THE PERCEPTION OF NEIGHBOURHOOD STRAIN:

A COMMUNITY CASE STUDY

by

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ABSTRACT

The aim of this study is to investigate the effects of socio-demographic variables on the perception of neighbourhood strain in an inner-city community. The ultimate purpose of this detailed analysis of strain perception is to develop hypotheses about the effect of actual neighbourhood strain and the perceived strains on the residents' participation in the 'Citizens' movement.

First, a study of the objective strains on the neighbourhood is carried out, followed by an investigation of the variation in strain in different geographic areas of the community. Finally, a measure of perceived strain is developed and the effect of various socio-demographic characteristics, and of zones of different strain intensity on strain perception is measured.

It is found that the location of residents in zones of varying actual strain has an effect on their perception of neighbourhood strain. It is also found, that of all the socio-demographic variables examined, only education has an effect on strain perception at the level of the neighbourhood as a whole. A variety of different socio-demographic characteristics exert an effect at the level of the zones, however, it is seen that the variation in actual strains combined with the variation in socio-demographic makeup of

the different zones, creates a series of different environments which must be taken into account when predicting the residents' participation behavior.

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CHAPTER I

INTRODUCTION

Sandy Hill is an inner-city community bordering the central office and commercial area of Ottawa, Canada. In the nineteenth century, it was considered a prestigeous place to live and was inhabited, to a large extent, by highly placed Anglophone public servants and merchants. Through the years, the residential and family, as well as the socio-economic characteristics of the area have undergone a variety of shifts until the early 70's, the period of time focused on by this study, the area had become a mixed neighbourhood in terms of a variety of characteristics. A range of housing types, family statuses, income and occupation groups, ethnic groups as well as age groups, are found in this neighbourhood. Much pressure has been exerted on the neighbourhood, which would ultimately limit its residential uses to a few extreme types. Sandy Hill shares the pressures exerted on many inner-city areas; the pressure exerted by unprotective zoning regulations, the pressure from land speculation as well as from large volumes of through traffic on residential streets. A unique pressure is exerted on this neighbourhood, however, by the expansion of the University of Ottawa on the community's western border. All of these pressures converge into a severe strain on the

survival of the area as a mixed residential neighbourhood with a special character.

In the late 60's, a citizens' action group sprang up in Sandy Hill, to halt, and where possible to reverse the effects of the severe neighbourhood strains. By 1971, their efforts had resulted in the formation of a Citizens' Committee for planning, to participate in the city's process of drawing up a neighbourhood plan for the area. Little major opposition has been voiced against the Citizens' Committee's goals and proposals, by occupants of the neighbourhood itself. General meetings are held before the Committee's recommendations are presented in the community's name, notice of which is distributed to all occupants of the neighbourhood and to which all are invited. Although no major opposition has been voiced by citizens of Sandy Hill against the Committee, some reformulation of specific proposals has occurred through this feedback mechanism, as would be expected in a participatory process. It seems then, that the majority of the residents of the area support the aims and the proposals of the Committee and that many who offer no support are at least not opposed to these aims. The major opposition to the Citizens' Committee's recommendations has come from outside the community, from certain planners, politicians and developers who hold different views from the Citizens' on the desirable and optimal use of the area.

The aim of this thesis is to explore the actual strains on the neighbourhood, in terms of its survival as a mixed residential area, and the perception of these strains that residents of the neighbourhood hold. This study is part of a larger, long term study which aims to explore the factors which affect the participation of residents in the Citizens' Group as well as the factors which impede or facilitate the Citizens in the attainment of their goals. The ultimate purpose of studying both the objective strains and the perception of strains in the neighbourhood, in this thesis, is to predict their effect on the participation behavior of citizens, although this effect will not be measured here.

Theoretical Framework

The general theoretical framework used in the overall study will be Maurice Pinard's theory of collective behavior, which is a reformulation of mass theory as proposed by Kornhauser and of collective behavior theory as proposed by Neil J. Smelser.[1]

Kornhauser's mass theory postulates that the source of the generation of mass movements in modern society, is to be found in the characteristics of its social structure, that is, in its weak integrative capacity. It claims that

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[1]William Kornhauser, The Politics of Mass Society, (New York: The Free Press of Glencoe, Inc., 1959) and Neil J. Smelser, Theory of Collective Behavior, (New York: The Free Press of Glencoe, Inc., 1963).

large segments of the population are highly vulnerable to political movements because of the weakness of the set of intermediate structures between the individual or the primary group on one hand, and large scale national organizations on the other. In mass society, then, the atomization of the individual prevails encouraging him to find redress for his grievances in social movements.

Strong intermediate groups are assumed to exert restraining effects which prevent the growth of political movements. There are mechanisms through which an attachment to intermediate groups is said to execute these restraining effects, for instance, through the socialization of members to accept the rules of the game and to tend towards negotiation rather than radical action; through the enlargement of concerns and the prevention of the formation of one overriding goal and ideology characteristic of social movements. Involvement in secondary organizations is said to operate a system of social sanctions and rewards which discourage the use of channels not approved of by the group and encourage conformity to approved behavior. These organizations are also thought to foster a feeling of political efficacy among participants while non-involvement engenders alienation and the search for political ventures. Therefore, according to mass theory, a society which lacks a complex set of intermediate structures lacks restraining mechanisms, and its members are open to mass action and to participation in social movements.

The frequently observed finding that the poor are not easily recruited to social movements although they certainly have many grievances and are one of the most alienated segments of the population, as well as Pinard's finding that recruitment to the Social Credit Party was most successful in the socially integrated rural areas, pointed out the need for the reformulation of mass theory. In his reformulated model, Pinard has taken inspiration from Neil Smelser's theory of collective behavior, from his own findings as well as from findings based on diffusionist and conflict theories. He has outlined some factors which the previous mass theory did not take into account but which must be made explicit before a reformulated model is drawn up.

First, the various elements of the intermediate structure (primary groups, communal groups, occupational groups, associations and organizations of all sorts) must be considered as reference groups by their members in order to exert any kind of normative effects, either positive or negative. Moreover, under certain strains, some groups may cease to be regarded as legitimate reference points.

Second, the components of the intermediate structure which act as reference points may be found on any point of the alienation-conformity continuum and their position may change over time. Accordingly, they can exert on their membership restraining, neutral, or mobilizing effects towards a new movement.

Third, all components of the intermediate structure, whatever their normative orientation, are likely to exert communicating effects on their members. Well-integrated individuals are better targets for recruitment, therefore, than atomized ones.

Fourth, strains must be considered as an important independent factor; they can also affect the conditions of the intermediate structure. Under severe strains, integrated individuals can elude the restraining effects of intermediate groupings, and these groupings can themselves move towards an alienated position, exerting both communicating and mobilizing influences.

A few general propositions can now be made:

> If the strains are severe and widespread, alienated groups will tend to be particularly active; moreover, either conformist groups will tend to move from a restraining position to a more neutral or even to a mobilizing position, or their members will tend to elude their restraining effects. Their communicating role, on the other hand, will be working fully. To the extent that this prevails, I would predict that integrated individuals and pluralist societies will be more prone to social and political movements than atomized people and mass societies. This prediction, of course, is just the opposite of that made by mass theorists.
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> If, on the other hand, strains are not severe or widespread, then restraining effects will tend to predominate over mobilizing effects, and communicating effects will be weak since there is no need for a new movement. Under such circumstances, any new movement, if it should appear, will of course be weak; but to the extent that it succeeds in recruiting some people, the basic proposition of mass theory should hold: the lower the degree of integration, the greater the proneness to social movements. So far, therefore mass theory appears to be sound, paradoxically, only

> when strains are limited, that is, when the success of a movement is highly problematic to start with.[2]

The present thesis will be limited to an analysis of strain, while later phases of the study will relate the impact of this strain on participation behavior. Future phases will also examine the role of structural conduciveness, generalized beliefs, and mobilization especially as affected by participation in the intermediate structure, and relate their effects to those of neighbourhood strain.

Although there are many problems in the neighbourhood which converge into a strain on the residential character of the area, some parts of Sandy Hill suffer a greater quantity and more intense strains than others. The variation of strains throughout relevant zones will be traced in this study. It is our feeling, however, that it is not only the objective strain on an area which will affect participation behavior, but also the perception of this strain that citizens hold. Those who see a number of problems and pressures affecting the community, and are aware that they are all aspects of a greater threat to the survival of the residential nature of the community, would seem to be more likely to be mobilized for intense action than those who see only particular problems, or those who are not aware of the threat to the neighbourhood's preservation. This perception of strain, and its variation

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[2]Maurice Pinard, The Rise of a Third Party, (Englewood Cliffs, N.J.: Prentice Hall, 1971) p. 194.

throughout zones with different objective strains, is a very important aspect in determining the effect of strain on participation. The determination of the patterns of strain perception, then, will form the central part of this thesis.

There are many factors which affect the perception of strain, but we will limit ourselves to examining the impact of the variation in objective strains, as well as the impact of family and residential characteristics and socio-economic characteristics. Residents of zones with high objective strain, should tend to have a higher awareness of the generalized critical strain on the community. Those living in areas of moderate and low objective strain may be expected to have a corresponding moderate and low perception of generalized strain.

There are a number of family and residential characteristics which act as intervening variables in the relationship between objective strain and the level of strain perception. Owner occupants may be considered to have made a stronger commitment to the neighbourhood than tenants and, in turn, tenants more than roomers. One would expect owners to have a higher awareness of neighbourhood strain than tenants and, in turn tenants more than roomers. Those living in low profile buildings (low-rise) tend to include the street as part of their environment more than those in medium profile buildings or high profile buildings. One would expect residents of low profile buildings to have a high awareness of neighbourhood strain, those in medium

profile buildings to have a moderate awareness of neighbourhood strain and those in high profile buildings to have a low awareness of neighbourhood strain. One would expect long term residents of the neighbourhood to have a high perception of neighbourhood strain, moderate term residents to have a moderate awareness, and short term residents to have a low awareness of neighbourhood strain.

Since the residential unit which is most affected by the kind of pressures on the neighbourhood is family-type accomodations, one would expect those residents with children to have a high awareness of neighbourhood strain, couples with no children to have a moderate awareness of neighbourhood strain and the single to have a low awareness of neighbourhood strain. Since university student households are usually of a short term nature with a definite time limit in view, one would expect students to have a lower awareness of critical neighbourhood strain than non-students.

When the outline of this thesis was first formulated, it was the author's intention to examine the differences in the perception of strain between the Anglophone and Francophone residents of the community. An examination of the data revealed that the perception of strain was a complex and multi-dimensional phenomenon, and its detailed study had to be limited to a small number of residential and family characteristics as well as to socio-economic controls. At the level of the neighbourhood as a whole, there was found

to be no significant difference between the Francophone and Anglophone population on those characteristics to be used in the examination, except that a slightly higher proportion of Francophones are University students. At the level of zones with varying degrees of objective strain, the differences were also found to be minimal. A decision was made to study the effect of the designated characteristics on the perception of strain in depth, rather than be diverted by phenomena peripheral to them.

Statistical Procedures

Sample

The data was gathered through a survey of 574 households out of the approximately 5,000 households in the neighbourhood. The interviews were carried out from January to May, 1972, just after the Citizens' Planning Committee had been formed.

The sampling procedure consisted of drawing a pure random sample of households within the limits of Sandy Hill. The first step consisted of surveying each building in the area in order to know the number of households in each. A household was defined as a residence unit which includes a family accomodation, apartments or rooms where roomers are concerned. Each household in the community was, then, numbered and the desired number of households randomly chosen.

Analysis

The examination of the survey data, will be a multivariate analysis undertaken through cross-tabulations where the effects of independent variables will be calculated as accounted for by other variables. The usual .05 level of significance will be chosen.

Outline

A detailed study of the objective strains exerted on the neighbourhood, is the first step towards an examination of strain perception. This will be undertaken by an examination of the changes in the residential, family and socio-economic characteristics of the area, especially in the twenty years between 1951 and 1971 when changes accelerated, as drawn from the Census of Canada data. The Census data will be complimented by evidence of pressure sources drawn from city files and from observation (Chapter II). This will lead to a discussion of the variation in objective strains in different sections of Sandy Hill, and an examination of the way in which the family and residential characteristics of these zones may be expected to alter the prediction about the level of strain perception their residents are likely to attain (Chapter III).

A measure for strain perception at the level of the neighbourhood as a whole will then be developed, using a number of indicators of opinion on neighbourhood problems from the sample survey (Chapter IV). Finally, the effect of residing in zones of varying strain, and the effect of

family and residential as well as socio-economic characteristics will be measured (Chapter V).

CHAPTER II

OBJECTIVE NEIGHBOURHOOD STRAINS

As stated at the outset of this study, the neighbourhood of Sandy Hill is located in Ottawa near the downtown core. It comprises an area of approximately 600 acres which is bounded on the west by the Rideau Canal, on the east by the Rideau River, on the north by Rideau Street, a major thoroughfare and commercial area, and on the south by the Queensway, a major expressway. This is the definition of the neighbourhood which has been used by the Citizen's Committee for planning in all of its activities however it is not a definition that has been shared by the City Planning Branch in their activities. For the city, the neighbourhood boundaries are identical to the Citizens' on the north, east and south but on the west they see the community stopping at King Edward Avenue. This leaves a residential area of several blocks in the north-west corner and the University of Ottawa and most of the property over which it has expropriation rights, out of the neighbourhood. The city's reason for this is a bureaucratic one; the north-west residential area, which has become known as the north-west quadrant, has been designated as part of the City's Central Core study involving a different city planning team and different time limits. This small area, which contains

many historic buildings, many of the community's churches, which has retained a residential character although it has suffered deterioration, is to be planned as part of the major commercial and office area of the city. The Citizens, seeing the pressure which such an association may bring to bear for the redevelopment of this area have always refused to consider it as separate from the rest of the community and continue to plan for it.

The University of Ottawa and much of its potential property was excluded from the neighbourhood by the city planning since the province had granted the University expropriation rights and planning control over an area bounded by Mann Avenue in the south, Henderson Street, Laurier Avenue and Cumberland Street on the east, Stewart Street on the north and Nicholas Street on the west. Because the city does not have the planning jurisdiction over this area, although it does fall under certain city by-laws, it has chosen to consider it as separate from the Sandy Hill neighbourhood. The Citizens' Group on the other hand feels that the University and its expropriation have such a strong impact on the community, that so many students and staff are residents of the neighbourhood and so many services and facilities could potentially be shared by them, that they must be treated together even though the city does not have a complete planning mandate on the University Campus.

Since this study is concerned with the development

of the citizens' movement as a social movement, we will use the boundaries as defined by the Citizens' Committee for planning. A slight diversion from the aforementionned boundaries does inadvertently occur in the survey data, however, since an area of light industry, housing and park-land in the southern tip of the neighbourhood was not included in our original sample. This area is isolated from the rest of Sandy Hill geographically and also physi-cally since only a small walking path and one street connect it to the rest of the neighbourhood. At the time that the sample was drawn up, intense general planning activities had not begun and there was some confusion about these residents' status as part of the community. The sampling procedure included the residents of a Central Mortgage and Housing low-rental apartment complex on Mann Avenue however, and this complex forms the survey's southern residential boundary. Given the small number of residents in the southern tip, its exclusion from the sample should not cause an appreciable distortion of the data.

In this chapter the data used, will be mostly derived from the Canadian census as published by Statistics Canada. The boundaries referred to here from 1941 on will be slightly different from those accepted for the general study because of the way in which the census tracts have been defined. According to the 1971 census tract definition, Sandy Hill is roughly represented by census tracts 14, 50,

51 and 52 (see Figure A.1). Their boundaries exclude the north side of Daly Street from King Edward Avenue to Nicholas Street, Besserer Street from King Edward Avenue to Colonel By Drive; the south of Rideau Street from the canal to Charlotte Street, which represents very few households; Besserer Street North from King Edward Avenue to Charlotte Street. This census tract division also includes Rideau Street North from Charlotte to the Rideau River and Charlotte Street East from St. Patrick Street to Rideau Street which are considered to be part of the Lower Town neighbourhood. These added and deleted areas do not consist of enough households to cause concern about the representivity of the statistics used. Previous to 1941 the census data was collected by ward with St. George's ward roughly representing Sandy Hill.

History of the Neighbourhood

Sandy Hill began to develop in earnest as a residential community with the influx of civil servants after the naming of Ottawa as capital of the two Canadas in 1857 and as the seat of government of the Dominion of Canada in 1867. At this time the only area of Sandy Hill subject to great residential development was the land between Laurier and Rideau Streets which we will refer to as the North Zone. Although many of the prominent residents of Ottawa had lived across the canal in Uppertown which had developed earlier, by the time of Confederation Sandy Hill was considered a prestigeous place to live and Daly Street in

particular was the most fashionable street in the city. Many prominent civil servants, members of Parliament and merchants made the north part of Sandy Hill their home in the 1860's and 70's.

While the North zone was developing as a fashionable residential area, its westernmost part developed as a light industrial area because of the Rideau Canal and its commercial traffic. Homes for the canal and light industry workers also were built in this area. The trend towards a less grand style of housing in this area than in the rest of the North zone, continued in later years through the influence of the construction of railroad tracks, a railway yard and a railway station on the banks of the canal. Another factor which affected the western sector began with the establishment, in 1848, of the College of Bytown, later to become the University of Ottawa. The college consisted initially of only one block at Waller and Laurier but expanded over the years, especially in recent years, until it controlled a great part of the Western sector.

The 1871 census gives us the first indication of the socio-demographic characteristics of the Sandy Hill population. At this time the population consisted of 3,474 people out of a population for the City of Ottawa of 21,545. The number of families corresponds closely to the number of homes, indicating a preponderence of single family dwellings. About 88 percent of the population claims to be from

families originating in the British Isles, 11 percent claim to be of French origin and 1 percent of German extraction.

By the time of the 1881 census the population of Sandy Hill had grown to 4,527 people while the population of the city as a whole had grown to 27,412. The majority of the population still originates from the British Isles but a drop from 88 percent to 81 percent of the population indicates a drop in the concentration of the British majority. This drop in concentration of the British majority is accounted for by the increase in the number of people of French origin from 11 percent to 17 percent. The proportion of other ethnic groups remained stable.

By 1891 some residential development south of Laurier in the western sector had begun. On the eastern edge of the community, the Ottawa Golf Club located in much of what is now Strathcona Park along the Rideau River, assuring the development of fine homes in the eastern section of the neighbourhood. With the 1891 Census some data pertaining to the ethnicity of the population is lost. The total population of Sandy Hill had risen to 5,788.

When the 1911 Census was taken, Sandy Hill was largely developed except for the land in the southeastern area of the neighbourhood. The population at this time was 10,581. The first apartment buildings had begun to appear in the area there being listed light buildings with over five dwelling units in Sandy Hill at this time.

By 1921 the neighbourhood had been totally filled in

with buildings except for a few blocks in the Southeastern corner. The population had risen to 12,671. Part of this population increase was accommodated through the construction of more apartment buildings as the number of buildings containing six or more dwellings increased from six to nineteen.

Between 1921 and 1941 the population of Sandy Hill increased from 12,671 people to 14,877 people, according to the Census. Somewhat spotty statistics make it difficult to plot the neighbourhood trends during these years however an examination of the city's building statistics does provide a picture of neighbourhood development. It seems that following World War I a building boom was experienced. As we saw previously, this building boom resulted in most of the developable land in Sandy Hill being utilized. This building activity included the construction of new apartment buildings but also the conversion of larger homes and former mansions into apartment buildings. This boom continued until 1929 when the scarcity of mortgage money and developable land caused it to taper off. With the advent of the Depression nearly all new construction came to a halt.

Even though few new dwellings were being constructed, the population of Sandy Hill continued to increase during the Depression years. The population of St. Georges ward was 14,522 in 1931 compared with 12,671 in 1921, and by 1941 the population had undergone a modest increase to 14,877

people. It is likely that many of the very large houses which had been built to accomodate big families and to be run by a large live-in staff, continued to succumb to a change in lifestyles and economic conditions and be at least partially sub-divided into apartments. The financial burden brought on by the Depression probably caused many residents to take in roomers or boarders especially in homes that were under-occupied. The growth in population during the Depression years may have been higher than the 1931 and 1941 Census figures indicate due to the changes in boundary-definition used in the Census since the former statistics were gathered by ward and the latter were gathered by Census tracts and represent a somewhat more restricted area.

By the time of the 1951 Census, Sandy Hill's population had grown to 15,287 from the 1941 level of 14,877. This modest growth was not characteristic of the whole neighbourhood as census tract 50, the western sector of the neighbourhood, showed a population drop of 13 percent to 3,204 people. The prime factor to which this drop in population can be attributed is the construction of the MacKenzie King Bridge on the northwestern edge, completed in 1951, which caused the demolition of a number of residences.

With the 1951 Census, useable data on ethnicity again became available showing that the French segment of the population had grown considerably and represented 38 percent

of the neighbourhood's population while those of British descent made up 45.1 percent of the population. The French and English residents are not randomly distributed throughout the Census tracts since the western zone, tract 50, is predominately French (59.3 percent) while the central and eastern tracts are 34 percent and 30 percent French respectively.

