HANNIGAN, John Andrew, 1948-
MUNICIPAL REORGANIZATION AND CRISIS MANAGEMENT AGENCIES: THE IMPACT OF REGIONAL GOVERNMENT IN ONTARIO ON EMERGENCY AND PROTECTIVE SERVICES.
The Ohio State University, Ph.D., 1976
Sociology, community organization

Xerox University Microfilms, Ann Arbor, Michigan 48106

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1976
MUNICIPAL REORGANIZATION AND CRISIS MANAGEMENT AGENCIES:
THE IMPACT OF REGIONAL GOVERNMENT IN ONTARIO ON
EMERGENCY AND PROTECTIVE SERVICES

DISSERTATION

Presented in Partial Fulfillment of the
Requirements for the Degree of Doctor of
Philosophy in the Graduate School of
The Ohio State University

By

John Andrew Hannigan, B.A., M.A.

The Ohio State University
1976

Reading Committee:

E. L. Quarantelli
R. R. Dynes
C. T. Jonassen

Approved by

E. L. Quarantelli
Advisor
Department of Sociology
ACKNOWLEDGEMENTS

In the odyssey from idea to finished product, there are many who have offered advice and assistance. I am grateful.

Dr. E. L. Quarantelli (my advisor) and Dr. Russell R. Dynes, Co-Directors of the Disaster Research Center have contributed substantially to my sociological understanding and professional development, while allowing me the freedom to pursue various "Canadian" projects. For this I am most appreciative. I would also like to thank Dr. Christen Jonassen for participating on my dissertation committee.

During the last three years, Emergency Planning Canada has consistently provided me with backing and assistance. In particular, Burke Stannard has been a warm and interested "guardian." Thanks also to Mr. C. R. Patterson for his continued support of E.P.C. fellows, and to Deborah Dundas for her help in carrying out the survey portion of this research.

In completing any research document of this type, the transition from rough draft to clean copy is a major and important task. I was fortunate to have a competent and helpful "clerical squad" to assist in this regard. Mim Morris oversaw the typing of this dissertation and provided significant technical assistance. Ann Perozek typed the major portion of the manuscript, while Ruth Chalfant and Annette Haban looked after other aspects of the final typing and proofing. Also, Marti Woodruff and Carol Byrd provided assistance in various ways. Thanks to one and all.

I should also note the contributions of my past and present colleagues at the Disaster Research Center who maintained an unflagging interest in the progress of this research.

Finally, I wish to thank my family for their support throughout my graduate years. Most of all, thank you to my wife Ruth for her patience, understanding, and assistance. From the genesis of this project over lunch together, she participated in the execution of the research in the roles of compiler, typist, critic, and friend. Much of the credit for the successful completion of this work is hers.
VITA

December 13, 1948 ......................... Born - Ottawa, Ontario

1969 ...................................... B.A. in Sociology
University of Western Ontario
London, Ontario

1972 ...................................... M.A. in Sociology
University of Western Ontario
London, Ontario

1969-1972 ............................. Teaching Assistant, Department
of Sociology, University of
Western Ontario

1973-1976 ............................. Emergency Planning Canada
Research Fellowship, Disaster
Research Center, The Ohio
State University, Columbus,
Ohio

1975 ............................. Teaching Associate, Department
of Sociology, The Ohio State
University, Columbus, Ohio

1976 ...................................... Lecturer in Sociology
Division of Social Sciences
Scarborough College
University of Toronto

PUBLICATIONS

"Mass Communications in A Canadian City," Communications in Canadian
Society, edited by Benjamin D. Singer, Toronto: Copp Clark, 1972, co-author

"Provincial Emergency Measures," Emergency Planning Digest, Volume 3,
#3, May - June, 1976, principle author.

"Legitimacy and Public Organizations," Canadian Journal of Sociology,

PRESENTATIONS


FIELDS OF STUDY

Major Field: Sociology

Collective Behaviour and Social Movements. Professor E. L. Quarantelli

Complex Organizations and Social Organization. Professor Russell R. Dynes

Urban and Community Studies. Professor C. T. Jonassen
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CHAPTER ONE

INTRODUCTION

A recurrent theme in much of contemporary urban sociology has been the increasing interrelatedness of urban, suburban and rural local community units. Roland Warren has identified this as part of a "great change" wherein decisions, policies and programs of local units are guided more and more by their relation to extracommunity systems of which they are a part. In a somewhat similar observation, Scott Greer has stressed the importance of the transformation of the internal order of a society towards an increase in scale. A crucial aspect of this change, according to Greer is an increase in the scope and intensity of interdependence and the resultant growth of cities as the control centers for an ever-widening range of mutual activities.

While the locus of economic activity, secondary associations and effective political power has shifted away from the municipality, there has not been a concomitant alteration in the basic structure of local government. Rather, with the spread of numerous suburban settlements, the overall number of separate, autonomous, municipal jurisdictions has grown at a rapid rate. At the same time, many individual service functions such as education have been removed to special political jurisdictions. This is particularly true for new government functions such as pollution control which are both interjurisdictional in effect and without tradition in their relationship to established local government. As a result, there has developed a "multinucleated" form of municipal government wherein legislative responsibility, and fiscal power have become dispensed among so many levels of private and public interest that the concerted unified planning and action are often difficult. This dysfunctional aspect of local government is commonly called the "fractionalization" of power.

Since the beginning of this century, urban reformers such as Maxey, Studensky and McKenzie have seen the solution to the problem of fractionalization as being the implementation of some form of structural centralization, particularly for metropolitan areas. Municipal reform theory has justified this strategy on the grounds that structural consolidation would allow a greater degree of co-ordinated inter-unit planning, that it would promote cost saving economies of scale and that it would lead to greater equity and efficiency in the provision of services. More recently, this form of local government reorganization has been visualized as a way of bringing the resources of the suburban fringe together with the problems of the central city.
Structural change of this type has not been easy to implement, especially in the United States. Lindblom and Braybrook suggest that such major structural alterations are alien to the "gradualist" method of social action which emphasizes small changes rather than entertaining the possibility of large changes, the consequences of which are unknown. Even more important, is the threat which the proposed reform of local government poses to local autonomy. Perceptions of this are deeply rooted in historically based considerations of time and space. As Jonassen has pointed out in his analysis of school district reorganization in Norway, loss of local institutions is often viewed as yet another step in the threat posed by a mass society to the self orientation and value systems of residents. In particular, structural consolidation is apt to be perceived as an attack on what Brand has termed "symbolic values" - values which identify institutions in the public mind.

To date, the most extensive instance of local government reorganization in the Western world has been the "reform" program carried out in England and Scotland. In accordance with this plan, 1250 local authorities have been replaced by 369 second tier district councils while six metropolitan and 47 non-metropolitan counties have been constructed to replace the former 58 counties and 83 county boroughs. In contrast, structural reorganization of local government in the United States has been limited to a handful of metropolitan plans, notably, Seattle, Miami-Dade, Nashville, Indianapolis and Atlanta. In large part, the difference between the two countries reflects the fundamental difference between a strong national government able to negotiate a reformed local political structure (Britain) versus a decentralized system emphasizing the right of referendum and "home rule" (United States).

Since 1968, the Government of Ontario has been engaged in a new and very extensive program to restructure existing municipal units in the province. The core of this plan has involved the establishment of "regional government," a second tier of municipal administration which is designed to "ensure more comprehensive planning and a greater uniformity and efficiency of services." Each regional municipality covers both one or more urban complexes as well as the rural hinterland with which they share economic, social and physical services. What impact this restructuring program has had for one particular sector of municipal servicing, crisis management, is the topic of this dissertation.
Purpose of the Study

Over the last two decades, a considerable social science literature has emerged on the topic of local government reorganization. Unfortunately, most of this has been "prescriptive," reiterating the same set of theoretical arguments in favour of metropolitan reform. Those evaluations which have been carried out are largely impressionistic and, as Boschken points out "either provide tenuous conclusions or use methodologies that lack an adequate cost-benefit framework."9 Where a distinctly empirical approach has been adopted, the research topic has most often concerned public reaction in the community to the proposed reorganization plan. A striking research vacuum has been the relative neglect of the "organizational" effects of municipal structural change, especially for consolidated public service agencies.

Accordingly, the present study is a limited and largely exploratory attempt to remedy some of the lacunae cited above. Using a complex organization perspective, comparative research has been done on the impact of regional government in Ontario on three types of local services, police protection, fire protection and emergency measures. Together these comprise an integral part of what has been termed the "crisis management sector" of municipal servicing.

The concept of crisis refers to "the collective state of a social system in which conventional normative patterns are inappropriate as guidelines for group behaviour."10 Crisis management agencies, according to Stallings, function to prevent crisis from developing by mitigating crisis generating events or coping with existing crisis situations.11 Crisis management is particularly linked to the problem of fragmentation because crisis generating events tend to cut across political jurisdiction, thus necessitating a joint and co-ordinated response. For example, natural disasters such as floods or fires often impact multiple adjoining municipalities or parts thereof. Similarly, criminal offences may be planned in one jurisdiction, committed in another, and detected in a third. This contrasts markedly with other municipal services such as garbage collection, which are more naturally adaptable to political boundaries.

In brief, the present research is organized around the following questions: To what extent were crisis management services "fractionalized" before the implementation of regional government? What types of administrative and service problems did this generate? What special demands were faced by consolidated public organizations (i.e. police forces) and how did this relate to the nature of the pre-regional environment? What changes have taken place since consolidation in resource levels, expenditures, professionalization, material and social innovation and the structuring of activities? Has regional government promoted a greater degree of co-operation and exchange in an area of
municipal servicing which has not been regionalized, i.e., fire protection? What factors promote and inhibit the adoption of a full consolidation plan for fire protection services? What changes in organizational priorities, resources and activities have accrued as a result of regionalizing small planning oriented emergency measures offices?

Many of the above questions tend to be somewhat concrete and perhaps occasionally ideosyncratic to Ontario municipal life. However, it was felt that this was in keeping with the need to deal with the problem of local government reorganization on a specific, empirical level, where findings would be of benefit to policy makers as well as to those engaged in the overall field of urban administration research. In the model of structural reorganization presented in Chapter Four, and in the concluding chapter, the more general implications of this research are presented and linked to other efforts in both the subarea of complex organizations and that of urban studies.

Sociological Significance of the Research

Upon initial consideration, the problem of local government reorganization would appear to be restricted in interest largely to political economists specializing in the study of municipal administration and financing. Yet, upon close perusal, a number of points arise which suggest that this is also a significant problem from a sociological standpoint. The basic rationale for this is that local government reorganization represents a major change in the political-administrative sector, and that as such it impinges on other institutional sectors of the total society. More specifically, the topic of municipal reform and structural consolidation is related to the mainstream of sociological interest in the following ways:

1. It contributes to the more complete understanding of the nature and consequences of social change, especially deliberate, structural change.

Local government reorganization represents more than a simple redrawing of electoral boundaries or an attempt at streamlining existing administrative machinery. Rather, what is being altered are certain basic principles which govern the form and function of governing institutions. According to Brand, structural modernization in developed countries often challenges existing ideologies in much the same way as organizational changes such as bureaucratization challenge the whole attitude to life of people in "new" countries. Specifically, the reform of local government is often seen as threatening the symbolic values of local democracy and participation, key elements in the value system of Western societies.
The lack of congruence between the existing structure of local government and the growing increase in scale throughout society is in some ways comparable to Ogburn's concept of "cultural lag." In this case it is demographic and economic change which is ahead of political change, and the resulting stress takes the form of the breakdown of effective service delivery. This is the point made by Hawley and Zimmer who identify this failure to adjust administrative boundaries as constituting a final "missing step" in their five stage model of metropolitan development.13

In short, by studying the conditions, characteristics and consequences of local government reorganization, the social scientist is focusing on an increasingly relevant but as yet understudied aspect of social-political change.

