SPATIAL CONCENTRATION OF COMMUNITY MENTAL HEALTH FACILITIES

by

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SPATIAL CONCENTRATION OF COMMUNITY MENTAL HEALTH FACILITIES

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ABSTRACT

This thesis examines the factors contributing to the spatial distribution of community mental health facilities. It is a readily observable phenomenon that these facilities are concentrated within easily identifiable areas of the central city, yet the factors contributing to this pattern are not as easily discerned. This thesis argues that the ghettoisation of facilities is the product of a complex interaction of social and political forces that are intrinsically associated with the many dimensions of locational conflict. The nature of community response and the exercise of political power are key elements of this process. Both of these elements exhibit distinct socio-spatial characteristics. In light of this, the research goals of this thesis sought to identify whether systematic relationships exist between the concentration of facilities and community attitudinal and socio-environmental characteristics.

Metropolitan Toronto was the study area for this thesis. Socio-environmental data were collected measuring the major social and physical characteristics of the neighbourhoods under examination. Attitudinal data were taken from a major survey (1090 people) of attitudes toward the mentally ill and mental health facilities conducted in Toronto. The relationships of these variables to facility concentration were tested individually and in combination.

The results of the analysis indicated that the socio-environmental variables were more strongly related to facility concentration than the attitudinal variables. With respect to both sets of characteristics, areas of low concentration were most similar to one another and most different from areas of high concentration.

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CHAPTER ONE

INTRODUCTION

Within the last twenty years, major changes have occurred in the treatment of the mentally ill. Mental health professionals and planners have adopted policies which attempt to facilitate patient recovery by encouraging the increased integration of the patient within society. The outward manifestation of this has been a movement away from traditional treatment settings within large institutions towards smaller, community-based facilities. This policy of deinstitutionalization recognizes the importance of the community itself as a factor contributing to the resocialization of the patient by providing a supportive treatment setting.

Fundamental to the success of these programs is the response generated within the host communities for these facilities. Communities have generally been reluctant to accept the notion of community-based care and have, in many instances, strenuously opposed their implementation. This is not surprising in light of the traditional isolation of mental patients from the mainstream of society. Patterns of social and spatial isolation have become institutionalized to the extent that attempts to alter them are extremely difficult.

The response of communities has had great impact on the formulation of public policy for the location of mental health facilities. Planners and politicians have responded to public objections by adopting

least-risk planning strategies and locating facilities in areas of expected ineffectual opposition. The outcome of this has been a concentration of facilities in areas that are unable to block their implementation. These areas have become dumping grounds for the mentally ill and have resulted in the creation of an "asylum without walls" (Dear, 1977).

The focus of this thesis is to examine the factors that account for the spatial distribution of community mental health facilities. The ghettoisation of facilities is the product of a complex interaction of social and political forces that are intrinsically associated with the many dimensions of locational conflict. The nature of community response and the exercise of political power are key elements of this process and are best understood within the context of the generation and resolution of conflict. Both of these elements exhibit distinct socio-spatial characteristics that have great utility in accounting for the distribution of facilities.

Opposition occurs in response to mental health facilities as a result of the perceived externality effects of the facility. These effects have a detrimental effect on neighbourhood satisfaction. The resulting impact can be conceptualized as a mismatch in the level of integration between facility form and neighbourhood context. As the level of integration decreases, the intensity of opposition and the likelihood of locational conflict are increased.

Community consciousness and values are important determinants of response. This assertion is based on the fact that the rejection of community mental health facilities occurs as a consequence of group-based territorial action. Such a consensus can only exist to the extent that

individuals within a community have similar perceptions of the impacts of these facilities.

The emergence of community consciousness and values is promoted by the differentiation of residences over urban areas into discrete neighbourhoods. These de facto territories are the result of relocational strategies on the part of individuals simultaneously desiring maximum proximity and distance to those resources within society perceived as being, respectively, beneficial and harmful in nature. Within these homogeneous groupings, a "daily-life environment" is defined which tends to perpetuate the status of the groups within them. (Peet, 1975)

Community mental health facilities are seen to pose a challenge to the perpetuation of the daily-life environment. Such facilities are regarded as noxious because they represent the threat of undesirable change. The basis for these beliefs lies in the characterization of the mentally ill by society as dangerous and unpredictable. Attitudinal surveys have consistently demonstrated that these individuals are viewed with fear and mistrust. Thus, levels of opposition will vary depending upon how individuals within different areas perceive the impacts of facility and user upon the status-quo.

The process that occurs here in the determination of response is a transformation of individual dispositions into group values which form the basis for action. Exclusion of community mental health facilities is a result of individual desires to maintain a certain social and physical distance from the mentally ill and of the community's concern with maximizing, maintaining and enhancing the social and physical character of its location.

The social processes that account for variations in response contribute to an analysis of the spatial concentration of facilities only when considered in conjunction with the political and planning process. Government is the vehicle through which locational decisions are made, so it is not sufficient simply to understand why opposition to facilities occurs; it is also necessary to know why certain neighbourhoods are more effective in voicing their opposition and in defending themselves against the location of facilities.

In such an analysis, the relationship between the community and the control of society's resources again assumes a central role. With respect to the political and planning dimensions of this relationship, it is the exercise of power that is most pertinent to the discussion. As is the case with most of society's resources, it is the wealthy and elite classes that have a disproportionate amount of power and influence within society. They are able to exert control over many of society's institutions so as to perpetuate the existing order and maintain the status-quo. Government and planning agencies are no exception, and many 'formal' and 'informal' practices have developed to ensure that no major adjustments occur in the distribution of society's resources.

As instruments in this process, planners have responded by adopting programs and policies that will not incur the wrath of the powerful within society. With respect to facility location, this involves the utilization of least-risk strategies, locating the facilities in areas unable to block their implementation. Such forces are at work simultaneously acting to exclude facilities from certain areas while burdening other areas extensively. The result of this process is the spatial concentration

or ghettoisation of facilities within easily identifiable areas of the city.

The research goal of this thesis is to identify whether systematic relationships exist between the distribution of facilities and community attitudes and characteristics. Recognition of the many complex social and political forces contributing to the spatial concentration of facilities, cautions against assuming a simple link between community characteristics and facility distribution. Attempting to differentiate neighbourhoods with respect to facility concentration is justifiable, however, because distinct socio-spatial variations occur within each of the major processes accounting for this concentration. The concept of community is central to both the development of the daily-life environment and formation of community consciousness, and to the exercise of political power and community protection. The process of residential differentiation further accentuates the distinctiveness of communities.

To examine these relationships, four research objectives have been identified. These are:

1. to define a conceptual framework for analyzing the process of facility concentration (Chapter 2);
2. to develop specific research hypotheses and outline an operational research framework within which to test these relationships(Chapter 3);
3. to test the validity of the hypotheses (Chapter 4);
4. to analyze and assess the implications of the results for future facility siting (Chapter 5).

CHAPTER TWO

SOCIAL AND PLANNING RESPONSES TO COMMUNITY MENTAL HEALTH FACILITIES

2.1 Introduction

Locational conflict within urban areas is generated by the perceived impacts of public decisions (Dear and Long, 1978). Opposition is generated when decisions are perceived to result in large negative differentials between the existing environment and the future environment. At the community level, competition centres around attempts to attract land uses with positive effects and repel those with negative effects. This is commensurate with community concern with maximizing, maintaining and enhancing the social and physical character of residential neighbourhoods. The resolution of such conflict between localized populations is the cause of inequalities in environmental quality that exist between neighbourhoods (Cox, 1973).

An analysis of locational conflict thus has great utility in explaining spatial variations in the quantity and quality of public services. For this reason, the examination of the distribution of community mental health facilities has been placed within the context of the two major components of this process: (i) the generation of conflict; and (ii) the resolution of conflict. These dimensions of the overall process provide the framework within which the interrelationships of the many factors contributing to the ghettoisation of facilities can

best be identified and understood.

Two distinct geographical approaches have been adopted to facilitate this examination. For the generation of conflict, a behavioural approach forms the basis for explaining how discrepancies in perceived fit between facility and neighbourhood can lead to the outgrowth of community opposition. With respect to the resolution of conflict, a socio-political approach is employed to explain how the planning mechanisms of a metropolitan area respond to such opposition and how the eventual locational decision is made. The adoption of these two approaches is not meant to suggest the independence of conflict generation and conflict resolution. What it should demonstrate, however, is the myriad of factors that must be examined in accounting for the distribution of facilities.

Distinct socio-spatial variations in the generation and resolution of conflict can be identified using these approaches. Insights into how and why opposition can be expected to vary can be achieved through an examination of the factors influencing perceived fit. In conjunction with an understanding of the differential access of social classes to the controlling mechanisms of the planning process, it becomes evident how the spatial concentration of facilities is a logical outcome of locational conflict.

The precise manner in which these numerous factors contribute to facility concentration forms the focus for the remainder of this chapter. To clarify the interrelationships of these factors, the ensuing section outlines a conceptual framework which synthesizes the various dimensions of the concentration process. Subsequent sections examine

in more detail the components of the framework, emphasizing the socio-spatial variations that can be expected to occur.

2.2 Conceptual Framework

Seven basic components are crucial to the conceptual model: attitudes towards facilities and users, neighbourhood characteristics, facility/user characteristics, perceived fit between facility/users and neighbourhood, attitudinal response and intensity of opposition, planning strategies, and the actual locational decision (Figure 2.1). The first five components relate to the generation of conflict, the last two to conflict resolution.

Attitudes towards facilities and users are linked directly to the perceived fit between facility and neighbourhood. Predispositions toward the mentally ill are strong precursors of perceived impact. The extent to which facilities are characterized as noxious elements is also influenced by neighbourhood and facility/user characteristics. Neighbourhood characteristics refer to the social and physical composition of the neighbourhood. Physical quality and social cohesion are both factors identified as influencing the integration of facility and users into a community. Characteristics of facilities - i.e. type, scale, number - determine the visibility of a facility and the degree of noxiousness associated with it. The perceived impacts of facilities and users relate to the tangible (e.g. property values) and intangible (e.g. fear for personal safety) effects of such programs.

The interaction of attitudes and neighbourhood and facility characteristics determines the perceived fit between facility form and

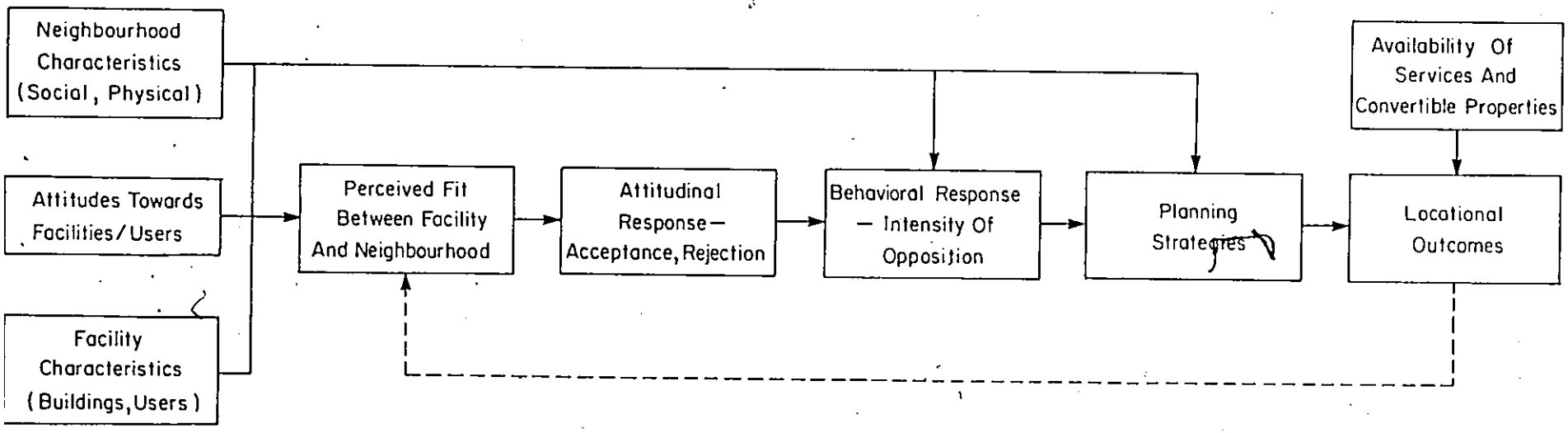

Figure 2.1 Conceptual Framework

neighbourhood context. The mismatch that occurs is influenced by the extent to which the facility is perceived to detract from attributes of the existing environment. As the discrepancy between form and context increases, there is an increased likelihood of facility rejection. The attitudinal response dictates the intensity with which the facility will be opposed. The type of neighbourhood is also a strong influence on the likelihood of opposition.

The political-planning process responds to patterns of opposition by adopting strategies which seek to minimize locational conflict. Hence locations where little or no formal or informal resistance is anticipated become typical havens for mental health facilities (Segal and Aviram, 1978). Such least risk sites tend to proliferate in transient areas of rental accommodation in the central city (Wolpert et.al., 1975; Scott and Scott, 1980). The availability of easily convertible properties and existing service facilities for the mentally ill serves to reinforce the tendency towards spatial concentration. Once these services are established, the pattern may even become self-perpetuating (Dear and Taylor, 1979).

The actual locational decision may result in adjustments in the manner in which fit is perceived. Firstly, it can reinforce the perceived noxiousness associated with the facility as in neighbourhoods where its location has been successfully blocked. Secondly, it can reduce levels of perceived noxiousness as in areas where exposure to the facility allays fears previously associated with it. Thirdly, it can increase levels of perceived noxiousness by surpassing tolerance levels in those neigbourhoods willing to accept a few facilities.

2.3 The Generation of Conflict

The concept of fit is central to an understanding of how conflict is generated with respect to the siting of mental health facilities. Dear (1976) has expressed the locational problem in terms of fitting a certain form into a particular context. The impact of a locational decision thus depends upon the degree of correspondence between facility form and neighbourhood context. Opposition is seen to occur when the prospect of a particular siting results in a large discrepancy between form and context.

To understand why this occurs, it is necessary to realize that an individual's satisfaction with his residential site and neighourhood is based on his preferences for the various attributes which are present at the site. Public facilities can alter such environments by positively or negatively altering these attributes. Opposition is generated in instances when decisions are perceived to result in large negative differentials between the existing and future environment. The location of a mental health facility will almost universally be perceived as detracting from the existing environment. This is because such facilities are characterized as noxious elements; they are recognized as necessary social institutions but are not desired at close proximity.

The extent to which mental health facilities are perceived to detract from the existing environment is influenced by three factors (Dear and Taylor, 1979): (i) neighbourhood characteristics; (ii) facility characteristics; and (iii) attitudes toward facilities and users. The first two factors relate respectively to context and form. The components of all these factors are examined below. This discussion

should make apparent the extent to which these individual elements are inextricably linked in determining perceived fit.

2.3.1 Neighbourhood Characteristics

Two neighbourhood dimensions influence facility response: (i) social structure; and (ii) physical structure. The former relates to the socio-economic, demographic and belief systems which characterize the host neighbourhood population. The latter includes factors such as land-use mix, type and age of structures, and density of development (Dear and Taylor, 1979). The broad range of characteristics encompassed here complicates attempts to identify direct relationships with response. However, the results of research conducted by Trute and Segal (1976) gives some indication of how such links might be logically structured.

In their work, Trute and Segal identified facility integration to be highest in neighbourhoods characterized by moderate social disorganization. Such communities were identified as lower-status areas with high proportions of rented and overcrowded dwellings. Stable family units were not prevalent as these areas contained higher numbers of never married, divorced and single-parent individuals. The population also tended to be older with fewer middle-aged people.

Facility integration was identified to be lowest in areas that exhibited strong social cohesion. Such areas tend to be homogeneous in terms of race, class and education, largely non-transient with high percentage of owner-occupied family units, and more highly organized with respect to community and civic organizations. These traits were characteristic of suburban and higher-status areas.

Dear and Taylor (1979) link these results to expected patterns of facility rejection. They suggest that in areas of low social cohesion, two factors combine to reduce the likelihood of opposition. First, a facility could remain relatively invisible given the existing mixture of land uses. Second, the residents, especially if they are tenants, may have little incentive to protect the quality of a neighbourhood which is already deteriorating. In contrast, they demonstrate how the introduction of a facility is more likely to be highly visible in areas of high social cohesion. In these neighbourhoods, characterized by a high proportion of owner-occupied single family housing, a facility is more likely to be perceived as a threat to neighbourhood quality and property values.