Besides displacing part of the community's population, the MacKenzie King Bridge had another serious consequence for the neighbourhood's stability, that is, the introduction of large amounts of through traffic onto the residential streets. The Gréber Report indicates that the only street of any regional importance which cut through the community in 1948 was Laurier Avenue East connected to the Laurier Avenue Bridge.[1] There was a Nicholas-Waller traffic arterial along the western edge of the neighbourhood, railroad tracks and maintenance yards along the western and southern borders and no bridges across the river on the quiet eastern edge except at the northern tip. Sandy Hill had been somewhat dead-ended by these boundaries, a condition which the construction of the MacKenzie King Bridge promptly altered. Many neighbourhood streets began to serve as shortcuts to the bridge bypassing busy Rideau Street with King Edward Avenue, Wilbrod Street and Stewart Street, particularly in the North West quadrant, bearing the

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[1]Jacques Gréber, The Gréber Report: Plan for the Nation's Capital (Ottawa: Queen's Printer, 1950).

onslaught of this through traffic. Over the years the volume of through traffic in the north zone increased with Wilbrod and Stewart Street being made alternate one-ways to facilitate the use of the bridge and accomodate the growing number of cars. This was only the first of a number of events which encouraged the penetration of local streets by through traffic.

The other factor which was to affect the western edge of the community was the growth of the University of Ottawa. By 1912 the University had undergone an expansion which increased its territory from the original one block to four blocks along Cumberland Street. The enrolment of the University grew gradually over the years but in the late 50's it started to accelerate. Expansion of the University's facilities became mandatory if the enrolment were to continue increasing at such a high rate. In order to facilitate this expansion, the University dropped its status as a Roman Catholic University in 1968 and became a public institution qualifying it for provincial grants for greater capital expenditures. The University then embarked on a land acquisition program which significantly altered the social and physical structure of Sandy Hill. Since the majority of the population in the area over which the University gained expropriation rights was of French origin, it is this population which was most affected by the expansion.

Not only those who were expropriated or those who

sold out in anticipation of expropriation were directly affected by the University's expansion. The increasing enrolment put pressure on the community to absorb more students, encouraging the transformation of homes into rooming houses and apartment buildings. This can be seen most directly in the area of the neighbourhood between Laurier Street and Somerset Street, and west of Chapel where many rooming houses exist. The decay and demolition of the blocks within the University's boundaries influenced a deterioration of the housing stock in those western blocks outside the University's limits.

Socio-Demographic Alterations

At this point we will begin an examination of the pattern of a number of Sandy Hill's socio-demographic characteristics for the twenty years between 1951 and 1971. At this time many pressures for change began to converge on Sandy Hill and the changes in the socio-demographic characteristics of the residents are an indication of the effects of some of these pressures. Where applicable, the statistics for the City of Ottawa as a whole will be compared to those of Sandy Hill, in order to act as a relevant reference point in order to put changes in Sandy Hill in the proper perspective and avoid spurious conclusions. Only Census tract 50, 51 and 52 will be used for the examination over time in order to facilitate comparison. Due to some variability in boundary definition Census tract 14 will be examined separately and for the 1971 data only.

With the 1961 Census a decline in the population of Sandy Hill is observed from 15,287 people in 1951 to 14,855 in 1961, a trend which continued in 1971 when the population decreased further to 13,590. This decrease in population is especially striking since the City of Ottawa was undergoing an accelerated growth of population in this period, from a population of 202,045 in 1951 to a population of 268,206 in 1961 and 302,340 in 1971. While Sandy Hill exhibited a decline in population from 1941 to 1971 of 9 percent, the city as a whole showed an increase of 76 percent (from 171,940 in 1941 to 302,340 in 1971). It is in the western Census tract 50 that the real decline in population took place from 3,204 people in 1951 to 2,552 in 1961 and 1,120 in 1971. The most dramatic decrease took place in the late 60's coinciding with the expropriation operations of the University. From 1941 to 1971 there was a loss of 70 percent of the population in this western sector. The other two Census tracts actually underwent a slight increase of population after 1951. The central Census tract, 51, had a population of 7,261 in 1951 and of 7,844 in 1971 while the eastern Census tract, 52, had a population of 4,822 in 1951 and 5,155 in 1971.

It is obvious that the housing types in the community have changed considerably since 1951, so it is not likely that this relative stability of population in the central and eastern sectors is related to a stability of housing types and uses.

In 1951, Sandy Hill had 975 single detached dwellings making up 31 percent of the housing units in the area and 2,180 attached or apartment dwellings representing 69 percent of the dwellings. In 1971, there were 710 single detached dwellings composing about 13 percent of the housing units in the area and 4,445 attached or apartment--86 percent of the area. All of the Census tracts show an actual decrease in the number of single detached dwellings, however in the central and eastern zones it is the accelerated construction of other types of housing units which makes the proportion of single detached units so low, 12 percent in C.T. 51, and 18 percent in C.T. 52 in 1971. There were 1,015 single attached, apartments and flats in 1951 in tract 51 and 2,430 in 1971; in tract 52 there were 690 apartments or attached units in 1951 and 1,710 in 1971 a jump from 69 percent of the housing units to 87 percent of the housing units in the central sector and from 63 percent to 81 percent in the east. The central sector had been the one which had experienced the highest degree of apartment development up until 1951. It is also the area with the greatest population. Between 1951 and 1971 the new apartment construction was gradual with the greatest surge of construction occurring in the early 60's. The eastern sector had a stock of grander homes in general than the central sector, many of which became embassies rather than apartment buildings or rooms. Conversion into embassies maintained the appearance of the area while many of the larger homes remained in single

family use or were only actually converted into apartments. By 1951 there had been no great degree of new apartment construction in this area, with only a gradual increase by 1961 but from the middle of the 60's on there was a great surge of new apartment construction. Most of this took place in the north zone of the sector where the zoning by-laws facilitated hi-rise construction which often entailed the destruction of historical or large unusual houses, or at least bordered an area of such homes.

It is surprising that such an increase in the number of dwelling units has been accompanied by a levelling off or even a decrease in population. A clue to this mystery lies in the fact that the number of persons per household has been decreasing in Sandy Hill, indicating that more space is being turned over to people living alone or to couples without children thus stabilizing the size of the population while increasing the number of dwelling units. In 1951 there was an average of 3.8 persons per household in Sandy Hill, in 1961 the average was 3.2, in 1971 it had dropped to 2.5 persons per household. The average for the whole of Ottawa has also been dropping but not as dramatically. In 1951 the average number of persons per household in Ottawa was 3.8 and in 1971 it was 3.2. Sandy Hill's average and the city's average were comparable in 1951 but by 1961 Sandy Hill had started falling behind until in 1971 its household units were considerably smaller.

Between 1951 and 1971 Sandy Hill gained 2,265 apartments or attached dwellings and lost 265 single detached dwellings while its western population decreased dramatically through expropriation and its central and eastern population increased only slightly. During this time Sandy Hill also lost 859 families. The Census defines a family as a couple with or without children, or as a parent or guardian living with children in the same dwelling. About half of the families lost were from the western sector and most left at the time of the University's expropriation. The central area also lost a large number of families going from 1,759 in 1951 to 1,445 in 1971, a loss of 314. This is probably due to the great growth in apartment type dwellings and of traffic. The eastern sector did not suffer such a great family loss going from 1,219 families in 1951 to 1,155 families in 1971, a loss of 64 families. It must be noted that in the same period the city of Ottawa as a whole had an increasing number of families from 48,811 in 1951 to 70,585 in 1971, an increase of almost 45 percent.

Sandy Hill did not share in the growth of families experienced by Ottawa as a whole from 1951 to 1971 but it did experience a great increase in the number of households during that period, indicating that there is an increasing proportion of single people in the area. In 1951 the single or widowed made up 36 percent of the population while in 1971 they make up 45 percent. This growth is not comparable to that of the city as a whole for in 1951 single people

made up 29 percent of the population of Ottawa and in 1971 this proportion had only risen to 30 percent. In 1951 the neighbourhood already had a higher proportion of single people than the city but compared to the city as a whole, Sandy Hill has been characterized in these years by an unusual loss of families and a high growth in the proportion of single people.

Since the figures on families include both those couples with and without children, it is important to examine the change in age characteristics in the community in order to know whether it is people with pre and school age children who have been leaving or not electing to come to the community. According to the Census figures, Sandy Hill has undergone a drop in the population of children 0-4 years of age, from 1,244 such children in 1951 (8 percent of the population) to 565 in 1971 (4 percent of the population). Although this decline is sharp, a similar decline is experienced by the city as a whole reflecting a change in life styles and a general decline in the birthrate. In the city of Ottawa in 1951 children from 0-4 years of age made up 11 percent of the population while in 1971 the actual number of them had dropped and they represented a percentage of only 6 percent. Even to begin with there had been a lower proportion of such pre-school children in Sandy Hill than in the city as a whole and by 1971 the percentage gap between them had narrowed. All of the Census tracts have a similar proportion of pre-school children, with the central

tract having the highest proportion as well as the largest population so that its 355 pre-school children represent 5 percent of its population. The eastern sector has 160 pre-school children (3 percent) and the western sector, depleted in population by expropriation, has only 40 pre-school children (4 percent of its population).

Although the declining population of pre-school children may appear less serious than at first glance because of the general decline for the city as a whole, it is not only this age group's status as a proportion of the population which is important, but also its absolute numbers. When the number of children in a school drops below a certain level there is often pressure to have the school closed by the financial administrators and have the children sent to schools in other communities. When this happens families with children are reluctant to locate or stay in the community and tend to move to an area where schools are more readily available starting a vicious circle. The number of pre-school children in an area is an indication of the potential candidates for school entrance, if indeed these families do stay until their children reach school age. In Sandy Hill the actual number of potential students is rather low.

The number of school age children (5-19) in Sandy Hill has decreased between 1951 when there were 2,906 such children, and 1971 when there were 2,440. Their proportion of the population has not declined very much: in 1951

school-age children represented 19 percent of the area's population while in 1971 they represent 18 percent. However, in the city as a whole the actual number of school age children has almost doubled since 1951 when they represented 21 percent of the population while in 1971 they made up 28 percent of the population. In 1951 Sandy Hill's and Ottawa's proportion of school age children was comparable but in 1971 Sandy Hill has fallen 10 percent behind the city in its proportion of school age children. This would seem to suggest that couples with school age children are not attracted to the area and that many couples stay in the community when their children are very young but move before the children reach school age. This pattern could be precipitated by many factors such as the difficulty in finding family-type accomodation at a reasonable price and the general lack of facilities such as parks and recreational space, especially in the north zone, and the volume of through traffic in some areas.

The low number of school age children is reflected in the age patterns of adults in the community. There has been an increase in the actual number of adults between 20 and 34 years of age in Sandy Hill since there were 3,820 such people in 1951 and 4,310 in 1971. This young adult group as well as the elderly group are the only two to increase in actual numbers during this period while the numbers in the other age brackets were falling. In 1951 the youg adult group made up 25 percent of the total population of the area and in 1971 they had jumped to 32 percent while

for the city as a whole they made up 25 percent in 1951 and 24 percent in 1971. The proportion of young adults in Sandy Hill has grown considerably and this growth is particularly striking since the proportion of young adults in the city as a whole has dropped slightly in the same period. This is the age group which is most likely to consist of single but independent households, childless couples, and couples with pre-school and young school age children. With such an over-representation of this age group it is not surprising that although the number of pre-school children has dropped remarkably, the proportion of pre-school children in Sandy Hill has almost kept up with that of the city as a whole. The greatest number of the young adult group fall between the ages of 20 and 30 (26 percent of the total population) compared with 32 percent for those 20-34. It would seem then that the young adults in Sandy Hill are more likely to be single or childless than the young adults in the city as a whole, since the proportion of pre-school children is not higher than the city's but the proportion of young adults is.

Sandy Hill lost 1,462 adults between the ages of 35 and 64 from 1951 to 1971. Almost 1,000 of these were lost in the western sector but the central sector also lost 422 adults of this age group while gaining 563 young adults, and the eastern sector lost only 111 adults aged 35 to 64 while gaining 340 young adults. In 1951 this adult group accounted for 39 percent of Sandy Hill's population but in 1971 they

make up 33 percent of it. In the central sector their proportion is somewhat lower than in the other two while the the proportion of young adults is somewhat higher. Sandy Hill's proportion of adults between 35 and 64 is comparable to that of Ottawa as a whole but the actual number of such adults has increased by approximately 40 percent in the city and their proportion has dropped only from 35 percent in 1951 to 33 percent in 1971. Given the low proportion of school age children in Sandy Hill and the declining but approximately average proportion of adults likely to have such children, it would seem that this adult group is also more likely to be single, childless or have smaller families than those in the city as a whole. Indeed when the 35-64 age group is broken into finer categories it is seen that 23 percent of the neighbourhood's population are in the 45-64 age group among which families are highly likely to have some if not all of their children on their own. Only 10 percent of Sandy Hill's population are in the 35-45 age bracket which is the one most highly likely to have school age children.

As mentioned earlier, the only age group besides young adults which has grown in actual numbers is the group 65 years of age and over. There were 1,390 such people in Sandy Hill in 1951 and 1,843 in 1971 representing 9 percent of the population in 1951 and 14 percent in 1971. In 1951 Sandy Hill had only a slightly higher proportion of the 65 and over age group than the city did (8 percent) but by

1971 the city's proportion had grown only slightly to 9 percent while Sandy Hill's proportion had gone up by 5 percent. This increase in proportion is not only due to this age group's increase in number but also to the decrease in the number of other groups such as the families with school age children.

This decrease in the number of single detached housing units and increase in the number of attached and apartment type dwellings as well as the predominance of single people and childless families in the neighbourhood should be reflected in a low number of owner occupants and a high number of tenants as well as in a lowering of the length of residence in the community.

The Census figures show that there has indeed been such a drop in the proportion, as well as in the actual number, of owner occupied dwellings. In 1951 there were 1,260 owner occupied dwellings in Sandy Hill comprising 31 percent of the neighbourhood's dwellings while in 1971 there were 920 comprising only 17 percent of the total dwellings. This decrease in the proportion of owner occupied dwellings was steady but somewhat more accelerated in the 60's when the expropriation by the University of Ottawa and the surge in apartment construction took place. Of course a good part of this loss took place in the western sector where there are 165 fewer owner occupied dwellings than in 1951. The central and eastern sectors, however, have also exhibited a loss of owner occupied dwellings; the central area lost 115

owner occupied dwellings the same number as its loss of single detached dwellings in that period; the eastern sector lost 60 owner occupied dwellings between 1951 and 71. In terms of percentages the central sector went from 31 percent owner occupied dwellings in 1951 to 17 percent in 1971; the eastern sector went from 37 percent owner occupied dwellings to 20 percent in 1971 while the western sector went from 27 percent in 1951 to 9 percent in 1971. This drop in the number of owner occupied dwellings has naturally been accompanied by an increase in the number of tenant occupied dwellings with 69 percent of the dwellings being tenant occupied in 1951 and 82 percent being so occupied in 1971.

These figures do not correspond to the trends for the city as a whole. In 1951 Sandy Hill was already 10 percent behind the city in its proportion of owner occupied dwellings while in 1971 it had dropped 24 percent behind the city as a whole while the city itself remained stable. A similar stability of tenant occupied buildings is seen for the city as a whole between 1951 and 71 (57 percent) while a corresponding increase of 25 percent in the gap between the city's and Sandy Hill's proportion of tenants is also witnessed.

It is important to know whether a drop in the proportion of owner occupied dwellings corresponds to a drop in the length of residence of people in their dwelling. The Census does not provide us with the opportunity of measuring the length of residence in the neighbourhood but only the

length of residence in the present dwelling. It is the length of residence in the neighbourhood which is more pertinent since one may be very attached to the area and still move from dwelling to dwelling within it as needs and lifestyles change.

Length of residence in a dwelling and ownership of that dwelling are often thought to be highly related. If this is the case then Sandy Hill should exhibit a lower rate for people who have lived in their dwelling five years and more, than the city as a whole. In 1951, the city's and Sandy Hill's proportion of those who had lived in their dwelling two years and less, three to five years and six years and over were very similar; for Sandy Hill the figures were 26 percent (0-2 years), 28 percent (3-5 years) and 46 percent (6 plus years). This proportion changes remarkably over the years until in 1971 the proportion of those who have lived in their dwelling under two years has jumped to 46 percent, from three to five years has dropped to 15 percent and six or more years has dropped to 38 percent. There is obviously a polarization of the neighbourhood into the longer term residents and the short term residents. This pattern is not Sandy Hill's alone but has come to be characteristic of the city as a whole where those who have lived in their dwelling less than two years make up 40 percent of the population, those 3 to 5 years make up 17 percent and those 6 and more years make up 44 percent. Sandy Hill shows a slight variation from the city's pattern in that its long

term residents are 6 percent below the city's and its short term residents are 6 percent above the city's. Sandy Hill does then, have a somewhat higher proportion of short term residents than usual but this 6 percent difference is small compared to the difference one might have expected, given the pattern for occupancy ownership and number of apartment type dwellings. The rate of longer term residents is high given the rate of occupancy ownership in Sandy Hill. This could be due to a variety of factors such as the greater proportion of people over 55 in Sandy Hill than in the city as a whole. It could also indicate that some tenants form a special kind of attachment to the area or to their dwellings in the area which is as strong as the ownership factor in other parts of the city.

We saw that Sandy Hill began as an area with residents of predominately British origin but by 1951 those of French origin had gained in proportion so that there were only 7 percent fewer residents of French rather than British origin while those of other ethnic origins composed 18 percent of the neighbourhood's population. Between 1951 and 1971 the relative proportions of the French and English groups changed until in 1971 the French predominated with 43 percent of the population while the British had dropped to 33 percent of the population. Those of other ethnic origins had grown in the meantime to become 24 percent of the population. When examining the actual numbers of each group, one can see that the French have not grown much in

actual numbers; there were 5,811 people of French origin in 1951 and 5,850 of French origin in 1971 in Sandy Hill. Those of British origin did decrease in actual numbers from 6,891 in 1951 to 4,515 in 1971.

In terms of Census tracts, it was seen that the western sector, tract 50, had the greatest proportion of French in 1951. The elimination of the French from this sector was somewhat slower than the elimination of the English whose number dropped about equally in 1961 and 1971. Perhaps the English population in this area was more affected by the construction of the bridge and the increased traffic it generated. The disappearance of the French took place more dramatically in the 60's corresponding with the University expropriation; over 1,000 residents of French origin disappeared from the western sector in the ten years preceding 1971. This placed the figure for the western sector at 490 residents of French origin and 330 residents of British origin in 1971 a proportion of 44 percent and 30 percent respectively. In the central and eastern sectors the French went from proportions of 34 percent and 30 percent respectively in 1951 to proportions of 43 percent and 43 percent in 1971. This was accompanied by a decrease in the proportion of British origin in all sectors until in 1971 all the Census tracts had similar proportions of French and English approximating those for the neighbourhood as a whole of 43 percent French and 33 percent British. There is no longer a higher concentration of the French in one sector

but both they and the British appear in similar proportions in all Census tracts.

This increase in the proportion of those of French origin and decrease in the proportion of those of British is not characteristic of Ottawa as a whole. In 1951 the French made up 28 percent of Ottawa's population and the British 60 percent. Already, Sandy Hill was higher than the city in its proportion of French residents. By 1971, the proportion of French in Ottawa had dropped to 25 percent, although their actual number had increased, while the proportion of those of British origin also dropped slightly to 55 percent. This put Sandy Hill in the position of having a proportion of French origin residents approximately 20 percent higher than the city's and a proportion of British origin residents approximately 20 percent lower than the city's as a whole. It is not surprising that Sandy Hill does attract French residents since it is one of the few neighbourhoods in Ottawa which has a range of French institutions and also of course, offers the opportunity of living near others of the French language or ethnic group. A good number of the students who come from outside Ottawa to attend the University of Ottawa are of French origin and would probably account for some of the increase in this population.

On the matter of income, Sandy Hill has changed its position relative to the city since 1951. The way in which the data was gathered complicates the comparison since the 1951 figures are for the heads of households and the 1961

and 1971 figures are for total family income. In 1951 the average earnings of the heads of households was $2,799. in Sandy Hill and $2,584. in Ottawa. By 1961 Sandy Hill had fallen behind the rest of the city with the average family income being $5,774. in Sandy Hill and $6,228. in Ottawa. In 1971 this gap continued with the average family income being $11,452. in Sandy Hill and $12,412. in Ottawa. This lower than average income is not typical of all the Census tracts. The Census tract with the lowest average family income is the central one with an average of $9,920. The western tract is also below the city's average at $10,557., while the eastern tract is well above the average for the other two as well as above the average for the city at $13,878. A further analysis of income, education and occupation variables will be undertaken from the survey data in later chapters.

The southern area of Sandy Hill, Census tract 14, had a population of 1,690 in 1971. Of the 450 occupied dwellings in this area only 7 percent are single detached dwellings and 93 percent are attached or apartment dwellings. Since all the dwellings in the C.M.H.C. housing project are apartments, there are approximately 45 to 50 dwelling units in the southernmost tip that is in the area which was not included in the survey sample. This census tract is much higher in apartment type dwellings than the others in Sandy Hill.