2. It contributes to the sociological literature on interorganizational relations by focusing upon the implications and effects of the merger/consolidation of administrative units.

One of the most fruitful areas of recent research in the sociology of organizations has been that of interorganizational relations and decision making. Structures linking multiple organizations in what Warren has termed "inclusive decision making" range from community welfare councils to federations of churches.14 In contrast to bureaucratic organization, the units of a confederative organization or interorganizational alliance have a relatively weak formal inclusive structure and collectivity orientation of units and are integrated by specific joint agreements.15

One way in which an interorganizational network of administrative units becomes transformed into a bureaucratically organized and unitary structure is through the process of consolidation. The term consolidation describes the amalgamation or merger of autonomous organizational units. According to Jeffrey Pfeffer, merger is one possible strategy for an organization to employ in managing environmental interdependence. In his study of 854 corporate mergers in manufacturing and mining (one of the few existing systematic studies of this process), Pfeffer identified three distinct types: 1.) those which reduce symbiotic interdependence, 2.) those which reduce commensalistic or competitive interdependence, and 3.) those which diversify and avoid interdependences.16

The structural consolidation of municipal agencies on a regional or metropolitan basis represents a distinct type of merger process. In contrast, to corporate mergers, the initiative for amalgamation frequently comes, not from the agencies themselves, but from those in what Dill17 terms the "regulator" segment of their task environment, in particular senior government departments. In addition, structural consolidation often involves the merging of agencies which differ greatly in terms of size and internal organization.
In sum, by studying the structural consolidation of municipal service agencies, one is also expanding the existing knowledge base about the transformation of interorganizational relationships and the growth of larger organizations.

3. **It has significant implications for the concept of community, especially as it relates to local autonomy.**

Communities are units of social organization which have a territorial dimension. As such, the community serves a dual role for its members. On the one hand an essential element of a community is its functional efficiency, that is, its "ability to act in a corporate fashion to solve problems and secure and enhance the life chances and standard of living of its residents." In addition, however, the community serves a psychological function, in that it provides a source of identification, sentiment and participation.

Local government reorganization frequently brings these two elements of community into conflict. By shifting local administrative boundaries to an expanded scale, it is thought that functional efficiency will be greatly enhanced. At the same time, local attachments do not automatically shift to fit the new metropolitan or regional boundaries. As a result, a cleavage develops between the official definition of community and that held by community members. Where a popular referendum is required in order to legally adopt structural modernization, the spectre of lessened local autonomy often contributes to defeat of the proposal. Where local government reorganization is legislated without a popular vote, community attachment sometimes becomes translated into a judgement that consolidated administrative units are "distant" and "inefficient."

Local government reorganization, therefore is quite salient to the wider issues of what constitutes a community, and what consequences accrue from the legislative enlargement of territorial boundaries to a regional or metropolitan level.

4. **It is a key issue in the assessment of contemporary urban problems and potential methods of community problem solving.**

As will be shown in Chapter Three, the fragmentation of local government has frequently been identified as the immediate cause of many existing urban problems. In particular, the disparity between the high repertoire of services provided by the central city and the large revenue base of the suburbs has had serious implications for the fiscal survival of the former. In addition, the frequent overlap of service jurisdictions and the failure of existing municipalities to establish the machinery with which to deal with interjurisdictional problems such as transportation, planning and pollution control are thought to have contributed substantially to contemporary problems such as "urban sprawl."
Accordingly, many urban researchers and administrators have looked to municipal structural reorganization as one possible solution to the so-called "crisis of our cities." For example, in the conclusion to his comparative study of crisis sensitivity in sixteen American cities, Stallings predicted that much of the future of crisis management was likely to center around emerging regional governments both domestically and internationally. 19

Therefore, by providing longitudinal concrete data on the consequences of local government reorganization, it is thought that a contribution can be made to the ongoing debate over the nature of urban problems and solutions for these.

Outline of Chapters

Following this introduction there will be six further chapters. Chapters II and III contain an overview of the local government reorganization process and of the particular application studied here, regional government. In Chapter II, the ideology of metropolitan reform is outlined and categories of intermunicipal co-ordination are delineated and compared in typological form. Then, in the second part of the chapter, the conditions supportive of successful implementation of local government reorganization are discussed and some of the major consequences of structural reorganization, as found in the existing literature, are summarized. In the next chapter, this background discussion is continued. First of all, the context in which regional government in Ontario developed is presented, with particular reference to the unique structural features of municipal arrangements in the Province. Also, a summary is given of the rationale used to justify the regional government plan. Finally a discussion of the "costs" of structural change is presented and the future of the restructuring program in Ontario is briefly featured.

In Chapter IV, the consolidation of municipal services is first discussed in relation to the existing literature on organizational centralization and change. Then, two alternative models of metropolitan reform proposed by Elinor Ostrom are contrasted and examined. This discussion is continued with reference to the modes of empirical measurement which have so far been utilized in assessing the impact of local government reorganization; following this, the specific "impact indicators" used in this study are given. In a major part of the chapter, a model of structural centralization of municipal services is then presented and considered in depth. Finally, the chapter concludes with a specification of the parts of the model utilized in the present empirical application.
Chapter V contains a discussion of the methodology employed in this research including the units and level of analysis, the data gathering techniques used and the strengths and limitations of the approach adopted here.

In Chapter VI, the presentation and analysis of comparative data is given. First, a typology of regional municipalities is formulated based on the prior degree of municipal fragmentation and the dominance of the central urban unit; then a brief comparison of the three crisis management services under study is suggested, based on five organizational dimensions. Having laid this groundwork, the empirical analysis is presented. Changes in crisis management since regionalization are organized under the general headings of police protection, fire protection and emergency measures. At the end of the chapter, a summary of the main empirical findings may be found, as well as a statement concerning the representativeness of the results. Further, more detailed descriptions of the regionalization of crisis management services in each of the nine regional municipalities may be found in Appendix A: Comparative Case Studies. These case studies are included here to supplement the comparative analysis by providing an historical overview of the local government reorganization process in each regional area.

In the final chapter, the implications of this research for both complex organizations research and the study of urban administration are suggested. Then, specific policy recommendations are made for each of the three municipal service areas. Finally, a series of suggestions for future research on the topic of local government reorganization are presented.
Footnotes


11. Ibid., p. 9.


15. Ibid.


CHAPTER TWO

LOCAL GOVERNMENT REORGANIZATION: REFORM AND REACTION

During the last century, few solutions to the problems of managing the city have been as ubiquitous as that involving local government reorganization and in particular the prescription of a consolidated metropolitan area government. Yet, such plans for municipal "reform" have consistently faltered and few have actually been adopted in areas other than the Southern United States and Canada. Scott Greer has described this as reflecting a form of "political schizophrenia" wherein the appeal of a promised improvement in government services is offset by a fear that local autonomy will be eroded. This is particularly cogent when local government reform involves a change in the relative power of the central city vis à vis the suburban fringe.

In the following section, a brief overview of this metropolitan government reform "movement" will be presented, emphasizing its rationale for suggesting structural centralization as a viable solution to the problems generated by political fragmentation. Next, various forms of local government reorganization will be discussed and an attempt made to classify these along several theoretical dimensions. Thirdly, the conditions under which structural reorganization plans are successfully implemented will be outlined. Finally, the consequences of local government reorganization will be examined, especially in relation to existing reorganized local government units in Miami, Nashville and Toronto.

The Ideology of Local Government Reorganization

Metropolitan Growth and Political Fragmentation

A master trend in twentieth century North American urban development has been the differential growth of central cities and the peripheral rings which surround them. That is, central city growth has become progressively slower while the suburban ring has expanded at a more rapid rate. Schnore attributes this "relative decentralization" to two main sources, outward relocation from the centre and growth via accretion at the periphery.
A key factor in this deconcentration of urban population has been the corresponding land use changes reflecting this. A recent American government report -- Toward an Understanding of Metropolitan America points out that the effect of the growth of innerbelt and outerbelt expressways has been to reduce the time-distance factor throughout the metropolitan area, thus encouraging the movement of commerce toward the periphery.\(^4\) In addition, the commitment of government to housing construction immediately after World War Two resulted in the appearance of mass produced suburbs around every large city.

This decentralization became a significant aspect of the growth of many smaller cities in the 1920's and by the next decade a distinct majority of American cities of 50,000 and over were "exhibiting the pattern of relative decentralization formerly seen around only the larger cities."\(^5\)

In Canada, this suburban growth was most marked in the decade 1945-55. Gardiner indicates that the population of the city of Toronto remained static during this period while the population in its peripheral areas grew from less than 100,000 in 1945 to over 600,000 in 1956.\(^6\)

As an urban population rapidly accumulated in the hinterland, so did the number of governmental units. The central city usually was unable or unwilling to annex these outside areas, so these new administrative units became firmly established. When special needs such as housing, sewer construction and fire protection became crucial, new specialized unifunctional service units were created. By 1967, the proliferation of government units in the United States had proceeded to the point that, excluding school districts, there were over 16,000 units of government within the existing metropolitan areas -- an average of about sixty per area. In Chicago alone there were 1113 governmental units, 1101 of which were outside the central city.\(^7\) On a lesser scale the same phenomenon was to be found in Canadian metropolitan areas. Thus, the metropolitan area around Toronto became balkanized into thirteen local municipalities - one city, three villages, four towns and five urbanized townships\(^8\) and Metropolitan Winnipeg included, in 1965, six cities, one town, two suburban municipalities and four rural municipalities.\(^9\)

This political fragmentation was seen by many urban theorists as dysfunctional; herein lies the core of the argument in favour of structural reorganization.

According to Hawley and Zimmer there are five sequential phases of metropolitan development. The fourth phase -- the rapid accumulation of an urban population and urban land uses in the hinterland -- should be immediately followed by "the adaptation of social and administrative systems to the territorially expanded community."\(^10\) However, in fact, this final phase has remained incomplete, with the result that frictions develop and an imbalance is created. In short, the problem of political fragmentation is as follows:
The distribution of the members of an organization (i.e.) the metropolitan community over a number of semi-autonomous political or administrative units impedes when it does not prevent, joint action in dealing with the day to day requirements of collective life. Moreover, it invites inequities and infringements of various kinds. Residents of one administrative area, for example, may use the facilities of another one without contributing to their maintenance, or they may so manage their affairs so as to create a health hazard or other nuisances for the occupants of the adjacent area.11

In various forms, this general argument has been repeated by almost all those identifying local government reorganization as the prime mode of reform needed in urban regions.

In the following section, we shall examine in greater detail the specific arguments presented by urban reformers against political fragmentation and in favour of structural reorganization.

The Reorganization of Urban Government: A Rationale

From the voluminous literature advocating metropolitan reform, one can distill out three basic arguments in favour of expanding effective control over the urban region from the municipal to the metropolitan level. These are dealt with most concisely in articles by Friesma,12 Brazer,13 and more recently in a chapter of a book by Harrison.14 For purposes of discussion, these points can best be dealt with under three headings: area planning, equity and efficiency.

Area Planning

Although administrative units within a metropolitan region are politically autonomous, they are much less independent socially and economically. Rather, there appears to be an increasing interdependence across jurisdictional lines, especially in reference to economic activities.15 In the language of urban economists, this is referred to as a "spillover effect." Such spillovers can exist on both manifest and latent levels. In the first instance, physical agents such as industrial effluents diffuse from a factory in one municipality into the environment of another. Without any vehicle for joint planning, "no one jurisdiction acting alone can be expected to be able to enforce adequate control."16 Public services in one government unit can also affect life
in other units in a somewhat more indirect manner. A high quality of protective services, especially police and fire services in one jurisdiction can affect a neighbouring jurisdiction in the sense that it will help constrain areawide crime operations or reduce the probability that fires will spread from area to area. In addition, lack of co-ordination between local government units can have serious implications for all units involved. This is particularly applicable to activities such as disaster control which clearly transcend municipal boundaries.