2.3.2 Facility Characteristics

Four aspects of community mental health facilities have been identified as important in influencing response. These are: type of facility, scale of facility, number of facilities, and degee of noxiousness (Dear, 1976). The first two factors are concerned with the visibility of a facility within a community, recognizing that the nature and size of the facility will have great influence on its potential impact. This is important, for the label "community mental health facility" encompasses a wide variety of service types, ranging from out-patient clinics and drop-in centres to organized group homes (Dear and Taylor, 1979). Associated with these are diverse operational characteristics that influence the level of integration between facility and community. As the number of facilities increase, these characteristics become more visible; thus, multi-facility impact is greater than that of an individual facility.

Aspects of these three factors are intrinsically associated with the final factor, degree of noxiousness. Several authors have suggested that the perceived degree of noxiousness is based on the various attributes an individual associates with that facility (Austin, Smith and Wolpert, 1970; Dear and Taylor, 1978; Austin, 1974; Currie, 1976). It is this perceived set of attributes or characteristics which directly affect the desirability of a facility.

The manner in which perceived facility attributes are translated into noxious dispositions has been outlined in more detail by environmental psychologists. Simplifying this process, it is suggested that perceptions are transformed into meanings which form the basis for action. In general, differences in overt behaviour are directly related to the different meanings that people attach to the same situation (Cullen, 1976). In this respect, Sparkes (1976) has suggested that for any individual the impact of a facility varies in accordance with subjective interpretations suggested by psychological meanings ascribed to it. The conclusion that proceeds from this is that the different meanings that a facility has for different people may account for varying responses among individuals.

2.3.3 Attitudes Towards Facilities and Users

Attitudes towards mental health facilities and users are inextricably linked with perceptions and the formation of meaning. Previous research has suggested that community predispositions toward the mentally ill have had a major effect in influencing response to facility locations (Taylor et.al., 1979). Attitudes have motivational

qualities that lead a person to seek (or avoid) objects (Currie, 1976). An examination of the nature of these dispositions is required therefore to achieve a complete understanding of the underlying factors that contribute to patterns of facility rejection.

Society's attitudes toward the mentally ill are characterized by strong feelings of fear and mistrust. Research has indicated that the behaviour of mental patients is seen to be unpredictable and dangerous (Johannsen, 1969; Fracchia et. al. 1976). Even though recent studies have indicated that there is little basis in fact for such fears, these attitudes appear deeply embedded. There is increasing evidence that people may be responding with fear not to the individuals per se, but simply to the label, "mental patient" (Fracchia et. al., 1976; Page, 1974). Johannsen (1969) reports that society appears quite tolerant of deviant behaviour when it is not labelled as a manifestation of mental health.

The end result of such dispositions has been a desire to maintain large social as well as physical distances from the mentally ill (see Aviram and Segal, 1978). These tendencies toward rejection of the mentally ill have been documented as early as 1943 (Allen) and further substantiated by many authors since then (Barahal, 1971; Crocetti, et.al., Rabkin, 1974). Armstrong (1976) has suggested that this is so because society views such deviance as a threat to the cohesion of its organization and to the perpetuation of its values. The location of a mental health facility can thus be expected to generate opposition as individuals within society seek to maintain the traditional separation between the mental institution and society.

2.3.4 Social and Spatial Variations in Perceived Fit

The perceived discrepancy between form and context is not uniform, however; systematic variations amongst individuals have been identified. Coughlin et al. (1973) have identified the social and economic characteristics of the residents as one of the most important factors influencing what facility effects they perceived. Atkisson and Robinson (1969) have reported that the characterization of facility attributes as amenities or disamenities is directly related to the values, standards and tastes of a population. Sparkes (1976) has concluded that individual concerns about the impact of facilities is directly related to their lifestyle and activity patterns. Dear (1974) has identified socio-economic status as the major variable in explaining response to public facilities.

The development and variation of attitudes is strongly influenced by the differentiation of neighbourhoods within urban areas, for it is at the neighbourhood level that individuals derive their values and expectations (Harvey, 1975). In this manner, distinct attitudes and dispositions toward the mentally ill are fostered and the discrepancy between facility form and neighbourhood context takes on distinct spatial characteristics. The factors that underlie the formation of discrete homogeneous neighbourhoods strongly determine the intensity of response. Crystallized within this process is the manner in which neighbourhood and facility characteristics interact with attitudes to determine perceived fit.

The influence of socio-economic status and the availability of and accessibility to society's scarce resources are particularly important

contributors to this process. Individuals who have similar propensities and abilities to consume these resources tend to group together forming spatially distinct neighbourhoods. The desire for such socially homogeneous territories derives largely from the demand for accessibility to those environments regarded as providing positive externalities and the demand for physical distance from those regarded as generating negative externalities (Cox, 1973). Within these homogeneous groupings a "daily-life environment" is defined which tends to perpetuate the status of the social groups within them (Peet, 1975). The resources within this environment represent a scarce source of upward mobility for many individuals and, as Peet has stated, "... is fiercely protected against other groups which might weaken or 'pollute' the resources contained in the domain." (Peet, 1975).

As a community's resource investment increases, a hardening of attitudes and growing resistance to any prospect of change can be expected as individuals strive to protect their daily-life environment. Communities of high social status can thus be expected to exhibit greater opposition to the mentally ill and their facilities since these areas have the greatest resource investment in immobile residential property. Their return on this investment is very dependent upon the public provision of positive externalities. In these neighbourhoods, a mental health facility would represent a strongly divergent land-use that could be perceived as threatening to the social and physical fabric of the community.

Further explanations of why community opposition should be more prevalent in higher-status areas can be found in sociological studies that have indicated that members of these groups tend to be community-centred in their outlook. That is, the utility they derive from their

residence is not solely related to the attributes of their home but is also related to attributes of the overall neighbourhood. Higher-status individuals have also been characterized as striving harder than others to seek high standards of housing and neighbourhood. Michelson attributes this to a desire to find a house that is protected from unwanted encroachments and from undesirable land uses or undesirable neighbours (Michelson, 1970). Such people are seeking to achieve a certain quality of environmental form, one that transmits a particular kind of meaning (Thouez, 1975). Taking all these factors into consideration, it is logical to suggest that individuals of higher socio-economic status would have more adverse reactions to the introduction of a mental health facility into their neighbourhood. Support for this assertion is provided by Crawford and Wolpert in their study of opposition to mental health facility siting. They found that opposition leaders tended to be drawn from the high social classes (Crawford and Wolpert, 1974).

These apparently logical expectations are surprisingly, however, not confirmed in attitudinal surveys. What these studies have tended to demonstrate is that individuals of higher socio-economic status express attitudes that exhibit higher levels of tolerance and enlightenment with respect to the mentally ill (Crocetti et al.; Bord , 1971). Alternatively, lower social classes have regarded the mentally ill as much more deviant. This is reflected in attitudes that are characterized by higher levels of fear and resentment (Dohrenwend and Chin-Shong, 1967; Rabkin, 1974).

The relationship between attitudes and eduction further substantiates these trends. Individuals who are more highly educated have been shown

to be less derogatory and more willing to tolerate contact with the mentally ill. These findings have been so consistent (for education these trends were illuminated as early as 1948 by Siepp), that Rabkin, in her review of attitudinal literature with respect to the mentally ill, has concluded that, "... measures of either education or social class do serve to differentiate respondents regarding their degree of tolerance for the mentally ill." (Rabkin, 1974).

An apparent contradiction exists here and necessitates evaluating whether these attitudinal findings undermine the logic of the structural explanation as to how and why opposition to the mentally ill and their facilities would be expected to vary over space. Two factors are important to consider and suggest that this contradiction is not really as great as it originally appears. Firstly, is the necessity to distinguish between attitudes toward the mentally ill and attitudes toward mental health facilities. Dear and Taylor (1979) have demonstrated the difficulty of assuming a direct translation of one into the other. They discovered that while individuals of lower social status expressed the most intolerant attitudes toward the mentally ill, it was higher social status individuals who were the most exclusionary with respect to mental health facilities. A possible explanation for this has been suggested by Dear and Wittman (1979). They speculate that the prospect of a community mental health facility in one's neighbourhood may cause a "psychological trade-off" to occur for some people such that sympathetic attitudes toward the mentally ill are converted into restrictive attitudes with respect to community mental health care.

The second factor, the discrepancy that exists between expressed attitudes and actual behaviour, is closely linked with the first and provides further insights into why differences in attitudes toward the mentally ill and their facilities could occur. The precise nature of the relationship between attitudes and behaviour has been highly indeterminate in previous research (Rabkin, 1974). The present situation reflects this; even though individuals of higher socio-economic status may express generally favourable attitudes toward the mentally ill, their actions when actually confronted with close social and physical contact with such individuals do not demonstrate corresponding levels of tolerance.

Page has confirmed the independence of attitudes and behaviour toward persons termed mental patients (Page, 1974). Rabkin (1974) has demonstrated how other factors, which she classifies as personal and situational, have great utility in accounting for such differences. She defines personal factors as encompassing a wide range of other attitudes, values, beliefs, and social and cognitive characteristics of the individual. Situational factors include the influence of other people, social norms and expectations, and the number of alternative behaviours possible in any given situation (Rabkin, 1974). In demonstrating the influential role that such factors have in determining behaviour, she points out that there will not be a high correlation between attitudes and behaviour if situational pressures substantially contribute to the observed behaviour, as they almost always do. Porteous has indicated the relevance of this to the present context as he has identified neighbourhood satisfaction to be influenced by both individual and group value systems (Porteous, 1977).

Differences in attitudes and behaviour for high-status individuals can thus be accounted for in two ways. Firstly, attitudes will be positive because it is increasingly socially acceptable to express tolerant attitudes toward the mentally ill. Secondly, actions will be negative because group norms and community consciousness become overriding situational factors as individuals strive to protect their environment. In this respect such impacts as declining property values, increased noise levels and perceived neighbourhood deterioration are frequently cited (Dear, Fincher and Currie, 1977).

2.4 Resolution of Conflict

Residential segregation represents a relocational approach to controlling externalities that bear upon the environmental quality of neighbourhoods. Decisions made within the public domain can seriously hinder the effectiveness of such strategies. The inherently spatial aspects of such allocations dictate that conflict that does arise will be locational in nature. Therefore, in those instances where neighbourhood equilibrium is threatened, informal relocational approaches must be subjugated to formal, public processes where conflict can be resolved.

The translation of neighbourhood defence into the public sphere has strong implications for how resources are distributed over urban areas.The exercise of political power is particularly important in determining how people in different areas establish differential claims on society's resources (Smith, D., 1974). At the community level, power may be measured by its effectiveness in attracting or deflecting those impacts having desirable or undesirable characteristics. In short,

community power in locational conflict is manifest as a set of strategic options available in response to proposals of a group in authority (Dear and Long, 1978).

Social status is an important factor in a community's ability to engage in political activity. Political resources are not randomly distributed over urban areas but increase with higher levels of income and education (Orbell and Uno, 1927). Two factors contribute significantly to explaining why this is so: (i) the efficacy of a group's voice; and (ii) the number of weapons at a group's disposal. These two factors are not mutually exclusive and both are heavily weighted in favour of groups of higher socio-economic status (Newton, 1975; Lineberry, 1977).

The first factor indicates the all-important role that communication assumes in the political process. A community must be able to make its voice heard to communicate to those in positions of authority the things it desires of them. Community organization is extremely important in opening up these communication channels. A neighbourhood represents a potentially great mobilization of power that can communicate wants and communicate threats (Newton, 1975). But such power can only be utilized if it is organized towards a certain goal.

Middle-and upper-class neighbourhoods have many advantages that allow them to mobilize the power available to them. Such neighbourhoods have significant infrastructural advantages with respect to mobilization in terms of collective organizations such as residents or ratepayer associations. These groups can provide the driving force around which opposition to facility location can develop. These groups also facilitate the gathering and distribution of information. Such benefits enable high-

status areas to utilize such information more effectively to achieve their goals.

The solidarity of these neighbourhoods with respect to their goals allows them to take advantage of these communication resources. Within higher-status areas there is far greater consensus with respect to preserving the character of their neighbourhood, enabling power to be mobilized with little or no intra-community confrontation.

Once such power is mobilized, higher status communities also have a far greater range of options available to them that can be utilized to block the implementation of a mental health facility in their area. Legal measures are particularly potent weapons in this regard. The entrance of the mentally ill has been blocked for example by using zoning regulations to restrict land uses. This has included placing extremely strict definitions on what should be considered a "family" for residential zoning purposes (Aviram and Segal, 1978). Exclusionary devices are also available to these neighbourhoods in the form of city ordinances and regulations such as fire safety requirements and building codes that effectively restrict the siting of facilities within these areas.

Cox (1973) has also suggested that the threat of relocation is another weapon in the arsenal of high-status areas. He points out that these areas provide a disproportionately high share of a city's revenue with respect to property tax and as such the threat of relocation provides a powerful bargaining resource.

These practices provide striking examples of how the powerful within society are able systematically and consistently to manipulate the political and planning processes for their own advantage. Utilizing such options,

the middle-and upper-class are able to protect the homogeneity and stability of their neighbourhoods and effectively exclude the mentally ill from these communities. The functioning of the political and planning processes does not inhibit such practices but actually facilitates and reinforces them. Certain informal mechanisms can be identified that are extremely useful in demonstrating how such biases are transmitted through these processes.

The concept of "non-decision" is particularly relevant in this regard. Formally defined, a non-decision is "... a means by which demands for change in the existing allocation of benefits and privileges in the community can be suffocated before they are even voiced." (Bachrach and Baratz 1970). Power and influence are key aspects of this concept and are utilized so as to ensure that only policies supportive of the status quo are considered for implementation. Such efforts are directed towards the creation or reinforcement of barriers that effectively block any challenges to the existing order.

The costs of non-decision making are not distributed randomly across socio-economic groups, or across different political units which contain clusters of socio-economic types. For those with few private resources who depend upon a large measure of public action to solve public problems, non-decision making means they are left with the burden of the problems (Newton, 1975). Newton has termed this the "middle-class solution", for in this manner they ensure that other people's problems do not encroach on their neighbourhoods.

Over time these values and beliefs become ritualized and institutionalized providing an inertia that resists efforts for change. (Bachrach and Baratz,(1970) have employed the term, 'mobilization of bias' to characterize such a phenomenon). Those in the best position to

initiate change, the planners and the politicians, are unlikely to do so for they are motivated to protect the interests of the status-quo. Two reasons can be identified to explain this. Firstly, these professionals tend to be drawn from the dominant strata of society; their values and beliefs are therefore already strongly represented in society. As a result, by implementing policies that are self-fulfilling, they are simultaneously reinforcing the biases inherent within the planning process. (Harvey, 1978).

Secondly, planners and politicians must concern themselves with maintaining their position in society through ensuring their job stability and status. For the politician this necessitates a concern for re-election; for the planner, a concern for maintaining the professional system. Neither group therefore wishes to draw the ire of those within society who can potentially undermine their position. It is therefore politically expedient for the planner and politician to endorse and implement policies that are acceptable to those groups that are most politically aware and influential.

These maintenance mechanisms within society remain dominant, effectively hindering any challenges to the existing distribution of resources. The result is that planning has developed into little more than a technocratic status-quo exercise, its goals being directed more toward system maintenance than system change or innovation (Bottomley and Holdsworth, 1973; Hardwick and Hardwick, 1973). These factors have had profound influence on the quality, quantity and spatial distribution of public services over urban areas. With respect to the location of mental health facilities, this involves the utilization of least-risk strategies, locating the facilities in areas of expected ineffectual opposition

(i.e. those communities expected to be unable to prevent their establishment). Planners have adopted strategies that minimize conflict and confrontation, avoiding areas of expected strong opposition and sites requiring rezoning, and concentrated on areas that are downgraded to such a degree that an additional facility has only a minimal marginal effect (Wolpert, Dear and Crawford, 1975). Such forces are at work simultaneously acting to exclude facilities from certain areas while burdening other areas extensively. The result of this process is the spatial concentration or ghettoisation of facilities within easily identifiable areas of the city.

Three other factors are prominent in the literature as possible explanations for this distribution. They relate to: (i) the distribution of need; (ii) the availability of convertible properties; and (iii) the distribution of service facilities. Expanding upon these, it has been suggested that the distribution of facilities merely reflects the distribution of need and that this is most prevalent in the inner-city areas. It has been further suggested that convertible properties and service facilities for the mentally ill are available only in certain areas of the city, thereby necessitating the location of the facilities in these areas, irrespective of whether opposition exists or not.