This area has an average of 3.8 persons per household, much higher than the rest of Sandy Hill's rate at 2.5 persons and somewhat higher than the city's at 3.2 persons These figures would seem to indicate that this area is made up mostly of families in apartment accomodations. Since the C.M.H.C. rental accomodations predominate this area it is not surprising that the great majority of dwellings are tenant occupied, 94 percent to be exact. Given the high rate of tenant residency, the length of residence in the present dwelling is surprisingly high; 36 percent have lived in their dwelling for two years or less, 16 percent for 3 to 5 years, 48 percent for six years and more. This compares favorably with the record of the city as a whole and the southern area is higher in long term residents than the rest of Sandy Hill.

The residents of the southern area of Sandy Hill over the age of 15 do not tend to be single or widowed; only 28 percent are single or widowed and 72 percent are married. This rate is comparable to that of the city as a whole while the proportion of single people is much lower than that for the rest of Sandy Hill (45 percent). Given the higher proportion of married people in this area and the higher number of people per household, one would expect that there is also a greater proportion of both pre-school and school age children. The statistics do indeed show that this area has a higher than average proportion of children. Children from 0 to 4 years of age make up 15 percent of the

population compared to 4 percent in the rest of Sandy Hill and 7 percent in Ottawa. In actual numbers, this small area has one half as many pre-school children as the whole of the rest of Sandy Hill.

The proportion of school age children (5-19) is also high 31 percent in the southern area compared with 18 percent for the rest of Sandy Hill and 28 percent for Ottawa. This southern area is comparable to the city in its proportion of school age children while the rest of Sandy Hill is 10 percent below the city's average.

This area has a proportion of 27 percent of its residents between the ages of 20 to 34 which is slightly above the city's average of 24 percent and slightly below the rest of Sandy Hill's at 32 percent. Given the proportion of children and of married residents, it is likely that this young adult population tends to be married with young children to a much greater degree than the young adults in the rest of the neighbourhood. The proportion of adults between 35 and 64 is lower than the rest of Sandy Hill's at 25 percent compared to Sandy Hill's 33 percent, and is indeed below the city's average of 33 percent. The members of this age group would seem to be more likely to be married with school age children than those in the rest of Sandy Hill, given the higher rate of married residents and school age children.

The group of adults 65 years of age and over does not make up a high proportion of the southern area since their

numbers only represent 2 percent of the population, while in Sandy Hill they make up 14 percent and in Ottawa 9 percent. The southern area then is characterized by a high concentration of married adults between twenty and forty-five years of age and a high concentration of pre-school children as well as a higher concentration of school age children than the rest of Sandy Hill.

Given the high number of persons per household and the apartment nature of the vast majority of dwellings, it would seem likely that this area is more densely populated than the rest of Sandy Hill, that is, that the number of persons per room is higher. The statistics show that this area does indeed have a higher ratio of persons per room at .82 while the ratio for the rest of Sandy Hill is .53 persons per room and that for Ottawa is .58. This average of .82 persons per room does not constitute really crowded conditions which are generally considered to start at 1.5 persons per room and become severe at 2 persons per room. However, Census tract 14 has the highest ratio of persons per room of any Census tract in Ottawa, and it is likely that within it one will find truly crowded conditions more often than in other areas of Sandy Hill.

The figures on ethnicity show a curious pattern in the southern Census tract. In terms of ethnic origin the area has about equal proportions of people of English and French origin, 48 percent and 46 percent respectively. Those of British origin are represented at a rate of 14 percent

above the proportion for Sandy Hill as a whole. However, when respondents in Census tract 14 give their mother tongue, the proportion of French drops to 28 percent, that is, approximately one half of those of French origin do not consider French to be their mother tongue in this area. This pattern does not at all correspond to that of the other Census tracts in Sandy Hill; in the central and eastern Census tracts the proportions of those of French origin and French mother tongue are approximately equal while in the western tract the proportion of those of French mother tongue is 8 percent higher than those of French origin. It seems highly likely that only 28 percent of the residents of this southern area consider themselves to be of French ethnicity.

The average income per household in the southern area is well below the average for Sandy Hill and for Ottawa; in the south it is $8,736. per year in 1971, in Sandy Hill it is $11,452. per year and in Ottawa it is $12,412. per year. The only Census tract which is at all comparable to it in Sandy Hill is the central one (51) with $9,920. a year. The central tract does not have nearly the proportion of families or of young children that the southern tract does and its average income would seem to be affected by students living in the area.

The C.M.H.C. offers controlled rents kept below the market values in their dwellings which attract this family population even if it does often mean living in crowded

conditions. This is reflected in the average cash rent for the area $112. a month in 1971 compared to an average of $141. a month in Ottawa and $142. in the rest of Sandy Hill. This comparatively low rent is probably the major factor that keeps the length of residence in the dwellings of the southern population so high, given their tenant status and the somewhat crowded conditions. The fact that it is very difficult to find accomodations for a family anywhere else in the city at a cost which their lower than average salaries will permit, and that the waiting lists for larger controlled rental accomodations are very long, are probably the major factors in keeping these residents in the area.

The average rent for the greater part of Sandy Hill, of $142. a month, is distorted by the differences in the average rents in the three Census tracts. Both the western and central Census tracts have below average rents of $132. and $130. a month while the average number of rooms per dwelling is above the neighbourhood's average in the west and below the neighbourhood's average in the central tract (5.1 rooms in west, 4.5 in center, 4.8 neighbourhood average). The average number of rooms per dwelling in the western tract is comparable to that of the city as a whole (5.4 percent) while the average rent is somewhat cheaper in the west. There is almost an average of one room less in the central area dwellings than for the city while the rent is equal to that in the western sector. This reflects the greater construction of recent and smaller apartments

in this area. The eastern tract is quite different from the other two. The average rent in the east is well above the average for the neighbourhood and the city at $165. a month compared with $142. and $141. for the neighbourhood and the city. At the same time the number of rooms per dwelling in the east is similar to the neighbourhood average but lower than the city's (4.9 rooms east, 4.8 rooms neighbourhood, 5.4 rooms city). The higher rent cannot be explained by a greater number of rooms so it would seem that the rental accomodations are of a more exclusive or luxurious nature in the east. These apartments seem to be more exclusive, on the whole, than those in the western, central and certainly than in the southern area but they also appear to be rather exclusive on a city wide basis given their higher rents and lower number of rooms. This general exclusivity of the eastern area was earlier reflected in the fact that the average income per household was higher than in the rest of the neighbourhood and higher than the average for the city. The hi-rise development in this area, which grew greatly from the middle 60's, was mostly of a very expensive nature with a variety of services offered to tenants. The potential attraction of higher income people to these apartments was assumed to lie in their prestigeous reputation, their proximity to downtown and frequently their view of the river as well as their location in an area of charming old homes. Ironically, it is their presence and the potential construction of more

like them, in this area of charming old homes that poses the greatest threat for the survival of the historical character of the area.

We have now seen the demographic alterations which have taken place over twenty years in Sandy Hill. We have also seen the contrast between the main body of Sandy Hill and the area composed chiefly of the C.M.H.C. Housing Project which is somewhat isolated from the rest of the community in many ways. These demographic alterations are indicators of the pressures for change on Sandy Hill and show the declining appeal of the area as a family neighbourhood due to a number of Neighbourhood strains. Of course an accelerated change in socio-demographic characteristics becomes a strain in itself and intensifies the effect of the original pressures on the area. We will now examine a number of major sources of strain which operated during the twenty years between 1951 and 1971.

Major Sources of Strain

While the demographic alterations to the population were taking place, a number of other pressures were being exerted on the neighbourhood. We have already mentioned the construction of the MacKenzie King Bridge and the disruption it brought to the neighbourhood. In the early 60's another major disruption was caused by the completion of the Queensway throughway on the neighbourhood's southern border. Feeder streets from the Queensway were connected to two neighbourhood streets, Nicholas Street on the western

edge and Mann Avenue cutting through the southern section. This encouraged a great increase in the amount of north-south traffic through the community, getting to and from the throughway. A few years later the MacDonald-Cartier Bridge was built linking Ottawa to Hull at the far end of King Edward Avenue, outside of Sandy Hill. King Edward narrowed from a six-lane section outside of Sandy Hill to a four-lane and ultimately a two-lane section within it. A high density of traffic descended upon the Queensway via this route especially at rush hours. The fact that there was no satisfactory road connection in Quebec between Hull and Montreal, encouraged much heavy truck traffic to reach the Queensway and the Ontario route to Montreal by using Nicholas Street. In the mid-60's suggestions began to be raised that King Edward Avenue be widened to six lanes all the way through the neighbourhood, in order to accomodate all of this heavy truck and car traffic. Already the heavy car traffic had caused a great deal of noise and disruption but the prospect of a freeway alarmed many citizens because of the increased noise and air pollution that heavy truck traffic would bring, the barrier such a wide arterial would place between the University and the north-west quadrant and the rest of the community, and the destruction of historic buildings and charming streetscapes that its construction would require. Over the years, the possibility of a King Edward arterial was to resurface and be buried only to resurface again from other sources as one

solution to Regional traffic problems.

Another area which was altered by the traffic generated by the Queensway was the formerly quiet east side of the neighbourhood. Traffic coming from the Queensway would often travel up Mann Avenue, Range Road, Charlotte Street to Rideau Street. Previously Range Road had been a quiet and exclusive area of residences and embassies bordering Strathcona Park. Now access to the park became more difficult, especially for unaccompanied children, and the noise level in the area increased remarkably. Chapel Street was put in a similar situation to Range Road. In the late 60's there was a suggestion which, if followed would have further served to disrupt the central and south eastern area which had always been more protected than the northern area from traffic. The idea was to build a freeway along Somerset Street, with a bridge leading to the eastern section of Ottawa and a bridge across the Canal to Center Town. This proposition was also not popular with citizens of the area, although it did not receive as much publicity as the King Edward Freeway and did not seem as imminent a threat until the 70's.

As these traffic pressures on the community were increasing, the University of Ottawa was going through its expansion, as previously described, both forcing people out of the area through expropriation and demolition and fostering the absorption of ever larger numbers of students into the neighbourhood. It is not surprising that in the face of these traffic problems and the change in residential

character brought about by the increase in short term residents and the profitable market that had been created for small apartments, that many families with school age children moved out of the neighbourhood. As some areas were more affected by these changes than others, and some had more protective zoning designations, the pattern of population change varied throughout the community.

Sandy Hill had undergone changes in its residential character for many years. The central Census tract had seen much apartment construction over the years except that before the 60's it had always been of a low or medium profile type. Even many of the grand houses in the north and eastern areas had been converted into apartments or embassies. However it wasn't until the 60's that the pressures on the area multiplied and converged to such a degree that they threatened to push families and long term residents out of the area altogether. This concatenation of pressures resulted in alarm among those citizens who did not want to leave the area, and consequently citizens' action groups sprang up. The first such group was Action Sandy Hill, a residents' and owners' association, which arose largely in reaction to the building of hi-rises in the north eastern area and the issue of spot rezoning which allowed developpers to build higher or more densely than the zoning bylaws allowed. Already the zoning in the whole northern area offered no protection for its historic buildings. The zoning in the north from King Edward Avenue

to the river allowed high density and hi-rise development with a higher profile being possible between the Rideau River and Charlotte Street. This zoning meant not only the actual building of hi-rises but also meant that many of the homes in the area would be purchased mainly for their potential value as hi-rise property. This kind of land speculation usually leads to the deterioration of the housing stock, a change in the family and social character of the area and an inflation in land values so that it becomes very difficult to maintain and value the existing homes for their age and charm. Since a number of small units bring a higher return in rents than fewer but larger units, family dwellings are usually rare in new hi-rise developments, except for the wealthy.

From the time of its formation in 1968, Action Sandy Hill battled the city and developers on a number of specific issues. It became clear that if Sandy Hill were to preserve its character, then a complete and coherent plan for the area would have to be put into effect with community values in mind. Through the persistence of Action Sandy Hill, the city finally agreed to launch a neighbourhood study and develop a plan for the area with citizens' input. At this time a separate body, the Citizens' Committee for planning was set up. From the start, the citizens, the planners and the politicians did not agree on what citizens' participation entailed. It is at this point, when the Citizens' Committee for planning had just been established,

when several public meetings had been held to gather the residents' opinions on the form of participation to be undertaken and the issues to be pursued, that our sample survey began.

It is clear that a number of pressures emerged or intensified during the 60's. Most of these diverse pressures merge into one overriding strain, the loss of residential character. It would seem that from the various decisions made to route outside traffic through the community, to zone much of the area for hi-rise, high density development, and from the propositions made to cut the area up with further freeways, that Sandy Hill's status as a mixed residential area was considered an anachronism by many people in a position to recommend and make policy decisions. It would seem that many policy shapers and makers saw the residential nature of the area as impeding the free flow of traffic from other parts of the city into the city's core. Their propositions and zoning by-laws suggest that they foresaw the ideal residential use ultimately serving only a few types of resident: those who could not afford to live elsewhere and those who lived in the area only as a step towards a more and more desirable area or those who could afford the self-contained environment of a quality hi-rise. Obviously, many of the neighbourhood residents did not share such a view of the ideal residential character of the community.

The analysis of socio-demographic characteristics based on the census data has been useful in tracing the changes which the various pressures on the neighbourhood have triggered. The census data has shown the trend towards smaller dwellings, smaller households, fewer families especially with school age children and the increase in apartment type dwellings. It has been particularly useful in capturing the dramatic impact that the expansion of the University of Ottawa has had on the social and physical character of the area. It has also been useful in tracing the differences in economic conditions between the eastern part of the neighbourhood and the central, western and particularly southern area. With the exception of the southern Census tract, however, the Census tract statistics are limited to presenting variations in neighbourhood characteristics in an east-west direction. As our analysis of pressures has shown, many of the significant pressures and differences operate in a north-south direction, a subtlety which the Census tract data cannot detect.

Since our aim in examining geographic subdivisions is to trace differences in objective strain on them and to predict differences in the perception of strain and ultimately in participation attributable to being located in them, it seems necessary to further divide the area into north, central and south divisions. We will define as the east part of the area that from Chapel Street to the river, the central part as that from Chapel to King Edward Avenue

and the western part as that from King Edward to the canal. Cutting these divisions, we will take the north as that area from Rideau Street to Laurier Avenue, the center as that from Laurier to Somerset Street and the south as that from Somerset to Mann Avenue. Since further analysis will be undertaken with the sample survey data, the C.M.H.C. housing project will be considered as a section and the southernmost tip excluded. This would leave us with ten zones to consider in our analysis, however, since the center west and south west zones' population has been so depleted by the University's expansion, not enough cases remain in the sample to justify treating them as separate areas. The respondents from the center-west will be included with those of the center-center and called the Center-West zone. Likewise the respondents from the south-west will be included with those from the south-center with whom, they share many strains, and called the South-West zone (See Figure A.2).

Sandy Hill, as mentioned earlier, is a mixed residential area both in terms of housing types and in terms of socio-demographic characteristics. It is very difficult to capture the special "flavor" of Sandy Hill when large areas of it are taken as the unit of examination and especially when averages are examined. Some parts of Sandy Hill are relatively homogeneous others vary in dwelling types and socio-demographic characteristics from block to block and still others from building to building. It is

felt that the divisions used here are large enough to be useful analytical tools while small enough to capture the special relationship of the residents to the problems facing the neighbourhood. The next chapter will be devoted to outlining the major strains in these areas and comparing the zones' socio-demographic characteristics.

CHAPTER III

ZONE CHARACTERISTICS

All of the North zone of Sandy Hill suffered a great deal of neighbourhood strain emanating from many sources at the time of the founding of the Citizens' Groups. Its viability as an area which housed people at all stages of the family life cycle was severely challenged. One of the major strains for the North zone was the volume of traffic on its residential streets. As mentioned earlier, the building of the MacKenzie King Bridge and the eventual transformation of Stewart and Wilbrod into alternate one-way streets to facilitate its use, poured great amounts of through traffic onto these streets especially at rush hours. King Edward later became a major arterial, especially in the North zone, and Laurier Avenue retained its status as a busy arterial also involving Charlotte Street. The use of Chapel Street increased as people sought a shortcut to the Queensway and Rideau Street remained a busy arterial. The formerly quiet easternmost section of the North zone became divided from the rest of the neighbourhood by the increasing volume of traffic on Charlotte Street, and with the construction of two major hi-rises along the river its streets became means of entry and exit for the additional population. This increasing traffic activity left only

Daly Street, some parts of Besserer Street and a few short cross streets relatively free from through traffic.

The whole of the North zone felt the impact of the growing traffic volume but the North-West quadrant was the most severely affected. Due to its proximity to the down-town core and to the bridges, the volume of traffic intensified to an even greater degree on its streets than on those of the rest of the North zone. The University of Ottawa's expansion also affected the residential character of the area since two blocks of homes were taken over by the University and converted into office space. The remaining houses in the area, most of which dated from the last century, became vulnerable to a variety of uses because of a zoning bylaw allowing both residential and office usages. Many of the older houses became rooming houses or were converted into apartments serving the student population. The many churches in the area served to anchor it to its former grandeur and a few houses were renovated and restored. This created an area in which a variety of socio-economic groups lived side by side with character varying from house to house.

The North-Center zone and the North-East zone have much in common in terms of traffic strains. The process of residential deterioration had started earlier in the North-Center, however, and it had a higher ratio of apartments and rooming houses at an earlier time than the North-East. The zoning in this area permitted hi-rise construction and

in the early 60's the number of apartment type dwellings mushroomed. These hi-rise dwellings were neither as expensive nor as luxurious as those later built in the North-East zone. This area lost a great part of its single detached dwelling units and some of the low profile (low-rise) apartment conversion did not maintain the former appearance of the buildings.

Even though the zoning in the North-East allowed for hi-rise development, the pressure towards this kind of construction occurred at a later date than in the North-Center. The North-East had seen much conversion to apartment and embassy usages but the stately appearance of the houses and streetscapes often remained intact. Many buildings were bought for purposes of land speculation, and some areas did suffer a great physical deterioration of the housing stock. It was still possible to find in the North-East, however, many blocks of housing which retained the atmosphere of a former time. The spurt in luxury apartment construction in the mid-60's challenged the essentially low-profile character of the area, and the possibility of spot rezoning for even higher densities threatened the area still further. Like all of the North zone, the North-East suffered a shortage of parks and recreational areas for children which combined with the increasing volume of traffic, the construction of smaller dwelling units, and the increase in the transient population, discouraged families from remaining. Both the North-Center and the North-East have considerably higher

populations than any of the other zones except the Center-West.

The Center zone in general was not under as intense pressure as the North zone. The problem of through traffic was not acute except on peripheral streets such as Laurier, Somerset and Range Road. In the west King Edward Avenue did cut through the area and imposed the problems created both by its volume of traffic and the prospect of a future freeway. The specter of a Somerset Street freeway threatened the area but one would have to have been well informed to be aware of it and therefore threatened by it. The blocks in the Center zone are longer in the north-south direction than those in the North zone, so there are fewer intersecting streets in the east-west sense. The east-west intersecting streets, apart from those peripheral streets already mentioned, tended to carry only local traffic. The major traffic threat in the Center zone then was in the western section with the King Edward Arterial, and it was indeed a major threat.

The University of Ottawa's expansion exerted a great strain on the western and central portions of the Center zone. By 1971, the majority of properties between King Edward Street and Nicholas had been purchased and most former residents had moved. However, many owners remained with the Henderson Street expropriation boundary, who had not yet been expropriated and who did not know when this move might come about. These owners were caught in a tight

position, since it was difficult to sell their property to anyone else while the University held expropriation rights, and the University had not yet expressed a serious interest in buying their property. All around them, the housing was decaying due to the neglect of its residential use, but these residents were not in a position to leave the area. The expansion of the University still exerted much pressure on those residents left within its expropriation boundaries.

The boundaries granted to the University of Ottawa by the Province also forced a reconsideration of the route of a potential King Edward Freeway. The solution that planners foresaw was for the University to be given ownership of the King Edward Street within its boundaries while giving up an equal amount of land along its Henderson Street border. Any freeway would then be placed on King Edward Street in the North zone and loop down Henderson Street in the Center and South zones. This proposal pushed the impact of a potential freeway still deeper into the heart of the Center-West and South-West zones.

The zoning in the Center-West allowed for high density hi-rise development. Very little hi-rise development did occur however except on the border of the Center-West with the Center-East. It seems likely that a number of the rooming houses which appeared in the area, especially aimed at University students, were actually held by speculators banking on a future hi-rise use. There was a general deterioration of the housing stock in this area which

became more severe between Somerset and Osgoode Streets. The threat of a freeway on Henderson, the pressure to absorb many students, the zoning which left the area open to speculation and deterioration were the greatest threats to the residential character of this area.

The Center-East was not under the same kind of speculative pressure as the Center-West was. The zoning in most of this area allowed only for medium-profile and medium-density development except along the Chapel and Laurier Street borders where hi-rise development was permitted. Most of the hi-rise development in the Center zone took place along these borders since it was possible to attract higher income tenants or buyers for condominium units to the better preserved east side. Much of the housing in the area was of a low-profile nature and there were still many unifamilial dwellings. A commercial strip along Somerset Street influenced some deterioration of the housing stock located near it but housing conditions improved as one went towards Laurier Avenue. Many embassies or diplomatic residences were located in the larger houses of the Center-East zone, especially in those blocks near Laurier and Strathcona Park. Many of the larger houses near Somerset Street had been transformed into apartment and rooming houses with a rather high density population of mixed socio-economic groups being accomodated in them. The only parts of the Center-East which experienced immediate through traffic pressures were Range Road, Laurier Avenue

and Chapel Street.