One method of resolving critical areawide service problems is through the mechanisms of bargaining and negotiation. However, this is generally only successful until area planning impinges on the local "plans" of a member of the bargaining group. Frederick Gardiner, the first Chairman of the Metropolitan Council of Toronto summed this situation up well when he said this of the area municipalities before metropolitanization:

Each was geared to a pattern of local development. None was concerned about what was happening to its immediately adjoining neighbour and none was concerned about how the metropolitan services which were essential for the development of the whole area could be provided.¹⁷

Brazer makes a similar point when he says that when it comes to decisions such as how much to spend for an area sewage treatment, the resident voters of a community can scarcely be expected to engage in a form of public philanthropy and take into account the repercussions of their decision on a neighbouring community.¹⁸ In light of this, metropolitan reformers have seen the only viable solution as carrying out some form of government consolidation.

Equity

Metropolitan reformers have consistently argued that local government reorganization is needed in order to combat the uneven allocation of resources and differing levels of service within a metro or regional area. This has been seen as particularly applicable to the disparities between central cities and their residential suburbs.

Essentially, three elements are involved here: 1.) demand for services, 2.) cost of servicing, 3.) municipal capability of raising sufficient revenue to meet this demand. Each of these elements often differs greatly in magnitude from unit to unit in a regional area and this disparity has serious implications for all municipalities involved.
A frequently cited instance of this is the high demand for servicing in the central city in the face of a shrinking taxation base. This demand has two dimensions. On the one hand, central cities must bear a disproportionate share of social service payments and activities within the metropolitan area. This can be a particularly severe fiscal burden in cases where senior levels of government do not pick up the lion's share of the responsibility. In addition to this, there is some evidence that the daily use of the central city by commuters is reflected in increased expenditures for municipal services in the central city. This is true even when controls for the central city's size, age, per capita income and racial makeup are imposed. This added burden placed on the city by nonresidents who live near it is usually referred to as the "suburban exploitation of the central city." However, fringe area governments also face certain significant fiscal disadvantages. With little industry and limited commerce, municipalities must rely largely on residential land taxes. Where the demand for services is relatively low, this is not really a problem. However, when there is an accelerated demand for certain services, but no appreciable increase in taxable sources, then problems can ensue. As Gardiner points out, this is what occurred in Scarborough, a large eastern suburb of Toronto, in the early fifties when the growing suburban population here demanded a share in the "quality" education proposed by the Province as a cardinal future priority. In addition, servicing often costs more in fringe areas because of distance from existing facilities and relatively low population densities.

Local government restructuring, especially that involving consolidation is seen by municipal reformers as the best way to ensure the creation of an acceptable equity and to match resources with needs.

Efficiency

A third argument in favour of metropolitan and regional governments is that they are more efficient. Typical is Wilcox's conclusion that decentralization of policing in the Los Angeles area resulted in the duplication of equipment, technical services and executive personnel. In contrast, areawide government is seen as introducing "economies of scale" which allow decreased average unit costs. For example, in 1968 the Ontario Fire Marshal suggested to the Waterloo Area Local Government Review Commission that centralized administrative authority and co-ordination for area fire-fighting forces would among other benefits, result in reduced costs "in the bulk purchases of fire fighting apparatus, equipment, uniforms and communications."
Perhaps more than any other argument in favour of local government reorganization, the claim of increased efficiency has stimulated scholarly disagreement. In a frequently quoted study, Hirsch found that such economics of scale are most difficult to realize in populations over 15,000; in populations over 100,000 the cost functions were found to remain unchanged or even to increase slightly. Letwin has stressed that economies of scale are not exhaustible and in fact may reach a certain threshold. Furthermore, "the most efficient scale of output differs for each kind of public service." Erie et al. uphold this point, indicating that "many functions are not subject to scale economies since they are labour intensive and not performed with new technologies in larger areas but only on a greater scale."

However, the fact that the quality of service may change with greater centralization could tend to render part of this quantification of relative cost efficiency problematic. Obviously, the claim of greater efficiency will not be settled without considerable sophisticated future research into this aspect of local government reorganization.

**Categories of Inter-Municipal Co-ordination**

Roland Warren has demonstrated that the typology can be a useful device in categorizing community decision organizations and can be of utility in seeking to understand the difference in the behaviour of these planning organizations toward each other within a common interactional field. Similarly, a typology approach can be of assistance here in categorizing the co-operative relationships which can exist among municipal level government units in a region or metropolitan area.

Some initial work in this area has been done by Scott who devised a continuum on which he ranks metropolitan government reorganization plans from least radical to most radical. Five categories are derived: 1.) incremental change, 2.) county reorganization, 3.) metro federation, 4.) annexation, 5.) consolidation. According to Scott, the "threshold of acceptability" can be found somewhere between county and metro federation.

Zimmerman has divided advocates of government reform into four categories: 1.) consolidationists (advocate city-council consolidation), 2.) semi-consolidationists (advocate two tier regional governments), 3.) statists (advocate the creation of special state authorities), 4.) ecumenicists (advocates solving metropolitan exigencies by inter-local co-operation within existing governmental frameworks, in particular, Councils of Government).

A more specific list of nine co-ordinating mechanisms is given by Lineberry and Sharkansky, although these are not classified according to any particular set of dimensions. Their categories are: 1.) municipal
extraterritorial regulation of real estate development in the rural fringe outside municipal borders, 2.) intergovernmental agreements, 3.) voluntary metropolitan councils, 4.) the urban county, 5.) transfer of functions to senior levels of government, 6.) metropolitan special districts, 7.) annexation and intercity consolidation, 8.) consolidation of city with surrounding urbanized county, 9.) federation of several municipalities.\(^1\)

Keeping in mind these prior efforts, it is possible to delineate two basic dimensions on which to categorize local government reorganization efforts.

Firstly, one must consider whether a new political structure has arisen as a result of the change toward greater municipal co-ordination. Such structures may range from a purely voluntary body (with legal status) such as a Council of Government to an entirely new municipality. Conversely, an already existing unit of government may increase its power over a metropolitan or regional area, either partially by taking over a number of key functions or completely via annexation.

Secondly, it is necessary to consider the extent to which public service functions have been transferred from existing units of government to either a new structure or to an expanding unit. This dimension may best be seen in the form of a five point continuum: little or no functional transfer of power, minimal transfer (one or several functions), a partial transfer, a considerable transfer and a full transfer (for some units or for all units). A functional transfer of power also implies a certain loss of local autonomy for some or all of the units involved; consequently it is possible to conceptualize a parallel continuum varying in ordinal fashion in the same manner and direction.

As can be seen in Figure 1 existing types of intermunicipal co-ordinating mechanisms can be reduced to six types: 1.) voluntary associations (i.e., Councils of Government), 2.) special districts and authorities, 3.) the urban county, 4.) regional (including metropolitan) government, 5.) annexation, 6.) consolidation. Each of these six types, when classified on the basis of the two dimensions specified above exhibits a unique combination of elements. Of the six, voluntary associations and special districts/authorities have tended to be the most politically acceptable forms of area-wide co-ordination. Unfortunately, as several recent reports have concluded, voluntary associations especially Councils of Government have had little serious impact on the solving of complex areawide problems.\(^2\) Special districts/authorities have been more effective, but suffer from being function-specific and are thus at a disadvantage when a particular problem cuts across functional lines. Probably the least adopted form of regional co-ordination has been full consolidation. This involves merging several existing local government units into a new "superunit." In Ontario, for example, the city of Galt and the towns of Preston and Hespeler were recently
### Types of Inter-municipal Co-ordinating Mechanisms

<table>
<thead>
<tr>
<th>Type of inter-municipal co-ordinating mechanism</th>
<th>Emergence of a new political structure</th>
<th>Extent of functional transfer of power</th>
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<td>Little or none</td>
</tr>
<tr>
<td>Special districts and authorities</td>
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<td>Minimal</td>
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<tr>
<td>Urban county</td>
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<td>Regional Government</td>
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</tr>
<tr>
<td>Consolidation</td>
<td>Yes</td>
<td>Full (for all units)</td>
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combined to form the new City of Cambridge. Such consolidations however, are usually impossible politically. In this connection, factors in the political environment resistant or favourable to various types of unification in metropolitan or regional communities will be discussed in some detail in the next section of this chapter.

Conditions of Local Government Reorganization

Local government reorganization can be implemented under two basic sets of political conditions -- 1.) where a senior level of government imposes it, 2.) where it is adopted locally after a favourable referendum or other form of voter reaction.

The former is most typical of Canadian society - where provincial governments are constitutionally given direct responsibility for municipal affairs. A somewhat similar situation exists in England where the national government holds direct power over municipal affairs. As Letwin suggests, "aside from the question of political feasibility, no explicit constitutional obstacle prevents Parliament from redistricting local government, reducing or enlarging its powers, or altering its organization in any other way." In marked contrast, the American system of government requires a popular referendum on most local reorganization plans. Exceptions to this have been small in number. In 1898, New York City adopted a borough system involving a five county consolidation. Nearly three quarters of a century later (1970), the Indiana Legislature passed an act consolidating the city of Indianapolis and Marion County without a popular referendum.

In situations where a senior level of government is able to impose structural reform, and where it has become convinced that this is crucial to the solution of contemporary urban problems, political acceptability is more a question of the form that this reorganization will take rather than whether it will take place at all. Through the receipt of briefs from interested parties and through conducting public hearings, a senior level government is able to determine what shape and boundaries local government reorganization can take and still remain within the bounds of political feasibility. For example, as a result of strong negative feelings on the part of Burlington, Ontario residents, Burlington was excluded from the Regional Municipality of Hamilton-Wentworth.

In marked contrast, where a referendum is required by law the barriers to change are considerably greater. Indeed, since the end of World War Two, 36 major American metropolitan reorganizations, including city-county consolidations, have been proposed and only ten have been adopted by referendum. All of these have been in Southern states. A number of other recommendations, of course, have never reached the referendum stage.
Scott Greer has divided the difficulties of changing American metropolitan governmental structure into three levels: 1.) the underlying cultural norms of Americans concerning local government, 2.) the resulting legal-constitutional structures and 3.) the political-governmental system built upon them. According to this view, there is a deep seam of belief in the Jacksonian ideology of decentralized and laissez faire government which runs through much of the American electorate. This belief tends to encourage suspicion of any structural change which is perceived as leading to "more government."^5

In a major study involving a probability sample of 3,000 respondents, plus a sample of 630 public officials, drawn from six American cities Hawley and Zimmer more or less confirmed this hypothesis.36 Their study revealed that excessive centralization and loss of local identity were the most frequently cited reasons for opposing metropolitan consolidation. Interestingly enough, the fear of increased taxes, a factor often stressed as explaining opposition to structural consolidation, was not found to be especially important. Hawley and Zimmer concluded that resistance to governmental unification was probably rooted in "folklore" or on some real or imagined vested interest and that as such "it may be effectively insulated against rational appeals."37

What then of areas which have accepted structural reorganization? What factors appear to be influential in bringing about a positive voter reaction to metropolitan reform plans? And why has this occurred almost exclusively in the South? While those engaged in urban research have not conclusively answered these questions, several conditions have been proposed which appear to be influential in this regard.