Problems exist with these explanations however. The relationship between the distribution of need and the distribution of facilities is a chicken-and-egg problem. Does the distribution of need dictate the distribution of facilities or is it the reverse? Evidence seems to suggest that a significant proportion of ghetto inhabitants may be there only because their attempts to live elsewhere have failed (Aviram and Segal, 1973). These individuals out of necessity are then forced to

relocate in the inner city because facilities are unavailable elsewhere. Such a process tends to be self-perpetuating with the concentration of patients in the inner city the obvious outcome.

The assertion that convertible properties are only available in central city areas is also overly simplistic. The results of a recent study examining this issue indicate that for the state of New Jersey, in a housing market described as 'extremely tight', suitable properties for the mentally ill are available in all types of neighbourhoods (Scott and Scott, 1980). While the actual number of available properties represents only a small percentage of the total housing market, Scott and Scott suggest that community care can be provided for a large portion of the target population. However, they cite one factor as particularly important in hindering the successful deinstitutionalization of the mentally ill: community opposition.

Explanations of need and service and property distribution are thus seen to be extremely superficial, failing to account for the underlying processes that contribute to the concentration of facilities. None of these three factors taken separately or together can explain why attempted sitings in outlying areas of the city fail even if suitable properties and services are available. It further leaves open the question of why more such sitings are not even attempted. These explanations can best be characterized as manifestations of the allocational biases inherent within the political-planning process. They serve to reinforce the pattern that has already been created by these forces.

2.5 Summary

Examining the concentration of mental health facilities within the framework of locational conflict provides many insights into the underlying processes that give rise to the spatial distribution of noxious public facilities. The factors that cause facility concentration are best understood within the context of the generation and resolution of conflict. It is important to know how and why conflict arises with respect to competing land uses. It is also essential to understand what factors are involved in resolving such friction.

With respect to the location of mental health facilities, it is apparent that conflict is easily generated. Community attitudes toward the mentally ill and their facilities provide the impetus for confrontation. Individuals evaluate the potential effects of mental health facilities in terms of their perceived impact upon the attributes of the existing environment. This is manifested in an increased discrepancy in the perceived fit of facility-users and neighbourhood. As this mismatch increases, the intensity of opposition also increases.

The manner in which this evaluation is concluded has distinct socio-geographic characteristics. Members of all social groups express a desire to maintain a certain physical and social distance from the mentally ill. However, individuals of higher social status are more willing and able to transfer these attitudes into actions as they strive harder to maintain the character and sanctity of their neighbourhoods. Since these groups are differentiated over urban areas, variations in the intensity of opposition take on distinct spatial characteristics.

The manner in which opposition is transmitted through the urban

system in order to resolve conflict is exceedingly important in the determination of where mental health facilities eventually locate. The ability and effectiveness with which a community can block facility sitings is a function of the power and influence it can exert against those with political and planning authority. There are distinct social and geographic aspects to this as the ability to wield power increases with social status.

Thus, the interaction of these complex social and political forces determines the eventual distribution of mental health facilities. Distinct social and spatial variations in the concentration of facilities can be expected to occur. The following chapter presents a research design for examining the relationships between facility concentration and social and attitudinal indicators for the Metropolitan Toronto area. The validity of this explanation of facility distribution can then be assessed in light of the results.

CHAPTER THREE

RESEARCH DESIGN

This chapter describes the research design for the study. The first section specifies the research hypotheses. The data required to test the hypotheses are then identified and the operational definition of variables is discussed. The analytical framework is outlined in the concluding section. Of concern here are the statistical techniques chosen for the analysis, the rationale underlying their selection, and the manner in which they are utilized in the analysis.

3.1 Research Hypotheses

The central hypothesis of this thesis is that the distribution of community mental health facilities is related to two factors: (i) community opposition to facilities; and (ii) community influence and power. The introduction of a facility into differing communities is not likely to generate the same level of opposition. Similarly, community effectiveness in voicing opposition is not equal. The perceived impact of a facility is conditioned by attitudes toward facilities and users and influenced by the resource investment in the environment. Both of these factors have distinct social and spatial characteristics.

The relationships that exist between facility concentration, attitudes toward the mentally ill/facilities, and community socio-environmental characteristics can thus be specified in terms of the

following two research hypotheses:

(i) the concentration of community mental health facilities is related to spatial variations in attitudes toward the mentally ill and mental health facilities;

(ii) the concentration of community mental health facilities is related to spatial variations in community socio-environmental characteristics.

While it is argued that community attitudes and community socio-environmental characteristics are significant factors accounting for the spatial distribution of mental health facilities, it is important to emphasize that the two are not independent: Many studies have identified the extent to which they are correlated (e.g. Dear and Taylor, 1979; Aviram and Segal, 1973).

3.2 Data Requirements

To test the hypotheses necessitates accurately defining and measuring the following four major components: (i) community; (ii) facility concentration; (iii) community attitudes; and (iv) community socio-environmental characteristics. The following sections will explain how these variables have been operationalized.

3.2.1 Community

Community was defined in terms of two geographic units: (i) census tract; and (ii) planning district. This decision represents a trade-off between the theoretical concept of a community (i.e. a socially and

locationally distinct unit) and operational limitations (i.e. data availability). Two levels of analysis were chosen to determine how sensitive the results were to changes in geographic scale. The census tract was the basic unit of analysis. Each individual tract comprises between 2,500 and 8,000 people with lower numbers in the central city. Area size ranges from 0.10 to 54.21 square kilometres, with a general increase in size with distance from the city centre. This was regarded as the lowest level of areal disaggregation which would accurately represent the concept of community as developed in the conceptual framework. This reasoning was consistent with the definition of census tract that was utilized in the formation of the tract boundaries: "the area must be as homogeneous as possible in terms of economic status and social living conditions." (1976 Canadian Census). The examination of census tracts was limited to those units for which both attitudinal and socio-environmental information was available (see Map 3.1).

The planning districts comprise varying numbers of planning units (analogous to census tracts) aggregated so as to achieve a representation of larger community units.[1] For the purpose of this study, this was the highest level of aggregation considered appropriate for defining community. Larger units, such as wards, were considered too heterogenous. The analysis of the planning districts was conducted in two stages. The first stage, as for the census tracts, was limited to those planning districts for which both attitudinal and socio-environmental information was available. The second stage extended the analysis to all planning districts within Metropolitan Toronto. At this level, only socio-environmental data were available (see Map 3.2).

[1] Personal communication with Metropolitan Toronto Planning Board.

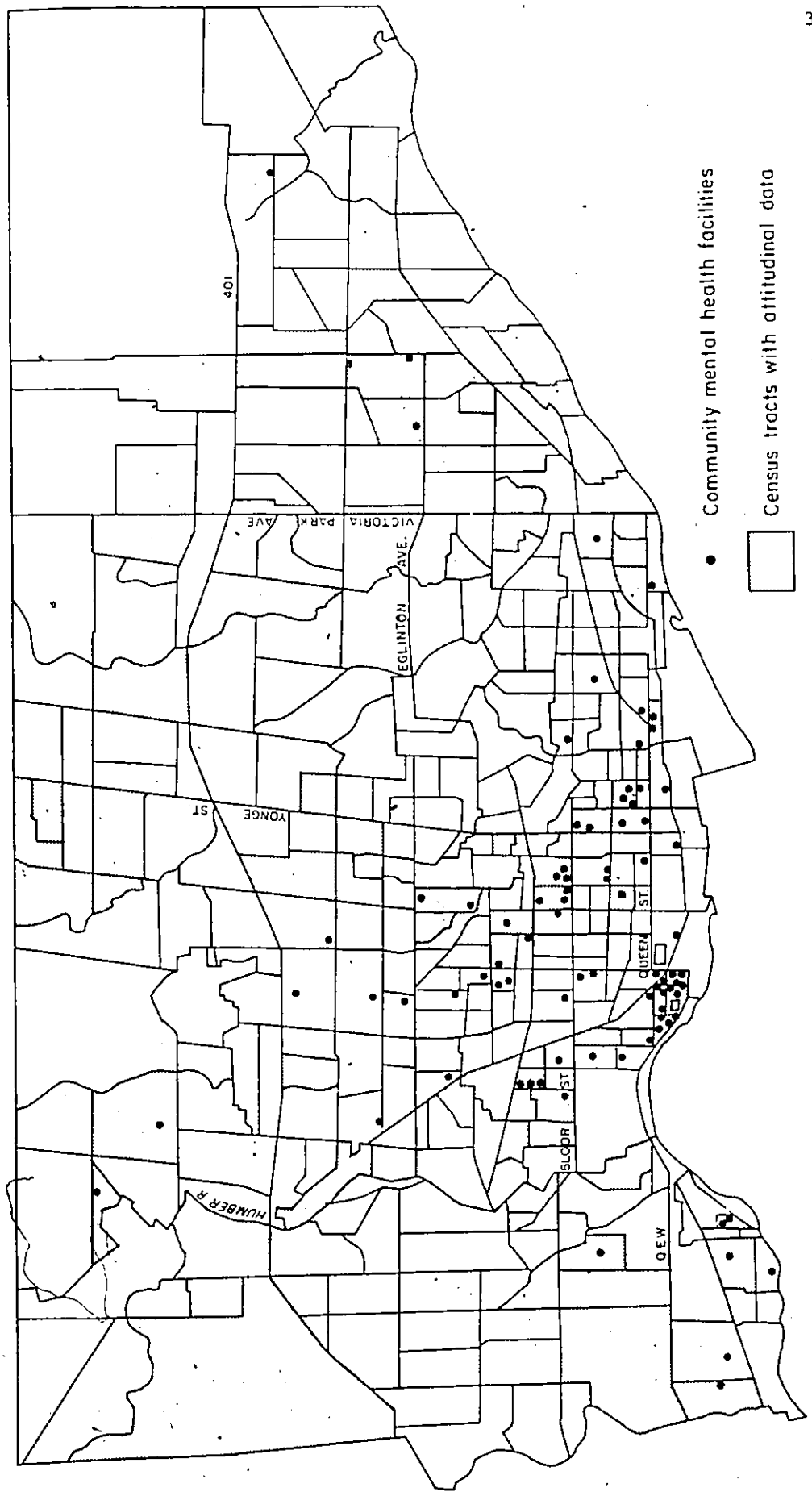

Figure 3.1 Distribution of community mental health facilities and census tracts.

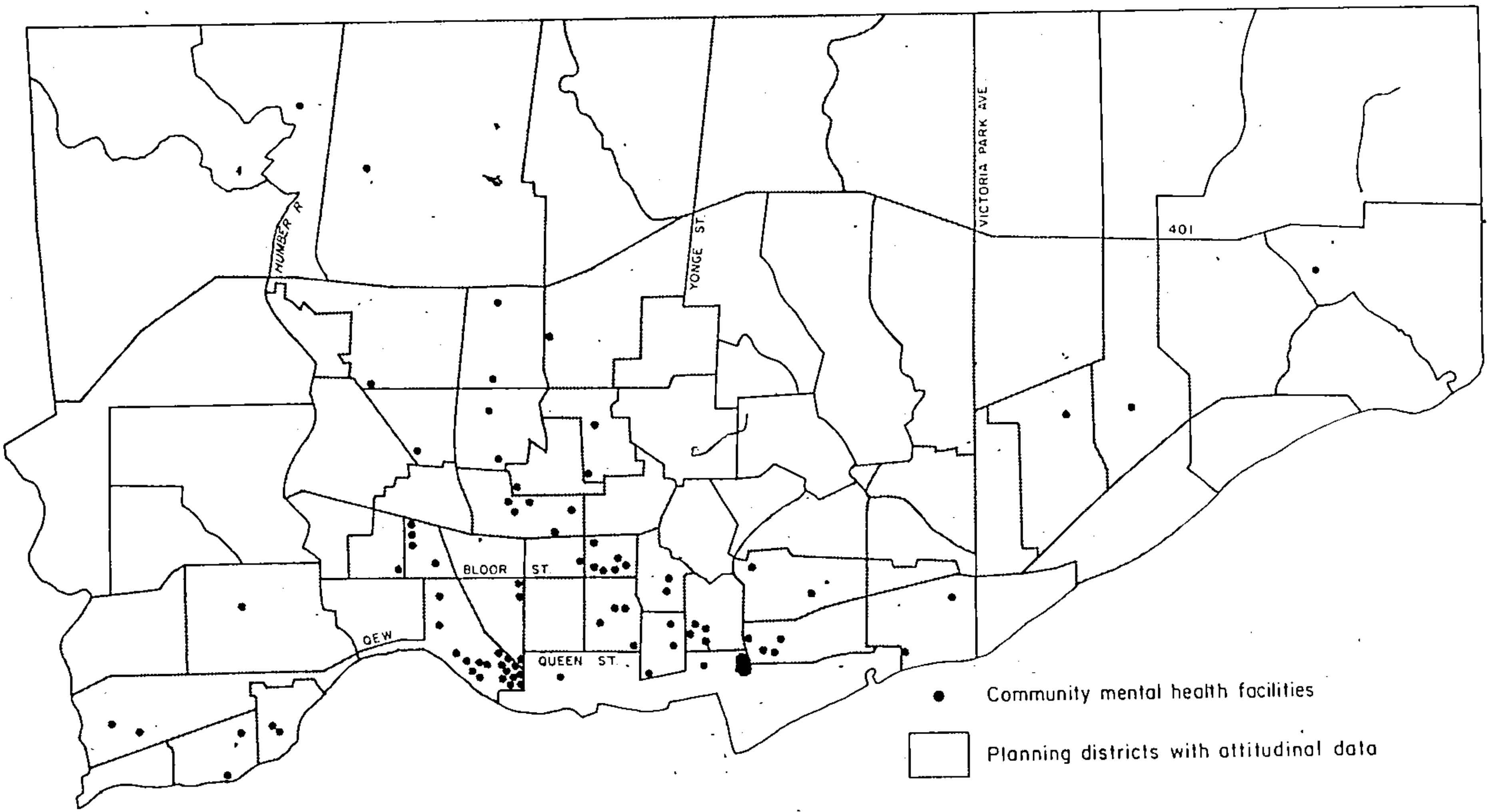

Figure 3.2 Distribution of community mental health facilities and planning districts.

3.2.2 Facility Concentration

Facility concentration was measured for each census tract and planning district as the number of facilities per square kilometre. In calculating this measure, all facilities within a one-block radius of the perimeter of the census tract or planning district were included. Extending the measure in this manner recognizes the distinct possibility that facilities in close proximity to an area may have equally as strong an impact as those facilities located within the defined boundaries. One-block was selected because previous research had demonstrated that within this distance undesirable attitudes toward facilities were most prevalent (Dear and Taylor, 1979).

Due to the relatively large number of census tracts and planning districts with values of zero for this measure (i.e. no facilities), the examination of concentration as a continous variable was statistically inadvisable. For analytical purposes, the concentration values were grouped into four separate concentration categories: (i) zero; (ii) low; (iii) moderate; and (iv) high. The distribution of cases within these categories for each level of analysis is shown in Table 3.1. The differing concentration values between census tracts and planning districts indicates the effect of changing the level of analysis. The absolute magnitude of the concentration values has lessened because the distribution of facilities is being compared against larger geographic units. Every effort was made, though, to preserve the relative relationships between the concentration categories.

In light of the differential impacts that could be expected to occur as a result of variations in facility size and operational

TABLE 3.1

DEFINITION OF FACILITY CONCENTRATION CATEGORIES

Geographic Units	Concentration Category	Units Per Category	Concentration Values
Census Tracts	zero	30	0.00
	low	11	0.01- 1.49
	moderate	8	1.50- 5.99
	high	8	6.00-21.00
Planning Districts (Attitudinal/Socio-Environmental Data)	zero	13	0.00
	low	13	0.01- 0.49
	moderate	10	0.50- 1.99
	high	6	2.00- 6.00
Planning Districts (Socio-Environmental Data only)	zero	36	0.00
	low	18	0.01- 0.49
	moderate	12	0.50- 1.99
	high	9	2.00- 6.00

characteristics (see Chapter 2), it is important to note that variations in facility type were ignored in calculating the concentration index. It could be argued that differential weightings should be assigned to different facility types based upon their visibility and expected impact. This was not attempted, however, because of the uncertainty involved in calculating a weighting measure that would accurately represent the impacts of the differing facility types. Furthermore, a weighting factor was not considered crucial in the Toronto context because the vast majority of facilities within this city are small-scale. The large differences in facility size found in the United States do not occur in Toronto.