The South zone's status as a residential area was under less strain than that of any other area in Sandy Hill. The South-West was faced with the possibility of a freeway on Henderson Street and the specter of a freeway on Somerset Street. However its zoning allowed only medium profile development of slightly less density than in the Center-East. Most of the housing here was of a low profile and of a modest nature. Some conversion into apartments had taken place especially along Somerset Street. There was a large play-ground and park for children as well as a community center in the area and an English language primary school in the zone as well as a French language one on the border of the zone. Most of the through traffic problems were located at the periphery of this zone, while the pressure on it to house students as well as a deterioration in the physical condition of its modest housing stock were the greatest strains on this immediate area.

The South-East zone was the one with the most protected residential status in all of Sandy Hill. Traffic problems were acute only for those on the periphery, although this included a high number of unifamilial houses on Range Road. This South-East area is characterized by its high proportion of unifamilial dwellings and the almost suburban-like appearance of great portions of it. This unifamilial character came from a very protective zoning designation especially in the easternmost parts. This

low-profile low-density zoning extended from Somerset Street up Range Road and Mann Avenue to Blackburn Street and down Blackburn and Templeton to Marlborough Street and Somerset again. The rest of the area had a medium profile residential zoning similar to that in the South-West. One pocket of hi-rise zoning existed at the edge of the park where a luxury hi-rise had been built on the river. Some apartment type accomodation existed in the area zoned for medium density but unifamilial units were still highly represented and the area kept a mixed but unifamilial atmosphere. This is really a low threat area compared to many others in Sandy Hill, the major threat besides peripheral traffic, probably comes from the deterioration and change in character of surrounding areas which may force changes in the residential use of the southeast.

The characteristics of the C.M.H.C. housing project were well documented from the census data. It is really an area isolated from the life of the rest of Sandy Hill, and contrasts particularly with the South-East zone which it borders. There is a high density of children in this small area and some evidence of overcrowding. Both a French and English Primary School are located nearby, however, English students have to cross busy Mann Avenue. In the sense that the Housing Project is bordered by streets with a high level of through traffic, there may be considered to be a traffic threat. Probably the greatest strain in this area is the fact that the residents cannot afford to live in less

crowded conditions. It is unlikely that there would be a high identification with the problems of the neighbourhood as a whole in the Housing Project.

We have identified the major kinds of neighbourhood strain immediately affecting each of the zones in Sandy Hill. One's perception of neighbourhood strain need not be limited to that in the zone where one resides. For example, a resident of the more protected South-East zone who valued living close to downtown and also valued the charm of historic buildings might strongly identify with the problems of residents in the North-East zone. It is likely, however, that one's view of the neighbourhood's problems will be shaped, to a certain extent, by the strains in one's immediate area. In general, residents of high strain zones should be more likely to generalize the neighbourhood problems they are aware of, and fit them into a broader awareness of the threat to the survival of Sandy Hill as a mixed residential area with a special character. This more generalized consciousness of neighbourhood strain should lead to a greater likelihood of interest and participation in a Citizens' group. Residence in lower strain areas may lead to an awareness of neighbourhood problems, but it is likely to be of a more specific nature, and not linked to a network of problems, or a generalized consciousness of neighbourhood strain.

All predictions about perception of strain by zone are open to variation according to the socio-demographic

characteristics of residents within them. In order to predict further the kinds of strains residents of a zone are likely to identify, we will examine the distribution of some of these socio-demographic characteristics throughout the zones using the sample survey data. The statistics gathered through the survey vary from the census statistics since the census statistics are based on data for each individual while the survey statistics are based on data for households.

Socio-Demographic Characteristics of Zones

Residential Status

We saw from the Census data that Sandy Hill is predominately an area of tenants. According to the survey data, only 14 percent of Sandy Hill's residents are the owner occupants of their dwellings, while 78 percent are tenants and 8 percent are roomers. There is a great variation from these averages in individual zones however (see Table 3.1). The C.M.H.C. housing project naturally consists only of tenants. The two southern zones have a much higher proportion of owners than most other zones do, with a proportion of approximately 40 percent each. The Center-East and North-East at 24 and 20 percent respectively have higher than average proportions of owner-occupants though not nearly as high as the two southern zones. The only zone which actually reflects the average for the neighbourhood is the Center-West at 13 percent. The North-Center and North-West zones are well below the average at 3 percent and 6 percent respectively.

TABLE 3.1

RESIDENTIAL STATUS BY ZONE

Residential Status	Zone H.P.	S.E.	S.W.	C.E.	C.W.	N.E.	N.C.	N.W.	Total %
Owner Occupant	0	42	40	24	13	20	3	6	14
Tenant	100	58	51	57	63	76	94	92	78
Roomer	0	0	9	16	24	4	3	2	8
N .	(57)	(31)	(35)	(37)	(104)	(123)	(102)	(84)	(573)

The two southern zones, then, have high and similar proportions of owner occupants. The South-West has an average proportion of roomers (9 percent) while the South-East had no roomers in our sample. The South-West then would seem to be a more mixed residential area. Both of these areas have relatively light strains compared to the rest of the neighbourhood but one would imagine that the large owner component would affect the level of awareness of the strains that do exist. Owners have generally made a greater commitment than tenants to the neighbourhood and this should intensify their perception of strain.

The Center-East and the North-East zones do have similar proportions of owner occupant (24 percent and 20 percent) however, there the similarity of residential statuses ends. The Center-East has a below average number of tenants (57 percent) but a higher than average number of roomers (16 percent). The North-East on the other hand, has hardly any roomers (4 percent) but has an average number of tenants (76 percent). The Center-East has a higher proportion of the most transient kind of population.

The Center-West may approach the average in terms of owner occupants (13 percent) but it is not average in the other residential categories. This is the area with the highest proportion of roomers (24 percent) and it has a below average proportion of tenants (63 percent). This reflects the general deterioration of the area that has taken place and the interim use of property bought mainly for

purposes of speculation. Although the proportion of roomers in the Center-East and the Center-West are both above average, one must bear in mind that the population in the Center-West is much higher. Because of this high population, over 50 percent of all the roomers in Sandy Hill are located in the Center-West zone. No other area comes anywhere near absorbing a similar number of roomers. This high population of roomers combined with the tenants and owners gives to the Center-West a population approximately as numerous as each of the North-East and North-Center zones. These latter zones house their residents in a quite different fashion, being areas where high profile development has taken place.

The North-Center, the North-West and the Housing Project which have low levels of owners or no owners at all, have a very high tenant population. The Housing Project is completely made up of tenants, while the North-Center and North-West have 94 and 92 percent tenants respectively. The North-Center and North-West are areas of very high neighbourhood strain, however the low number of owner occupants would seem to indicate that a perception of these strains might be more limited than the strains themselves warrant. The North-East, on the other hand, has a relatively high proportion of owner occupants as well as a high level of strain.

Housing Type

It is not only one's situation as owner, tenant or roomer which may affect one's commitment to the neighbourhood but also the type of housing one inhabits. Low profile housing where a resident has private access to a ground level entrance tends to lead one to include the ground level and the street as part of one's environment. Hi-rise apartments tend to be somewhat self-contained environments which often limit the resident's involvement in life at the street level. This is especially so when they are centrally air-conditioned and windows are seldom opened thus blocking out much noise from the street.

In Sandy Hill, the highest single category of housing type is the apartment building over four stories high at 40 percent. That means that fourty percent of the dwellings in Sandy Hill are found in apartment buildings higher than four stories. The next largest category is multifamilial housing at 25 percent representing buildings with a predominant apartment usage of four stories or less. The third largest category is unifamilial housing at 23 percent which includes both single detached housing and single attached housing (doubles, row houses etc.). The housing types least represented are detached and attached duplexes at 6 percent and rooming houses at 3 percent (see Table 3.2).

As the pattern of ownership in the neighbourhood would lead us to suspect, there is a great variation by housing type in the different zones. The area with the

TABLE 3.2

HOUSING TYPE BY ZONE

Housing Type	Zone H.P.	S.E.	S.W.	C.E.	C.W.	N.E.	N.C.	N.W.	Total %
Unifamilial	0	55	63	22	31	28	8	12	23
Duplex	0	19	9	27	5	5	3	2	6
Multifamilial	100	10	11	32	21	18	21	18	25
Apartment Building. .	0	16	11	16	28	44	64	64	40
Rooming House	0	0	0	0	11	2	4	0	3
Other	0	0	6	3	4	3	1	2	2
N .	(57)	(31)	(35)	(37)	(105)	(123)	(102)	(84)	(574)

highest proportion of unifamilial dwellings, detached and attached, is the south zone with 55% unifamilial dwellings in the South-East and 63 percent in the South-West. The South-East also has a much higher than average proportion of duplexes at 19 percent, another type of housing which tends to include residents in the street environment. The South-West is only average in such dwellings. Both zones have a below average and similar proportion of multifamilial and apartment dwellings around 10 percent and 13 percent respectively.

The areas which are roughly comparable to the average in unifamilial dwellings are the Center-East (22 percent), the Center-West (31 percent) and the North-East (28 percent). The two eastern zones have levels of ownership roughly similar to their proportions of unifamilial dwellings however the Center-West zone has only a moderate rate of ownership and has a higher proportion of unifamilial dwellings. In the Center-West, then, even many of the unifamilial dwellings, of which the bulk are detached, seem to be owned as investment properties.

The Center-East exhibits a pattern quite different from the others in terms of duplex units. Duplexes represent 27 percent of the dwellings in this area, well above the neighbourhood's average. When its unifamilial units and its duplexes are added together we find that 49 percent of the Center-East zone's units are of a low profile nature with direct access to the street. This is considerably

lower than the average of 73 percent for low profile housing in the south zone but it is the next highest low profile area. The Center-West and the North-East have 36 percent and 33 percent low profile housing units respectively. In terms of multifamilial units, or medium profile apartment buildings, the Center-East zone is again above average at 32 percent compared with 21 percent and 18 percent for the Center-West and North-East zones. The great majority of dwelling units in the Center-East, then, are in low and medium profile buildings while just over half of the units in the Center-West and the North-East are in these categories. On the basis of housing types alone there should be a greater chance that a resident of the Center-East be involved in the life of the area. Many other factors could, of course, affect this involvement.

These three zones show a quite different pattern concerning high profile housing. The Center-East has few of its dwelling units in buildings over four stories high (16 percent). The Center-West has a lower than average number of dwellings in such apartments (28 percent). The North-East zone, on the other hand, has a slightly higher than average proportion of high profile apartment buildings (44 percent). The Center-West makes up for this discrepancy by having 11 percent of its dwelling units in rooming houses (average is 3 percent). These three zones which are similar in the proportion of unifamilial units are remarkably different in terms of other residential uses.

The Center-East gives the least evidence of deterioration or housing strain and remains essentially a low to medium profile area. The high proportion of rooming houses plus the large number of unifamilial units which are not owner occupied give evidence of a probable deterioration of the housing stock in the Center-West. The North-East zone seems to be one of sharp contrasts. It has a slightly above average number of unifamilial units and a slightly above average number of high profile apartment units with all intermediate categories somewhat below average.

The North-Center and the North-West have the lowest level of owner occupied housing units at 8 and 12 percent each. The only other major types of housing unit are the multifamilial, slightly below average at 20 percent and 18 percent respectively. It is in high profile apartment units that these areas are particularly strong at about 64 percent each. A glance at the North-West quadrant suggests that there are not enough buildings higher than four stories, to explain the proportion recorded in our survey. It would seem that the apartment buildings on the east side of King Edward Avenue as well as those on the west side were coded as part of this area. This is an annoyance, but not a serious error since the strain affecting both sides of the street is similar. The North-Center and the North-West then would seem to be the zones with the lowest degree of involvement in the street environment based on housing types.

Household Density

The figures for household density from the sample survey vary from those in the census since the census includes the kitchen as a room while excluding bathrooms and hallways, while the survey excluded kitchens in the room count along with the other two categories. Since kitchens in most apartment buildings are not large enough to be used for a variety of functions and would better be described as kitchenettes, it was felt that it was better to exclude them when estimating the amount of available personal space in a living unit. The mode of Sandy Hill's density is in the range of 1 to 1.49 persons per room (44 percent) (see Table 3.3). Another large proportion, however falls in the range of .5 to .99 persons per room. 9.8 percent of Sandy Hill's population has over 1.5 persons per room a proportion which is near to constituting truly crowded conditions.

Great variations in household density are found throughout the neighbourhood. None of the areas has its mode in the least crowded category of less than .5 persons per room but the South-East zone has a much higher than average concentration of residents in this lowest density category (26 percent) and the Center-East also has a higher than average concentration (at 19 percent). The other zones are comparable to the average of 11 percent except for the Housing Project which is very low in light density, at 2 percent and the Center-West which is somewhat below average

TABLE 3.3

HOUSEHOLD DENSITY BY ZONE

Household Density	Zone H.P.	S.E.	S.W.	C.E.	C.W.	N.E.	N.C.	N.W.	Total %
.49 or less	2	26	9	19	5	11	15	14	11
.5 to .99	5	48	50	35	26	48	36	32	35
1 to 1.49	71	26	38	35	62	33	38	43	44
1.5 or more	21	0	3	11	7	9	11	11	10
N .	(56)	(31)	(34)	(37)	(100)	(120)	(100)	(81)	(559)

at 5 percent.

Three areas have their modes in the second lightest density category, the range from .5 to .99 persons per room: the South-East (48 percent), the South-West (50 percent) and the North-East (46 percent). When all the densities under one person per room are taken together as an indication of light density, only the South-East shows an overwhelming light density at 74 percent. Most of the other zones hover around the 50 percent mark although the South-West and the North-East are closer to 60 percent in light density. It is the Center-West and the Housing Project which are not at all well represented in the light density categories.

The Center-East does not have a clear mode in any single category and must be considered bi-modal with equal concentrations in the range of .5 to .99 persons per room and 1 to 1.49 persons per room (35 percent). This unusual pattern is accompanied by an above average proportion of very light density and an average proportion of very high density. This corresponds to its equally unusual pattern of housing types and residential statuses (see Tables 3.2 and 3.1). The higher concentration of medium profile buildings and duplexes probably accounts for this bi-modal split. The Center-East seems to be the area offering the greatest amount of each of a wide range of housing types without having a large number of apartment buildings.

The North-Center also has a bi-modal split between the .5 to .99 range of density and the 1 to 1.49 range of

density (36 percent and 38 percent). This area has a concentration towards the middle of the density spectrum. The North-West is close to a bi-modal split but it does have a higher concentration of residents in the moderately high density range of 1 to 1.49 persons per room (43 percent) than in the lighter density range of .5 to .99 persons per room (32 percent). Both the North-Center and the North-West may be classified as areas of moderately high density.

The zones which definitely have their mode in the range of moderately high density are the Housing Project and the Center-West at 71 percent and 62 percent respectively There is an important difference between them however: the Center-West has 31 percent of its population in the lighter density range under 1 person per room although very little of this is in the lightest density category. The Housing Development has its second largest concentration of population in the highest density range of 1.5 persons or more per room (21 percent) the only zone to be well above average in terms of very high density.

The zones may be characterized according to housing density in the following manner: the South-East is a low density area; the South-West and North-East and Center-East are moderate density areas; the North-Center and North-West are moderately high density areas and the Center-West and the Housing Project are essentially high density areas.

Family Status

Areas which have many families with small children often tend to have more persons per room than areas with predominately single people. We will now examine the marital status of our respondents by zone in order to know whether the density patterns in Sandy Hill follow the patterns for family settlement or are explained by other factors (see Table 3.4).

As expected the proportion of households composed of single persons is high in Sandy Hill (42 percent). The zones with an above average concentration of single person households are the North-Center and the North-West at 51 percent each, both of them, areas of many apartment-type dwellings and moderately high densities. The Center-West also has an above average concentration of single people at 51 percent and it is essentially an area high in apartment dwellings and rooms as well as an area of high density. This high proportion of single person households in higher density areas may be affected by the number of students in Sandy Hill who would tend to crowd into apartments in order to pay rents they can afford. The other areas have an average representation of single person households except for the South-East (25 percent) and the Housing Project (9 percent) which are strongly family areas.

Among those who are married we include those who were formerly married such as the separated, widowed and divorced since there is a chance they might have children

TABLE 3.4

MARITAL STATUS BY ZONE

Marital Status	Zone H.P.	S.E.	S.W.	C.E.	C.W.	N.E.	N.C.	N.W.	Total %
Single	9	26	43	44	51	40	51	51	42
Married	91	74	57	56	49	59	49	49	58
N .	(57)	(31)	(35)	(36)	(105)	(123)	(100)	(84)	(571)

living with them, and also couples who say they are co-habiting. Of course, it is not only one's marital status which affects one's relationship with the community but also whether or not one has children. People with children tend to have more need of local services, such as parks and schools, and have more occasion to become aware of strains in the neighbourhood especially of the problems created by high densities of traffic. Since it is precisely the group of people with pre and primary school children whose needs are most challenged by the strains on the residential character of the area, we will examine their distribution by zone.

Among those classified as married (see Table 3.5) in the neighbourhood, 68 percent have children living at home with them. There is a variation in the proportion of families with children across the zones. In the zones which had the lowest proportions of single person households, the Housing Project and the South-East zone, there is a considerable variation in the number of families with children living at home. In the Housing Project 91 percent of the households are classified as family ones and among these 98 percent have children living with them. This much higher tendency of these families to have children than the neighbourhood average as well as the apartment nature of the dwellings accounts for the area's high density rating. In the South-East zone 74 percent of the households are family ones but only 70 percent of these include children,

TABLE 3.5

FAMILY STATUS BY ZONE

Family Status	Zone H.P.	S.E.	S.W.	C.E.	C.W.	N.E.	N.C.	N.W.	Total %
Children	98	70	85	64	69	68	43	53	68
No Children	2	30	15	36	31	32	57	48	32
N .	(52)	(23)	(20)	(22)	(48)	(75)	(49)	(40)	(329)

comparable to the neighbourhood's average. The high proportion of widowed respondents in this area would lead us to expect that a lot of these families are older with the children already gone from home. This fact helps account for the low density per room in the area.

Those areas which had an average proportion of single person households (42 percent), the South-West, Center-East and North-East, also vary from one another in the proportion of families with children at home. The Center-East and the North-East are roughly average in their proportion of families with children (64 percent and 68 percent respectively) but the South-West zone has a much higher proportion of families with children (85 percent). With its high proportion of owner occupants and its high proportion of unifamilial dwellings it is not surprising that families in the South-West have children living with them at a higher than average rate. Its proportion of unifamilial dwellings is higher than its proportion of families, and still higher than its proportion of families with children. Some of its unifamilial dwellings seem to be inhabited by groups of single persons, making it a more mixed environment than the basic data on dwelling types would suggest.

Among the zones which have the highest proportions of single person households; the Center-West, the North-Center and the North-West, only the Center-West has an average number of families with children. The North-Center

and the North-West have lower than average proportions of families with children, at 43 percent and 53 percent. These two northern zones have the lowest proportion of families with children of any other zone, which is not surprising given the apartment type nature of their dwellings and the traffic strains and lack of recreational space which characterize them.

Student Households

With a higher than average proportion of single people living in moderately high to high density areas, it is interesting to investigate whether or not students are also concentrated in these areas (see Table 3.6). Households composed mainly of University students make up 18 percent of the households of Sandy Hill. The only area which varies a great deal from the average in its proportion of students is the Housing Project with only 7 percent of its households being student households. There is little variation in student households across the other zones although the Center-West is the zone with the highest proportion of students at 24 percent. All of the western zones bordering the University have slightly higher than average proportions of students, and the South-East zone has a slightly lower than average proportion of students. Student households do not vary according to the density patterns. Students are not as likely to feel generalized neighbourhood strains, as they are for the most part a transient population which can foresee moving from the community in a definite time period.

TABLE 3.6

STUDENT HOUSEHOLDS BY ZONE

Student Households	Zone H.P.	S.E.	S.W.	C.E.	C.W.	N.E.	N.C.	N.W.	Total %
Student	7	14	21	19	23	16	17	21	18
N ,	(56)	(29)	(34)	(37)	(104)	(122)	(109)	(83)	(565)

Those who do perceive strains are likely to perceive specific ones related to their own immediate housing problems, such as the lack of student housing.

Length of Residence

An important factor in predicting a resident's perception of neighbourhood strain is the length of time that he has lived in Sandy Hill. 16 percent of the respondents have lived in Sandy Hill for 20 years and more. One finds these long term residents throughout the neighbourhood however the Center-East and the North-West and the South-West have above average proportions of such long term residents (25 percent, 26 percent and 23 percent respectively). The Housing Project and the Center-West zone, the two areas of highest density per household, have lower than average proportions of such long term residents.

When the residents of Sandy Hill are divided into those who have lived in the neighbourhood two years or less, between three and nine years and over ten years we find proportions of 42 percent for the short-term residents, 28 percent for the moderate and 30 percent for the long term residents of the area (see Table 3.7). Given the low percentage of owner occupants in the area the proportion of moderate and long term residents of the area is very high.