Zimmerman has isolated seven factors which appear to be common to each area implementing a reorganization plan.38 According to Zimmerman, the existence of relatively few units of local government in a metropolitan area, each with a small population (excluding the central city) is a positive factor in reducing opposition to metropolitan change. Also, most of the successful consolidations in the South, for example Nashville and Jacksonville, offered the smaller municipalities the option of continuing their separate corporate existence. Thirdly, city-county consolidation is not entirely new in most Southern areas, as partial consolidation has occurred incrementally over the years; consequently, voters were accustomed to the idea of turning to the county for a solution to areawide problems. In some cases scandals in municipal governments have destroyed the legitimacy of existing domains thus opening the way for reorganization. Also helpful has been the relative inert and non-competitive municipal political system in some metropolitan areas.
The last two factors cited by Zimmerman are more questionable. He suggests that "the fact that there is less industry in Southern metro areas...is of some significance as it may indicate a lesser role played by manufacturing interest groups in the area's politics." However, a study of proposed governmental reorganization in fourteen metropolitan areas between 1950 and 1961 showed just the opposite -- that manufacturing industry was supportive of consolidation in ten cases. Zimmerman also discusses the racial factor as having some effect. According to this rationale, Southern white suburbanites tend to favour metropolitan reform because it is viewed as a means of stifling the growing political power of blacks in an urban area. Conversely, blacks feel that they have more to lose from metropolitan reform. Where metropolitan reform proposals have been put to the voters (as in Cleveland, St. Louis, Nashville, Miami), blacks have consistently voted negatively. Since whites still hold the balance of power in much of the South, this can be seen as encouraging reorganization. Zimmerman himself, however, cautions that the statistical evidence bearing on this issue is somewhat mixed and the hypothesis must remain at the suggestive stages.

In addition to some of the factors discussed above, other positive factors in promoting favourable voter reaction to governmental reorganization include: 1.) positive political support from senior level legislators, 2.) the use of locally knowledgeable individuals as staff to conduct background research and develop recommendations, 3.) conducting extensive public hearings by the responsible plan preparing group, 4.) careful concern in the design of the reorganization proposal for problems involving representation of various districts and population elements and 5.) existence of a critical situation which must immediately be remedied by some positive action or of widespread recognition of such a situation. These latter factors are important not only where a referendum is required but also in a political milieu where local government reform is being "imposed" by a senior level of government.

Consequences of Reorganization

Although there is a considerable social science literature dealing with the issue of local government reorganization, much of this has tended to be more concerned with advocating this type of planned change than with evaluating its impact. Schiltz and Moffitt have stressed that most of the work which do seek to appraise the effects of governmental reorganization "have been impressionistic assessments and they tend to be negative in reaction." They add, however, that more concrete case studies of metropolitan government in operation tend to "agree that the negative consequences of the plan have been overstated."
The most complete attempt to summarize and integrate those studies which do exist can be found in a relatively recent article by Erie et al.\textsuperscript{45} Findings on the performance of metropolitan institutions are organized in propositional form under three general headings: 1.) process effects, 2.) output effects and 3.) impact effects. This analysis consistently draws upon Harold Kaplan's 1967 functional analysis of Metro Toronto.\textsuperscript{46} Other frequently cited sources include Smallwood's discussion of Metropolitan Toronto,\textsuperscript{47} Glendening's dissertation on the Metropolitan Dade County Government,\textsuperscript{48} Grant's comparison of predictions and experience in Nashville's Metro Government\textsuperscript{49} and Sofen's treatment of metropolitan reorganization in the Miami area.\textsuperscript{50}

Positive consequences of metropolitan reorganization appear to be chiefly in the areas of heightened professionalism and an increased diffusion of information among participating units. This strengthened influence of professionals has been found to be particularly applicable to "physical, tangible policy scopes, such as capital projects and transportation, of a technical noncontroversial nature."\textsuperscript{51} In general, service levels do seem to rise, especially where areas previously receiving disparate levels of service are joined; however, this often necessitates higher taxes and occurs only after passing through an initial "catch-up" period.

In a number of respects, structural change appears to have a minimal impact. For example, neither the nature of local political culture nor the scope of citizen political attachment seem to change much with reorganization. Also reformed metropolitan institutions do not have any noticeable effect in terms of the redistribution of wealth among elements of their populations.\textsuperscript{52}

Finally, what of the problems encountered by reorganized metropolitan or regional units of government? A comparative study of the three metropolitan governments of Toronto, Miami and Nashville by Grant sheds some light in this area.\textsuperscript{53} Grant's study involved selecting a panel of knowledgeable people of approximately twenty in each of the three areas and then asking each of these the same sets of questions as to what they thought the results were from having adopted metropolitan government.\textsuperscript{54}

Grant found that Toronto and Nashville had experienced greater political stability with their metro systems than had Miami. One key factor seemed to be the quality of leadership. In Toronto, the first Metro Chairman played a pivotal role as a mediator in the new metro system. As Kaplan points out, this individual, recognizing that his key resource was that he alone participated in both the technical and political subsystems, insisted that "all important communication between the legislative and administrative branches be channeled through him."\textsuperscript{55} In contrast, Miami's first two County Managers were seen as failing to steer a middle course between too little and too much leadership, thus aggravating unstable situations caused by other sources.
These "other sources" were related to structural and situational characteristics. In general, little was done to shift the local frame of reference of each unit to an at least partial areawide frame. Unlike Toronto, Miami failed to provide some highly visible services such as water sewers or expressways. The failure to clearly delineate the separate powers of each level of the two tiered political system provoked further problems. This was especially so since there were a great number (27) of strong suburban cities involved.

By way of contrast, the creation of a single unified government in Nashville rather than a two tiered system was seen by Grant's influentials as being instrumental in reducing conflict levels in the first four years of metro government in the area. Another important factor here was the fact of an elected mayor rather than an appointed manager.

Most of the evaluative studies thus far have dealt with the effects of local government reorganization on the general urban political system; however, few have explored the impact of these structural changes on specific parts of this complex. One of the few pieces of research to investigate the consequences of metropolitan reform for a particular public service is Cook's study of the effect of federation on education spending in Metro Toronto. With such a category of services, little has been done in terms of charting the impact of structural reorganization on specific municipal departments and agencies. The present study has been designed to partially bridge this research gap. By focusing upon selected agencies within the crisis management sector of urban government, this appraisal is meant to take the form of a concrete, empirical and specific test of how well the ideology of local government reorganization matches the reality.

In this chapter, we have reviewed the ideology of local government reorganization, focusing on three main tenets - more closely articulated area planning, more equitable allocation of resources and services and more efficient scale of output. Then, a classification of intermunicipal co-ordinating mechanisms was presented, based on the extent of functional transfer of power and the emergence (or non-emergence) of a new political structure. Thirdly, the conditions under which local government reorganization can be successfully adopted were discussed. A chief barrier to this form of municipal reform was found to be a deep seated set of values, stressing "laissez faire government." Finally, some of the general consequences of structural reorganization were reviewed with reference to past studies of metropolitan restructuring.

In the next chapter, the specific instance of local government reorganization under consideration here - regional government in Ontario will be discussed.
Footnotes


2. The term "movement" here is used in the sense of a general movement as opposed to a specific social movement. In this connection, Wilson defines a general movement as consisting of "changing opinions, attitudes, self conceptions and ideas in which a new geist or consciousness is aroused and disseminated. See: John Wilson, *Introduction to Social Movements* (New York: Basic Books, 1973), pp. 11-12.


11. Ibid., p. 148.


15. Ibid., p. 127.


35. Greer, op. cit., p. 124.


37. Ibid., p. 124.

38. Zimmerman, op. cit.

39. Ibid., p. 536.


41. Harrison, op. cit., p. 129.

42. Advisory Commission on Intergovernmental Relations, op. cit.


44. Ibid., p. 98.

45. Erie et al, op. cit.


52. Ibid., pp. 33-35.


54. As Grant himself notes, this approach does have its limitations in that what is being measured is not necessarily what actually did happen, but rather what these knowledgeable perceived as having occurred.


CHAPTER THREE

REGIONAL GOVERNMENT IN ONTARIO: AN OVERVIEW

Perhaps the most extensive program of local government reorganization in North America has taken place in the Province of Ontario. In 1954, the largest city in the province, Toronto, established a metropolitan government; thirteen years later, this metropolitan arrangement was revised and a number of the constituent local government units were consolidated. Following the example of Toronto, in 1968, the Ontario Government began to enact legislation creating two-tier regional units of government. At present, there are ten of these regional municipalities in operation, as well as one area municipality. In the future, further reorganization is planned in the form of a county restructuring program.

In this chapter, an overview will be presented of the development and implementation of the regional government plan in Ontario. Particular attention will be given to the structural historical factors which have encouraged the adoption of this particular form of local government reorganization and to its general political impact both within and beyond the newly regionalized areas.

Nature of Municipal Government in Ontario

When seeking to understand the bases of regional government in Ontario, there are three distinctive characteristics of municipal affairs in the Province which are important to consider: 1.) the County system, 2.) the role of the Ontario Government in municipal affairs, and 3.) the position of Toronto as the epi-centre of provincial development.

County System

In Ontario, the County system has provided a tradition of two-tier local government while at the same time making other forms of reform such as city-county consolidation somewhat unrealistic. These Counties are multi-purpose units which provide areawide services of both a traditional nature (the administration of justice and county roads) and of more recent vintage (for example, public health and the supervision of assessment). Representatives on County Councils
are designated members of the elected municipal body of each constituent unit. This sounds very similar to regional government and indeed it is. The difference is partly one of scope, both in terms of geographic area covered and in terms of the number of functions assumed by the second tier of local government.¹

Another important difference, however, is that in contrast to the American system, Ontario cities are quite separate and distinct from their surrounding Counties.² Consequently, County Councils have not been logical instruments for utilization in dealing with problems which span the city-county boundaries, even where a county more or less surrounds a metropolitan area. In this regard, regional government is a departure from the existing tradition of local government, in the sense that city and council are joined via Regional Council and through regionalized service agencies.

Role of the Provincial Government

The Province of Ontario possesses a considerable degree of control over its municipalities, especially in comparison to American state governments. In large part, this power emerged from the depression era when many municipalities defaulted on their bonds and faced bankruptcy.³ Unlike other Canadian provinces, Ontario has specified the legal basis of the municipal system and the powers of local units in just a single comprehensive piece of legislation -- the Municipal Act. There are no municipalities incorporated under individual charters and all municipal rights are, at least in formal terms, granted by the Province. An institutional manifestation of this power is a regulatory agency called the Ontario Municipal Board. This is a quasi-judicial body which among other matters is tasked with approval of zoning bylaws in all Provincial municipalities. Another of its significant powers is that upon application by one or more municipalities, it can order the amalgamation of any number of adjacent municipalities or it can annex the whole or any part of one municipality to another.⁴

Since World War Two, the Province has further expanded its power over local government units. According to a 1969 report of The Ontario Economic Council, this process of gradual provincial encroachment has taken the form of special purpose authorities and conditional grant programs designed to ensure adequate service levels throughout the province.⁵

Since the Ontario Government largely financed these special units or services, the Province reasoned that it consequently has a right to exercise a control function in order to ensure that the money provided is spent properly.
In the last twenty years or so the Province has increasingly come to see the inadequacies of existing political boundaries and the restrictive tax base of local government as primary municipal problems. When it was decided that regional government was the best solution to these ills, the Provincial Government was in a position to legislate this form of structural reorganization without having to secure prior approval by means of a popular referendum or other direct form of voter approval. In contrast to the American political system, then, centralization has obviously replaced local autonomy as "a key operative principle of political organization in Ontario" and this helped create a political context favourable to the evolution of regional government.