3.2.3 Attitudes Toward the Mentally Ill and Mental Health Facilities

The data used to measure these components were taken from a major survey of attitudes toward the mentally ill and their facilities conducted in Toronto, Ontario (Dear and Taylor, 1979). The survey was intended to analyze the basis of community opposition to community mental health facilities. To this end, the total population was stratified by three levels of socio-economic status (low, medium, high) and two levels of residential location (city, suburb). Two separate samples were drawn from the overall population based on areas with and areas without existing neighbourhood mental health facilities.

For those areas without facilities, a multistage cluster sampling procedure was conducted. Forty-eight enumeration areas, equally distributed throughout the six strata, were randomly selected. For those areas with facilities, a purposive rather than random sample

was conducted. This was necessitated by the small number of facilities and the need to ensure representativeness amongst the six strata to allow comparative analysis. Twenty one enumeration areas were selected for this purpose. The final sample composed 1090 people, 706 from areas without facilities and 384 from areas with facilities.

The questionnaire was introduced as a survey of attitudes toward community services. The first questions were directed at general opinions of community services and awareness of community mental health facilities. Subsequent questions measured attitudes toward the mentally ill and various perceptual, attitudinal and behavioural reactions to facilities. The concluding section dealt with personal characteristics. The data relevant to this study were the attitudes toward the mentally ill and two measures of reaction to potential and existing facilities.

Measurement of attitudes toward the mentally ill was based on two instruments that have been widely accepted for research in this field: the Opinions about Mental Illness Scale (OMI) (Cohen and Struening, 1962) and the Community Mental Health Ideology Scale (CMHI) (Baker and Schulberg, 1967). In conjunction with the CMHI scale, three OMI scales were used: authoritarianism, reflecting a view of the mentally ill as an inferior class requiring coercive handling; benevolence, a paternalistic, sympathetic view of patients based on humanistic and religious principles; and social restrictiveness, viewing the mentally ill as a threat to society.

Modified versions of these scales were presented to respondents. This revision was necessary because the original scales were designed with professionals in mind. A subset of the original statements for

each scale and additional, pertinent statements comprised the final scales. Ten statements were selected for each scale with an equal number positively and negatively worded. Reliability and validity statistics were calcuated to ensure that all four scales matched accepted psychometric standards. The procedures followed are discussed in Dear and Taylor (1979).

Reactions to facilities were measured in both attitudinal and behavioural terms. All respondents were asked to rate the desirability of having a facility located within three distances of their home - 7-12 blocks; 2-6 blocks; and within one-block. Reactions were measured on a nine-point labelled scale ranging from "extremely desirable" to "extremely undesirable". Respondents were also asked what, if any, actions they would take with respect to each facility location rated to some degree undesirable. A list of nine possible alternatives were given which were representative of four levels of responses (Table 3.2).

3.2.4 Community Socio-Environmental Characteristics

The socio-environmental variables were collected from the 1976 Canadian Census and the Metropolitan Toronto Planning Board Land-Use Directory. To maintain consistency with the conceptual framework, variables were selected to represent the major social and physical characteristics of the neighbourhoods examined. These characteristics divide into six categories: socio-economic; community stability; density; land-use; demographic structure; and community homogeneity (Table 3.3).

Density and land-use measures were included as factors affecting facility visibility. Community stability and socio-economic

TABLE 3:2

BEHAVIOURAL INTENTIONS SCALE

Nothing	1. Oppose and do nothing
Individual Actions	2. Oppose and write to newspaper
	3. Oppose and contact politician
	4. Oppose and contact other government official
	5. Oppose and sign petition
Group Actions	6. Oppose and attend meeting
	7. Oppose and join protest group
	8. Oppose and form protest group
Move	9. Oppose and consider moving

TABLE 3.3

SOCIO-ENVIRONMENTAL EXPLANATORY VARIABLES*

Socio Economic

- mean income,** % population less than grade 9, % population with some university, cash rent, house value**

Community Stability

- % owner, % detached dwelling, % unemployed, % migrant 1971-76

Density

- population density, persons per household, % single-person households

Land-use

- % industrial, % institutional, % residential, % commercial

Demographic Structure

- % male, % single > 15, % children < 6, % children 18-25, % population > 65, % population < 15.

Community Homogeneity

- ethnic diversity***, % English-speaking

* All variables ratio level of measurement
** 1971 values
***interval level of measurement-for derivation of this index see:
Canadian Urban Trends - Neighbourhood Perspective, Volume 3, Ed. M.Ray Copp. Clark Publishing, 1977.

variables were included to indicate neighbourhood variations in resource investment and the associated interest in preserving environmental quality. Community homogeneity measures were intended to suggest the likelihood of the existence of shared, neighbourhood goals. Demographic variables recognize that life-cycle and family-status are factors influencing neighourhood and facility perceptions.

3.3 Analytical Framework

3.3.1 Statistical Techniques

Discriminant analysis and one-way analysis of variance were the two statistical techniques used to test the relationship between facility concentration and the socio-environmental and attitudinal variables. The manner in which they were utilized is discussed in this section.

Univariate analyses of variance were performed to determine the separate effects of each of the independent variables on facility concentration. These tests were performed for each level of geographic analysis. Only those independent variables that significantly distinguished between groups defined in terms of facility concentration were included in the subsequent discriminant analyses.

Discriminant analysis was the principal method employed to test the research hypotheses. This technique is well suited to the purposes of this study. The preliminary requirements for such an analysis are a dependent variable measured at the nominal level or higher and a series of independent variables measured at an interval or ratio level. Discriminant analysis then defines linear combinations of the independent variables that maximize the F-ratio between the groups defined on the dependent variable.

Standardized discriminant coefficients are then calculated for each variable which represents the relative contribution of that variable to that function. Group centroids are also calculated which indicate relative group differentiation on that function. Examined together, these values convey a great deal of information that is pertinent to understanding the factors differentiating concentration groups.

The predictive power of the derived functions can be assessed by classifying the individual cases into groups based on their scores on each function. Each case is assigned to the group for which it has the greatest probability of membership based on the discriminant functions. A contingency table is then created from which actual and predicted group membership can be compared.

3.3.2 Data Analysis

Discriminant analyses were performed for each geographic scale and for each group of independent variables (i.e. attitudinal and socio-environmental). A subsequent discriminant analysis was performed combining both sets of independent variables to determine their relative contribution to group differentiation.

A stepwise discriminant process was utilized due to the large number of ihdependent variables (Klecka, 1975). In this technique, independent variables are entered into the analysis on the basis of their discriminating power. Additional variables are added only if they significantly increase the discriminating power of the combined set of variables previously included. The use of a stepwise procedure thus excludes redundant variables from the discriminant functions.

3.4 Summary

This chapter has examined the research design utilized in this study. Two research hypotheses were stated that specified the nature of the relationships between facility concentration and neighbourhood attitudinal and socio-environmental characteristics. Four major components of these hypotheses were then identified and their operationalization discussed. These were: (i) community, (ii) facility concentration; (iii) community attitudes; and (iv) community socio-environmental characteristics. Community was defined at two levels of geographic analysis - census tracts and planning districts. Facility concentration was measured for each census tract and planning district as the number of facilities per square kilometre. This measure included those facilities within a one-block perimeter of the census tract or planning district. Community attitudes were drawn from a major survey of attitudes toward the mentally ill conducted in Toronto. Measures of attitudes toward the mentally ill, the desirability of mental health facilities, and behavioural reactions to facility siting were incorporated within this study. Community socio-environmental variables were selected from the 1976 Canadian census and Metropolitan Toronto Planning Board Land-Use Directory. Six categories of independent variables were distinguished corresponding to factors previously shown to influence community response to the mentally ill and their facilities. An analytical framework was then discussed and two statistical techniques chosen for the analysis: (i) analysis of variance to test the individual relationships of the independent variables to facility concentration; and (ii) discriminant analysis to determine what combined set of

variables best differentiates between concentration categories.

The following chapter will present the results of the analysis and report whether significant variations do occur between areas of differing facility concentration in terms of their attitudes and socio-environmental characteristics.

CHAPTER FOUR

ANALYSIS OF FACILITY CONCENTRATION IN METROPOLITAN TORONTO

The results of the analysis will be presented in this chapter. The first section examines the separate effects of the independent variables on facility concentration as indicated by analysis of variance. Their joint effects are examined in the second section based on the results of discriminant analyses. Emphasis is placed on the interpretation of statistically significant discriminant functions and the effectiveness of the discriminant functions to predict facility concentration. These results will be examined for separate models at each of three geographic scales (Table 4.1). The conclusion of this chapter will synthesize these results and assess the relative utility of the models as successful indicators of facility concentration. Emphasis will also be placed on identifying those individual community characteristics which are consistently significant discriminating variables.

4.1 Separate Effects of Socio-Environmental and Attitude Variables on Facility Concentration

4.1.1 Socio-Environmental Variables

The socio-environmental variables are, in general, significantly related to facility concentration. This is apparent for all levels of geographic analysis (Table 4.2). The relative strength of these

TABLE 4.1

OUTLINE OF ANALYSIS PROCEDURE

Level of Analysis	Model
Census Tract (57)*	Socio-environmental
	Attitudinal
	Composite
Planning District (42)	Socio-environmental
	Attitudinal
	Composite
Planning District (75)	Socio-environmental

*number in brackets represents number of cases.

TABLE 4.2

ANALYSIS OF VARIANCE RESULTS - SOCIO-ENIVRONMENTAL VARIABLES[1]

Classification Category	Independent Variables	Level of Analysis		
		Census Tract	Planning District (with attitudinal data)	Planning District
Socio-Economic	Mean Income	3.0951*	1.9880	5.2654**
	% Population < Grade 9	1.8603	2.7577	12.3358***
	% Population some university	2.7846*	1.8413	3.4404*
	House value	0.7397	0.7116	2.6932
	Cash rent	2.4414	2.6166	9.1571***
Community Stability	% Detached dwellings	3.8107*	11.7209***	20.0820***
	% Owner	2.4684	7.3547***	10.6714***
	% Unemployed	2.3505	18.1560***	11.0425***
	% Migrant	0.5710	2.9009*	3.4728*
Density	Population density	8.7313***	22.1094***	17.1197***
	% Single-person households	3.9969**	6.3039**	7.5512***
	Persons per household	1.1946	1.8007	1.3649
Land-use	% Commercial	4.3681**	3.1249*	7.5206***
	% Industrial	0.4590	2.0364	3.8430*
	% Residential	0.3884	1.2527	1.5292
	% Industrial	0.6997	3.6653*	7.6476***
Demographic Structure	% Male	4.2980**	1.4084	2.5956
	% Single > 15	8.3080***	11.2253***	13.5804***
	% Population < 15	3.1587*	3.5821*	2.0514
	% Children < 6	2.7076*	3.1034*	2.8201*
	% Children 18-25	1.9705	7.3164***	10.4693***
	% Population > 65	1.0236	1.6928	1.0510
Community Homogeneity	Ethnic diversity	3.1461*	9.2501***	13.7636***
	% English-speaking	1.7169	4.4174**	12.6912***

[1]Values are F-values *Significant at 0.05 level **Significant at 0.01 level ***Significant at 0.001 level.

relationships, however, increases with increasing scale. This is evidenced by changes in the number of significant variables and in the relative significance of these variables.

Seven variables are consistently related to facility concentration for all levels of analysis. These significant variables are: population density, percentage of single individuals over 15, percentage of single-person households, percentage of detached dwellings, percentage of children under 6, percentage commercial land use, and ethnic diversity. Of these, population density and percentage of single individuals over 15 exhibit the strongest relationships.

The implications of the significant variables take on added meaning when their distribution is examined relative to the six classification categories which formed the basis for their selection (Table 4.2). Density characteristics appear to be the most important dimension determining facility concentration. The density variables are the only measures significant at all three levels of analysis. This is consistent with the existing literature in this area which suggests that facility concentration will differ with density levels. Density is an important determinant of facility visibility which directly influences perceived impact. The more visible and obtrusive a facility is, the more likely it is to generate opposition. The location of facilities thus occurs in areas where facility visibility is minimized.

The patterns for the other classification categories are not as clear. Demographic structure and community homogeneity are the only other dimensions that demonstrate relatively consistent relationships with facility concentration for all levels of analysis. The contribution of

the demographic variables is significant for the census tract and first planning district level. For the entire metropolitan area, however, its importance is decreased and is, in relative terms, the category with the weakest relationship to facility concentration. These results do indicate, though, that family status and life-cycle are significantly related to facility concentration. The direction of the relationship as shown by the group means (Table 4.3.1, 4.3.2, 4.3.3) supports the expectation that areas of zero and low concentration have greater numbers of children and fewer single individuals. These relationships are consistent with the conceptual framework in which neighbourhood social characteristics are linked to the perceived impacts of facilities and in turn to intensity of opposition.

The importance of the community homogeneity dimension is evident at both planning district levels and to a lesser degree at the census tract level. The most representative measure of this dimension, ethnic diversity, is, however, significantly related to facility concentration at all three levels. Expectations of greater ethnic diversity in areas of moderate and high concentration are supported by the group means (Tables 4.3.1, 4.3.2, 4.3.3). These results are again consistent with the conceptual framework in which community homogeneity, as a dimension of neighbourhood social characteristios, affects perceived facility impacts and thereby opposition to facilities.

The land-use dimension is only moderately related to facility concentration. Its importance, however, does increase with increasing scale but not to the extent that would be expected on the basis of existing literature. Discrepancies in this regard may be associated with a

TABLE 4.3.1

GROUP MEANS FOR VARIABLES SIGNIFICANTLY RELATED TO FACILITY CONCENTRATION - CENSUS TRACTS

Concentration Categories:	Zero	Low	Moderate	High	TOTAL
VARIABLES					
Population density	4788.6	5765.8	9280.0	10829.1	6455.4
% Single > 15	22.0	20.9	31.9	30.8	24.4
Mean rating-social restrictiveness	36.9	34.6	37.9	37.3	36.6
Mean rating-authoritarianism	36.0	34.1	36.6	36.4	35.7
Variation in benevolent attitudes	4.5	4.2	5.4	5.4	4.7
% Commerical land-use	5.8	4.7	13.4	11.4	7.4
% Male	48.4	48.4	48.0	52.5	48.9
% Single-person households	18.6	18.3	32.5	30.4	22.2
% Detached dwellings	45.3	38.1	20.7	15.2	36.2
Mean rating-composite	133.2	130.7	135.0	134.0	133.0
% Population < 15	20.1	22.6	14.6	17.8	19.5
Ethnic diversity index	.569	.609	.675	.660	.604
Mean income	11823.6	10857.3	11961.3	8794.0	11231.2
Mean desirability for facility 2-6 blocks	4.6	4.8	4.2	3.8	4.5
Mean desirability for facility 1-blocks	5.5	5.7	5.0	4.4	5.3
% Some university	16.8	11.9	24.5	16.0	16.9
% Children < 6	7.0	8.3	5.2	6.5	6.9

TABLE 4.3.2

GROUP MEANS FOR VARIABLES SIGNIFICANTLY RELATED TO FACILITY CONCENTRATION - PLANNING DISTRICT WITH ATTITUDINAL DATA

Concentration Category:	Zero	Low	Moderate	High	TOTAL
VARIABLES					
Population density	3983.4	4563.9	8227.8	11792.2	6289.2
% Unemployed	5.6	6.3	6.9	8.9	6.6
% Detached dwelling	52.7	43.0	26.1	8.4	37.1
% Single > 15	21.1	20.3	26.8	32.9	23.9
Ethnic diversity index	.531	.612	.626	.702	.603
% Owner	59.7	61.9	47.7	32.7	53.7
% Children 18-25	9.0	8.8	7.1	5.7	8.0
% Single-person households	16.4	14.0	25.6	31.2	20.0
Mean desirability for facility 1-block	5.7	5.8	4.9	4.3	5.3
Variation in benevolent attitudes	4.7	4.1	5.0	5.8	4.8
% English-speaking	78.0	67.2	63.6	57.6	68.3
Mean desirability for facility 2-6 blocks	4.8	4.8	4.2	3.7	4.5
% Institutional land-use	5.3	5.4	8.9	12.0	7.1
% Some university	20.4	23.5	18.3	16.6	20.3
% Undesirable 1-block	45.5	47.7	30.3	30.8	40.5
% Commercial land-use	5.4	4.8	9.6	10.9	7.0
% Children < 6	6.9	8.2	6.9	5.9	7.1
Variation in authoritarian attitudes	4.6	4.3	5.1	5.7	4.8
% Migrant	20.1	18.0	20.7	26.6	20.5

TABLE 4.3.3

GROUP MEANS FOR VARIABLES SIGNIFICANTLY RELATED TO FACILITY CONCENTRATION - ALL PLANNING DISTRICTS

Concentration Categories:	Zero	Low	Moderate	High	TOTAL
VARIABLES					
% Detached dwelling	53.1	42.6	27.3	8.0	41.0
Population density	3709.1	4247.8	8068.9	9701.0	5255.1
Ethnic diversity index	.519	.602	.636	.690	.578
% Single > 15	21.2	21.4	25.7	33.2	23.4
% English-speaking	78.9	67.5	61.2	57.0	70.7
% Population < Grade 9	15.8	28.8	31.2	33.1	23.4
% Unemployed	5.6	6.7	7.0	8.6	6.4
% Owner	62.9	61.6	50.4	33.8	57.1
% Children 18-25	8.9	8.6	7.2	5.3	8.1
Cash Rent	162.3	136.7	138.6	128.1	148.3
% Institutional	5.3	5.2	8.4	12.6	6.7
% Single-person households	16.2	15.2	23.7	30.2	18.8
% Commercial land-use	4.7	4.9	9.4	14.7	6.7
Mean income	14070.2	10911.6	11471.0	8994.2	12287.1
% Industrial land-use	6.0	15.0	7.9	8.1	8.7
% Migrant	20.2	17.8	20.8	24.9	20.3
% Some university	20.1	10.9	16.9	17.2	17.0
% Children < 6	7.0	8.2	7.2	5.7	7.2

failure to account for alternative land-use possibilities within the units of observation. The result is that the data may not accurately reflect neighbourhood quality in the intended manner. As an example, expanses of parkland and open space will definitely decrease the amount of land devoted to residential land use, but will not necessarily detract from the local environment. In such instances, residential measures would be poor indicators of differing levels of neighbourhood quality.

