-.033	-.132	.062	-.065	.143
33. scenic location	.523	.013	.267	.208	-.125	.001	-.116	.115	.170	-.123	-.306
34. dreary-cheerful	.714	-.095	.325	-.235	-.131	.132	.094	-.055	-.036	.002	-.156
35. middle-working class	.032	.428	.195	.224	-.114	.507	-.044	.160	.398	-.061	-.106

Factor	I	II	III	IV	V	VI	VII	VIII	IX	X	XI
1. unstable-stable economy	-.009	.624	.068	.002	.195	.087	-.021	.118	.062	-.419	-.157
2. small-large	.017	.076	-.109	.144	-.049	-.032	-.059	.752	.103	-.011	-.114
3. poor-good transportation	.133	.173	.222	.410	.012	.194	-.236	.244	.196	.074	.013
4. important for government	.169	.130	.058	.551	-.061	-.361	.059	.234	-.349	-.041	-.047
5. winters boring-enjoyable	.601	-.048	.140	.016	-.049	.094	-.258	.208	-.015	-.372	-.018
6. rough town-civilized	.472	.254	.305	.074	.242	-.319	.092	.136	-.237	-.230	-.108
7. poor-prosperous	.249	.733	.017	.091	-.011	-.252	.062	.153	.070	.117	.054
8. cost of living	.119	.046	.068	.063	.110	.664	-.037	.033	-.097	.054	.023
9. polluted-clean	.714	-.014	.056	.233	.037	.026	.045	-.100	.008	-.087	.117
10. industrial-residential	.211	.157	.299	-.036	.468	-.090	-.086	-.275	.294	.161	.007
11. social problems	-.084	.027	.105	-.097	.618	.297	.268	.080	.003	-.033	-.325
12. quick money	-.014	.024	.062	.032	-.045	.003	.004	.088	.810	-.039	-.069
13. interesting population	.197	.483	.123	-.034	-.096	.237	-.049	.330	-.141	-.034	.493
14. isolated-accessible	.095	.173	.616	.484	.030	.010	.113	.131	.055	-.014	.064
15. range of goods	-.035	.490	.255	.552	.109	.093	-.050	-.068	.035	.039	-.050
16. unprogressive-progressive	.077	.297	.639	.135	.212	-.050	-.007	-.035	.163	.030	.097
17. lifestyle	-.048	.079	.237	.266	-.096	.139	.148	.087	-.124	.711	-.054
18. good for recreation	.357	.491	.066	.074	.014	.231	-.463	-.052	-.233	.099	.109

Appendix C : Rotated Factor Loadings Matrix

	Factor	I	II	III	IV	V	VI	VII	VIII	IX	X	XI
19.	modern facilities	.221	.553	.150	.164	.121	.140	-.234	-.057	-.413	.195	-.073
20.	liveable climate	.261	.116	.244	.124	-.345	.236	.108	.080	-.098	-.453	-.052
21.	no racial stress	.258	.136	.043	.190	.635	-.193	-.028	-.092	-.195	-.101	-.187
22.	impermanent-permanent	.490	.222	.091	.266	.174	.098	-.271	.002	.162	.032	-.307
23.	lots of space	.487	.359	-.297	.137	.266	.001	.175	-.134	.173	-.104	.112
24.	wilderness-tamed country	-.019	-.042	-.071	-.099	-.074	-.109	.032	-.131	-.015	.017	.762
25.	far from a major city	-.282	-.049	.024	.136	.121	.390	.259	.412	.066	-.314	-.036
26.	poorly-well planned	.026	.056	.037	.265	.559	.207	-.075	.335	-.055	-.006	.295
27.	transient-stable population	.289	-.028	-.029	.133	-.163	.593	.159	-.054	.096	-.064	-.205
28.	cultural activity	.089	.078	.328	-.059	.245	.064	-.461	.375	.072	.268	.099
29.	friendly people	.440	.285	.220	-.197	.152	-.158	.068	.473	-.219	.083	.010
30.	male/female ratio	.116	-.154	.775	-.061	-.026	.100	-.107	-.091	-.128	.039	-.162
31.	company town	.236	-.083	-.053	.638	.135	.213	.100	.031	-.013	.138	-.143
32.	little to do-lots to do	.563	.153	.218	.135	.088	.170	-.372	.025	-.357	-.004	.115
33.	scenic location	.633	.228	.063	-.083	.078	.189	.182	.050	.049	.136	-.082
34.	dreary-cheerful	.594	.185	.250	.236	-.148	.197	-.054	.099	-.349	.136	-.179
35.	working-middle class	.108	.017	.021	.063	.091	.145	.818	.001	.005	.153	.072

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