Toronto: The Epi-Centre of Development

Centered in Toronto and covering 8600 square miles is the Central Ontario Planning Region. This area includes seven of the ten regional municipalities in Ontario. Central Ontario is one of four Provincially designated planning regions in the southern portion of the province and is by far the most highly industrialized and most densely populated. The overall plan for each planning region is set out in a series of Provincial Government policy blueprints collectively entitled Design for Development.

The core of the Central Ontario or Toronto-Centred Region is an almost continuously urbanized area which extends for 115 miles along the western shore of Lake Ontario and is termed "the Golden Horseshoe." This area has the highest concentration of population in Canada and in 1971 accounted for 47.4 per cent of Ontario's population and 16.9 per cent of Canada's. According to the official Provincial plan this area roughly corresponds with a sub-area or zone of the Toronto Centered Region called the Lakeshore Urbanized Area. Adjacent to this are a zone within commuting distance of Toronto (The Commuter-shed) and a zone beyond normal commuting distance but still within "the orbit of Toronto's highly specialized functions" (The Peripheral Belt). Planning within each "region" is of two chief types: regional economic planning, concerned mainly with interregional resource allocation as a means of reducing regional disparities in socio-economic welfare and regional physical planning with its primary emphasis on the spatial arrangement of generalized land uses.

While these regions are considered optimal for economic and physical planning purposes, they are generally seen as too large for administrative purposes. Consequently, the next level of organization within each region is the regional municipality or regional government. The important point in all this is that regional two tier governments in Ontario did not develop in a planning vacuum but rather were meant to be part of a master plan implemented by a senior level of government. Regional governments appear to be a solution to the problem of the expanding orbit of Metro Toronto which both limits the political growth of Toronto and discourages annexation as a method of reorganization.
The Perceived Need for Reform

In general, the rationale for municipal structural reorganization in Ontario more or less follows that discussed in the previous chapter. What is somewhat unique is the fact that the initiative for this program originated at the Provincial level of government rather than with urban reformers at the local level.\(^9\)

Samuel Clasky, one of the chief architects of the regional government program has identified three basic structural weaknesses in the local government system which existed prior to regionalization.\(^10\) First of all, responsibility at the local level had become completely fragmented among municipal councils, public utility commissions, health units and numerous other forms of municipal governing bodies. As a result there was "little co-ordination in deciding service priorities" and "no mechanisms to provide the overall budgetary or financial planning essential to good management."\(^11\)

Secondly, the narrow population and financial base of many Ontario municipalities meant that these government units could simply not provide the level of servicing demanded in a modern society. To support this, Clasky points out that in 1969 over half of Ontario municipalities had under two-thousand residents and over half of the municipalities in the Province spent less than $150,000 on municipal services.\(^12\)

Finally, the distinction between rural and urban local government was seen as becoming increasingly artificial due to the pressures of economics, transportation, labour mobility and communication. The problem, Clasky emphasizes was that "this merging of basic rural and urban values has not been reflected in our municipal institutions."\(^13\) In particular, the separation of cities and towns from counties appeared problematic, especially in the face of increasing urban development.

Given these structural problems, advocates of regional government saw this new form as allowing a considerably greater degree of fiscal integrity and centralized planning, while at the same time preserving a degree of local autonomy. According to this view regional government was conceptualized as "a compromise between centralization at the provincial level and local control of local services."\(^14\)

The central assumption underlying this view of course, was that a considerable centralization of function was necessary in order to overcome the problems of fractionalization and to ensure an even and upgraded level of municipal servicing. The problem, then, was to achieve a viable balance between efficiency and continued local access to municipal political institutions.
The Implementation of Regional Government

Local Government Reviews

Specific recommendations for restructuring within each region were made in a series of intensive area studies called "local government reviews." From 1963 through to 1974 local government reviews were conducted for the Waterloo, Ottawa-Eastview Carleton, Hamilton Burlington-Wentworth, Peel-Halton, Niagara, Brant, Lakehead and Muskoka areas. Somewhat similar studies were made in the Durham Haldimand-Norfolk, and Sudbury areas. The purpose of these studies was to report in depth upon:

1. The structure organization, finances and operational methods of all municipalities and local boards.

2. The economic, social, geographic and cultural influences in the region and the effects of these upon local governments.

3. The anticipated future development of the area which could require revision of the existing local government system and boundaries.

4. The existing financial position of local governments in the area and the fiscal effects of any proposed changes in the local government structure.

These local government reviews were conducted by special commissioners appointed by the Provincial Minister of Municipal Affairs. The Chief Commissioner of these reviews was most often a political scientist (Mayo, Plunkett, Fyffe) but also included an accountant (Steele) and a planning consultant (Jones). Research aid, particularly through provision of a full time research director, was provided by the Province.

Typically, a local government review commission first prepared a "Data Book" which detailed basic information about population, municipal services and local finances within the study area. After this data book had been distributed to interested parties in the area, briefs were invited from local municipalities, civic organizations and individuals. In addition, public hearings were normally conducted. Finally, a comprehensive report was issued, based on the background research, the submissions, and the observations of the commissioners.

These reports were not always similar in terms of the solutions to municipal problems which they recommended; nor were their recommendations uniformly adopted per se. For example the Plunkett Report recommended that Peel-Halton be one region and that a single tier regional system be adopted. However, the Ontario Government eventually split Peel and Halton into separate regions and instituted a two
tier form of regional government. In sum, however, these reviews represent a systematic examination of urban growth and the problems associated with this which is on a scale rarely seen thus far in other states or provinces.

The Regional Municipality

In designing the new regional governments, five guidelines were presented by the Ontario Committee on Taxation: 1.) a sense of community based upon sociological characteristics, economics, geography and history, 2.) an adequate financial base to carry out regional services at a level satisfactory to the people of the region, 3.) a balance of interests within each region, 4.) sufficient size to assure efficient and economical local services, and 5.) maximum inter-regional co-operation should be possible.\footnote{18}

In addition to these, three other criteria were later developed under the policy for regional reorganization: 1.) participation of all communities within a region in discussion leading to the formation of a regional government, 2.) new regional boundaries should be usable by both provincial departments and agencies and by units of educational administration, and 3.) the region and the subordinate local municipalities (in two tier structures) must be designed together using the same guidelines.\footnote{19}

The first regional municipality to come into being was Ottawa-Carleton in 1969. Others were subsequently established on a "problem-area priority basis." Chronologically, the regional municipalities examined in the present research were established in this order: Ottawa-Carleton (1969), Niagara (1970), York (1971), Sudbury, Waterloo (1973), Peel, Halton, Durham, Hamilton-Wentworth (1974).\footnote{20}

In all cases, a two-tier form of regional government came into operation. Regional councils were given authority over property assessment, arterial roads, health and welfare services, area planning, emergency measures, conservation, water supply and treatment, and sewage and garbage disposal. In addition, in all regions except Ottawa-Carleton policing became a regional responsibility.

The method of selection for regional councillors varies somewhat from region to region. Generally, members are indirectly elected, being designates from among the elected members of the lower tier unit. However, in the Niagara region some regional councillors are elected to both the regional council and the local municipal council. In all cases, the Regional Chairman was initially appointed by the Province. Subsequently, however, this post has become elective, although in Sudbury and Ottawa-Carleton the appointed Chairman was later elected to a second term of office.
The Costs of Change

During the process of implementing a regional government system, opponents frequently cited the loss of "local autonomy" as being one of the most significant "costs" of the local restructuring program. Since the actual establishment of the regional municipalities, however, criticism of the regional scheme has centered more upon the allocation of financial costs and of service levels.

A particular problem has been to determine the extent to which service levels should be upgraded in rural parts of the regional municipality. In many cases, present rural taxpayers do not desire urban type services nor are they willing to bear an increased tax load to pay for them. For example, regular police patrols by regional police on rural routes are considered a needless expenditure by many rural residents. Yet, as the pressure of development changes the population balance in rural sections of the regional areas, the demand for these "urban" type services will grow. The problem here obviously goes beyond regional government per se; rather it lies with the changing face of rural Ontario. For example, increasingly, conflict is arising between new and established rural residents over land zoning regulations. At any rate, with regard to regional servicing, the only viable solution appears to be for the regional municipality to implement increased and improved service standards in a "phased" fashion according to shifting needs. With some services such as sewer and water services, these future needs must be anticipated well in advance of the actual demand; with other "softer" services, such as police protection, improvements can be more closely articulated with actual population changes.

A second continuing criticism of the regional government scheme has been that the cities have had to bear an undue proportion of the regional expenditures in relation to the amount of representation that they have been given on regional council. For example, in 1971, the three largest cities in the Niagara Region assumed 89% of the regional tax levy but had only 46.45% of the elected representation. Similarly, New Democratic Party Provincial Member of Parliament Melville Germa (Sudbury) objected during the debate on the "Regional Municipality of Sudbury Bill" to the fact that the City of Sudbury had 58% of the population, carried 68% of the debt load and was to have less than 50% of the vote on regional council. Adjusting the representation strictly according to population, however, would alienate the smaller municipalities who would argue that their local autonomy was not being sufficiently safeguarded and that the urban portion of the region would dominate the upper tier of government.
A third criticism of the new regional municipalities has been that they "cost more." Typically, the City of St. Catherines, in its 1971 brief to the Provincial Government claimed "it is apparent that the total cost of government has increased substantially since the implementation of the regional concept in Niagara." Such comments, however, are somewhat misleading. Despite Provincial assistance it is inevitable that more equitably distributed and improved services are ultimately going to cost more. Then too, as the Special Program Review, a recent Ontario Government task force found many municipalities postponed a number of capital expenditures and improvements when regional government seemed inevitable. For example, a city might have required an improved police communications system before implementation of regional government, but in anticipation of the restructuring, it elected not to install this new system because police services would be part of a larger regional service requiring a single communications network. As a result, a backlog of spending requirements faced the new regional governments.

In some areas, expenditures for certain functions increased because the new regional municipalities were paying for services previously taken care of by senior levels of government. For example, in many rural areas, policing was formerly carried out by the Ontario Provincial Police Officers at no cost to the townships themselves. Upon regionalization, these O.P.P. officers were replaced by regional police officers. Despite increased per capita grants to regional municipalities, overall police costs were bound to be higher than before in regions where many areas had formerly received "free policing."

The Special Program Review pointed out that several other factors also contributed to the seemingly high spending levels of the new regional municipalities. Some municipalities, freed of major services such as police and sewage, rapidly escalated their spending on their remaining functions. This accounts in part for "the apparently high property tax increases that have occurred immediately after regionalization." In addition, some local municipalities failed to reduce staff, while at the same time substantially increasing salaries (particularly to senior administrative staff), despite reduced functional responsibilities.

**Future Restructuring**

Following the regional government program, the Province of Ontario has now embarked upon a "County Restructuring Studies Program." The stated object of the program has been to provide financial assistance and professional aid to a county and its separated municipalities which request a study of their system of local government. As with the regional government program, provision is made for local government reviews; however, unlike regional municipalities, the
initiative for deciding whether to proceed with legislation for restructuring rests with the municipalities. The conclusions of these County restructuring Studies may also differ somewhat from the studies recommending regional governments. For example, in the recent (March, 1976) report on Kent County, Commissioner Lionel Feldman recommended that any restructured county arrangement exclude Chatham, the largest urban centre in the County.

Further restructuring may also be halted if the Provincial Government adopts the proposals for future planning advanced by the Special Program Review. Among other items, this body recommended that: 1.) further introduction of regional government or restructured counties be postponed and 2.) that if restructuring is approved at some later point, that "a prime requisite be the achievement of cost savings rather than the expansion of services."27

In this chapter, an overview of the regional government plan in Ontario has been given. Of special note have been the strong role of the Provincial Government in designing and legislating regional government and of the Local Government Review Commissions in making specific recommendations for restructuring. In the second part of the chapter, some of the "costs" of regionalization were discussed and the future of the restructuring program was briefly considered.