The socio-economic dimension is the most inconsistent in terms of its relationships to facility concentration. This is most apparent within the two planning district levels. These results are extremely surprising in light of the heavy emphasis within the existing literature placed on socio-economic factors as important determinants of response to public facilities. A closer examination of the individual variables comprising this classification category indicates why these results may have occurred and why it would be erroneous to quickly dismiss this dimension as insignificant.

Economic and social factors are extremely important considerations in understanding these results. Within Metropolitan Toronto, as in many large urban agglomerations, a high premium is paid for proximity to the downtown core. The net result of this is escalated prices in central areas that otherwise might be considered undesirable. Housing prices and cash rents in central city areas are thus not solely based on quality alone, but partly reflect proximity advantages. The result is that area wide variations in housing prices and cash rents that might be expected to occur on the basis of quality alone are lessened. The utility of price measures as indicators of neighbourhood quality is consequently weakened.

All measures of community stability are significantly related to facility concentration at the planning district levels. This is in contrast to what occurs at the census tract level, where only one variable is important. These patterns should not be taken to indicate that this dimension has only a minimum contribution to make to the determination of facility concentration. What it does emphasize, however, is the impact that changing geographic scale has on the significance of the results.

As discussed previously, the numbers and relative significance of the variables for all dimensions increased with increasing scale. This demonstrates that for the socio-environmental variables, differences with respect to facility location are more discernible at larger units of analysis. In most instances, examinations at larger scales might be expected to disguise significant variations that occur. However, because of the small number of facilities, interpretable differences are more obvious at larger scales.

4.1.2 Attitudinal Variables

The attitudinal variables are, in general, weakly related to facility concentration. This is apparent for both levels of analysis (Table 4.4). While the overall relationships are not as significant as expected, it is encouraging to note that certain variables are consistently related to facility concentration. These significant variables are: variability of benevolent attitudes; mean desirability rating for a facility within 2-6 blocks; and mean desirability rating for a facility within one block.

TABLE 4.4

ANALYSIS OF VARIANCE RESULTS - ATTITUDINAL VARIABLES

		F-values	
		Census Tracts	Planning Districts
Attitudes Toward Mentally Ill	Authoritarian mean	4.8240**	1.8073
	Authoritarian standard deviation	2.2007	2.9466*
	Benevolence mean	2.3230	0.8429
	Benevolence standard deviation	4.7779**	4.8404**
	Social restrictiveness mean	5.3247**	2.0572
	Social restrictiveness stan. devi.	1.5237	1.9158
	CMHI mean	2.6073	1.8294
	CMHI standard deviation	0.9464	0.8130
	Total mean	3.7440*	1.3097
	Total standard deviation	1.0867	1.3019
Attitudes Toward Facilities	Mean undesirability rating 7-12 blocks	0.9727	2.3151
	% undesirable 7-12 blocks	0.2966	0.6026
	% very undesirable 7-12 blocks	1.0965	0.1075
	Mean undesirability rating 2-6 blocks	2.8531*	4.2872*
	% undesirable 2-6 blocks	1.9585	1.8185
	% very undesirable 2-6 blocks	0.4615	1.0454
	Mean undesirability rating 1-block	2.8307*	4.8548**
	% undesirable 1-block	2.5044	3.2764*
	% very undesirable 1-block	1.2308	1.5668
Behavioural Response	% more 7-12 blocks	0.2405	0.7802
	% do nothing 7-12 blocks	0.6654	0.7498
	% individual action 7-12 blocks	0.3818	0.3411
	% consider moving 2-6 blocks	0.3429	0.4806
	% do nothing 2-6 blocks	0.5611	0.8803
	% individual action 2-6 blocks	0.5050	0.5920
	% consider moving 1-block	0.9892	0.6034
	% do nothing 1-block	1.3078	1.4330
	% individual action 1-block	0.7441	1.0814

* Significant at 0.05 level
**Significant at 0.01 level

The relative contribution of the classification categories is extremely important to examine due to the inherent diversity of attitudinal dispositions (see Chapter 2). In this light, it is particularly important to determine whether facility concentration is more significantly related to attitudes toward the mentally ill or to attitudes toward facilities.

Initial examination of the results provides little clarification. At the census tract level, attitudes towards the mentally ill are more significantly related to facility concentration while at the planning district level, attitudes toward facilities are. Only two consistent patterns are evident for both levels of analysis: (i) the significant relationships with facility concentration for the aforementioned variables; and (ii) the totally insignificant relationships between the behavioural measures and facility concentration.

Closer inspection of the results, however, shows that facility concentration is most significantly related to those measures associated with exclusionary tendencies. While this is inherently obvious for the facility desirability variables, it is equally true for measures of attitudes toward the mentally ill. The significance of the authoritarian, social restrictiveness, and composite scales at the census tract level is indicative of these exclusionary dispositions. No significant relationship is evident between facility concentration and the benevolence or CMHI scales. The values for the scale scores demonstrate that while individuals within areas of differing facility concentration may be similarly sympathetic to the mentally ill and may express like ideologies with respect to the concept of community mental health care, differences

will occur when the issues of control and exclusion of the mentally ill are raised.

The results also indicate that between concentration categories, greater differences in facility rejection tendencies occur with decreasing distance to facility. At larger distances, no differences in attitudes are discernible. However, when differences are reduced to within a six-block radius, variations become evident. This occurs for both levels of geographic analysis. This reflects the spatially constrained effect of externalities associated with mental health facilities. The impacts of these distance-decay effects are, however, perceived differently by individuals within areas of differing facility concentration.

The conceptual framework suggests that variations in exclusionary tendencies can be directly linked to behavioural response (Figure 2.1). In light of the previously identified response patterns, the insignificant relationships of the behavioural variables with facility concentration raises serious questions as to the validity of this assertion. This apparent discrepancy between theory and reality may, in part, be due to the sample from which the response data are drawn.

Dear and Taylor (1979, pp. 10-11) have suggested that the sample design which forms the basis for this analysis may, in fact, underestimate the degree of actual facility opposition. They point out that the sample omits all those respondents whose opposition to a facility location was intense enough to cause them to move away from the host neighbourhood. They argue that a complete study should sample from three different populations: (i) those responding to a hypothetical location; (ii) those responding to an existing location; and (iii) those in the throes of a

locational controversy. Only the first two populations are sampled for this study.

4.1.3 Comparison of Socio-Environmental and Attitudinal Variables

A comparison of the relative contributions of the socio-environmental and attitudinal variables indicates that the former are more directly related to facility concentration. This is evident for both the number and significance of the relationships and is even more pronounced at larger scales of analysis.

These results are not entirely surprising in light of the ambiguities that have existed in previous research involving attitudes toward the mentally ill (see Rabkin, 1974). In examining these results, it is difficult to assess the impact that other factors (i.e. personal and situational) have in distorting the relationship between attitude, response and behaviour. This presents a formidable problem to any study of this nature and is one that has not been satisfactorily resolved.

The representativeness of the attitudinal measures can be further questioned when issues of scale are raised. Attitudes were sampled at the enumeration area level. While these might accurately depict dispositions within similarly small units such as census tracts, their validity for much larger units (i.e. planning districts) is uncertain. It is therefore not surprising that few significant relationships with facility concentration occur at this scale.

The socio-environmental variables thus appear to be the most likely measures to discriminate successfully between areas of differing facility concentration. Their relationships are numerous and consistently

strong. In contrast, the attitudinal variables are only weakly related to facility concentration.

4.1.4 Correlations Between Significant Variables

The results of the analysis of variance dictated which independent variables were included in the discriminant analysis. At this stage it is important to reemphasize that discriminant analysis does not seek to determine the individual relationships between the independent and dependent variables. It calculates linear combinations of the independent variables which best discriminate among the criterion groups. Interrelationships between the independent variables are thus important determinants of which measures are included in the discriminant functions. Strong correlations exist between many of the independent variables included in this analysis. While collinearily amongst the independent variables does not present a statistical obstacle to the successful operation of discriminant analysis, it is important to consider the ramifications of this for the interpretation of the results, particularly in light of the stated focus of the study.

The inclusion of certain variables in the final analysis should not be taken to indicate that the remaining variables are insignificant discriminators. The inclusion of one variable may significantly reduce the explanatory power of other variables with which it is highly correlated. In short, they may be explaining the same variation between groups. The results of the discriminant analysis must therefore be interpreted carefully, ensuring that those variables not entered into the analysis are not automatically labelled as insignificant discriminators.

4.2 Combined Effects of Socio-Environmental and Attitude Variables on Facility Concentration - Census Tracts

4.2.1 Socio-Environmental Variables

The results of the first stepwise discriminant analysis indicate that five socio-environmental variables made significant contributions to the discriminant functions. These variables are in order of inclusion: population density, percentage male population, percentage commercial land-use, ethnic diversity, and percentage of population with some university education. Two functions were statistically significant based on Wilks Lambda (Table 4.5). The discriminant coefficients show that the first function is defined by a combination of all five variables. The second function is defined by a combination of population density and percentage male as the one pole and a combination of commercial land-use, ethnic diversity and university education as the other.

Group differences can be identified by plotting the group centroids in a geometric space defined by the two functions (Figure 4.1). This demonstrates that the first discriminant function (X-axis) separates the four concentration categories into two subsets: census tracts with low (zero and low) and high (moderate and high) facility concentration. On the second function, the greatest separation occurs between areas of moderate and high concentration. The zero and low concentration groups are clustered at the intermediate points.

The groups are ordered in the manner that would be expected based on the discriminant coefficients of the contributing variables. Census tracts with high facility concentration are thus characterized by high population densities, high percentage male population, high percentage

TABLE 4.5

SOCIO-ENVIRONMENTAL VARIABLES (CENSUS TRACT) - DISCRIMINANT FUNCTION STATISTICS

Standardized Coefficients	Function 1	Function 2
Population density	-.57	.44
% Male	-.48	.68
% Commercial	-.41	-.49
Ethnic diversity	-.32	-.45
% Some university	-.53	-.51
Wilks Lambda	.37**	.72*

** Significant at 0.001 level
* Significant at .05 level

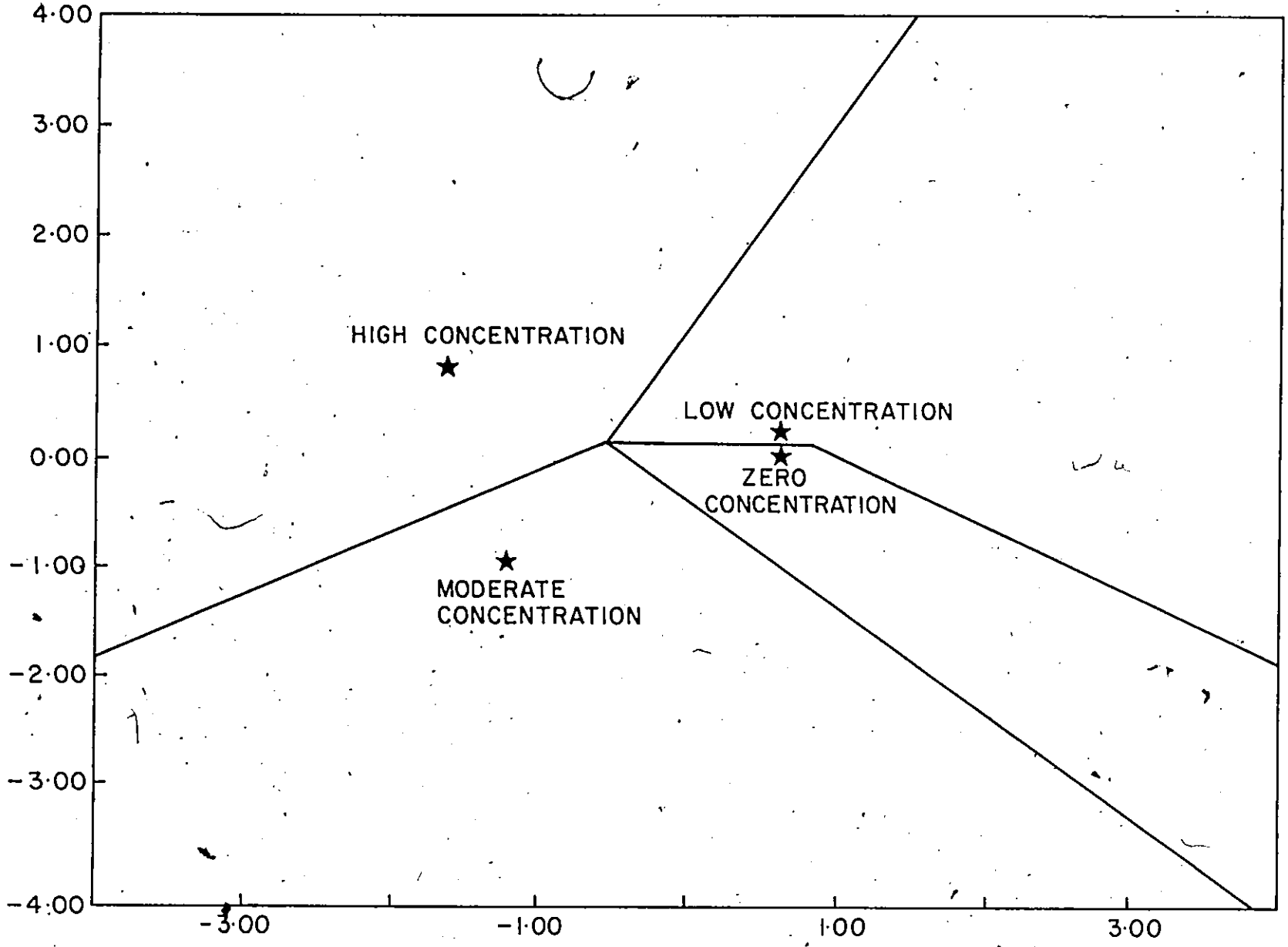

Figure 4.1 Facility concentration analysis: group centroids for socio-environmental data (Census Tracts).

commercial land-use, high ethnic diversity, and a high percentage of the population with some university education. In contrast, tracts with low facility concentration have low scores on all these variables. The distinction appearing here is between congested, diverse areas (census tracts with high facility concentration) and uncrowded, homogeneous areas (tracts with low facility concentration).

The contribution of the variables to the second function allows a further distinction to be drawn between areas of moderate and high facility concentration. Moderately concentrated areas are census tracts with relatively high levels of ethnic diversity, commercial land-use, and university educated individuals. Highly concentrated areas are tracts with high population densities and male population. The distinction suggested here is between inner-city neighbourhoods (high concentration) and surrounding, low-status residential areas (moderate concentration).

Within discriminant analysis, scores are calculated for each case on each function and these allow prediction of group membership. Individual cases are classified into one of the four groups based on probability densities derived from these scores on the discriminant functions. A contingency table is generated which cross-tabulates predicted and actual group membership and determines the percentage of cases correctly classified.