The proportion of residents who have lived in Sandy Hill over ten years is highest in the two areas with the highest proportions of unifamilial dwellings; the South-East and the South-West (40 percent each). All the other areas

TABLE 3.7

LENGTH OF RESIDENCE IN NEIGHBOURHOOD BY ZONE

Length of Residence	Zone H.P.	S.E.	S.W.	C.E.	C.W.	N.E.	N.C.	N.W.	Total %
2 years or less . . .	35	30	37	50	53	43	43	38	42
3 to 9 years	37	30	23	19	30	28	23	27	28
10 years and over . .	28	40	40	31	17	29	34	35	30
N .	(57)	(30)	(35)	(36)	(104)	(123)	(102)	(84)	(571)

including the Housing Project approximate the average for long term residents (30 percent). The only area which has a low proportion of long term residents is the Center-West zone at 16 percent.

The Center-West zone also has a higher than average proportion of short term residents at 53 percent and only the Center-East zone has as high a proportion of short term residents (50 percent). All other zones, except the South-East have average proportions of short term residents having only 30 percent. All the zones likewise have average proportions of moderate term residents except for the Housing Project which is above average at 37 percent and the Center-East which is below average at 20 percent.

All of the high strain North zones have approximately average and similar lengths of residence. The Center-West which is also a high strain area has a very low proportion of long term residents, and it is not as likely that its residents will perceive the generalized strains on the neighbourhood as sharply as the residents of the other three high strain zones. The southern areas are those of the longest term residents with the South-East having a higher proportion of moderate term residents than the South-West does. The Housing Project shows a pattern of residence that is similar to the neighbourhood's, although there is a higher concentration of people in the three to nine year category than for any other zone.

Effects of Residential and Family Characteristics

Now that we have examined the variations in residential and family characteristics in the different zones, we will examine them in terms of the effect that these characteristics may be expected to have on the residents' perception of strains which most threaten the residential character of the community.

Among the zones which we could designate as areas under a great deal of strain concerning the preservation of a mixed residential character, the three North zones and the Center-West zone, there is a variation in the type of residential characteristics which one might expect to affect the residents' perception of the strains about them. The North-West and the North-Center zones have very similar residential characteristics. They both have lower than average proportions of owner occupants and higher than average proportions of tenants. They are much lower than the neighbourhood, in general, in unifamilial structures and very high in apartment structures. The density within their households tends to be concentrated at the moderately high level. This tendency towards a high density is not caused by a high number of children in the area for these two zones are above average in single person households and below average in family households with children. This would seem to indicate that the apartments are rather small in the area and not as luxurious as many built later in the North East. One would suspect that many singles tend to

share apartments in order to bring the household density up to the moderately high level. The North-West has a slightly higher proportion of University student households than the North-Center but it is unlikely that the difference is high enough to be significant. The North-West and the North-Center do have average lengths of residence, with 34 percent of the respondents having lived over 10 years in each area. This proportion, as well as the proportion for moderate length of residence should be considered high when the other residential and family characteristics are taken into account. On the whole, there is little to lead us to expect that the residents of these areas will have as high or as generalized an awareness of neighbourhood strain as the objective strains themselves warrant. The long term residents may be more likely to have this awareness, as well as the residents of low profile buildings. The traffic threat is very severe, especially in the North-West area where none of the buildings are really high enough to escape the noise traffic creates. This problem should catch the awareness of residents in both zones. The occupant owners in this area should tend to have a very high awareness of neighbourhood problems as most of the low profile structures are under the pressure of deterioration, as a result of land speculation and changes in the characteristics of the households around them. In general, we can expect only a moderate awareness of neighbourhood strain for these zones as a whole.

The North-East zone is an area of high strain which has many residential and family characteristics which would lead us to expect a high perception of neighbourhood strain. Most of the hi-rise development in this area is of ten stories or more separating it quite effectively from the community. We have little reason to suspect that residents of these exclusive hi-rises would have a high awareness of the strains on the community since the nature of these buildings protects them more from the outside world than the usual apartment buildings in the North-Center do. Although the North-East does have a high proportion of residents in high profile apartment buildings, its proportion is similar to the average for the neighbourhood. This zone also has a slightly higher than average proportion of unifamilial units and an average proportion of duplexes and multifamilial units. This supply of low to medium profile buildings is complemented by the fact that there is a slightly higher than average proportion of owner occupants in the area. The density within households tends to be moderate and the area has an average number of single person households as well as an average proportion of families with children. It is an area where family life is still possible, and attractive to many, although it is under severe strain. The combination of these factors would lead one to expect a high awareness of those strains which most threaten the community. The length of residence in Sandy Hill is only average however this indicates that a large percentage of those in non-hi-rise

dwellings must be longer term residents, since the majority of the apartment dwellings in the North-East existed for only five years or less before the survey was carried out. This flood of new units highly affects this zone's statistics for length of residence. The North-East, then, should be an area of high awareness of strain, an awareness that should be generalized enough to embrace many of the neighbourhood's problems.

The Center-West is another zone of high strain, but it has certain residential characteristics which lead us to expect that the residents will not have as high an awareness of generalized neighbourhood strains as the strains themselves would warrant. The Center-West has many signs of deterioration both in terms of the housing stock and in the tendency towards an increasingly transient and short term population. The Center-West zone has a supply of essentially low to medium profile buildings, but within them it accomodates as many households as those parts of Sandy Hill where hi-rise units account for a high proportion of the dwellings. Not surprisingly, the density of the households tends towards a high density. There is an average number of owner occupants in this zone but a higher than average number of unifamilial dwellings, meaning that about half of these dwellings are owned for speculation or investment purposes. The number of tenants in this area is somewhat low but the proportion of roomers is much higher than average, as is the number of rooming houses. The proportion of

single people in the Center-West is high while an average number of the families do have children. The length of residence in this area varies greatly from the neighbourhood average, since it has the lowest proportion of long term residents of any area in Sandy Hill and has a higher than average proportion of short term residents. Families with children are probably kept in this crowded and deteriorating milieu by the presence of a school, but it is likely that they feel a great deal of strain in the area. Those with children, and the few long term residents, are probably the only ones in this area who will perceive the strains on the neighbourhood.

The Center-East and the South-West can be termed as areas of moderate strain from our examination of objective area strains. The Center-East is the more mixed area of the two, with a high proportion of a wide range of low to medium profile housing types. It is well below the average in the proportion of its dwelling units contained in high profile apartment buildings. It has a higher than average proportion of owner occupants and a lower than average but moderate proportion of tenants. The Center-East does have a higher than usual proportion of roomers. Since little of this population is housed in high profile dwellings, it is not surprising that the density within the households is moderate. This area has an average proportion of single person households as well as an average proportion of families with children. There is an average proportion of

long term residents and a high proportion of short term residents. It would seem that the average proportion of long term residents and the average proportion of families with children would indicate that there is a core group which is likely to have a high awareness of strains in the neighbourhood. The fact that much of the rest of the neighbourhood has a growing tendency towards transience, could in itself be a pressure on many residents and combined with a zoning regulation which does not fully protect family housing usages could lead the long term residents, owners, unifamilial residents and families with children to see problems in the neighbourhood. On the whole one would expect a rather moderate feeling of neighbourhood strain kept to this level by the high number of short term residents.

The South-West is much more homogenous in its range of dwelling types than the Center-East zone. It is predominately a low profile area with a very high proportion of unifamilial housing. It has a much higher proportion of owner occupants than average, a low proportion of tenants and an average proportion of roomers. Even with this high proportion of unifamilial homes, the density in the area is moderate and there is an average percentage of single person households. Those classified as married in the area have children in a higher than average proportion than the neighbourhood as a whole. The proportion of long residence is higher than the average for the neighbourhood, however, the proportion of short term residence is average probably

reflecting the single and roomer population. There seems to be an equal split in this area between short term and long term residents and between families and single people. We would expect the perception of neighbourhood strain to be moderate in this area given the moderate strain it is under and its residential mix.

The South-East is an area of low objective strain. Those living on the periphery have a high strain from traffic while the major strain for this area is probably the deterioration of surrounding zones especially near Somerset Street. It is an area highly composed of unifamilial dwellings and duplexes and has an essentially low profile. The proportion of owners is higher than the neighbourhood average, the household density is low and the proportion of long term residents is very high. There is a higher proportion of families in this area than average, a lower proportion of single person households, while the families have children living at home in only an average proportion. The residential and family characteristics of this area would lead us to expect a higher awareness of generalized neighbourhood strain than the strain in this specific area would warrant, an awareness which is moderately high.

The Housing Project does not share in a great many of the strains affecting the rest of the neighbourhood. It is not under any particular pressure to change since it is run and regulated by a government body, and is not open to

speculation or expropriation. There is a peripheral traffic problem which serves to cut the area off from the rest of the neighbourhood. The residents of this Housing Project are all tenants, the dwellings are all apartments, there tends to be a high density within households, in fact, the census shows it has an average household density higher than any other area in Ottawa. Most of the households are family ones and most include children. The greatest strain for residents in this area is probably the high density of children housed in such a small area with inadequate recreational facilities. Residents of the Housing Project have no particular reason to be aware of the threat to the residential character of Sandy Hill since they are buffered from the community by two areas of low to moderate strain. It is unlikely that there will be a tendency towards an awareness of generalized community strains and any such awareness will probably be of a more specific and localized nature.

Socio-Economic Characteristics

There are socio-economic characteristics which may have an impact on perception of strain. These characteristics are probably more salient in terms of mobilization for participation, while the family and residential characteristics are central to the perception of strain. We will examine the zones of Sandy Hill in terms of their distribution of these socio-economic characteristics and from this

examination see if the prediction about perception of strain based on actual strain and on residential characteristics should be altered.

Age

The adult population of Sandy Hill tends to be a very young one with about 50 percent of the adult population under thirty. The under twenty-four adult group makes up 32 percent of the population which is probably accounted for by the high number of university student households. Most zones have an approximately average proportion of this young group except for the Center-West and the South-West which are above average at 40 percent. This corresponds to their higher than average number of university students and to the presence of rooms in these areas.

The age group from twenty-five to thirty-nine makes up 32 percent of the population of the neighbourhood as a whole. Most zones approximate this average except for the Housing Project which has almost 50 percent of its population in this age group. This corresponds to the high proportion of young families in the Housing Project. The North-East is above average, with 40 percent of its population in the twenty-five to thirty-nine age group which helps account for the average number of families with children in an area of many high profile dwellings.

22 percent of the neighbourhood's population is in the age group from fourty to fifty-nine. The South-East had

a low proportion of those in the group from twenty-five to thirty-nine but it has a much higher than average proportion of adults in the forty to fifty-nine age group (41 percent). This would seem to account for the fact that while the South-East has a high proportion of families it has only an average proportion of families with children still at home.

Those over sixty years of age, make up 14 percent of the neighbourhood's population. This older group is found in all the zones of Sandy Hill but their proportion is very low in the Housing Project (2 percent). An above average proportion of this older group is found in the North-West zone (19 percent) which may be related to this zone's proximity to so many churches.

The only zone which exhibits a high degree of homogeneity is the Housing Project which is highly composed of young adults and young families. All other zones exhibit a mixed population while the North-East does have a concentration of young adults and the South-East has a concentration of adults between fourty and fifty-nine. Most of the impact that this pattern of age groups could have on the perception of strain has been accounted for by the residential and family characteristics that accompany them.

Education

Sandy Hill has residents of a wide variety of educational levels with 50 percent having graduated from a secondary school or less education, 30 percent having done some university courses or having completed a Bachelor's

degree, and 14 percent having graduate or professional education.

Most of the zones have a proportion of residents of secondary education or lower which approximates the average. Only the Housing Project has a high concentration of people of this level of education (83 percent) adding to its homogeneity. The South-West and the Center-East have a higher than average concentration of people of low education (63 and 59 percent respectively).

Most zones approximate the neighbourhood average of 30 percent for those with a university education. Only the Center-West and the North-Center at 37 percent and 43 percent respectively are higher than average in those with a university education. The Center-West also has a high proportion of University student households which probably accounts for the major part of those with university education. The Housing Project has only 11 percent of its respondents in the category with university education.

Only one zone has a higher than average proportion of those with graduate or professional training and that is the North-East at 27 percent. All the other zones approximate the average of 17 percent except for the Housing Project where only 6 percent of the respondents had such a high level of education. All of the zones then, except for the housing project exhibit a heterogeneity in educational characteristics.

Occupational Status

Although Sandy Hill is an area with residents having a wide range of educational levels, it is predominately a white collar area. Over two-thirds of Sandy Hill's residents (68 percent) are white collar with 47 percent among them who would be classified as upper middle class. All of the areas but the Housing Project and the South-West zone have a proportion of upper middle class residents that is at least average. The Housing Project has only 19 percent of its population in this category while the South-West has 35 percent. The areas with above average proportions of the upper middle class are the South-East, the North-East and the North-West (57 percent, 57 percent and 61 percent respectively). White Collar workers in clerical and sales jobs make up 21 percent of the neighbourhood's population. There is an above average proportion of them in the Housing Project (33 percent) and a below average representation in the South-East (11 percent) South-West (11 percent) and the Center-East (14 percent).

Skilled blue collar workers make up 11 percent of the neighbourhood's population. They are above average in the South-East (25 percent) in the South-West (21 percent) and in the Housing Project. The areas which are highly made up of blue collar workers in general are the Housing Project at 47 percent and the South-West at 41 percent. All other areas are near the average of 26 percent except for the North-West which has only 16 percent of its

population among the blue collar workers. The unskilled blue collar workers are above average in the Housing Project and the Center-West.

Among the areas that have an above average proportion of upper middle class residents; the South-East also has an above average proportion of skilled blue collar workers and is below average in the lower middle class; the North-East is average in all other classes; the North-West is below average in blue collar workers. The North-Center and the Center-West are average in all categories while the Center-East is close to the average in all categories except for the lower level white collar workers of whom it has a low proportion. The Housing Project and the South-West zone are above average in blue collar workers while the Housing Project also has a concentration of lower level white collar workers and the South-West has a higher but still below average proportion of the Upper Middle Class.

Annual Family Income

In Sandy Hill the income groups can be divided into four almost equal categories: those making under $6,000. a year (29 percent), those making between $6,000. and $9,999. (26 percent), those between $10,000. and $14,999. (22 percent) and those making $15,000. and over (22 percent).

Most areas are close to the average for those families making under 6,000 dollars a year except for the South-East where they are below average at 13 percent and

the Center-East and the North-West where they are above average at 36 and 38 percent. The Center-East does not follow a pattern of low income concentration however as the two middle income categories are only present in one half of their proportion in the neighbourhood while the highest income group is well above average at 36 percent. The Center-East is the zone of the greatest extremes in income distribution. The North-West does not show such extremes and is close to the average in all other categories except for low income. The high proportion of elderly residents in the North-West may raise the proportion of low income residents.

One might have thought from the previous characteristics examined that the Housing Project would be the area with a concentration of low income residents, however it has only an average proportion. (It would seem that the lowest incomes probably belong to students and the elderly.) It does have a much higher than average proportion of those making 6,000 and 9,999 dollars a year (50 percent compared with 26 percent). This area is average in the next highest income group and much below the average in the highest income group (2 percent). The Housing Project is essentially, then, a low middle income area.

The North-Center and the Center-West have a distribution of incomes which is similar to the neighbourhood's average. The North-East has an income distribution which is close to average, however, there is a somewhat higher than

average proportion of residents in the highest income group (30 percent).

The South-West has a concentration of respondents making between 10,000 and 14,999 dollars a year (43 percent). This is well above the average for the neighbourhood however this zone is also lower than average in the highest income group (14 percent) and average in the others. The South-West is essentially a middle income area.

The South-East is the only zone with a concentration of respondents in the upper income bracket (39 percent). It is also above average in the middle income group (26 percent) and below average in the other two income categories. This area, in fact has by far the lowest proportion of the low income group in all of Sandy Hill. The South-East, then, is essentially a high income area.

The socio-economic characteristics, although central to an examination of mobilization for participation, are not as central for an examination of the awareness of neighbourhood strain. The family and residential characteristics, which indeed reflect many of the socio-economic characteristics examined, are more central to this examination. Our prediction of perception of strain by zone as affected by residential and family characteristics should remain an accurate one. The zones in general may be expected to exhibit the following levels of perception of neighbourhood strain: among the zones under high strain, the North-Center and the North-West can be expected to have

only a moderate level of strain perception, the North-East can be expected to have a high level of strain perception, the Center-West can be expected to have a low perception of strain; among the areas of moderate strain both the Center-East and the South-West can be expected to have a moderate awareness of strain; the low strain area, the South-East can be expected to have a moderately high awareness of strain; and the Housing Project, whose strains are different from those in the rest of the community, can be expected to have a low awareness of the strains affecting the neighbourhood as a whole. Within each of these zones the varying family and residential characteristics should account for variations in strain perception.

CHAPTER IV

STRAIN PERCEPTION AND COMMUNITY PROBLEMS

Measuring the perception of neighbourhood strain is a complex procedure which is rendered even more complex by the variation of objective strains by zone as previously discussed. In this chapter, a general measure of strain perception for the neighbourhood as a whole will be aimed at, while the variation in strain perception by zone and by socio-demographic characteristics will be discussed in the following chapter.

First, let us examine the pattern of problems pointed out by the community in general in order to identify those which may best be used to measure neighbourhood strain. The questions used to identify community problems are as follows:

(1) Do you think the community has changed since you have been familiar with it?

(2) What kind of change are you referring to?

(3) What do you think will happen to the neighbourhood in the next 10 years?

(4) What leisure facilities should be improved or created in your neighbourhood?

(5) What do you think is the most urgent housing problem to be solved in your neighbourhood?

(6) Are you interested in the preservation and renovation of the houses in the neighbourhood which were built in the last century?

(7) What do you think is the most urgent traffic problem to be solved in your neighbourhood?

(8) If a freeway were built in or near the neighbourhood where should it be built?

(9) Are you favorable to the construction of a freeway on King Edward Avenue?

(10) What is the number one problem in the neighbourhood?

(11) What do you think is the greatest threat to your neighbourhood?

Perception of Change

The residents of Sandy Hill who feel that the neighbourhood has changed a great deal since they have been familiar with it, are represented in about the same proportion as those who have lived in Sandy Hill ten years and more (see Table 4.1). Since 42 percent of the residents of Sandy Hill have only been in the neighbourhood for two years or less, it is not surprising that 45 percent of the respondents see no change in the area since they have been familiar with it. The neighbourhood is divided almost evenly into those who see some change or great change and those who see no change or aren't sure if they've seen

TABLE 4.1

PERCEPTION OF CHANGE IN THE NEIGHBOURHOOD

Perception of Change	%
Changed a lot	30
Changed a little	17
Stayed the same	45
Doesn't know	8
N	(570)

a change.

Among those who identify changes, the concentration of response lies in the two categories identifying the transformation into apartment buildings and the deterioration of the neighbourhood (25 percent and 18 percent respectively) (see Table 4.2). The expansion of the University and its expropriation specifically catch the attention of 13 percent, with the change in the family and social characteristics of the area identified by 11 percent. The rest of the changes are diverse, not fitting any major category with only 5 percent of respondents feeling that the neighbourhood has improved.

Since the length of residence is so varied, the identification of the neighbourhood changes one expects in the future are, perhaps, a better indication of the feeling of neighbourhood strain than past changes are (see Table 4.3). Although 53 percent of the respondents feel that the neighbourhood has not changed since they have been familiar with it, only 19 percent feel it will not change in the next ten years or don't know if it will change. The feelings that the neighbourhood will deteriorate or be transformed into apartment blocks are again major categories (34 percent) but there is also a strong feeling that the neighbourhood will become a university campus (17 percent). The only other category of response that is large enough to be considered on its own, is the feeling that the appearance of the neighbourhood is going to change radically, a

TABLE 4.2

KIND OF NEIGHBOURHOOD

CHANGE PERCEIVED

Kind of Change	%
Improvement	5
Deterioration of Neighbourhood	18
Transformation into Apartment Blocks	25
Change in Family and Social Characteristics	11
Complete Change in Appearance	4
Other	18
University and Expropriation	13
Doesn't know	6
N	(273)

TABLE 4.3

CHANGE IN NEIGHBOURHOOD

IN TEN YEARS

Change in Ten Years	%
Become Commercial Area	.4
Deterioration of Neighbourhood	14
Transformation into Apartment Blocks	20
Change in Family and Social Characteristics	3
Complete Change in Appearance	7
University Campus	17
Other	19
Stay the same	12
Doesn't know	7
N	(526)

response which is probably related to either deterioration or the construction of apartments. The other responses are all too diverse to be fully examined. It is interesting to note that very few people seem to feel threatened specifically by a commercial or office expansion into the neighbourhood. There is a strong feeling of future change in the neighbourhood with many of the major threats for the preservation of the residential character of the area being perceived.

Leisure Facilities

We saw earlier that if families with children are to be attracted to Sandy Hill as a residential area, then more recreational areas will have to be made available especially in the North zone and the Center-West zone. One must bear in mind, when examining the response to the question on the need for leisure facilities that 56 percent of the households in Sandy Hill are made up of childless couples and single persons and 44 percent of the households include children.