In the next chapter, the organizational consequences of reorganization are presented in depth and a model of structural centralization of municipal services proposed.
Footnotes

1. In some cases, however, regional governments have more or less followed preexisting county boundaries. Also, with the implementation of the present county restructuring program, county councils will be tasked with a greater number of functions.


3. For example, ten out of the thirteen municipalities in the Metro Toronto area defaulted on their bonds in the thirties. See: Address to the National Conference on Metropolitan Problems, Michigan State University, 1956 (New York: Government Affairs Foundation Inc., 1957), p. 56.

4. Ibid., p. 57.


6. The basic statement of policy can be found in: Design for Development: Statement by the Prime Minister of Ontario on Regional Development Policy (April 5, 1966). Phase two of this regional policy was enunciated in a statement on November 28, 1968. "Design for Development" studies under the auspices of the Regional Development Branch, Department of Treasury and Economics (Ontario) were subsequently released for the Niagara (South Ontario) Region (June 2, 1970), the Midwestern Ontario Region (July 27, 1970), the Toronto Centered Region (May, 1970) and the Northwestern Ontario Region (October 13, 1970).


8. Ibid., pp. 300-301.

9. A notable exception to this was the Durham region report which was initiated and carried out by a local study group called OAPADS (Oshawa Area Planning and Development Study).


11. Ibid., pp. 45-46.

12. Ibid., p. 46.
13. Ibid., p. 47.


15. Among all the present regional municipalities, only York was not the object of a local government review or a similar study.


19. Ibid., p. 17.

20. Based on the effective date of operation. In all cases except Ottawa-Carleton there was a three month lead time between the date of incorporation and the effective date of operation. With Ottawa-Carleton, the first regional municipality, this was approximately six months.


22. This was raised to a 50 per cent representation in the final version of the bill. See: Legislature of Ontario Debates (June 22, 1972).


25. Ibid., p. 203.


CHAPTER FOUR

ORGANIZATIONAL CHANGE AND THE CONSOLIDATION OF SERVICES

Centralization - Decentralization and Organizational Change

In the "sociology of organizations" literature, the independent variable - centralization - is frequently linked in a negative fashion with innovation and program change. Centralization in this context refers to the concentration of decision making in the hands of a cadre of officials at the top of the organizational hierarchy. Since those holding formal positions of power stand to lose the most (especially in terms of social status) with the implementation of such changes, it is thought that they will normally resist any attempt to alter the organization's structure or programs unless this has been initiated by they themselves.

In contrast, when power is distributed throughout an organization in a "network" fashion, the likelihood of successful change or innovation occurring is increased. According to this "power equalization" model, broad participation in decisions concerning innovations is beneficial for acceptance because it reduces or minimizes alienation. In contrast, deliberate change imposed from above will be sabotaged if it threatens the beliefs, security, or power of lower organizational members.1

Hage and Aiken2 suggest that decentralization can also result in more rapid intra-organization communication channels and greater conflict among different occupational perspectives. The first factor is seen as shortening the time required to bring a new idea from the grass roots level to those responsible for making final decisions in the organization. Encouragement of greater occupational conflict is also a positive condition for innovation because it permits a greater interplay between different interests and ideas, a forum out of which new programs and techniques arise.

It has also been pointed out that proximity to the actual site of operations is vital to the formulation of new ideas about how to improve these operations. In this connection, Shepard3 has observed that innovative ideas are most likely to occur to persons who are familiar with the situation to which innovations occur.
One of the first and most frequently cited studies supporting the positive relationship between decentralization and program changes is Cillie's study of innovation in sixteen centralized and decentralized schools in New York State. Controlling for a number of socio-economic factors, Cillie found clear evidence that decentralized schools had adopted more new programs than centralized schools. More specifically, decentralized schools were more likely to have experimented with new methods, to have obtained more recent instructional materials, and to have made continuous revisions in courses of study.

Further support for this hypothesis can be found in studies by Ben-David and Hage and Aiken. Ben-David's study was a cross national examination of the development of new medical techniques and discoveries in Great Britain, France, the United States and Germany. The rate of innovation was found to be greatest in the latter two countries in which medical research activities were more highly decentralized. In their study of sixteen welfare agencies, Aiken and Hage found that the decentralization of power of decision making over organizational resources was positively linked with a high rate of program change.

Recent studies of the impact of differing types of environments on organizational structures have suggested that decentralized, professionally oriented organizations are best equipped to adapt and innovate in turbulent, rapidly changing environments. For example, Burns and Stalker, in their study of Scottish electronics firms, described an "organic model" of organization which was more decentralized, relatively more "open" and less formalized and more innovative than the more rigid hierarchical "mechanical" organization.

It should be noted, however, that not all studies of organizations have led to the conclusion that innovation and decentralization are positively related. For example, Evan and Black's study of change in business organizations indicated that innovation was more likely to occur in standardized organizations with centralized decision making structures. March and Simon concur with this position, arguing that innovations are not derived from the rank and file but from those at the top of the organization, because only power-holders are in a position to "impose" innovations on reluctant members of the organization.

Thus, while the literature on complex organizations tends to favour the decentralization-innovation hypothesis, this is by no means fully accepted. In particular, the relationship of centralization and innovation appears to be influenced by four factors: 1.) the degree to which the organizational environment is "turbulent," 2.) the complexity of the technology utilized by the organization, 3.) the "openess" of communication across different levels of the organization, and 4.) the "leverage" possessed by lower participants in organizations.
Municipal Structural Consolidation and Organizational Centralization

The structural consolidation of municipalities and of municipal agencies is a special case of organizational centralization. In contrast to most advocates of organizational reform, municipal reformers have long identified centralization with progress and enlightenment. The decentralization of decision making in the context of municipal affairs has been visualized not as encouraging innovation, but, rather, as impeding the formulation and acceptance of innovations such as pollution control programs. According to this view, contemporary urban problems are of such gravity that only a centralized decision making structure is adequate for ensuring that much needed reforms are implemented.

If this structural reform position is examined more closely, however, it will be observed that it is not as noticeably removed from the literature on complex organizations as it would initially appear.

For one thing, organizational size is frequently an intervening variable here. Planned change is generally more possible in agencies or organizations which are large enough so as to be able to free personnel and funds for development purposes. Guetzkow identifies one component of this as "organizational slack" or risk capital and suggests that this is necessary in order to help organizations absorb the economic costs of innovations. This slack would seem to be particularly important in technology-intensive organizations where innovations involve considerable development time and costs. In a somewhat similar manner, small municipal police and fire departments simply do not have the resources to acquire new communications equipment nor to hire specialists for innovative programs such as fire prevention or community relations. By centralizing municipal services, it is therefore possible to reach a threshold point or "critical mass" in terms of size and funding. This is particularly so since senior levels of government usually are more inclined to make special development grants available to centralized planning units rather than to a series of individual units.

Also worth noting is that fact that standardization has essentially a different meaning within the context of local government reorganization. In the general literature of complex organizations (for example Hage and Aiken) standardization is viewed as a kind of constraint on innovation, restricting constructive change by imposing a typically bureaucratic inflexibility. However, in the context of local government reorganization, standardization in itself may be an important innovation. For example, standardization of training in fire departments is usually encouraged because among other things, it leads to improved co-ordination at fire fighting sites.
Finally, the differing views of the relationship of centralization and innovation are partially a function of the level at which the particular analysis is being carried out. In the complex organization literature, centralization is discussed largely in the context of internal organizational power distribution and decision making. In the literature on local government reorganization, structural centralization is inter-organizational in nature. It is therefore quite possible for example, to have a consolidated metropolitan police force which is decentralized through a "neighbourhood" structure. Indeed, such a structure is optimal in the sense that it provides the "organizational slack" necessary for innovation and development, yet at the same time preserves elements of community control which can increase feedback and decrease alienation.

Municipal Reorganization: Two Alternative Models

Thus far, considerable emphasis has been given to the ideology of metropolitan reform and its claim that structural centralization will lead to increased effectiveness in coping with urban problems. This position has been discussed in depth because it underlies the whole regional government concept in Ontario. However, in recent years another alternative conception of urban problems has arisen which argues in favour of multiple government units within metropolitan areas. In her 1972 theoretical article "Metropolitan Reform: Propositions from Two Traditions," Elinor Ostrom, a leading proponent of the "political-economy" approach to urban problems enunciates the main tenets of this alternative "tradition" and contrasts it to the "metropolitan reform tradition."

As indicated in Figure 2, Ostrom's models are built on two independent variables - size of urban government units and multiplicity of agencies within a metropolitan area and three intervening variables - professionalization, reliance upon hierarchy and number of elected officials. Also, five dependent variables are employed - output per capita, efficient provision of services, equal distribution of costs to beneficiaries, responsibility of local officials and participation by citizens. According to the "metropolitan reform" model, increasing the size of urban government units and reducing the number of public agencies will result in an increase in all intervening and dependent variables except the number of elected public officials, citizen participation and the responsibility of public officials. In contrast, the political economy model questions the positive valence of three of the dependent variables - output, efficiency and equal distribution of costs to beneficiaries. Rather, it suggests that whether these increase or not depends upon the type of public good or service which is being centralized. Furthermore, as Ostrom suggests, political economists are "apt to argue that most large bureaucracies are less efficient in solving problems than either small
bureaucracies or a multiplicity of independent agencies co-ordinating their efforts through competition or bargaining. It follows from this that only detailed empirical research can establish whether the assumptions of the metropolitan reformers concerning output, efficiency and cost distribution are warranted.

The Impact of Local Government Reorganization: Modes of Measurement

In part, the failure to systematically assess the impact of various forms of local government reorganization on municipal organizations and services has been a product of the inability of urban researchers to arrive at a satisfactory mode of measurement. In particular, the concepts of efficiency and effectiveness have proved problematic. In general, three types of empirical indicators have been employed in prior studies of the impact of municipal structural reorganization: 1.) average unit costs, 2.) performance indicators, and 3.) consumer evaluations.

Average Unit Cost Studies

Carried out largely by urban economists, these studies test the basic assumption that increasing size means decreasing unit cost. Reference has already been made in Chapter Two to the conclusions of Letwin and Hirsch concerning a population threshold for economies of scale in relation to certain types of services. More specifically, Hirsch has indicated that the average unit cost for police protection is horizontal (i.e., it changes little with changes in scale) while the average unit cost for fire protection is U shaped with the trough or threshold occurring at a population size of about 110,000. However, Ahlbrandt, in his monograph on municipal fire protection services, cautions that Hirsch's data for fire protection was "not detailed enough to accurately specify the cost function" and that the conclusion probably would have been different if more variables had been included in the study, especially those describing the form of fire services "production." In his study of Scottsdale, Arizona, Albrandt demonstrates that expansion of the scale of operation for a private fire protection firm meant considerable cost savings, in that overhead was spread over a number of contractual areas.