The classification table (Table 4.6) indicates that 63.16 percent of all census tracts were correctly classified based on their discriminant scores. This is a moderate level of prediction for if grouping occurred randomly, only 25 percent would have been classified correctly. Areas of low concentration were predicted the best while high concentration areas

TABLE 4.6

SOCIO-ENVIRONMENTAL VARIABLES-PREDICTION OF GROUP MEMBERSHIP (CENSUS TRACTS)

Group	No. of cases	Zero Concentration	Low Concentration	Moderate Concentration	High Concentration
Zero concentration	30	18 60.0%	8 26.7%	2 6.7%	2 6.7%
Low concentration	11	2 18.2%	9 81.8%	0 0.0%	0 0.0%
Moderate concentration	8	1 12.5%	1 12.5%	5 62.5%	1 12.5%
High concentration	8	1 12.5%	1 12.5%	2 25.0%	4 50.0%

63.16 percent of cases correctly classified.

were predicted relatively poorly. This result is somewhat surprising in light of the clear separation evident for the latter group in the centroid plot. It is indicative, though, of the inherent social diversity that is evident within these areas. While the overall classification results were only moderately successful, it is encouraging to note that the greatest overlap in the misclassified cases occurred between groups of low concentration (zero and low) and groups of high concentration (moderate and high).

4.2.2 Attitude Variables

Two significant discriminant functions emerge from the analysis using the attitudinal variables (Table 4.7). The discriminant coefficients show that the first function is defined by a combination of variations in benevolent attitudes and average social restrictiveness as one pole and average facility desirability as the other. The second function is defined by average facility desirability and average social restrictiveness as one pole and variations in benevolent attitudes as the other.

The group centroids (Table 4.8) demonstrate that the first discriminant function most clearly separates the moderate and high from the low facility concentration areas. The zero concentration area is at the intermediate point. The second function differentiates areas of high and low concentration from areas of zero concentration.

The ordering of the groups and their relationships to the discriminant coefficients of the contributing variables are, to a certain extent, counter-intuitive. This is evident in the variable loadings. The results indicate that areas of moderate and high facility concentration

TABLE 4.7

ATTITUDINAL VARIABLES (CENSUS TRACT) -
DISCRIMINANT FUNCTION STATISTICS

Standardized Coefficients	Function 1	Function 2
Benevolence SD	.63	-.48
Mean desirability 1-block	-.22	.97
Social restrictiveness mean	.46	1.19
Wilks Lambda	.57**	.79*

** Significant at 0.001 level
* Significant at 0.05 level

TABLE 4.8

ATTITUDINAL VARIABLES (CENSUS TRACT) -
GROUP CENTROIDS

Group	Function 1	Function 2
Zero	-.115	.415
Low	-.854	-.569
Moderate	.845	.099
High	.853	-.750

are very similar and are characterized as areas exhibiting greater variations in benevolent attitudes, higher levels of social restrictiveness, while simultaneously expressing less unfavourable attitudes to the possibility of a mental health facility locating within one-block of their residence. Converse interpretations apply for those areas of zero and low concentration, with the latter being more strongly characterized by these traits.

The apparent discrepancy between response to facility location and levels of social restrictiveness is not unique to this study, and the existing literature provides logical explanations of this result. Previous research has indicated a diversity between areas of high and low concentration in terms of the duality of responses to the mentally ill and facilities serving them (Chapter 2). Populations within lower-status neighbourhoods have been seen to react negatively to the mentally ill person as an individual, but are less hostile to the concept of a community mental health facility. In contrast, in higher-status, middle-class communities where facilities are sparse, it is deemed socially acceptable to express favourable attitudes toward the mentally ill. However, when the prospect of actual contact occurs in the form of a proximate facility, exclusionary tendencies increase.

The variations in benevolent attitudes that occur are consistent with the patterns that were expected. Areas of high facility concentration exhibit a far wider range of attitudes toward the mentally ill (i.e. greater variations in benevolent attitudes) owing, in part, to the inherent social diversity of residents in these communities. These patterns are not as evident in areas of low facility concentration

which are most often homogeneous suburban locations.

The second function differentiates zero concentration areas from low concentration areas. Given the between group variations accounted for by the first function, the contribution of the variables to the second function indicate that areas of zero concentration are more exclusionary and more homogeneous in their outlook to the mentally ill than areas of low concentration. This distinction suggests that the zero concentration areas are the least socially diverse of all the concentration groups and the most likely to share common, community goals.

The classification table (Table 4.9) indicates that the attitudinal variables are only weak predictors of group membership. Only 56.14 percent of all census tracts were correctly classified based on their discriminant scores. The most accurate prediction (63.6 percent correctly classified) was for the low concentration areas; the most inaccurate (50.0 percent correctly classified) was for the high concentration areas. This latter result is not surprising in light of the wide range of attitudes that could be expected in these areas. The pattern within the misclassified cases is not encouraging indicating great overlap between groups of high and low concentration.

In general, the classification results indicate that although the attitudinal variables are significantly related to facility concentration levels, they are not strong predictors.

4.2.3 Combined Variables

Two separate analyses were performed using a combination of both sets of data: (i) for all socio-environmental and attitudinal variables

TABLE 4.9

ATTITUDINAL VARIABLES - PREDICTION OF GROUP MEMBERSHIP (CENSUS TRACTS)

Group	No. of cases	Zero Concentration	Low Concentration	Moderate Concentration	High Concentration
Zero concentration	30	17 56.7%	7 23.3%	2 6.7%	4 13.3%
Low concentration	11	3 25.0%	7 63.6%	1 9.1%	0 0.0%
Moderate concentration	8	1 12.5%	1 12.5%	5 62.5%	1 12.5%
High concentration	8	1 12.5%	1 12.5%	2 25.0%	4 50.0%

56.14 percent of cases correctly classified.

that were used in the previous analyses; and (ii) for only those variables that exhibited discriminatory power in the previous analyses. The results of the two were very similar. The interpretation is limited to the first analysis where all variables were included.

Seven variables made significant contributions to the discriminant functions (Table 4.10). Only one of the derived functions discriminated significantly amongst concentration groups. This function is defined by a combination of all seven variables. Examination of the group centroids (Table 4.11) demonstrates that the clearest separation occurs between census tracts with low (groups 0 and 1) and high (groups 2 and 3) facility concentration.

The loadings and distribution of groups on the first function are consistent with previous findings. Census tracts with high facility concentrations are characterized by high population densities, high percentage male population, high percentage commercial land-use, greater ethnic diversity, and more university educated people. These areas also exhibit greater variations in benevolent attitudes and express more authoritarian views. The opposite traits apply to areas with low facility concentration.

The classification of areas using the combined variables (Table 4.12) is more accurate (62.5 percent correctly classified) than that of the attitudinal variables and virtually identical to that of the socio-environmental model. For this analysis, areas of moderate facility concentration are the most accurately predicted (75.0 percent correctly classified). As with both previous analyses, the high concentration areas are the least distinguishable group with only 50.0 percent correctly classified.

TABLE 4.10

COMBINED VARIABLES (CENSUS TRACTS) -
DISCRIMINANT FUNCTION STATISTICS

Standardized Coefficients	Function 1
Population density	-.53
Benevolence SD	-.46
% Male	-.37
Authoritarian mean	-.36
Ethnic diversity	-.42
% Commercial	-.32
% Some university	-.35
Wilds Lambda	.27**

** Significant at 0.001 level.

TABLE 4.11

COMBINED VARIABLES (CENSUS TRACT) -
GROUP CENTROIDS

Group	Function 1
Zero	0.625
Low	1.010
Moderate	-1.681
High	-1.973

TABLE 4.12

COMBINED VARIABLES - PREDICTION OF GROUP MEMBERSHIP (CENSUS TRAC

Group	No. of cases	Zero Concentration	Low Concentration	Moderate Concentration	High Concentration
Zero concentration	30	20 66.7%	6 20.0%	2 6.7%	2 6.7%
Low concentration	11	5 45.5%	6 54.5%	0 0.0%	0 0.0%
Moderate concentration	8	1 12.5%	0 0.0%	6 75.0%	1 12.5%
High concentration	8	2 25.0%	0 0%	2 25.0%	4 50%

62.50 percent of cases correctly classified.

The combination of both sets of variables has resulted in slightly improved predictive ability for areas of zero and moderate facility concentration, while no change is evident in highly concentrated areas. The major abberation is for low concentration areas. The classification results for this group were 81.8 and 58.3 percent for the socio-environmental and attitudinal variables respectively, but only 54.5 percent for the combined measures. Since the same variables that contributed to the individual analyses do so for the combined, the reasons for this occurrence are unclear.

4.2.4 Summary - Census Tract Level

The results indicate that socio-environmental measures represent an important factor in determining the spatial distribution of community mental health facilities. The role of attitudes is less easily discerned, but the results of the combined model suggest that attitudinal measures do contribute to an understanding of variations in concentration. The strongest indicators of these patterns are: population density, percentage male population, and variation in benevolent attitudes. High values for these measures are most evident in census tracts with moderate and high concentration levels, with the opposite being true for areas of zero and low concentrations.

4.3 Combined Effects of Socio-Environmental and Attitude Variables on Facility Concentration - Planning Districts with Attitudinal Data

4.3.1 Socio-Environmental Variables

Two significant discriminant functions emerge from this analysis (Table 4.13). The first function most clearly differentiates the zero and low from the moderate and high concentration areas (Table 4.14). A clear distinction also exits between the latter two areas. Planning districts with high facility concentrations are characterized by high population densities, high unemployment rates, greater ethnic diversity, and a low percentage of children under 6. Areas of low facility concentration have the opposite traits.

The contribution of the variables to the second function discriminates between zero and low concentration areas. On this function, the former exhibit higher migration rates while the latter have greater numbers of single-person households and young children. This suggests that areas of zero concentration are newly developed communities populated by families with older children. In low concentration areas, the neighbourhoods are older with a greater variation in available housing types. These areas have a greater preponderance of new families with young children.

The classification table (Table 4.15) shows that for three concentration groups - zero, moderate and high - reasonably accurate predictions of membership were achieved. This is reflected in a high overall percentage of cases correctly classified (80.95 percent). The predictive accuracy was weakest for the low concentration areas.

TABLE 4.13

SOCIO-ENVIRONMENTAL VARIABLES (PLANNING DISTRICT) - DISCRIMINANT FUNCTION STATISTICS

Standardized Coefficients	Function 1	Function 2
Population density	.68	-.90
% Single-person households	-.07	1.76
% Unemployed	.52	.38
% Migrant	.09	-1.13
% Children < 6	-.58	1.70
Ethnic diversity	.45	.80
Wilks Lambda	.09*	.45*

* Significant at 0.001 level

TABLE 4.14

SOCIO-ENVIRONMENTAL (PLANNING DISTRICT) - GROUP CENTROIDS

Group	Function 1	Function 2
Zero	-1.613	-1.163
Low	-1.005	1.126
Moderate	0.969	0.376
High	4.057	-0.547

TABLE 4.15

SOCIO-ENVIRONMENTAL VARIABLES - PREDICTION OF GROUP MEMEBERSHIP
(PLANNING DISTRICTS WITH ATTITUDINAL DATA)

Group	No. of Cases	Zero Concentration	Low Concentration	Moderate Concentration	High Concentration
Zero concentration	13	12 92.3%	0 0.0%	1 7.7%	0 0.0%
Low concentration	13	2 15.4%	9 69.2%	2 15.4%	0 0.0%
Moderate concentration	10	0 0.0%	1 10.0%	8 80.8%	1 10.0%
High concentration	6	0 0.0%	0 0.0%	1 16.7%	5 83.3%

80.95 percent of cases correctly classified.

4.3.2 Attitude Variables

One discriminant function emerged as significant in this analysis (Table 4.16). This function is defined by a combination of variations in benevolent attitudes and percentage expressing undesirable attitudes toward facilities within one-block (percentage undesirable) as one pole and mean desirability rating for a facility within one-block (mean desirability) as the other. This function most clearly separates zero and low concentration areas from high concentration areas (Table 4.17). The moderate concentration group is at the intermediate point.

Planning districts of high and moderate facility concentration exhibit greater variation in benevolent attitudes, greater percentage expressing undesirable attitudes toward facilities, but have more favourable mean desirability ratings. While seemingly illogical, these results are not as inherently contradictory as they first appear. In accounting for this discrepancy, it is important to note that percentage undesirable contributes only marginally to this function, particularly in relation to mean desirability. In light of this, and recognizing that percentage undesirable was the last variable entered into the analysis, it is logical to suggest that the contribution of percentage undesirable to the function is to account for the residual variation that remains after mean desirability has been entered into the analysis. This result reflects a diversity of opinions existing within the concentration groups. It therefore is important to note that while overall attitudinal sentiments can be identified, diverging opinions exist and must be acknowledged.

With this classification in mind, a re-examination of the discriminant coefficients indicates that they are logically consistent with

TABLE 4.16

ATTITUDINAL VARIABLES (PLANNING DISTRICT) - DISCRIMINANT FUNCTION STATISTICS

Standardized Coefficients	Function 1
Benevolence SD	.60
Mean desirability 1-block	-.81
% Undesirable 1-block	.21
Wilks Lambda	.54*

*Significant at 0.05 level

TABLE 4.17

ATTITUDINAL VARIABLES (PLANNING DISTRICT) - GROUP CENTROIDS

Group	Function 1
Zero	-.254
Low	-.725
Moderate	.412
High	1.435

the ordering of the groups. Planning districts of moderate and high facility concentration can be characterized as areas with a wide range of attitudes toward the mentally ill and their facilities. In general, though, individuals within these areas are favourably predisposed to community mental health facilities. In contrast, individuals within zero and low concentration areas are much more homogeneous in their outlook toward the mentally ill. These areas are dominanted by undesirable attitudes toward the location of mental health facilities.

The classification table (Table 4.18) indicates that the attitudinal variables are only weak predictors of group membership. This is most apparent within the zero and low concentration areas where, respectively, only 30.8 and 53.8 percent of the planning districts were classified correctly. This contrasts strongly with the results for the moderate and high concentration areas (70.0 and 66.7 percent). The poor classification results for the zero concentration group is consistent with its weak differentiation on the discriminant function. On this basis, the most accurate prediction would be expected for the high concentration areas. In fact, this does not occur as the most accurately predicted is the moderate concentration group.

These results show that the representativeness of the attitudinal measures decreases with increasing size of area. The largest planning districts mainly fall into the zero and low concentration areas, the poorest predicted groups on the basis of the attitudinal variables. The moderate and high concentration areas were the most accurately predicted and they mainly comprise smaller planning districts.

TABLE 4.18

ATTITUDINAL VARIABLES - PREDICTION OF GROUP MEMBERSHIP
(PLANNING DISTRICTS WITH ATTITUDINAL DATA)

Group	No. of Cases	Zero Concentration	Low Concentration	Moderate Concentration	High Concentration
Zero concentration	13	4 30.8%	4 30.8%	4 30.8%	1 7.7%
Low concentration	13	2 15.4%	7 53.8%	3 23.1%	1 7.7%
Moderate concentration	10	0 0.0%	2 20.0%	7 70.0%	1 10.0%
High concentration	6	0 0.0%	0 0.0%	2 33.3%	4 66.7%

52.38 percent of cases correctly classified.

4.3.3 Combined Variables

Two functions were statistically significant based on Wilks Lambda (Table 4.19). The contribution of the variables to the first function most clearly separates the zero and low concentration areas from the moderate and high concentration areas (Table 4.20). Within the latter, a clear distinction also exists. Planning districts with higher facility concentrations are characterized by high population densities, high ethnic diversity, greater variations in benevolent attitudes, high unemployment, high percentage of single-person households, and low numbers of young children. The opposite characteristics apply to areas of lower facility concentrations.

The second function most clearly separates the zero and low concentration areas. On this function, the former exhibits higher migration rates and high population densities. The latter has greater numbers of single-person households and children under 6. The distinction in neighbourhoods suggested here is identical to that of the analysis that utilized only the socio-environmental variables (p.75).

The classification table (Table 4.21) indicates that the predictive power of the contributing variables is very good (85.71 percent). The most diverse groups in terms of facility concentration, the zero and high concentration areas, were particularly well predicted. The low and moderate areas were not as accurate, but still reasonably good. This pattern is consistent with the separation of groups on the discriminant functions. These results demonstrate that the derived functions have both significant discriminating power and strong predictive abilities.