20 percent of the respondents want playgrounds for children in their area and another 20 percent want play areas and parks for the use of the whole population. 25 percent of the respondents see no need for improved recreational facilities, probably in large part childless households whose leisure activities are varied and spread throughout the city and surrounding areas (see Table 4.4). A large category of respondents, 26 percent, identify the

TABLE 4.4

LEISURE FACILITIES MOST NEEDING IMPROVEMENT

Leisure Facilities	%
Adult Entertainment	5
Children's Play Ground	15
Adolescent Play Ground	5
General Play Ground	15
Other	2
None	25
Organized Activities	2
Recreational Facilities	26
Parks	5
N	(483)

need for specific facilities such as a swimming pool or tennis courts. There is a varied but definite feeling, even among single and childless couples, that the recreational facilities need improvement.

Housing Problems

In terms of the most urgent housing problem in the neighbourhood, only 11 percent of the respondents feel that there is no housing problem (see Table 4.5). The concentration of response is in an area which seems to be specific and oriented to the individual's own problems, that is, the cost of rent and taxes at 38 percent. We saw from the census data that the average rent in Sandy Hill in 1971 was comparable to that for the city, although with the tendency towards smaller households the apartments are probably also somewhat smaller than the city's average. Sandy Hill has a high proportion of university student households as well as a high proportion of households composed of the older age groups, both of whom tend to be on very low incomes but for convenience sake need to be located in a downtown area. The presence of students and the elderly is reflected in the high proportion of households with very low incomes which are accompanied by an equal number of households of only moderate income. It is understandable that such groups feel that rents are too high.

It is hard to determine which responses to this question are really community oriented ones and which personal. The deterioration of housing is one area of high

TABLE 4.5

MOST URGENT HOUSING PROBLEM

Housing Problem	%
No Problem	11
Lack of Housing	12
Cost of Rent and Taxes	38
Deterioration of Housing	18
Presence of Apartment Buildings	6
University's Expropriation	8
Other	6
More Open Space	1
N	(502)

concern at 18 percent but the construction of apartment buildings and the University's expropriation do not make the kind of showing they did for future change in the neighbourhood (6 percent and 8 percent respectively). The way in which this question was formulated, stressing the urgency of solution as it did, seems to have created a feeling of immediacy which in turn fostered a personal response to this question. Through an examination of the patterns of response to other questions we can determine whether this is indeed the case.

The preservation of historical homes rates a very high degree of interest among the population of Sandy Hill (see Table 4.6). 82 percent of the population are interested in such preservation with 50 percent among them who express a very strong interest. Even a high rate of concern about personal housing problems does not seem to lead people to favor the destruction of historical homes for the construction of mass types of housing. Since the rate of personal response to the most urgent housing problem question was so high, it is wiser to consider those residents who express a very high interest in preservation as those who are ready to defend the importance of historic character against great odds (50 percent of the population).

Traffic Problems

We saw in Chapter II that a serious threat to the preservation of a mixed residential character in the community is the use of the neighbourhood as a route for

TABLE 4.6

INTEREST IN THE PRESERVATION OF HISTORIC HOMES

Interest in Historic Homes	%
Very Interested	50
Interested	32
Not Very Interested	10
Not at all Interested	7
Doesn't know	1
N	(562)

large volumes of through traffic. Some areas are more severely affected than others, but all areas have at least a problem with heavy traffic on their borders. The responses to the question on the most urgent traffic problem do not reflect this through traffic problem to as great an extent as we might have expected (see Table 4.7). The formulation of the question was very similar to that on the most urgent housing problem, and seems to have created the same feeling of immediacy resulting in answers oriented towards personal problems.

27 percent of the respondents see no traffic problem or did not want to answer the question. It is difficult to divide the remaining responses into those which are essentially car oriented and those which are not. The 20 percent of respondents who see the density of traffic as the greatest traffic problem are probably referring to the volume of through traffic. The 18 percent who identify poor traffic conditions as the most urgent problem seem to be referring to problems related to their own driving convenience. The parking problem is pointed out by 14 percent of the population, which again seems oriented to personal problems but which certainly does exist especially around converted houses. The bulk of the responses to this question seem to be related to personal traffic problems with only 20 percent of respondents identifying the severe threat for the community. Perhaps the respondents' protectiveness towards the neighbourhood on the traffic

TABLE 4.7

MOST URGENT TRAFFIC PROBLEM

Traffic Problem	%
Traffic Laws Broken	6
Poor Traffic Conditions	18
Parking Problem	14
Lack of Public Transportation . .	3
Density of Traffic	20
Diverse	5
Need Traffic Facilities	6
No Problem or No Answer	27
N .	(574)

issue is better represented in the two questions related to freeways.

When asked if a freeway were built in or near the neighbourhood, where would one choose to have it built, a much more protective attitude is evident than for the question on the most urgent traffic problem (see Table 4.8). 36 percent of the respondents feel that no more freeways should be built in or near the community. This response should be considered a particularly strong statement against freeways, since the formulation of the question would only evoke such a response when it was deeply held. A less intense, but still protective response, to this question is that any such freeway should be placed outside or on the limits of the neighbourhood; 18 percent of the respondents in the neighbourhood had such a protective response. Only 20 percent suggested that a freeway be built on King Edward Avenue, the much publicized and much discussed proposed route. The remaining respondents proposed a variety of routes in Sandy Hill or had no opinion on this question. The majority of residents seek to shield the neighbourhood from a further invasion by through traffic.

On the specific issue of favorability to the King Edward Freeway, the majority of respondents again have a protective and anti-freeway attitude (see Table 4.9). 58 percent of the respondents are not favorable to the construction of a King Edward Freeway and 43 percent among them express a very strong degree of unfavorability. Very

TABLE 4.8

LOCATION OF A POTENTIAL FREEWAY

Location of Freeway	%
Should build no more	36
Outside Neighbourhood or on limits	18
King Edward Avenue	20
Other	8
Doesn't know	18
N .	(562)

TABLE 4.9

FAVORABILITY TO THE KING EDWARD FREEWAY

Favorability to King Edward	%
Very Favorable	11
Favorable	22
Not very Favorable	15
Not at all Favorable	43
No opinion	9
N	(536)

few respondents express a high degree of favorability (11 percent) and 22 percent say they are favorable to the freeway's construction.

Greatest Neighbourhood Problem and Threat

The respondents identify a number of diverse problems as the greatest one for the community, with the response being more generalized and community oriented than that for both the housing problem and the traffic problem (see Table 4.10). The major category of response is the problem most central to neighbourhood strain, that is, the deterioration of the neighbourhood and its loss of residential character (19 percent). Other community problems, similar to those identified by the Citizens' Groups are: University's expropriation (6 percent), housing (mostly responses concerned with deterioration, 10 percent), recreation (8 percent), poor public services (9 percent). These community problems account for 33 percent of the response and when added with the deterioration and loss of residential character response make up 52 percent of those problems identified. It is hard to know whether the 12 percent who point out traffic as the greatest neighbourhood problem are referring to personal or community oriented problems, but from the responses to the freeway questions it seems probable that those who identify traffic problems in this context are referring to the density of through traffic.

TABLE 4.10

NUMBER ONE PROBLEM IN COMMUNITY

Number One Problem	%
Recreation	8
University's Expropriation	6
Traffic	12
Attitudes of People	6
Housing	10
Deterioration and Loss of Residential Character	19
Cost of Rent and Taxes	9
Poor Public Services	9
No Problem	12
Other	9
N .	(574)

The housing problem that was so often identified, the cost of rent and taxes, does not rate high on the scale of community problems for most people; only 9 percent find it to be the greatest community problem. Only 12 percent feel there is no major problem in the neighbourhood and 6 percent think the attitudes of the residents of the neighbourhood are the greatest problem.

A community threat may be considered to be more serious and intense than a community problem. One of the best single indicators of the perception of neighbourhood strain is the question in which respondents are asked to identify the greatest threat to the neighbourhood (see Table 4.11). A greater proportion of respondents see no threat to the community than see no major problem for the community; 34 percent say there is no threat to the neighbourhood.

Among those who do see a threat to the community, there are a great variety of problems identified many of which were discussed earlier as creating pressure for change on the community. On the whole, more residents of the area do perceive a threat to the neighbourhood than do not, but it is rather difficult to determine which constitute a high awareness or a generalized awareness of the strains on the community. In order to determine the real meaning of these threat designations, it is necessary to examine the answers that respondents in each of the threat categories give to the questions on community problems. In this way, a general

TABLE 4.11

GREATEST THREAT TO THE COMMUNITY

Threat to Community	%
Hi-rise Apartments and Loss of Residential Character	16
University of Ottawa Expansion	12
Pollution and Noise	3
Traffic	9
Destruction of Historical Character	4
Poor Planning and Poor Management	5
Deterioration and Housing Problems	7
Rough Neighbourhood	8
Others	3
No Threat	34
N	(574)

pattern of concern can be established for each threat group and the level of awareness of neighbourhood strain to which it corresponds can be determined. Once the problem content of each threat category has been examined, the threats will be grouped according to the level of perception of neighbourhood strain to which they correspond, and this grouped variable will be used as the major indicator of neighbourhood strain.

Methodology

First, the overall association of these problems with the threat variable must be examined in order to ascertain whether all of the variables on community problems fall within the same sphere as the threat variables (see Table 4.12). The tables of each problem by threat are usually large and the numbers of rows and columns are not often equal. Such a variation in the sizes of rows and columns means that when comparing contingency tables, a coefficient of association must be chosen which will not be affected by these variations in sizes. Since the variables to be used in this chapter are at the nominal level, the Cramer's V is a suitable choice. Cramer's V is a measure comparable to ϕ for tables that are larger than 2 x 2, and is in fact, a modified version of the latter coefficient:[1]

$$V = \left(\frac{\phi^2}{\min\ (r-1)(c-1)}\right)^{\frac{1}{2}}$$

[1] In tables larger than 2 x 2, ϕ may attain values much larger than unity.

TABLE 4.12

THE CORRELATION OF VARIOUS PROBLEMS

WITH COMMUNITY THREAT

Various Problems	V	X^2	df.	P≤	N
1. Perception of Change	.17	50.72	27	.003	(570)
2. Kind of Perceived Change	.21	93.48	72	.043	(273)
3. Change in Ten Years	.18	135.97	72	.000	(526)
4. Improvement in Leisure Facilities	.15	82.02	72	.198	(483)
5. Most Urgent Housing Problem .	.18	129.85	72	.000	(502)
6. Interest in Historical Homes	.18	86.60	45	.000	(562)
7. Most Urgent Traffic Problem	.13	53.70	72	.05	(416)
8. Location of a Freeway . . .	.15	107.79	72	.003	(562)
9. Favorability to King Edward .	.22	105.49	36	.000	(536)
10. Number One Problem . . .	.23	180.63	72	.000	(574)

where min means the smaller value of r-1 and c-1. An advantage of V over other contingency coefficients, is that it can attain unity when the number of columns and rows are unequal, as with this data.[2] Its test of significance is X^2.

Table 4.12 records the consistency between the kind of threat one feels and the kinds of problems one finds major in the neighbourhood. Given the fact, that many variables are being used in a nominal scale with a great number of categories (as shown by the degrees of freedom), the coefficients of association should be considered high. More specifically, this means that the various categories are often not completely exclusive. This lack of exclusivity, consequently, reduces the size of the degrees of association as manifested by Cramer's V. Although there is such a suppressive effect on the coefficient, almost all the variables exhibit a high degree of statistical significance. The only variable which is not statistically significant is the one dealing with the improvement of leisure facilities in the neighbourhood.

Table 4.12 shows, then, that the relationships between all but one of the community problem variables and the neighbourhood threat variable are statistically significant. It also shows that the variation between the different coefficients tends to be small, that is, they tend to

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[2]Although Tschuprow's T is more often used in the social sciences than Cramer's V, the former is inconvenient since it can attain unity only when the number of rows and columns are equal.

be within the same universe.

Given the various complex ways in which each problem can be associated with the threats, a more detailed analysis of these associations is needed here. This will be accomplished by building a profile of each threat or non-threat, tracing the pattern of response for each to the community problem variables. This detailed analysis will be carried out by comparing the distribution of each category with the marginal distribution (totals for all respondents). Differences of approximately 10 percent from the marginal distribution will be considered significant in columns having ten cases or more. Only those responses which vary significantly from the average response of the total sample population will be analyzed.

Profiles of Neighbourhood Threats

Loss of Residential Character Threat

To the question on the Number One problem in the community, the hi-rise and loss of residential character threat group has double the proportion of response of the total population identifying the deterioration of the neighbourhood and loss of residential character (37 percent compared with average response 19 percent). This seems to indicate that the residential character threat group has a high tendency towards a generalized and insightful grasp of neighbourhood strain. There is a high concern here for the preservation of the residential character of the area; other categories of response approximate the average for

the total sample population. The residential threat group also has a higher than average rate of intense interest in the preservation of historical homes (65 percent compared to an average of 50 percent).

The residential threat group's response to the traffic problem question is close to average but on the location of a potential freeway, a high proportion of this group feels that no more freeways should be built (49 percent compared to average 36 percent). The overall feeling of protectiveness against a freeway is also higher than average 63 percent compared with 54 percent. This threat group records a much higher than average response against the construction of the King Edward Freeway with 76 percent unfavorable to the freeway (average 58 percent). The residential threat group, then, is intensely protective of the community on freeway issues.

The residential threat group is above average in a general feeling that the neighbourhood has changed at 58 percent (average 47 percent). This means that this group is approximately 10 percent below average in feeling the community has stayed the same. The change which this group identifies at a higher than average rate is the transformation of the area into apartment blocks at 39 percent (average 25 percent). Likewise, this group has a higher than average feeling that the neighbourhood will be characterized by the building of a great number of apartment blocks within ten years at 40 percent (average 20 percent).

It is likely that this high feeling of change will intensify the awareness of strain already exhibited.

The loss of residential character threat group has a consistent and above average awareness that the community is vulnerable to being transformed into hi-rise apartment blocks thus losing its residential character. It also has a strong protective response on the freeway issues making this group, as our further analysis will show, the group with the most intense awareness of neighbourhood strain. The loss of residential character threat group, in general, has a high perception of neighbourhood strain.

Loss of Historical Character Threat Group

The loss of historical character threat group has a higher than average feeling that deterioration and the loss of residential character is the greatest problem facing the community (39 percent compared to an average 19 percent). In this respect it resembles the loss of residential character threat group. The historical threat group also has a high feeling that the deterioration of housing is the most urgent housing problem (33 percent compared to an average of 12 percent). This threat group has a very strong response showing intense interest in the preservation of historic homes at 78 percent (average 50). This group has a highly generalized and insightful awareness of the danger posed for the residential character of Sandy Hill.

This group's response to the traffic problem question is average but 27 percent of this group feel any new freeway should be outside the neighbourhood's boundaries (average 18 percent). The most protective response of wanting no more freeways is average. The historical threat group has as strong a disapproval of the construction of the King Edward Freeway as the residential threat group at 76 percent (average 58 percent). The historical threat group has a higher than average feeling of protectiveness for the community on the freeway issues although its degree of protectiveness is not as strong as that shown by the loss of residential character group.

This threat group has a higher than average feeling that the community has stayed the same since they have known it (57 percent compared to average 45 percent). This group also has a higher than average feeling that the community will not change in ten years at 30 percent (average is 19 percent). This may reflect a confidence or a hope that the historic atmosphere this group values will not be harmed.

The historic threat group has a generalized awareness of community problems which incorporates many of the major strains on the community but the low feeling of change in the past and for the future, would seem to diminish the intensity of such a feeling of strain. However, the loss of historic character threat group may be considered to have a high perception of neighbourhood strain.

Deterioration and Housing Problem Threat Group

The deterioration and housing problem threat group has a higher than average feeling that the cost of rent and taxes is the major problem facing the neighbourhood (17 percent compared to average 9 percent). Given the range of other responses to this question, this strong concern would not seem to reflect a strong community concern. This group does not have a higher than average identification of deterioration of the neighbourhood as the greatest problem, as the residential and historical threat groups do. This group does, however, have a higher than average identification of the deterioration of the housing stock as the greatest housing problem (23 percent compared to average 12 percent). This threat group is close to the average in interest in the preservation of historical homes. No unusually strong pattern of community concern is evident from this analysis.

The response to the traffic threat question approximates the average, and this group's feeling of protectiveness on the freeway issue is also average. The deterioration and housing problem group has a below average unfavorableness to the King Edward Freeway with 49 percent of this group against the freeway compared to an average of 58 percent. It would seem then that this group's major concern is the housing issue specifically. The deterioration threat group shows a somewhat below average feeling of protectiveness for the community on the freeway issue.

The deterioration threat group has a higher than average general feeling that the community has changed (58 percent compared to average 47 percent). The change that is identified in a proportion above average is the deterioration of the neighbourhood (30 percent compared to average 18 percent). This threat group has a higher than average feeling that deterioration of the neighbourhood will take place in the next ten years (25 percent compared to average 14 percent).

The deterioration and housing threat group seems to have a more specific and physically oriented neighbourhood concern and a somewhat low protectiveness on the freeway issue but this specific concern could be intensified by a somewhat high feeling of neighbourhood change. This group reflects a moderate perception of neighbourhood strain.

University Threat Group

The University threat group exhibits a higher than average tendency to identify the University and its expropriation as the greatest community problem, with all other categories approximating the average (26 percent compared to average 6 percent). The replies to the most urgent housing problem question are about average except for identifying the expropriation of the University of Ottawa as the greatest problem (19 percent compared to average 8 percent). The pattern of interest in the preservation of historic buildings is average. This group seems to have a consistently high identification of the University's

expropriation as its only unusual characteristic.

The University threat group is average for the traffic problem question. The response to the question on the location of a freeway is similar to the average except for a lower proportion which doesn't know where a freeway should go, and a higher proportion which identifies diverse routes in Sandy Hill (16 percent compared to average 8 percent). This threat group registers a higher than average disapproval of the King Edward route for a freeway (73 percent compared to average 58 percent), leaving only 25 percent in favor of this freeway. This strong opposition to the King Edward Freeway, which is similar to that expressed by other threat groups with a better developed consciousness of neighbourhood strain than this one has, probably indicates that many who see the University as a threat live in the western sector near King Edward Avenue.

An area where the University threat group does exhibit a higher than average response, is in seeing change in the neighbourhood since they've known it (64 percent compared with an average of 47 percent). Again the change mentioned at an unusual rate is the expropriation of the University at 23 percent (average 13 percent). The only change in the future which is identified at an above average rate is the expansion of the University and the conversion of the neighbourhood into a university campus at 29 percent (average 17 percent).

It seems that the only striking characteristic of this threat group is its above average identification of the expansion of the University of Ottawa as the generator of a number of neighbourhood problems. There is a strong feeling of change in this group which might intensify its feeling of strain. On the whole, this group would seem to have only a moderate perception of neighbourhood strain.

Traffic Threat Group

The traffic threat group shows a pattern which varies from the average in a number of categories for the greatest problem in the community, although only one major one. 27 percent of this group says traffic is the greatest problem (average 12 percent) and 11 percent see poor planning as the greatest problem (average 2 percent) while this group is 8 percent below average in identifying each of housing and the deterioration of residential character as the greatest problems. Although this group has a consistent and higher than average interest in traffic problems, it does not seem to have as strong as usual a concern for the deterioration of residential character in the area. This group's response to the traffic problem question is consistent with their high interest in this area; only 6 percent say there is no traffic problem (average 27 percent) and 37 percent see the density of traffic as the greatest problem (average 20 percent). This group does have a higher concern with the problem of through traffic, however, it is surprising that a group

which has a high traffic concern would still have the majority of its responses in categories which seem to be related to the respondents' own driving convenience. To check the protective feeling of this group on the traffic issue, one must examine the freeway questions. The location of a potential freeway question, brings out the protective response of this group; 46 percent want no more freeways built (average 36 percent) with the overall feeling against a freeway above average at 65 percent (average 54 percent). This still leaves 35 percent of this group without a protective community feeling related to their identified threat, traffic. On the specific King Edward issue a larger proportion of this group shows a protective response; 79 percent are not favorable to this freeway compared to an average of 58 percent. This threat group is intensely protective of the community on traffic issues but its high awareness of problems seems fairly limited to specific traffic issues.

The traffic threat group's response on the most urgent housing problem is similar to the average except for a lower than average tendency to say there is no housing problem (3 percent compared to an average of 12 percent). The overall interest of this group in the preservation of historic homes is average but its rate of response to the category of high interest is below average at 42 percent (average 50 percent). The traffic threat group is at least ten percent below most other groups in registering a high

interest in historical homes and only the group which sees no threat to the community registers a lower rate of intense interest at 34 percent. It seems that a good number of respondents in the traffic threat group have little concern for the special character of the housing stock in Sandy Hill.

The traffic threat group approximates the average in seeing change in the community; among the 42 percent who have seen a change there is a higher than average tendency to identify the transformation into apartment blocks as the main change (46 percent compared to an average of 25 percent). This is a surprising finding for a group which has shown an average or below average concern for housing character. There does seem to be a core of respondents which has generalized residential concerns while the rest of this group has more personal housing concerns. It would seem, then, that many respondents in this threat group live on heavy traffic streets which cross zones of different characteristics. Those on heavy traffic streets in the higher strain zones are probably more likely to have a generalized residential concern. This groups' response to the changes facing the community in the next ten years is also average.