Although highly sophisticated in its methodology, this approach to measuring the impact of centralization on municipal services is inadequate for several reasons. First of all, whether or not the average unit cost increases tells the researcher nothing about changes in the quantity and quality of the service provided. As Ahlbrandt himself states in relation to fire protection, "population by itself is not a valid proxy (variable) for output and its coefficient cannot
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*Adapted from: Elinor Ostrom "Metropolitan Reform Propositions From Two Traditions." Social Science Quarterly 53 (December 1972) pp. 474-493.
be interpreted as evidence of the presence or absence of scale economies. Secondly, this approach leaves out significant sociological dimensions and inflates the importance of economic factors. As Corwin suggests in another context, "it is misleading to single out the economic factors in the absence of compelling evidence that they completely eclipse other variables that an extended sociological literature suggests are important." In particular, consumer satisfaction is not taken into account in cost equations of this type. As will be seen in the case of the Waterloo Region, a decrease in the number of organizational locations (and the resultant cost savings) may follow from a strictly economic model of centralization, but it is not always politically possible. Also, as Ahbrandt points out the empirical cost function is only a "partial" analysis because it fails to consider "the effects of a larger community on the ability of the individual to articulate his preferences."

Performance Indicators

Performance indicators are seemingly "objective" criteria for examining longitudinal change in the output of municipal agencies. Lineberry and Welch, in their discussion of the distribution of urban public services specify four types of performance indicators: 1.) indicators of input quality (relative to potential demand), for example the number of police patrolmen or pumper companies per population unit, 2.) indicators of input quality (relative to expressed demand), for example, the ratio of police patrolmen to reported crimes or pumper companies to fire alarms, 3.) indicators of input calibre, for example, training and experience levels of policemen, and 4.) indicators of service delivery quality (from the consumer's perspective), for example, average police response time. Most of these indicators are based on information taken from police and fire records or other such organizationally maintained statistics.

Such performance indicators are an improvement over simply dealing with cost equations. However, as Ostrom et al point out, many services provided by agencies such as the police are not easily "packageable." Performance indicators such as that suggested by Lineberry and Welsh have a fair degree of utility but some are biased to the extent that they are more attuned to readily packageable aspects of police protection or fire protection. Some police maintained indicators, especially those measuring crime clearance, are sometimes inflated due to internal pressures within a police department to produce the "right" data. Then too, with a largely planning oriented agency such as an Emergency Measures Organization, performance indicators are extremely difficult to formulate in terms other than number and type of functions performed.
Consumer Evaluations

This method had been used most fully by Elinor Ostrom and her associates and closely adheres to Hatry's argument that what "is needed for evaluation are criteria that come as close as possible to reflecting the basic underlying objectives of the government - the effects upon people." Typically, Ostrom et al. carried out an extensive survey in the Indianapolis area comparing consumer satisfaction with police services in predominantly white neighbourhoods in the Indianapolis jurisdictions and in adjacent independent communities. Results of this survey indicated that smaller police departments were able to provide higher levels of neighbourhood types of services than a large centralized department. A directly comparable study was completed by a student of Ostrom's, Somir Ishtak, for the Grand Rapids, Michigan metropolitan area with similar results.

Consumer evaluation studies are a distinct improvement over the first two methodologies discussed here. As with victimology studies they go beyond the "tip of the iceberg" and impart greater meaning to municipal outputs than do pure "production" figures. Also, they do bring in a measure of feedback noticeably lacking in other impact indicators.

Nevertheless, consumer evaluations do leave out some important elements. For one thing, they omit (understandably) questions about facets of municipal servicing not easily identifiable or understood by the average citizen. For example, elements such as street crime and patrol frequency are stressed but investigation of white collar crime is not. Similarly, questions may be asked about visible aspects of fire protection such as perceived response time but preventive and research elements are rarely included in consumer evaluation schedules because these are not manifest at a local neighbourhood level. Secondly, there is much stress put on measuring the effects of changes in municipal servicing (such as centralization) on the community itself, but less attention is paid to the organizational consequences of local government reorganization. This is unfortunate because short range organizational changes can sometimes have long range community effects. For example, programs which instruct police in human relations concepts can ultimately have a payoff in terms of improved community relations.

Impact Indicators Employed in This Study

As a start towards remedying the lacunae discussed above, the present study concentrates on the impact of one form of municipal structural centralization (regional government) upon a specific category of organizations (i.e., crisis management agencies).
A central impact indicator is organizational innovation in technology, programs, and organizational practices. In the last decade, considerable empirical research has been carried out on organizational innovations in crisis management agencies as a result of civil disturbances and natural disasters. In particular, studies by Anderson (1969) and Weller (1972) have dealt with internal and external conditions acting to positively influence the adoption of innovations in anticipation of future community crises. The present study is designed to build upon this research base; however, it differs in two critical aspects. First of all, most of the regional organizations under consideration here are new structural entities, in the sense that they are formed out of a collection of previously autonomous organizational units. Thus, whereas researchers like Anderson have studied innovations in established organizations over time, the present study deals with innovations in public agencies from the point of formal organizational birth. Secondly, while the focus of the study is the crisis management organization, the innovations considered are not restricted to those designed to anticipate particular community crises such as civil disturbances but cover the more general scope of organizational activities.

Secondly, changes in organizational resources are featured. This includes changes in both staff and in physical resources such as police cruisers. Such changes do not in themselves directly translate into improvements in the quantity or quality of organizational output, but they do provide a measure of the extent to which a new regional organization has had to commit itself to the extension of service. This is significant because such an extension is an extremely costly demand on the regionalized municipal organization and can act to make any short range changes in programs and practices impossible. Also under consideration will be the question of whether regionalization has opened up access to resources possessed by other regional municipal departments for a small, primarily planning oriented agency (i.e. the Emergency Measures Organization) with few resources of its own.

Thirdly, changes in professionalization and in the structuring of organizational activities will be included in this study. In particular, the research will focus upon changes in two specific indicators: training and clerical/operational personnel ratios.

As with increases in resources, changes in professionalization and in the commitment to supportive services do not translate directly into short term improvements in effectiveness. However, as Kreps and Weller have pointed out in reference to police departments, these can act to improve intra-organizational functioning, especially in situations of heavy demand and increasing complexity.
Fourthly, this study will examine the impact of regional government on inter-organizational co-ordination in a service area where no actual structural consolidation has taken place. More specifically, the formal inter-organizational relationships among fire departments in regional areas will be examined with reference to changes in such linkages as mutual aid arrangements and central dispatch systems. Also considered will be changes in the communications systems of regional police organizations (which also act to increase areawide co-ordination).

Finally, changes in municipal expenditures on the three crisis management services under study will be utilized as an impact indicator. In this regard a cost evaluation approach such as that utilized by Hirsch will not be adopted, but, rather, emphasis will be put on the relative impact of regionalization of crisis management agencies for municipal spending. In other words, no attempt will be made to determine whether regional protective services cost more than non-regionalized services used to in the same area. Rather, descriptive data will be provided to document the impact of regionalization of such services on actual municipal spending levels from year to year. In particular, expenditure comparisons will be made among regional municipalities and this will then be compared to relative change levels for innovations and resources. The inclusion of expenditures in this analysis is thought to be important because it is a crucial element in the continuing public debate over the advisability and effects of local government reorganization, in particular regional government.

No direct empirical attempt will be made to carry out a consumer evaluation of change in the quantity and quality of regionalized municipal services. While this would have been a worthwhile addition to the research presented here, such a project was simply beyond the scope and resources of this study. In the case history accounts, however, periodic references will be made to citizen satisfaction with reorganized protective services.

**A Model of Structural Centralization of Municipal Services**

The process of municipal structural centralization can be visualized using a four part model (Figure 3). This model forecasts the impact of structural centralization on functional service areas within restructured areas and the resultant implications for the municipalities within the newly reorganized jurisdiction. The other two key elements in the model are regional community characteristics and citizen (consumer) satisfaction.

The application of this model is particularly oriented toward regional government in Ontario; however, many of the linkages posited
Figure 3
Model of Structural Centralization of Municipal Services

Regional Community (contextual) Characteristics
- Urban-Rural Balance
- Municipal Wealth
- Population Size & Rate of Growth
- Dominance of Central Urban Unit
- Prior Level of Fractionalization

Organizational Changes in Functional Service Areas
- Dispersion
- Professionalization
- Size of Administrative (supportive) Component
- Innovation
- Communication (among organizational units)
- Resources
- Standardization

Evaluative Effects
- Local Control of Services
- Cost of Servicing
- Citizen (consumer) Satisfaction
- Inter-Municipal Co-ordination
- Quality of Servicing
- Equity of Servicing

Key: (+) = increases
----- = increases
--- = influences
--- = decreases
-... = decreases

---
by it are at least partially applicable to other instances of local government reorganization. Also note that the relationships suggested in this model form the framework for the analysis of data presented in Chapters Six and Seven.

To explicate the presentation of this model, each set of relationships will be considered under a separate heading.

Regional Community Characteristics and the Consolidation of Services

The likelihood of local government reorganization and the form which this reorganization will take are influenced by a set of variables related to the structure of the area itself. The regional community characteristics considered here are: 1.) population size and rate of growth, 2.) municipal wealth (assessment), 3.) prior level of fractionalization, 4.) urban rural balance, and 5.) dominance of the central urban unit.

The consolidation of municipal services via local government reorganization is most likely in areas with a rapidly expanding population. As Dynes and Wenger point out, with increasing size, a system is faced with providing additional and expanded services.\(^28\) Within each separate municipal jurisdiction this tends to result in increased structural differentiation. Between jurisdictional units, however, greater co-ordination is required in order to cope with new demands which involve more than one local government, for example, area road construction. This is especially the case where local populations expand to the limits of existing jurisdictions increasing the necessity of boundary spanning political-administrative structures.

Municipal wealth, as measured by taxable assessment is a second regional community characteristic which influences structural centralization. Regions with uniformly low assessments are unlikely to be consolidated, chiefly because they do not have the financial base needed to pay for the standardization and upgrading of services across the area. On the other hand, if all units within a region have a reasonably sound tax base, then services are likely to be at a sufficiently high level that it would be difficult to justify consolidation, although some less complete form of federalism could be implemented. Rather, regions with differential municipal wealth or metropolitan areas with a marked revenue spread between central city and suburbs are more likely candidates for centralization given proper political conditions.

Thirdly, the prior level of fractionalization is a factor in the consolidation of municipal governments and services. In particular, regions with a relatively large number of towns and small cities or metro areas with a plethora of suburbs are likely candidates for
for regionalization. Furthermore, widespread prior fragmentation necessitates a greater degree of structural change, in particular, boundary changes and amalgamations at the primary tier of government.

The urban-rural balance in a region is also a contextual variable acting on structural consolidation. Largely agricultural areas with only one urban complex are not likely to be consolidated or regionalized, or, if a centralized structure is proposed, the urban centre will probably be separated from it. Rather, areas where the rural urban balance is rapidly shifting in favour of the latter, but where services are having a difficult time keeping pace are in a position where regionalization may be a likely solution.

Finally, consolidated structures are formed in the context of the extent of domination by the central urban unit. In regions where a large city already dominates the area economically, socially and politically, consolidation is not likely to engender widespread change. In particular, newly formed regional municipal organizations and agencies will be essentially expanded versions of those already existing in the core city. In contrast, areas less oriented toward the central city will face a greater political shock upon centralization. In addition, consolidated municipal organizations in such regions will have to overcome a greater "liability of newness." All of this will be reflected in a political structure which will allow a division of power rather than a concentration of voting power in one large centre.

The Consolidation of Services and Organizational Changes Within Functional Service Areas

Not only does local government reorganization mean a change in political structures, it also entails the structural consolidation of administrative units such as health units or police departments. This in turn leads to changes within particular functional areas, for example, urban planning or protective services. The present model forecasts the direction of change in seven organizational variables -- dispersion, resources, communications, innovations, standardization, professionalization and size of administrative (supportive) component.