TABLE 4.19

COMBINED VARIABLES (PLANNING DISTRICT) -
DISCRIMINANT FUNCTION STATISTICS

Standardized Coefficients	Function 1	Function 2
Population density	-.54	.89
% Unemployed	-.43	-.39
% Children < 6	.25	-1.67
Ethnic diversity	-.68	-.79
Benevolence SD	-.56	.03
% Migrant	.00	1.13
% Single-person households	-.33	-1.75
Wilks Lambda	.07**	.44*

** Significant at 0.001 level
* Significant at 0.01 level

TABLE 4.20

COMBINED VARIABLES (PLANNING DISTRICT) -
GROUP CENTROIDS

Group	Function 1	Function 2
Zero	1.820	1.169
Low	1.225	-1.125
Moderate	-1.229	-.373
High	-4.551	.525

TABLE 4.21

COMBINED VARIABLES - PREDICTION OF GROUP MEMBERSHIP
(PLANNING DISTRICTS WITH ATTITUDINAL DATA)

Group	No. of Cases	Zero Concentration	Low Concentration	Moderate Concentration	High Concentration
Zero concentration	13	12 92.3%	1 7.7%	0 0.0%	0 0.0%
Low concentration	13	2 15.4%	10 76.9%	1 7.7%	0 0.0%
Moderate concentration	10	0 0.0%	1 10.0%	8 80.0%	1 10.0%
High concentration	6	0 0.0%	0 0.0%	0 0.0%	6 100.0%

85.71 percent of cases correctly classified.

4.4 Effect of Socio-Environmental Variables on Facility Concentration - All Planning Districts

The expansion of the analysis to include the entire Metropolitan Toronto area substantially increases the number of zero concentration (suburban) areas (Table 3.1), and their impact upon the results is evident. Seven variables contribute to the one significant discriminant function (Table 4.22), but only two - population density and ethnic diversity - were significant in previous analyses. Four of the five remaining variables are all indicative of characteristics strongly associated with suburban areas - i.e. low industrial land-use; low percentage single individuals over 15; low percentage of adults with less than grade nine education; and high numbers of children between the ages of 18 and 25. Only mean income (the weakest contributing variable), is inconsistent with this pattern.

The discriminant function separates all four groups (Table 4.23). A clear distinction exists between areas of zero and low and areas of moderate and high facility concentration, as it has in all previous analyses. The separation, however, is not strongly reflected in the classification results (Table 4.24). Overall, only 70.67 percent of the planning districts were accurately predicted. The values range from a high of 80.6 percent for the zero concentration group to 58.3 percent for the low concentration areas. The relatively high classification results for the zero concentration group is a reflection of the strong similarity in socio-environmental characteristics of the predominantly suburban planning districts that were added to this analysis.

TABLE 4.22

SOCIO-ENVIRONMENTAL VARIABLES (ALL PLANNING DISTRICTS) - DISCRIMINANT FUNCTION STATISTICS

Standardized Coefficients	Function 1
Population density	-.40
% Single > 15	-.55
Mean income	-.25
% < Grade 9	-.47
% Children 18-25	.45
% Individual	-.30
Ethnic diversity	-.45
Wilks Lambda	.19*

*Significant at .001 level

TABLE 4.23

SOCIO-ENVIRONMENTAL VARIABLES (ALL PLANNING DISTRICTS) - GROUP CENTROIDS

Group	Function 1
Zero	1.286
Low	.281
Moderate	-1.595
High	-3.582

TABLE 4.24

SOCIO-ENVIRONMENTAL VARIABLES - PREDICTION OF GROUP MEMBERSHIP
(ALL PLANNING DISTRICTS)

Group	No. of Cases	Zero Concentration	Low Concentration	Moderate Concentration	High Concentration
Zero concentration	36	29 80.6%	5 13.9%	2 5.6%	0 0.0%
Low concentration	18	5 27.8%	11 61.1%	2 11.1%	0 0.0%
Moderate concentration	12	1 8.3%	2 16.7%	7 58.3%	2 16.7%
High concentration	9	0 0.0%	0 0.0%	3 33.3%	6 66.7%

70.67 percent cases correctly classified.

4.5 Summary

This chapter examined the relationship between facility concentration and neighbourhood socio-environmental and attitudinal characteristics. The analysis was conducted in two parts. The first examined the separate effects of the independent variables on facility concentration by means of analyses of variance. In the second part, discriminant analyses were performed to ascertain the combined sets of variables that best distinguished between areas of differing facility concentration. The analyses were performed for socio-environmental and attitudinal data at the census tract and planning district level. Planning districts for the entire Metropolitan Toronto area were then examined based on socio-environmental data only.

The results of the analyses of variance indicated that the socio-environmental variables were more strongly related to facility concentration than the attitudinal data. This was more apparent for the larger geographic units. Seven socio-environmental and three attitudinal variables were consistently related to facility concentration at all levels of analysis. The significant socio-environmental variables were measures of the density, demographic, and ethnic homogeneity characteristics of communities. The attitudinal variables related to facility concentration were those measures associated with exclusionary tendencies.

The results of the discriminant analyses confirmed that the socio-environmental variables were more strongly related to facility concentration than the attitudinal variables. Improvements were evident in the combined analyses, however, indicating that the attitudinal variables do have certain discriminating power. Two socio-environmental variables -

population density and ethnic diversity - and two attitudinal variables - variations in benevolent attitudes and mean desirability rating for a facility within one-block - contribute significantly at all levels of analysis for which they were included.

The ordering of the groups relative to the discriminant functions was logically consistent with prior expectations. Areas of zero and low concentration consistently exhibited similar characteristics as did areas of moderate and high concentration. The high concentration group was the best distinguished for all levels of analysis. The zero and low concentration areas were highly similar in socio-environmental characteristics, with differences more apparent at larger geographic scales. With respect to attitudinal data however, areas of low concentration were consistently distinguished more clearly than zero concentration areas.

With increases in geographic scale, the discriminating power of the socio-environmental variables increased while the power of the attitudinal variables decreased. The differentiation of facility groups improved significantly between the census tract and first planning district level. Differentiation at the second planning district level was only slightly weaker than the first.

The socio-environmental variables were also better predictors of group membership than the attitudinal variables. The most accurate prediction, however, occurred for the combined variables at the planning district level. Areas of low facility concentration were generally the most poorly predicted on the basis of the socio-environmental variables; areas of zero concentration were poorly predicted using attitudinal data. Overall, moderate concentration areas were the most accurately predicted.

The following chapter will expand upon these results, examining in more detail the nature of the relationships identified between facility concentration and socio-environmental and attitudinal data. In light of this discussion, it will then be possible to ascertain the validity of the conceptual framework as a useful explanatory tool in accounting for the distribution of community mental health facilities. Policy implications for mental health care planning will then be discussed.

CHAPTER FIVE

CONCLUSIONS

This thesis has examined whether systematic relationships exist between the spatial concentration of community mental health facilities and community socio-environmental and attitudinal characteristics. The concentration of facilities was seen to result from two separate but related processes: (i) the generation of conflict; and (ii) the resolution of conflict. These processes exhibit distinct social and spatial characteristics such that the concentration of facilities can be linked to variations in these characteristics. The pertinent aspects of these processes were identified and the contributing factors integrated into a conceptual framework that explains the process of facility concentration.

This chapter assesses the extent to which the conceptual framework adequately accounts for the spatial distribution of facilities. The first section of the chapter reviews the relationships between facility concentration and community socio-environmental and attitudinal characteristics that were identified in the analyses. The conceptual framework is then reviewed in light of these results to determine the extent to which the hypothesized relationships are substantiated. The concluding section will consider the implications of these results for mental health care planning.

5.1 Summary of Major Findings

5.1.1 Socio-Environmental Variables

The results of the analysis indicate that community socio-environmental variables are strongly related to facility concentration both when considered singly and in combination. Density and community homogeneity measures were identified to be the most important factors related to facility concentration. Other important variables were: percentage single over 15; percentage male; percentage of children under 6; and percentage unemployed.

The relationships of these variables to the differing levels of facility concentration were consistent with *a priori* expectations. The moderate and high concentration areas were most similar to each other in terms of their socio-environmental characteristics, and much different from areas of zero and low concentration. The higher concentration groups were characterized as areas with higher population densities, greater ethnic diversity, higher proportions of the population that are single or male, higher rates of unemployment, and fewer young children. The distinctiveness of these groups relative to these characteristics was more apparent at the planning district level.

The zero and low concentration areas had very similar socio-environmental characteristics. These areas were shown to have lower population densities and greater ethnic homogeneity.

The patterns of neighbourhood socio-environmental characteristics described here are similar to those identified by Trute and Segal (1976) in their examination of facility integration levels. They found integration to be highest in communities of moderate social disorganization. These

areas exhibited high levels of transiency and overcrowding, characteristics ascribed to moderate and high concentration areas in this study. In contrast, those areas identified to have the poorest facility integration (communities of strong social cohesion) most closely resemble lower concentration areas in terms of their cultural homogeneity and family-status characteristics.

5.1.2 Attitudinal Variables

The results indicate that the attitudinal variables are only weakly related to facility concentration. Very few of the selected measures exhibit significant relationships, but consistent patterns are evident within the results. Exclusionary attitudes toward the mentally ill and mental health facilities were the dimensions most significantly related to facility concentration. Variability of attitudes, in particular benevolent attitudes, were other measures that contributed to group differentiation. No significant relationships occurred for the behavioural response measures.

The moderate and high concentration areas had similar attitudinal characteristics and were clearly different from areas of zero and low concentration. Areas of higher concentration exhibited negative dispositions to the mentally ill, but were more tolerant of mental health facilities. Greater heterogeneity in attitudes was also evident in these areas. The zero and low concentration areas were characterized as much more homogeneous, exhibiting less overall variation in attitudes. Individuals within these areas tended to be more tolerant of the mentally ill, while simultaneously expressing exclusionary attitudes toward mental health facilities.

The distinction between attitudes toward the mentally ill and attitudes toward mental health facilities reflects the results of previous research (see Section 2.3.4). This divergence of attitudes has been previously linked to variations in social class. To the extent that social class is inversely related to facility concentration, the explanations for this occurrence cited before are applicable within the present context. The patterns evident here support the concept that sympathetic attitudes toward the mentally ill are psychologically traded-off when the prospect of close social and physical contact with these individuals occurs (Dear and Wittman, 1979). The results also suggest that this is more likely to occur for residents of lower concentration areas.

5.2 Discussion of the Results

The relationships that have been identified between facility concentration and neighbourhood attitudinal and socio-environmental characteristics are logically consistent with *a priori* expectations. The existence of these relationships lends support the process of facility location as outlined in the conceptual framework (Figure 2.1). The patterns evident in the results are indicative of the distinct social and spatial variations in the generation and resolution of conflict. The extent to which the relationships between facility concentration and neighbourhood characteristics are supportive of the hypothesized intervening processes is discussed below.

The conceptual framework argues that the spatial concentration of community mental health facilities is the result of the interaction between conflict generation and conflict resolution. Opposition occurs

to facility siting when the impacts of facilities are perceived to result in large negative differentials between the existing environment and the future environment. The manner in which facility impact is perceived is conditioned by individual desires to maintain certain social and physical distances from the mentally ill and group concerns for protection of neighbourhood quality. Individual desires stem from basic attitudinal dispositions toward the mentally ill and mental health facilities. Group concerns arise from desires to preserve their social resource investment which the community environment represents. The interaction of these factors determines the perceived fit between facility form and neighbourhood context. The differentiation of neighbourhoods within urban areas and the relative resource investments they represent, dictate that concerns for community protection will vary over space. To the extent that neighbourhoods are socially homogeneous areas, concerns for community protection will also vary with social class.

Opposition to facilities is therefore likely to be least in neighbourhoods where protection of the environment is of relatively little concern. These areas become likely locations for mental health facilities as planners adopt strategies aimed at avoiding locational conflict. Another factor strongly shaping the formation of these strategies is community power and influence. Conflict will be reduced in those areas unable to block the implementation of a facility. The efficacy of a group's voice and the number of strategic options available to them in response to a group in authority are the major dimensions of community power. Both of these factors are more prevalent in higher-status communities.

The distinct socio-spatial variations identified in both the

generation and resolution of conflict suggest that facilities will be located in the following types of neighbourhoods: (i) those where protection of the community environment is not a major concern; and (ii) those with little power to block their implementation.

The characteristics of different facility concentration areas tend to substantiate the relationships hypothesized here. The characteristics of areas of higher facility concentration strongly suggest that these are the communities with the least political power and the smallest concern for community protection. These areas have higher population densities, and a wider variety of available housing types, suggestive of already deteriorating conditions within the neighbourhood. Even if community protection was of concern in these areas, facility impact would be lessened because these characteristics greatly reduce its visibility. The transiency in these areas indicates that residents have no great resource investment in that environment that would motivate them to actively protest a facility location. The likelihood that mental health facilities would not generate great opposition is reflected in the higher level of tolerance expressed towards facility location.

In areas of lower concentration, the characteristics identified indicate that these areas would be most opposed to facilities due to environmental protection concerns. The characteristics associated with these areas are indicative of middle - to upper-class areas where the "stake" in the environment would be greatest. Low levels of density and greater homogeneity of housing type combine to make facilities highly visible and easily identifiable as a divergent land-use. The predominance of nuclear families with young children are further indicators of concern for neighbourhood quality. These concerns are reflected in the

high levels of undesirability expressed toward potential facilities.

The differences between communities in terms of the likelihood and relative intensity of opposition can be equally applied to considerations of power and ability to deflect unwanted encroachments. The greater level of homogeneity in terms of cultural and attitudinal characteristics for the lower concentration areas suggests that these areas are the most likely to share common, community goals. The fact that residents have a greater "stake" in their environment would further suggest that community protection would be a prominent community goal. The high-status of these areas also suggests that they will have more weapons at their disposal to effectively oppose the location of facilities. Infrastructural advantages such as ratepayer associations ensure that the latent political power existing within these areas is mobilized when the need arises.

High concentration areas do not possess these same advantages. These areas are comprised of a much greater diversity of residents expressing widely varying attitudes toward mental health facilities and users. Consensus on group action would be thus very hard to achieve. This lack of consensus seriously restricts attempts to block sitings because these areas have little inherent political power.

The process of ghettoisation implied here should not be considered in isolation of other factors contributing to the spatial concentration of facilities. The distribution of need and the availability of services and convertible properties are factors that influence the eventual locational decision. They are, however, taken individually or together, highly inadequate explanations of the underlying processes

contributing to the concentration of facilities. They ignore issues of community opposition to facilities and the very real adjustments that this causes in eventual site selection. The argument that need and the availability of properties and services only exist within spatially confined areas of the city is weak. The continued attempts to site facilities outside these areas is evidence that these factors are more widespread than indicated by the existing facility distribution. While neither need nor suitable facility locations are evenly distributed throughout the urban area, they exist in a much wider range of communities than is reflected in the existing concentration of facilities.

The conceptual framework as described in this thesis presents a much more thorough analysis of the underlying process and practical considerations contributing to the concentration of facilities. The processes leading to opposition are accounted for and the manner in which they influence the locational decision discussed. The constraining nature of service and property availability are acknowledged, but are seen to contribute only to the extent to which they reinforce the existing spatial distribution of facilities. The results of the analysis suggest that the process of facility concentration is best understood within the context of the generation and resolution of conflict.

5.3 Implications of Results

Before assessing the implications of these results for mental health care planning, it is necessary first to consider whether the spatial concentration of facilities is necessarily undesirable, both from a patient and community perspective. Disagreement exists over the

likely impacts facility concentration has on patients. One of the bases for the community mental health program was that patient resocialization would be best achieved by providing model behaviour roles in a normal, community setting. In areas of high concentration there is a decreased likelihood that these goals will be achieved, for normalizing environments do not exist and patient interaction is most likely to occur with other patients. On the other hand, Segal and Baumohl (1979) argue that the "ghetto" provides an informal mutual support system within which patients can aid one another in the process of resocialization.

The impact that facility concentration has on community quality is not well-established. The current resistance of residents in the Parkdale and Annex neighbourhoods in Toronto (areas in which a high number of facilities are located) suggests, however, that increasing saturation does result in perceptions of deteriorating neighbourhood quality. These perceptions are likely to lead to opposition to future sitings. The need for alternative locations thus becomes necessary.

The neighbourhood profiles identified in this thesis provide a potential tool for identifying alternative sites where locational conflict will be minimized. Levels of opposition to facility siting can be predicted on the basis of these results and appropriate locational strategies identified and adoped. The result of this will be a movement toward a more rational distribution of community mental health facilities such that patient needs are met and deterimental community impacts minimized.