In general, the traffic threat group does not seem to have a generalized concern for the most critical community problems. It does have a high protective response towards the community on freeway issues and particularly against the King Edward Freeway. It would seem that this group is

a diverse one in geographic and in social terms and is mainly linked by a proximity to highly travelled streets. This group, on the whole, has only a moderate perception of neighbourhood strain although there is a core group within it which has a high awareness.

Rough Neighbourhood Threat Group

The rough neighbourhood threat group has a response approximating the average for the greatest problem in the neighbourhood, except for being somewhat above average in seeing the presence of students as the greatest community problem (10 percent compared to average 2 percent). On the most urgent housing problem, this group has a higher than average concern for the lack of housing (27 percent compared to average 13 percent) and a lower than average concern for the cost of rent and taxes at 27 percent (average 38 percent). The rough neighbourhood threat group shows a lower than average concern for the preservation of historic homes at 72 percent (average is 82 percent). There is no pattern to lead us to believe that this group has a generalized awareness of neighbourhood threats.

There is a high tendency on the part of this threat group not to acknowledge any traffic problem in the neighbourhood, with 42 percent seeing no problem (average 27 percent). This failure to see a traffic problem is higher than that for any other group including the no threat group (35 percent). On the freeway issue, this group shows a somewhat higher than average feeling that no more freeways

be built (44 percent compared with 36 percent) a high percentage for a group which has not tended to have a generalized awareness of community problems. This threat group has an average response to the question on the King Edward Freeway, which although close to average, expresses a much lower level of unfavorableness than seen for most other threat groups. This threat group has an unusual pattern of response on traffic issues, sometimes protective sometimes not. It would seem that on the whole this group has only an average feeling of community protectiveness against traffic.

The rate of seeing change in the community is average for this group. Those who do see change have an above average identification of the deterioration of the neighbourhood at 30 percent compared with an average of 18 percent. This group also has a below average identification of the transformation into apartment blocks as the major change (4 percent compared to an average of 25 percent). The prediction for the future of the area approximates the average.

The rough neighbourhood threat group does not exhibit a pattern of generalized concern for, or awareness of neighbourhood strain. It is a threat group which has a low level of strain perception.

Poor Planning Threat Group

The poor planning threat group has an above average feeling that deterioration and loss of residential character

is the main problem in the neighbourhood (32 percent compared to average 19 percent), while another higher than average response is the lack of good community planning at 14 percent (average is 2 percent). It would seem that this group has a more acute grasp of residential strain than many other groups. On the housing problem question, it shows an unusual pattern of response: an above average identification of the presence of apartment blocks as the greatest housing problem at 21 percent (average 6 percent), an above average concern for the lack of housing at 29 percent (average 13 percent), a below average concern for the cost of rent and taxes at 25 percent (average 38 percent), and no respondents who say there is no housing problem (average 12 percent). Again, this group shows a higher than average awareness of critical community strains. The interest in historical preservation among this group is high at 92 percent (average 80 percent), however the rate of intense interest is only average at 56 percent (average 50 percent).

The response of the poor planning threat group on the most urgent traffic problem approximates the average except in two categories: only 12 percent feel there is no problem (average 27 percent), and an above average proportion see the lack of specific traffic facilities such as stop signs, traffic lights etc. as the greatest problem at 15 percent (average 6 percent). The poor planning threat group has a higher than average tendency to identify specific solutions to the neighbourhood traffic problems.

The poor planning threat group has an average protectiveness towards the community on the general freeway issue. The degree of protectiveness on the King Edward Freeway is average.

Both the feeling that the community has changed and the kinds of changes perceived are average. The prediction for the future of the neighbourhood, however, is somewhat unusual: the identification of deterioration and loss of character is above average at 23 percent (average 14 percent), the feeling that the neighbourhood will improve is above average at 12 percent (average 3 percent). Perhaps the feeling that the neighbourhood will improve is related to a faith in the improvement of planning.

On the whole, this threat group has a well developed awareness of the strains on the residential character of the community and poor planning will be considered as a high perception of strain.

Pollution and Noise Threat Group

The pollution threat group has a higher than average feeling that there is no major problem in the neighbourhood at 33 percent (average 12 percent), an even higher feeling of no problem than that of the no threat group (22 percent). From the response to this question alone it does not seem that the pollution response is based on a high awareness of neighbourhood problems. The pollution threat group has a higher than average tendency to see no housing problem as urgent in the neighbourhood at 20 percent (average 12 percent),

as well as a higher than average identification of the cost of rent and taxes as the most urgent problem at 47 percent (average 38 percent). This resembles the pattern for the no threat group. The pollution threat group does show an average interest in the preservation of historic homes which the no threat group doesn't share.

On the greatest traffic problem in the community, the pollution threat group expresses a higher than average concern for the need of more traffic facilities such as traffic lights, stop signs etc., while it is average in all other categories. The pollution threat group has a higher than average feeling that no new freeways should be built at 53 percent (average 36 percent) while it is average in the other responses. On the King Edward Freeway issue, 76 percent are unfavorable to its construction (average 58 percent). In view of the lack of generalized concern shown by this group on many issues, the high community protectiveness is surprising.

59 percent of this threat group, feels that the community has not changed compared to an average of 45 percent. A somewhat higher than average proportion sees no change for the future of Sandy Hill at 20 percent (average 12 percent), while all other answers approximate the average.

Since this threat group has such a low generalized concern about community problems, it can be considered a group with a low perception of neighbourhood strain.

Diverse Threat Group

The respondents in the diverse threat group have been put together, because the threat they identify belongs to no broader category. The diverse threat group has a higher than average feeling that there is no problem in the neighbourhood, at 25 percent (average 11 percent). In this regard the diverse threat group is comparable to the no threat group (22 percent). Most other responses approximate the average except for the cost of rent and taxes which is above average at 17 percent (average 9 percent). On the most urgent housing problem, the lack of housing is above average at 21 percent (average 12 percent). The diverse threat group has an average interest in the preservation of historic homes. The level of high interest in historic homes, however, is above average at 67 percent (average 50 percent). This level of interest in historic homes is very high for a group which tends to see no problem in the neighbourhood.

On the general freeway issue, 47 percent feel that no more freeways should be built, above the average of 36 percent. The diverse threat group has an average response on the King Edward Freeway. This group then, has a slightly higher than average protective response towards the community on the freeway issue.

60 percent of the diverse threat group feel that the neighbourhood has changed since they have known it, an above average response (average 47 percent). A higher than

usual proportion feels that there has been great change in the community at 47 percent compared to an average of 30 percent. The diversity on which this group is based comes out when the prediction for the future is made; many categories of response are present in a proportion of 15 percent however the only below average category is that the area will become a university campus with no-one in this category (average 17 percent).

Since this group is so diverse it is difficult to identify a definite trend in strain perception so this threat group will be considered as having a moderate perception of neighbourhood strain.

No Threat Group

The no threat group varies from the average response on two categories of the question concerning the greatest community problem: 22 percent of this group finds there is no great problem in the neighbourhood (average 11 percent), and only 6 percent of this group feel that deterioration and loss of residential character is the major community problem (average 19 percent). This group lacks a generalized awareness of community problems according to these results. It does identify a number of specific problems but is lacking in the perception of that one strain which encompasses all the neighbourhood problems: the loss of residential character. On the major housing problem of the area, an above average proportion of this group sees no problem at 19 percent (average 12 percent). The no threat

group's interest in historic homes is lower than average at 67 percent (average 80 percent) and no other group has as low a degree of strong interest in the preservation of historical homes as this one. It seems that this group's feeling of no threat is indeed based on a weak grasp of the strains on the community.

For the most urgent traffic problem, the rate of seeing no problem is somewhat higher than average at 35 percent (average 27 percent). The no threat group has a below average feeling that no more freeways should be built at 24 percent (average 36 percent). The overall protective response on the general freeway issue is below average at 40 percent (average 54 percent). Most other response categories approximate the average, with the rate of not knowing where a freeway should go, being somewhat above average at 27 percent (average 18 percent). When the specific question of the King Edward Freeway is examined, the no threat group is above average in favorableness to its construction at 48 percent compared with an average of 33 percent, leaving only 35 percent among the no threat group unfavorable to the King Edward while the average unfavorableness is 58 percent. The no threat group is the least protective of any threat group examined, on traffic issues.

This group's feeling that the neighbourhood has changed is lower than average at 35 percent (average 47 percent). Those who do see change among the no threat group identify kinds of changes similar to the average. The

forecast for the future of Sandy Hill is similar to the average, meaning that many people who perceive no threat to the community are aware of many of the most serious changes that could come about. That respondents do not translate this awareness of possible change in the future into a feeling of neighbourhood threat, would seem to indicate that many in this threat group have only a slight attachment to the community.

The no threat group is certainly one which has a low perception of the generalized strains on the residential character of the community.

Threats and Strain Perception

From our analysis of the content of each threat statement we are able to set up a hierarchy of strain perception: the loss of residential character threat group, the loss of historical character threat group and the poor planning threat group may be considered to have a high perception of neighbourhood strain; the University and expropriation threat group, the traffic threat group, the deterioration of housing threat group and the diverse threat group may be considered to have a moderate perception of strain; the pollution and noise threat group, the rough neighbourhood threat group and the no threat group may be considered to have a low perception of strain.

CHAPTER V

STRAIN PERCEPTION, ZONE AND FAMILY AND RESIDENTIAL CHARACTERISTICS

In Chapter III, we saw the variation of objective strains by zone, and made predictions about the level of strain perception residents of each zone could be expected to have, based both on actual strain and on the family and residential characteristics of the areas. The residents of the zones were expected to exhibit the following behavior: the residents of the North-East were expected to have a high level of strain perception, those of the South-East to have a moderately high level of strain perception, those of the North-Center, the North-West, the Center-East and the South-West a moderate level of strain perception, and those of the Center-West and the Housing Project a low level of strain perception.

Table 5.1 shows, that the pattern of strain perception by zone is not quite as expected, although there are strong similarities to the prediction. No zone has a majority of its residents in the high perception category, but the North-East zone does have an above average proportion of such responses, accompanied by a lower than average proportion of low responses. The North-East is the zone, then, where respondents have a greater tendency towards a

TABLE 5.1

STRAIN PERCEPTION BY ZONE

Strain Perception	Zone H.P.	S.E.	S.W.	C.E.	C.W.	N.E.	N.C.	N.W.	Total %
High Perception	9	26	14	30	17	37	29	20	24
Medium Perception . . .	16	33	43	24	31	29	33	41	31
Low Perception	75	42	43	46	51	34	37	39	44
N .	(57)	(31)	(35)	(37)	(105)	(123)	(102)	(84)	(574)

$V = .20$; $P \leq .00$

high perception of neighbourhood strain.

The South-East, North-Center and North-West zones all exhibit a pattern of response which is close to the average and may be considered as areas in which residents tend towards a moderate perception of neighbourhood strain. The Center-East exhibits a special kind of pattern of its own, being both high in a high perception of strain and average to high in a low perception of strain while low in a moderate perception of strain. It is difficult to categorize the residents of the Center-East concerning a tendency towards a specific level of strain perception.

The residents of the South-West may be considered to have a low moderate perception of strain, having a below average proportion of high perception, an above average proportion of medium perception and an average proportion of low perception. The residents of the Center-West may be considered to have a low perception of strain being below average in a high perception of strain, average in a medium perception of strain and above average in a low perception of strain. Although the pattern of perception in the Center-West tends towards a low perception of neighbourhood strain it is not as low as that exhibited by residents of the Housing Project, where the overwhelming majority (75 percent) have a low perception of strain.

We had predicted that the South-East zone, although it is an area of low strain, would have an awareness of community problems which was much higher than its actual

strain would lead one to expect. It would seem that this zone's high proportion of owner occupants, long term residents, unifamilial dwellings and families did not have as strong an intensifying effect as we had thought, for its residents' overall level of perception is only moderate and not above that of residents of the North-Center and North-West as predicted. It is still higher, however, than the level of strain would have indicated. The South-West was expected to have a moderate level of strain perception, given its moderate objective strain and its high proportion of unifamilial dwellings and owner occupants. This zone, however, exhibits a low moderate level of perception. The Center-East residents were expected to exhibit a moderate level of perception of neighbourhood strain, but instead the residents are polarized into those of a high and those of a low level of perception. We had predicted that there would be a core group of owner occupants, unifamilial dwelling residents, households with children and long term residents in the Center-East, which would hold a high perception while the rest of the area would have an overall moderate level of strain perception.

The behavior pattern of all the other zones approximates our earlier predictions. It is clear that the actual strain in the zone in which one resides does have an impact on the perception of strain one forms. However, the relationship between actual strain and the perception of strain is affected by other characteristics of the area.

The areas of high objective strain, all the North zones and the Center-West zone, are characterized by different overall patterns of strain perception: the North-East has a tendency to a high level of strain perception, the North-West and North-Center to a moderate level of strain perception and the Center-West to a somewhat low level of perception. The areas of moderate objective strain, the South-West and the Center-East, also vary somewhat in levels of strain perception: the South-West has a low moderate level of strain perception while the Center-East is polarized into both high and low levels of strain perception. The zone of low objective strain, the South-East, has a moderate level of strain perception. The area which is removed from the community both in terms of strain and of family and residential characteristics, the Housing Project, has the lowest general level of strain perception of any area.

The relationship between zones and the perception of strain may be accepted as a significant one, since the test of significance $P \leq .00$ is well below the chosen upper limit of .05. It is also important to examine the significance of the effect of the family, residential and socio-economic characteristics on the level of perception of strain (see Table 5.2). Four of the family and residential characteristics have no significant effect on the level of strain perception: length of residence, marital status, residential status and housing type. Two of them do have a significant relationship although the behavior exhibited

TABLE 5.2

THE CORRELATION OF SOCIO-DEMOGRAPHIC VARIABLES WITH STRAIN PERCEPTION

Variables	V	P	N
Length of Residence	.06	.45	(571)
Marital Status	.01	.95	(571)
Family Status	.19	.003	(329)
Household Density	.11	.03	(559)
Residential Status	.09	.18	(573)
Housing Type	.07	.667	(574)
Student Status	.03	.819	(565)
Educational Level	.18	.00	(542)
Income Level	.20	.00	(414)
Occupational Status	.15	.0001	(551)

for families with children compared to families with no children is the opposite of that expected: those couples with no children have a higher than average high level of strain perception and those with children are average at all levels of strain perception. Only household density, of the residential characteristics has the expected effect; those in the least crowded conditions have a higher than average awareness of strain and a lower than average low perception of strain while those in the more crowded conditions exhibit the opposite behavior.

This lack of significant effect or reversal in predicted effect is a curious phenomenon, since the prediction for zones which was partially based on these characteristics was quite accurate. It would seem that the highly significant effect observed for education and perception of strain ($P \leq .00$), is more important than that for any other socio-demographic characteristic (see Table 5.3). Educational level, income level and occupational status all exhibit roughly similar effects on strain perception since they more or less coincide. Educational level is the preferred variable to use as an indicator here, however, since many respondents refused to divulge their annual family income (160 cases lost) and occupational status had to be assigned on the basis of parents' or spouses' status among those who held no job, leaving educational level as the best indicator of the respondents' personal attributes. The effect of education on strain perception may be described as follows:

TABLE 5.3

STRAIN PERCEPTION BY

EDUCATIONAL LEVEL

Strain Perception	Educational Level Low	Medium	High	Total
High Perception	16	31	40	24
Medium Perception . . .	30	35	31	32
Low Perception	54	34	29	44
N .	(285)	(161)	(96)	(542)

those of high education (graduate school or professional school) have a higher than average proportion of high strain perception, an average proportion of medium strain perception and a lower than average proportion of low strain perception; those of medium education (at least some university) have only a slightly higher than average proportion of high strain perception, an average proportion of medium strain perception and a lower than average proportion of low strain perception; those of low education (secondary school or less) have a lower than average proportion of high strain perception, an average proportion of medium strain perception and a higher than average proportion of low strain perception. The levels of strain perception which are affected by education, are the high perception of neighbourhood strain and the low perception of strain while the moderate level of strain perception is comparable for all groups.

It is possible that our failure to observe a significant relationship between most of the family and residential characteristics and the level of strain perception is in part due to the blurring effect caused by variations of educational level within residential and family groups. It seems highly likely, for instance that most of those who live in households of light density are people of higher education and consequently higher income who can afford to pay for more personal space. The effect observed for household density could indeed be another version of the educational effect. It is also possible that many of the

childless couples in the neighbourhood are people of higher levels of education thus affecting the relationship between family status and strain perception. It is important then, to examine the effects of family and residential characteristics on strain perception when education is held constant.

When the correlations between socio-demographic characteristics and strain perception controlled for education are examined, it is found that there are still very few significant relationships. There are really only three relationships which can be relied upon as significant and each of these are characteristic of one education group only within different variables. Among those with a high education, being married intensifies the tendency towards a high level of perception of neighbourhood strain (see Table 5.4). There is no such relationship for having children and education, so it would seem, for those of high education being married increases the involvement with the neighbourhood. For those of high education being an owner increases the tendency towards a high and moderate level of strain perception (see Table 5.5). The more committed a highly-educated resident is to the neighbourhood the more aware he becomes of the critical problems with which it is faced. No such pattern is observed for those of medium and low education.

The only other socio-demographic characteristic which has a significant effect on strain perception when education is controlled, is the household density among those

TABLE 5.4

STRAIN PERCEPTION BY MARITAL STATUS

BY HIGH EDUCATION

Strain Perception	Marital Status Single	Married	Total
High Perception	26	49	40
Medium Perception	28	33	31
Low Perception	46	18	29
N .	(39)	(57)	(96)

$V = .32$; $P \leq .007$

TABLE 5.5

STRAIN PERCEPTION BY RESIDENTIAL STATUS

BY HIGH EDUCATION

Strain Perception	Residential Status			
	Owners	Tenants	Roomers	Total
High Perception . . .	55	42	0	40
Medium Perception . .	46	29	38	31
Low Perception	0	30	63	29
N .	(11)	(77)	(8)	(96)

$V = .24$; $P \leq .03$

of low education (see Table 5.6). Those in the most crowded conditions among those of low education have the lowest level of strain perception. This relationship would seem somewhat unreliable however, since it is known that most people living in crowded conditions, live in the Housing Project and it is quite isolated from the rest of the community and is characterized by a low level of strain perception. The variation in strains by zone would seem to explain this relationship.

At the level of the neighbourhood as a whole, the only characteristics which seem to explain variations in strain perception are educational level, income and occupational status. Education, however would seem to be the key factor, as there is no doubt that a habit of analytic thought is a definite aid in developing an encompassing awareness of neighbourhood strain. It is also likely that, since education and higher income often go together, that the highly educated have more discretionary income and have a wider range of possibilities open to them as far as their place of residence is concerned, than others do. It is likely, that someone of high education and high income, made a definite decision to come to the area because of the gratification of personal tastes that it offered. Those with smaller incomes, especially families on low incomes often have to settle where the most reasonable cost is to be found. Following this train of thought, however, one would expect to find a heightened awareness of strain among long term residents of the area, who have probably chosen to stay

TABLE 5.6

STRAIN PERCEPTION BY HOUSEHOLD DENSITY

BY LOW EDUCATION

Strain Perception	Low Education Household Density				
	-.49	.50-.99	1-1.49	1.5+	Total
High Perception	16	27	12	3	16
Medium Perception	31	30	32	22	30
Low Perception	53	43	57	75	54
N .	(32)	(93)	(122)	(32)	(279)

$V = .18$; $P \leq .008$

in the neighbourhood regardless of problems, but this has not proven to be the case even when education is controlled for.

There is a possibility that the relationship observed between strain perception and residence for specific zones, is affected by the education factor. There is also a possibility that the effects of different family and social characteristics are blurred by the differences attributable to zones. Since the North zones contain the bulk of the population, any pattern of effect due to their objective strain and to their family and social characteristics could outweigh those found in other zones with different strains and different characteristics. Unfortunately, controls are very difficult to apply at the zone level since the zones of smaller population are likely to be left with fewer than ten cases in a column, rendering the results unreliable.

First, let us examine the relationship between zones and strain perception when education is controlled for. We saw that for the neighbourhood as a whole those of high education are characterized by a high tendency to the perception of high strain, an average tendency to the perception of moderate strain and a lower tendency to the perception of low strain; those of medium education are represented in equal proportions in all the perception categories although this means having a roughly average tendency to the perception of moderate and high strains and a lower tendency to perceive low strains; those of low education have a high

tendency to the perception of low strain, an average tendency to a perception of moderate strain and a lower than average tendency to the perception of high strain (see Table 5.3). In examining the table of strain perception by zone by low education, we will compare the results within each zone to the results of that zone when education is not controlled for. If the effect of low education is the same across the zones as it is for the neighbourhood as a whole, we would expect that in each zone the percentage of high perception will diminish, the perception of moderate strain remain approximately the same, and the proportion of low perception increase (see Table 5.7; compare with Table 5.1). In the Housing Project low education makes no difference in the distribution of strain perception. This is understandable of course since this area is rather high in residents of low education. In the South-East zone the expected pattern is not observed: the proportion of high perception remains stable while the proportion of moderate perception diminishes and the proportion of low education increases. It would seem that in the South-East zone there is another factor or factors which affect the high perception of strain more strongly than education does. In fact, those of low education in the South-East zone have the tendency to a higher degree of perception of high strain than any other zone's low education group. Among those of low education in the South-East, the perception of moderate strain diminishes while the perception of low strain increases.