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APPENDIX

SURVEY RESEARCH CENTRE
INSTITUTE FOR BEHAVIOURAL RESEARCH
YORK UNIVERSITY

LABEL

JUNE 1978

PROJECT # 215

Community Attitudes Toward Neighbourhood Public Facilities

The Survey Research Centre at York University is conducting a study on behalf of a research group at McMaster University in Hamilton. We would like to know your feelings about various community services.

RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	MARITAL STATUS	AGE	ELIGIBLE (18 YRS. & OVER) CODE YES OR NO	PERSON NUMBER	CHECK SELECTED PERSON
(HEAD)						

SELECTION TABLE 12

NUMBER OF PERSONS ELIGIBLE	1	2	3	4	5	6
PERSON TO BE INTERVIEWED	1	2	2	1	3	5

RECORD OF CALLS

	DAY	MONTH	TIME	RESULTS
1				
2				
3				
4				
5				

LENGTH OF INTERVIEW: _____

INTERVIEWER: _____

1 10 20

SURVEY RESEARCH CENTRE
INSTITUTE FOR BEHAVIOURAL RESEARCH
YORK UNIVERSITY

LABEL

PROJECT # 215

1. What is your general opinion about locating community services in residential neighbourhoods? (e.g., community centre, local clinic, police station, fire hall). Are you in favour or opposed?

Favour	1
Indifferent	2
Opposed	3
Don't Know	8

2a. Assuming land was available, are there any particular community services you would favour having located in this neighbourhood?

Yes	1
No	2
Don't Know	8

GO TO Q. 3a

b. If YES, what types?

_____ __ __

_____ __ __

_____ __ __

3a. Are there any particular community services you would oppose having located in this neighbourhood?

Yes	1
No	2
Don't Know	8

GO TO Q. 4a

b. If YES, what types?

_____ __ __

_____ __ __

_____ __ __

4a. I am especially interested in your feelings about community mental health facilities and the next few questions relate to this. Community mental health facilities include out-patient clinics, drop-in centres and group homes which are situated in residential neighbourhoods and serve the local community. Mental health facilities which are part of a major hospital are *not* included.

Are you aware of any community mental health facilities in Toronto?

Yes..... 1

No..... 2

GO TO Q. 5a

b. Can you name any?

_____

_____

_____

5a. Is there a community mental health facility in your neighbourhood?

Yes..... 1

No..... 2

Don't Know..... 8

GO TO Q. 6

b. What is the name of that facility?

_____

c. Where is it located? *(CLOSEST INTERSECTION)*

_____ ___ ___

6. *IF FROM Q. 5 RESPONDENT IS UNAWARE OF A FACILITY IN THE NEIGHBOURHOOD THEN PHRASE Q. 6 IN THE FUTURE CONDITIONAL (E.G. "WOULD HAVE"); IF AWARE, THEN USE THE PAST TENSE (E.G. "HAS HAD").*

What effects do you think the location of a community mental health facility in your neighbourhood would have/has had?

_____ ___ ___

_____ ___ ___

_____

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ATTITUDES TOWARD MENTAL ILLNESS

7. The following statements express various opinions about mental illness and the mentally ill. The mentally ill refers to people needing treatment for mental disorders but who are capable of independent living outside a hospital. Please circle the response which most accurately describes your reaction to each statement. It's your first reaction which is important.

HAND QUESTIONNAIRE TO R. TO FILL IN

STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
S.A.	A	N	D	S.D.

a. As soon as a person shows signs of mental disturbance, he should be hospitalized.

S.A. A N D S.D. ____

b. More tax money should be spent on the care and treatment of the mentally ill.

S.A. A N D S.D. ____

c. The mentally ill should be isolated from the rest of the community.

S.A. A N D S.D. ____

d. The best therapy for many mental patients is to be part of a normal community.

S.A. A N D S.D. ____

e. Mental illness is an illness like any other.

S.A. A N D S.D. ____

f. The mentally ill are a burden on society.

S.A. A N D S.D. ____

STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
S.A.	A	N	D	S.D.

g. The mentally ill are far less of a danger than most people suppose.

S.A. A N D S.D. ____

h. Locating mental health facilities in a residental area downgrades the neighbourhood.

S.A. A N D S.D. ____

i. There is something about the mentally ill that makes it easy to tell them from normal people.

S.A. A N D S.D. ____

j. The mentally ill have for too long been the subject of ridicule.

S.A. A N D S.D. ____

k. A woman would be foolish to marry a man who has suffered from mental illness, even though he seems fully recovered.

S.A. A N D S.D. ____

l. As far as possible mental health services should be provided through community based facilities.

S.A. A N D S.D. ____

m. Less emphasis should be placed on protecting the public from the mentally ill.

S.A. A N D S.D. ____

n. Increased spending on mental health services is a waste of tax dollars.

S.A. A N D S.D. ____

STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
S.A.	A	N	D	S.D.

C.2

o. No-one has the right to exclude the mentally ill from their neighbourhood.

S.A. A N D S.D. ____

p. Having mental patients living within residential neighbourhoods might be good therapy but the risks to residents are too great.

S.A. A N D S.D. ____

q. Mental patients need the same kind of control and discipline as a young child.

S.A. A N D S.D. ____

r. We need to adopt a far more tolerant attitude toward the mentally ill in our society.

S.A. A N D S.D. ____

s. I would not want to live next door to someone who has been mentally ill.

S.A. A N D S.D. ____

t. Residents should accept the location of mental health facilities in their neighbourhood to serve the needs of the local community.

S.A. A N D S.D. ____

u. The mentally ill should not be treated as outcasts of society.

S.A. A N D S.D. ____

v. There are sufficient existing services for the mentally ill.

S.A. A N D S.D. ____

STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
S.A.	A	N	D	S.D.

w. Mental patients should be encouraged to assume the responsibilities of normal life.

S.A. A N D S.D. ____

x. Local residents have good reason to resist the location of mental health services in their neighbourhood.

S.A. A N D S.D. ____

y. The best way to handle the mentally ill is to keep them behind locked doors.

S.A. A N D S.D. ____

z. Our mental hospitals seem more like prisons than like places where the mentally ill can be cared for.

S.A. A N D S.D. ____

aa. Anyone with a history of mental problems should be excluded from taking public office.

S.A. A N D S.D. ____

bb. Locating mental health services in residential neighbourhoods does not endanger local residents.

S.A. A N D S.D. ____

cc. Mental hospitals are an out-dated means of treating the mentally ill.

S.A. A N D S.D. ____

dd. The mentally ill don't deserve our sympathy.

S.A. A N D S.D. ____

STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
S.A.	A	N	D	S.D.

ee. The mentally ill should not be denied their individual rights.

S.A. A N D S.D. ____

ff. Mental health facilities should be kept out of residential neighbourhoods.

S.A. A N D S.D. ____

gg. One of the main causes of mental illness is a lack of self-discipline and will power.

S.A. A N D S.D. ____

hh. We have a responsibility to provide the best possible care for the mentally ill.

S.A. A N D S.D. ____

ii. The mentally ill should not be given any responsibility.

S.A. A N D S.D. ____

jj. Residents have nothing to fear from people coming into their neighbourhood to obtain mental health services.

S.A. A N D S.D. ____

kk. Virtually anyone can become mentally ill.

S.A. A N D S.D. ____

ll. It is best to avoid anyone who has mental problems.

S.A. A N D S.D. ____

STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
S.A.	A	N	D	S.D.

mm. Most women who were once patients in a mental hospital can be trusted as baby sitters.

S.A. A N D S.D.

nn. It is frightening to think of people with mental problems living in residential neighbourhoods.

S.A. A N D S.D.

8. *HAND QUESTIONNAIRE TO R. TO FILL IN*

a. Please read through this list of adjectives and put and X beside each one you associate with the term community mental health facility. Community mental health facilities include out-patient clinics, drop-in centres and group homes which are situated in residential neighbourhoods and serve the local community.

_____accessible	_____hidden	_____slow
_____active	_____human	_____small
_____appealing	_____inconsistent	_____sociable
_____attractive	_____inconspicuous	_____stable
_____bad	_____inhuman	_____strange
_____big	_____insecure	_____sympathetic
_____busy	_____institutional	_____tense
_____calm	_____interesting	_____threatening
_____chaotic	_____inviting	_____ugly
_____cheerful	_____noisy	_____uncertain
_____clean	_____normal	_____unfamiliar
_____commercial	_____noticeable	_____unfriendly
_____confusing	_____odd	_____unnatural
_____congested	_____orderly	_____unnoticeable
_____conspicuous	_____ordinary	_____unplanned
_____contrasting	_____organized	_____unpleasant
_____convenient	_____out-of-place	_____unusual
_____crowded	_____peaceful	_____visible
_____dangerous	_____permanent	_____welcoming
_____depressing	_____planned	_____well-maintained
_____deserted	_____predictable	
_____dirty	_____private	
_____disturbing	_____public	
_____familiar	_____quiet	
_____fast	_____relaxed	
_____friendly	_____repellant	
_____frightening	_____residential	
_____good	_____rundown	
_____harmonious	_____safe	

b. Now please circle the six adjectives in the list which for you are most associated with the term community mental health facility.

9. *HAND QUESTIONNAIRE TO R. TO FILL IN*

a. Please repeat the same procedure to indicate the adjectives you associate with your neighbourhood in general.

_____accessible	_____hidden	_____slow
_____active	_____human	_____small
_____appealing	_____inconsistent	_____sociable
_____attractive	_____inconspicuous	_____stable
_____bad	_____inhuman	_____strange
_____big	_____insecure	_____sympathetic
_____busy	_____institutional	_____tense
_____calm	_____interesting	_____threatening
_____chaotic	_____inviting	_____ugly
_____cheerful	_____noisy	_____uncertain
_____clean	_____normal	_____unfamiliar
_____commercial	_____noticeable	_____unfriendly
_____confusing	_____odd	_____unnatural
_____congested	_____orderly	_____unnoticeable
_____conspicuous	_____ordinary	_____unplanned
_____contrasting	_____organized	_____unpleasant
_____convenient	_____out-of-place	_____unusual
_____crowded	_____peaceful	_____visible
_____dangerous	_____permanent	_____welcoming
_____depressing	_____planned	_____well-maintained
_____deserted	_____predictable	
_____dirty	_____private	
_____disturbing	_____public	
_____familiar	_____quiet	
_____fast	_____relaxed	
_____friendly	_____repellant	
_____frightening	_____residential	
_____good	_____rundown	
_____harmonious	_____safe	

b. Now please circle the six adjectives in the list which for you are most associated with your neighbourhood in general.

10. *HAND QUESTIONNAIRE TO R. TO FILL IN*

a. Now please rate on each of the following 1 - 7 scales the effect you think a community mental health facility would have/has had on your neighbourhood.

greatly increase traffic on residential streets	1	2	3	4	5	6	7	greatly decrease traffic on residential street
greatly increase property values	1	2	3	4	5	6	7	greatly decrease property values
greatly increase personal safety	1	2	3	4	5	6	7	greatly decrease personal safety
greatly increase noise levels	1	2	3	4	5	6	7	greatly decrease noise levels
greatly increase property taxes	1	2	3	4	5	6	7	greatly decrease property taxes
greatly attract desirable people	1	2	3	4	5	6	7	greatly attract undesirable people
greatly enhance the visual appearance	1	2	3	4	5	6	7	greatly detract from visual appearance
greatly increase residents' neighbourhood satisfaction	1	2	3	4	5	6	7	greatly reduce residents' neighbourhood satisfaction
greatly encourage residents to move	1	2	3	4	5	6	7	greatly discourage residents from moving
greatly improve neighbourhood image	1	2	3	4	5	6	7	greatly detract from neighbourhood image
greatly complement residential character of neighbourhood	1	2	3	4	5	6	7	greatly diminish residential character of neighbourhood
greatly upgrade neighbourhood quality	1	2	3	4	5	6	7	greatly downgrade neighbourhood quality

b. PLEASE CIRCLE THE <u>THREE</u> EFFECTS YOU REGARD AS THE MOST IMPORTANT.

11. *HAND R. CARD A.*

How do you rate the desirability of having a community mental health facility located within the following distances from your home?

01. extremely desirable	05. Neutral	06. slightly undesirable
02. considerably desirable		07. moderately undesirable
03. moderately desirable		08. considerably undesirable
04. slightly desirable		09. extremely undesirable
		98. Don't Know

a. ...within 7 - 12 blocks.. ___ ___

b. ...within 2 - 6 blocks.. ___ ___

c. ...within 1 block..... ___ ___

12. *HAND R. CARD B.*

For each location of a mental health facility you have rated as undesirable which of these actions would you most likely take?

a. 7 - 12 blocks..... ___ ___

b. 2 - 6 blocks..... ___ ___

c. 1 block..... ___ ___

13. Have you ever taken any of those actions to oppose the location of a mental health facility in your neighbourhood?

Yes..... 1

No..... 2

14. *ASK Q. 14 ONLY IF FROM Q. 5 RESPONDENT IS UNAWARE OF A MENTAL HEALTH FACILITY IN THE NEIGHBOURHOOD. SEE. Q. 5. OTHERS GO TO Q. 15 A.*

Do you think your attitudes or behaviour would change if a mental health facility was opened in this neighbourhood?

Yes	1
No	2

GO TO Q. 19

15. *ASK Q's 15 THROUGH 18 ONLY IF FROM Q. 5 RESPONDENT IS AWARE OF A MENTAL HEALTH FACILITY IN THE NEIGHBOURHOOD. OTHERS GO TO Q. 19*

a. What is your opinion of the mental health facility in your neighourhood? Are you

... in favour	1
... or opposed	2
indifferent	3
Don't Know	8

GO TO Q. 16

b. Why are you in favour of/opposed to the facility?

_____

_____

c. *ASK ONLY IF OPPOSED IN Q. 15 a.*

HAND R. CARD B.

Which, if any of the actions listed on this card have you taken? *(CODE 3 ONLY)*

First mentioned	__ __
Second mentioned	__ __
Third mentioned	__ __

16. Were you living in this neighbourhood before the mental health facility opened?

Yes..... 1

No..... 2

GO TO Q. 19

17a. Are you aware of changes in any of your neighbours' attitudes or behaviour since the mental health facility opened?

Yes..... 1

No..... 2

GO TO Q. 18 a

b. If YES, describe the changes:

_____

_____

_____

18a. Are you aware of changes in your attitudes or behaviour or that of any member of your family since the centre opened?

Yes..... 1

No..... 2

GO TO Q. 19

b. Please describe these changes:

_____

_____

_____

19 *ASK EVERYONE*

In general, do you have any suggestions about how mental health facilities could be best fitted into residential neighbourhoods?

_____

_____

_____

C.5

20. Have you or any friends or relatives ever used mental health services of any kind?

Yes	1
No	2
Don't Know	8

And now a few questions about your background.

21. What level of education have you completed?

Some public school	1
Public school graduation	2
Some high school	3
High school graduation	4
Technical training beyond secondary school	5
Some university or college	6
University or college graduation	7
Post-graduate work	8

22a. What is your main occupation, that is what sort of work do you do?

_____ ____

_____ ____

b. What sort of business or industry do you work in?

_____

_____

23a. What is the main occupation of the head of the household, that is what sort of work does he/she do?

_____ ____

_____ ____

b. What sort of business or industry does he/she work in?

_____

_____

24. *HAND R. CARD C.*

Please indicate which range most closely describes the income before taxes of this household in the past year. Just give me the letter from the card.

A.	Less than $5,000	1
B.	$5,000 to $9,999	2
C.	$10,000 to $14,999	3
D.	$15,000 to $19,999	4
E.	$20,000 to $24,999	5
F.	$25,000 to $30,000	6
G.	More than $30,000	7
	Don't Know	8
	Refused	9

25a. Do you attend religious services at least once a month?

Yes	1
No	2

GO TO Q. 26

b. What is your religious group or denomination?

Anglican	01
Baptist	02
Greek Orthodox	03
Jewish	04
Lutheran	05
Mennonite	06
Pentecostal	07
Presbyterian	08
Roman Catholic	09
Salvation Army	10
Ukrainian Catholic	11
United Church	12
Other *(SPECIFY)* _____	

26. Do you rent or own your residence?

Rent	1
Own	2
Other *(SPECIFY)* _____	3

27. How long have you lived in this house/apartment? YEARS ___

THANK YOU VERY MUCH FOR YOUR CO-OPERATION

INTERVIEWER CODE:

SEX OF RESPONDENT:

Male	1
Female	2