TABLE 5.7

STRAIN PERCEPTION BY ZONE

BY LOW EDUCATION

Strain Perception	Zone H.P.	S.E.	S.W.	C.E.	C.W.	N.E.	N.C.	N.W.	Total %
High Perception . . .	11	29	18	18	9	17	21	17	16
Medium Perception . .	11	14	46	23	36	37	27	37	30
Low Perception	77	57	36	59	55	46	52	46	54
N .	(44)	(14)	(22)	(22)	(44)	(54)	(44)	(44)	(285)

In the South-West the expected pattern is again not observed, the proportions of high and moderate strain perception hardly change while the proportion of low strain diminishes (43 percent to 36 percent). Although the proportion of high strain was not very large to begin with, it slightly increases as does moderate strain, so one must expect that there is another factor or factors which better explain high and moderate strain perception.

In the Center-East, the expected pattern is observed; with low education the proportion of high perception decreases and the proportion of low perception increases. The education effect here is similar to that for the whole neighbourhood. In the Center-West, the proportion of perception of high strain decreases as expected but both the moderate and low perception levels increase slightly. The education effect then is not as clear cut as that for the neighbourhood as a whole.

In the North-East there is a dramatic change in proportions when low education is controlled. The proportion of high strain perception goes from 37 percent for all members of the zone to 17 percent for residents of low education. There is however an equal increase in the proportions of both moderate and low strain perception, and not just in low perception as the neighbourhood's performance would have us expect. The North-Center follows the expected pattern, diminishing in high strain perception and increasing in low strain perception. The North-West does

not at all follow the expected pattern since there is only a slight increase in low strain perception and little change in the proportion of moderate and high perception.

For the level of moderate education, only the Center-West and the North zones have sufficient cases to be analyzed (see Table 5.8). In all of them except the North-Center, the proportion of high perception increases and the proportion of low perception decreases. The North-Center exhibits a pattern more similar to that of the neighbourhood as a whole where all categories are present in about equal proportions. The direction of the perception of strain observed when education was not controlled for remains: residents of the North-East have the highest proportion of high strain perception; residents of the North-Center and North-West have a moderate level of high strain perception and residents of the Center-West have the lowest proportion of high strain perception.

For those of high education, only the Center-West and the North zones again may be examined due to a low number of cases in other zones (see Table 5.9). In the Center-West the expected pattern is observed; high education increases the proportion of those of high perception and decreases the proportion of those of low perception. In the North-East the effect of high education is dramatic; it increases the proportion of high strain perception greatly but it decreases both moderate and low perceptions, not just low as expected. In the North-Center the change is also

TABLE 5.8

STRAIN PERCEPTION BY ZONE

BY MEDIUM EDUCATION

Strain Perception	Medium Education Zone C.W.	N.E.	N.C.	N.W.	Total %
High Perception	26	47	33	33	32
Medium Perception	31	30	38	43	35
Low Perception	43	23	29	24	34
N .	(35)	(30)	(42)	(21)	(161)

TABLE 5.9

STRAIN PERCEPTION BY ZONE

BY HIGH EDUCATION

Strain Perception	High Education Zone C.W.	N.E.	N.C.	N.W.	Total %
High Perception	31	61	54	16	40
Medium Perception	25	19	31	42	31
Low Perception	44	19	15	42	29
N .	(16)	(31)	(13)	(19)	(96)

dramatic; high education greatly increases the proportion of high strain perception and greatly diminishes the proportion of low strain perception. In the North-West, however, high education has no effect on the perception pattern. Only medium education affects the North-West zone.

This examination of the variation in education effects by zone shows the complexity involved in what seems like straightforward relationships at the level of the neighbourhood as a whole. It would seem that the education factor plays an important part in making the level of perception of residents of the North-East zone higher than that in other zones. It also seems that some of the polarization of perception in the Center-East zone is explained by the education factor. However in many zones, especially the smaller population ones with less impact on the figures of the neighbourhood as a whole, this is definitely not the case. The effect of education at the level of the neighbourhood as a whole is highly affected by the North zones and the Center-West zone.

Another complexity in examining behavior at the level of the neighbourhood as a whole, is that although certain characteristics don't influence the perception patterns of most zones nor of the neighbourhood as a whole, they may have an important impact in one particular zone. Given the variation of strain on the zones and the variation in mix of characteristics, this is to be expected. For instance, residential status has no effect on strain

perception at the level of the community as a whole. However, in the South-East, South-West and Center-West being an owner occupant has an effect on the tendency towards a perception of high strain (see Table 5.10). In the South-East there is a 13 percent increase in the high perception of strain among owners compared to the behavior of the zone as a whole, in the South-West a 7 percent increase and in the Center-West a 13 percent increase. The effect in the Center-West is similar to the effect attributed to high education in that area, and it is possible that owner occupants and those of high education coincide in large part. However in the other two zones no effect for education is observed, and owner occupancy seems to explain more about high strain perception. There are other such variations throughout the zones, however it is impossible to control for education since it diminishes the number of cases to an unreliable level. In order to further investigate these phenomena, it would be necessary to group and regroup zones according to specific characteristics, changing the grouping as different variables are examined. This process would increase the number of cases in each column and allow a deeper analysis of the behavior explained by zone, however it is beyond the scope of the present study.

It is clear, then, that education is an important factor affecting strain perception but the zones also remain important in affecting the perception of neighbourhood strain. The variation in education effects by zone as well

TABLE 5.10

STRAIN PERCEPTION FOR THREE ZONES

BY OWNER OCCUPANTS

Strain Perception	S.E.	S.W.	C.W.
High Perception	39	21	30
Medium Perception . . .	39	29	23
Low Perception	23	50	46
N .	(13)	(14)	(13)

as the variation in the impact of owner occupancy seems to suggest that different zones have different characters, and given their different strains then different socio-demographic characteristics are important in determining strain perception within them. The individuality of the zones cannot be ignored in an analysis of the behavior of Sandy Hill residents, especially the character of the zones of smaller population for they can too easily be submerged by the characteristic behavior of the residents of larger zones with quite different strains.

CHAPTER VI

CONCLUSION

We have seen, that in the twenty years between 1951 and 1971, many changes in the socio-demographic characteristics of Sandy Hill took place. These changes coincided with the intensification and convergence of a number of physical pressures on the community such as the increase of through traffic, the passing of zoning bylaws not related to the profile of existing buildings, the lack of recreational space and so on. The changes in socio-demographic characteristics were often in reaction to physical strains on the community, but the change in socio-demographic character itself also created strains. There are major pressures exerted on the whole area of Sandy Hill, which make the preservation of its residential character hazardous. However, the quantity and intensity of these pressures vary from zone to zone within the area, creating a different level of actual strain on the residential character within each.

Not only do the objective strains vary by zone but so do the family, residential and socio-economic characteristics. This means that for each zone, the residents' perception of the actual strain is highly likely to be affected by the manner in which socio-demographic character-

istics alter the relationship with the neighbourhood. Varying socio-demographic characteristics not only affect the interpretation of actual strain, their mix also creates a special environment in which the strain exists.

In developing a measure of the residents' perception of strain we were not concerned with indicating only the degree of tension a person had concerning the community but rather the kind of tension a person had. A high perception of strain means that a person sees most of the major problems facing the neighbourhood as a whole, has generalized them into an encompassing framework which leads to an awareness of the fundamental critical strain (loss of the mixed residential character of the Community), and has a high likelihood of a protective attitude towards the area on the freeway issue. A moderate perception of strain means that a person may well have a strong awareness of some community problems, but this awareness is often limited to one major problem or a few problems, and does not tend to be generalized to an awareness of the fundamental critical strain. This moderate perception of strain, may or may not be accompanied by the likelihood of showing protectiveness towards the community on the freeway issue. A low perception of strain is not an absence of awareness of problems but rather is likely to include an awareness of problems in a resident's immediate area without the presence of a feeling that anything vital about the community as a whole is threatened. It is sometimes accompanied by a protective

attitude towards the community on the freeway issue.

At the level of the neighbourhood as a whole, the factors which seem to have the strongest effect on the level of strain perception are the zone one lives in, and one's level of education. It is not only the degree of actual physical strain on a resident's zone which predicts his level of strain perception, but a complex set of interacting socio-demographic characteristics. At the level of the neighbourhood as a whole, education as well as its complements, income and occupational status, exhibit an effect on strain perception. However, in the different zones the effect of education on perception shows a great variation and the neighbourhood results are highly affected by environmental factors in the high strain, high population zones. It is surprising that our predictions about the behavior of zone residents, were fairly accurate when they were partially based on an inventory of characteristics which individually show little effect at the neighbourhood level. It would seem that in considering the mix of socio-demographic characteristics in a zone with the actual physical strain on the zone, we developed a feeling for the environment of the zone, which was a greater factor in our prediction of residents' behavior than was any particular characteristic. It seems that the relationship of socio-demographic characteristics to the level of strain perception is a very complex multifaceted one and, it would appear, is based more on the combination and interaction of characteristics than on the

independent effect of each at the level of the neighbourhood as a whole.

Within the varying environments created by the blend of particular physical strains and a particular socio-demographic mix, different socio-demographic characteristics become dominant in affecting the level of strain perception. We have illustrated the dramatic effect of educational level in the North-East zone as well as the varying effects of owner-occupancy in the South-East, South-West and Center-West zones. Other variations have been observed, which cannot be taken as completely reliable without further controls, but which give every indication of being valid relationships. In the South-West, length of residence in the neighbourhood affects the perception of strain, with those of long term residence having a high perception of strain in a proportion 16 percent above that of the zone's population as a whole. In the South-West education has little effect, but it seems length of occupancy does. In the Center-East education does have the expected effect, but both length of occupancy and having children in the household, have a stronger effect on increasing the level of strain perception. This is further evidence that the environment of each zone encourages different socio-demographic characteristics to become dominant in affecting strain perception.

When one considers the effect of strain perception on participation in the Citizens' movement, it is necessary to consider the structure of participation and the method

of recruitment to active participation. At the time of the survey the main structure of Citizen's participation was as follows: a central co-ordinating committee which did intensive and often daily work on the plan, both responding to directions given at general Citizens' meetings and generating policies and proposals for discussion at meetings; periodic general meetings, usually organized around specific issues, with a notice and invitation delivered to each household; periodic zone meetings to discuss problems and proposals as they affected the more local levels. It must be noted that Sandy Hill was divided into only three zones for the purpose of these zone meetings, North, Center and South zones, and notice of the meetings depended on including oneself on a list at general meetings, since no funding was available to support a notification of all zone residents by mail. Later on, a community newspaper appeared which carried notification of zone meetings.

Given this structure, it is likely that the group with a high perception of neighbourhood strain, particularly from the zones of high objective strain, would take part in the Citizens' activities. The high strain perception group is not the only one which is likely to participate, although it is likely that its members would have the most intense form of participation. One must bear in mind that we are examining, here, the independent effect of strain and strain perception on participation. There are a number of other factors which are likely to affect mobilization such as

community attachment, desire to stay in the neighbourhood, general beliefs, activity in the intermediate structures of society, and so forth, which will be dealt with in future phases of the neighbourhood study.

Many of those residents with a moderate perception of strain are also likely to participate, since the Citizens' proposals cover such a wide range of topics, many of the specific problems which form the basis of individuals' moderate perception of strain are touched upon. Those with a moderate perception of strain, living in high strain zones are more likely to participate. Those who have a protective attitude towards the community on the general freeway issue are also more likely to participate. When mobilization factors are held constant, this group is less likely to have as intense a form of participation as those of the high perception group.

The residents who have a low perception of strain are least likely to participate. Many of the Citizens' proposals do touch the problems that this group sees at the local level, and when this occurs, they are more likely to participate. Those in high strain areas are most likely to participate, and even when residents of low strain perception do attend meetings they are not as likely to have as active an approach to participation as either of the other two.

Many of the socio-demographic characteristics which we hypothesized as affecting strain perception, may also

affect and modify the behavior of individuals in each strain group. It is likely however, that the specific characteristics which are found to heighten the perception of strain in particular zones, are also likely to increase the tendency towards participation in each of the strain perception groups in those zones. Since the particular socio-demographic characteristics which heighten strain perception in a given zone, may be considered to be key factors in developing a community protectiveness given the environment of that zone, then we would expect them to exert a heightening effect on the participation rate of individuals in the low and moderate perception category as well as on those in the high perception category.

Other structures of participation could modify these expectations. Since nearly all residents are aware of problems at their zone level, and since the strain and socio-demographic environment varies from zone to zone, a form of participation at least partially based on planning activities at the zone level, as divided in this study, would be most likely to involve the widest range of residents. Interests and socio-demographic characteristics vary within the zones as well, so groups with differing interests would probably have to be formed even within zones, to attract the widest range of residents. There are many problems common to the neighbourhood as a whole which must have a solution at the neighbourhood level, such as curbing the rate of through traffic. However, if groups were

mobilized at the level of their zone interests, even those with a low strain perception would be more likely to participate at the neighbourhood level. The political structure in which the decision makers outside of the neighbourhood operate, necessitates the presence of a central neighbourhood wide form of participation since it is only with the larger population base that a political impact would be possible. Organizing for maximum participation in a hetergeneous zone is a complex procedure and one must bear in mind the existing citizens' participation structure in predicting the behavior of different segments of the population.

Through the further examination of the manner in which different key socio-demographic characteristics affect strain perception within the zones, more specific predictions about the participation behavior of residents of Sandy Hill will be generated. From the present study we know that the relationship between socio-demographic characteristics and strain perception is a very complex one, and cannot easily be treated outside of the context of particular zone strains and social environments.

APPENDIX A

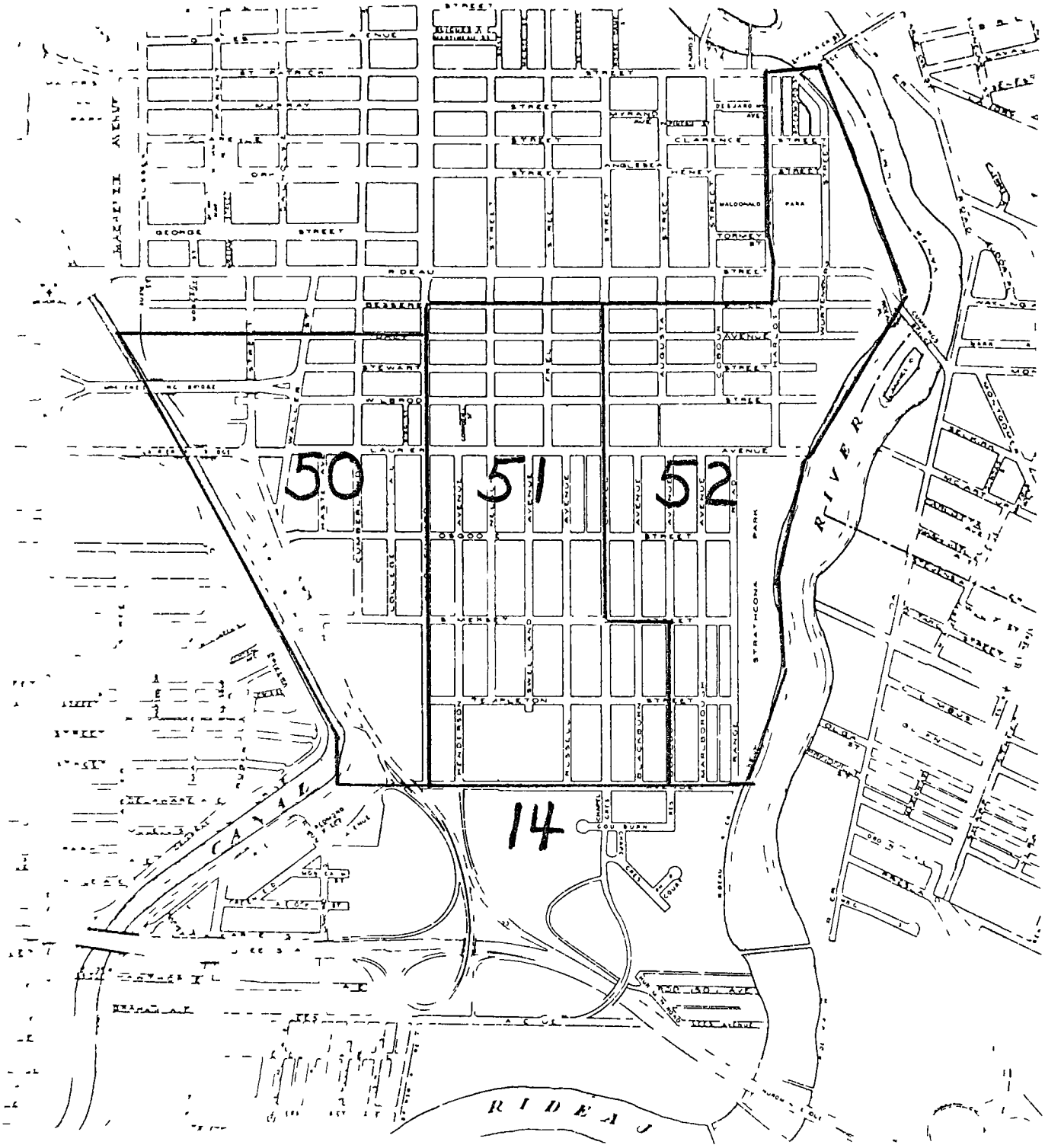

Fig. A.1--Sandy Hill Census Tracts,1971

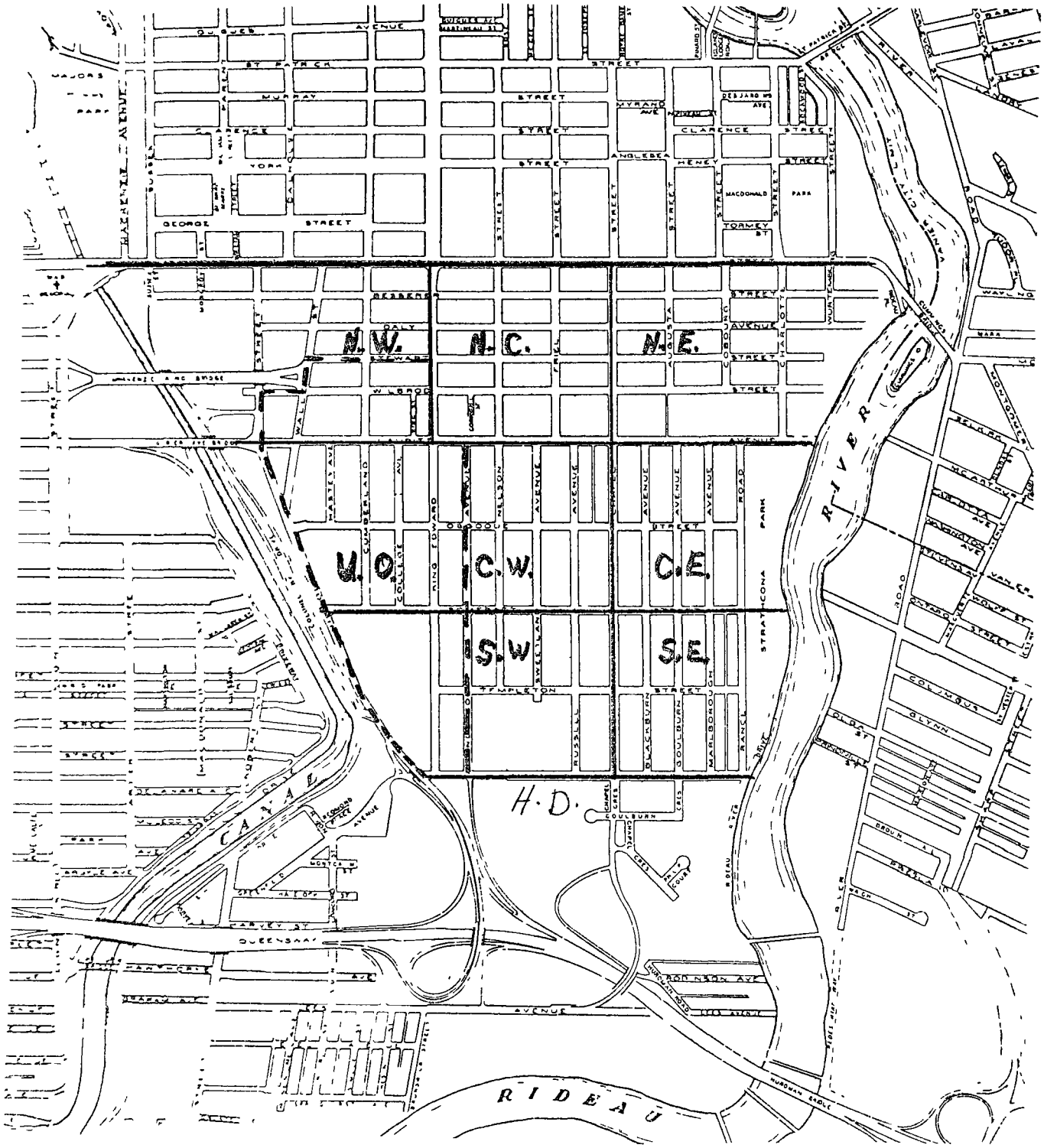

Fig. A.2--Sandy Hill Zones

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