Dispersion is a variable which refers to the number of separate physical sites on which a given organization is located. The consolidation of services in a functional area usually results in at least some decrease in dispersion. Given this, however, two ideal types of situations are possible. According to the first, while overall control and co-ordination of area services is centralized, the number of organizational locations, for example, police detachments, is not appreciably decreased. Alternately, centralization of services may mean a sharp decrease in dispersion, with organizational resources centered in one headquarters.
Structural consolidation brings about an increase in the resources available within a functional area, especially financial capabilities, manpower and basic equipment (for example motor vehicles). Resource expansion of this type is often possible due to increased per capita grants from senior levels of government. In addition, a considerable array of resources associated with innovations made possible by centralization, for example, communications hardware, may be accumulated.

According to this model, consolidation also increases communications within a functional service area. Furthermore, the communications pattern changes from horizontal to a vertical (hierarchical) and from interorganizational to intraorganizational. Communications change should be particularly high in functional areas where there is a need for a rapid operational exchange of information and where this communication is dependent upon technological mechanisms, for example, central dispatch systems.

As has already been implied, it is predicted that the consolidation of municipal services will result in an increase in innovation within functional service areas. Innovation refers to deliberate organizational change. Weller expands on this definition describing innovation as "a purposeful alteration of some controllable aspect of an organization by those having the authority to do so." Innovation, as discussed here, refers to changes in technology, practices and programs. Particularly useful in explaining an increase in innovation are two social conditions identified by Anderson in his Alaskan earthquake study. According to his analysis, new demands upon the organization and increased support from its task environment positively influence organizational change. Demands in the present context consist of the demands for increased service quality and effectiveness. The first can lead to changes in programs and practices while the latter encourages changes in technology and resources. Increased environmental support consists of: 1.) increased availability of resources and information from others in the organization set of a consolidated agency, and 2.) increased provision of conditional grants for capital projects and other such financial backing from senior levels of government. As Braito et al have illustrated, the former allows innovations in programs involving overlap in other "domains." The latter encourages the acquisition of new technology beyond the financial capability of the local level municipality.

Not surprisingly, the consolidation of services also will lead to partial or full standardization of these services. This standardization can apply to a wide range of organizational activities including equipment, salaries, training and procedures. These are usually cited as positive benefits of centralization in that they tend to equalize service levels throughout a metropolitan area or region.
Critics of local government reorganization argue, however, that increased standardization can be dysfunctional in that it leads to reduced discretionary power by administrative officials or operational personnel at a local or neighbourhood level.

According to this model, the consolidation of services can lead to increased professionalization. For one thing, large scale organizations have greater "slack," thus allowing advanced training to be carried out without unduly penalizing manpower or budgetary resources. For example, small police forces can ill afford to send officers to police colleges for any extended period of time, since basic patrol services would have to noticeably suffer; large forces, however, can better "cover" for uniformed personnel temporarily removed for this reason. Secondly, increased size normally leads to increased complexity. This means greater specialization and division of labour. In this connection, Hage and Aiken identify professionalism as an integral part of a more highly complex organization stressing that specialists continually seek new knowledge, especially through the channel of professional training. Thirdly, it can be argued that where administrative functions are centralized those at operational levels have more time to devote to the professional function. Support for this can be found in a study by Sofer of nationalization of the organizational structures of hospitals in England. Sofer found that when administrative responsibilities were taken over by a higher level administrative unit, the heads of subordinated hospitals became more professionally oriented.

Closely related to increases in innovation and professionalization levels is an increase in the administrative component of the organization. With increasing specialization of programs and differentiation of activities, a greater part of the total personnel in a particular functional area must be committed to co-ordination and administration tasks. Ostrom et al describe police departments with large supportive service components as employing a "task-oriented" production strategy and have shown that this is more characteristic of larger centralized departments. The consolidation of services in a functional area can be expected to increase the administrative or support component relative to the operational component.

It should be noted that these changes in organizational variables are not mutually exclusive but are interrelated in many ways. For example, standardization and innovation can both result in a marked increase in equipment resources. The reciprocal is also true, in that increased financial resources can allow standardization and innovation measures otherwise not possible. As already suggested, an increased number of specialized programs involving professional training ultimately can mean a larger administrative component. Similarly, the adoption of a new technical innovation such as a "911" number can have a positive impact on the volume and clarity of communications within a functional area.
Organizational Changes in Functional Service Areas and Evaluative Effects

While each of the organizational changes discussed above acts to shape what has been termed here "functional service areas," it also has implications for a more general set of dimensions. These "evaluative effects" refer to the chief points of argument in favour of or against the consolidation of services. Five evaluative effects are considered here: 1.) local control of services, 2.) inter-municipal co-ordination, 3.) quality of service, 4.) equity of servicing, and 5.) cost of service.

Local control of services is diminished by decreased dispersion and increased professionalization. Removing or reducing organization-al locations particularly clashes with local autonomy in areas of municipal servicing directly affecting public safety. Thus, to shut down a police or fire station is locally perceived as being a direct threat to community control and welfare. Similarly, the closing of local hospitals in Ontario has brought vigorous public opposition regardless of projected economic savings. In some service areas, professionalization can also lead to decreased local control of services. For example, the switch to a full time professional fire department from a largely volunteer force could improve the level of protection but it would remove a central local institution from many communities.

Inter-municipal co-ordination is generally increased as a result of consolidation of municipal services. For one thing the changes in communications discussed earlier allow both more rapid operational type co-ordination and also more closely articulated long range planning. Secondly, standardization of equipment and training means that all units can better anticipate one another and avoid harmful overlap. This is particularly important in crisis situations where various units must not work at cross purposes.

Thirdly, the overall quality of service can increase in some aspects and decrease in others with the consolidation of services. On the one hand, organizational innovations and the standardization of service levels act to improve the overall quality of output. For example, the implementation of a regional fire prevention program has payoff for all parts of that area. On the other hand, decreased dispersion can mean that organizational facilities are physically farther away, especially in time of emergency. For example, centralized hospital services may be more highly specialized and advanced than those available in a network of small local hospitals, but they are also more inaccessible to certain segments of local villages or townships. Similarly, investigative improvements in regionalized police forces may improve the cases-solved figures, but at the same time patrol services may be reduced for certain neighbourhoods or localities.
Fourthly, the equity of servicing is influenced by the consolidation of municipal services. In particular, standardization contributes to increased equity by leveling differences in technology and training. Equity of servicing may, of course, not always be desired by all those who benefit from it. Rural residents, fearful of tax increases, may, for example, oppose attempts to equalize service levels on the grounds that they "don't need it."

Finally, the cost of servicing is more or less increased as a result of the consolidation. On the positive side, a decrease in the number of organizational locations results in the kind of reduced costs envisioned by municipal reformers. More than offsetting this however, is the cost of innovation, of increased professional training, of standardization, of extending basic resources and of maintaining an increased administrative (supportive) component.

Evaluative Effects and Citizen (Consumer) Satisfaction

The final part of this model of structural centralization concerns the selective impact of these evaluative effects on the general level of citizen or consumer satisfaction.

Of these, only one - increased inter-municipal co-ordination of services - translates positively and unequivocally into citizen satisfaction. Especially where jurisdictional discontinuities and overlaps have created special service problems (for example, where the nearest fire department is in the wrong jurisdiction), increased coordination is perceived a salient benefit.

Loss of local control of services and generally increased costs are usually the two major negative factors contributing to decreased citizen satisfaction. The former is often identified with a loss of local autonomy and has a particularly cogent psychological impact.

Quality of service and equity of servicing can have either positive or negative effects on citizen satisfaction. As pointed out earlier, improvements in the "soft" aspects of servicing, for example, fire prevention, add little to citizen evaluations if the more visible indicators, such as the presence of a neighbourhood fire hall, are seemingly not improved. Satisfaction, in fact, can be expected to vary across different segments of a regional population, depending on their exposure to segments of organizational activities where improvements have been carried out. Similarly, increased equity of servicing is not appreciated by all ratepayers. As mentioned previously, some will declare those changes "unnecessary frills." Others, used to an extraordinarily high level of servicing before local government reorganization, will argue that service in their area has decreased in the attempt to achieve a better regional or metropolitan balance.
Overall citizen satisfaction, with the consolidation of municipal services, then, is an end product of a number of evaluative effects and the interpretation and weight attached to each of these by various segments of the population affected.

Empirical Application of the Model

This model of the structural consolidation of municipal services will be tested here using nine regional municipalities in Ontario which were created from 1968 to 1974. Particularly emphasized will be the organizational changes which have ensued in the functional service area of crisis management since regionalization and their linkage to each of the evaluative effects.

It must be stressed that this use of the model is largely preliminary and by no means comprehensive. As will be discussed at greater length in the next chapter, data on some factors was generally available and easily converted into statistical measures; on others, such information was either not obtainable on a longitudinal basis or else not complete for all jurisdictions. Nevertheless, this study represents one of the first empirical attempts to investigate the organizational consequences of municipal consolidation for more than one regional community.

While the present research constitutes an application of the model of structural consolidation just presented, it should not be visualized as an adequate test of the model. To begin with, the number of cases (>10) is too small to justify hypothesis verification to any degree of certainty. Secondly, as will be discussed at greater length in the chapter on methodology and data collection, complete longitudinal data could not be obtained for all variables, largely because this information was not recorded at the source.

Rather, this study is seen as a demonstration of the heuristic relevance of the model of structural centralization. In this connection, Udy stresses that before one can test hypotheses containing variables or test existence theorems, it is necessary to explore interrelationships among the variables used in the model and to "have formulated operational specifications of the concrete referents of the different values of the variables." Conversely, the model itself has value in that it can function as a frame around which to organize the descriptive analysis and as a guide for what to look for in the process of seeking to isolate salient patterns in the data.

As indicated earlier, five chief empirical impact indicators: innovation, resources, professionalization and structuring of activities, inter-organizational co-ordination, and municipal expenditures are used in this study. In addition, the analysis of data
seeks to answer the following basic questions about the impact of regional government upon crisis management services: What differences in the nature of the services themselves determine whether or not they are amenable to consolidation? Do differences in the structural makeup of regions prior to and after regionalization affect the pattern of internal resource allocation in consolidated organizations? What benefits and costs are involved in the consolidation of municipal emergency and protective services and what strategies can be adopted in order to best balance these?

In this chapter, the organizational consequences of increasing the size of government units and decreasing the number of government units are explored at some length. Three types of empirical indicators are assessed and the indicators used in the present study are introduced. Finally, a four part model of structural centralization of municipal services is presented and discussed at some length.

In Chapter Five, we begin the actual empirical analysis by reviewing the methodology and data collection methods utilized in this research.
Footnotes


12. Ibid., p. 485.

13. This is true not only for municipal services but also for organizational research as a whole. For a discussion of the concept see: James L. Price, Organizational Effectiveness: An Inventory of Propositions (Homewood, Illinois: Richard D. Irwin, 1968).


17. Ibid., p. 34.


19. Ahlbrandt, op. cit., p. 34.


35. Ostrom et al. (1973), op. cit., p. 62.

36. The cost of service will be treated here as an evaluative effect. Note, however, that the present empirical study uses municipal expenditures on a certain service area as an impact indicator rather than cost of service. Reasons for this are given on p. 64 of this chapter.

CHAPTER FIVE

METHODOLOGY AND DATA COLLECTION

As Gans has stated, the findings of any study are intrinsically related to the methods used to develop them. This is particularly so where the research is largely exploratory and in a little developed area.

In this chapter, details will be provided on the type of research design utilized, the specific data gathering techniques employed and the strengths and limitations of information used in the empirical analysis.

Level and Unit of Analysis

According to Haas and Drabek three critical and clearly related dimensions of any study design are: 1.) the level of abstraction, 2.) presence or absence of time, and 3.) number of units selected for study. Highly abstract research studies tend to select a large number of cases taken at a single point in time; on the other hand, more concrete empirical research probes a smaller number of cases over a larger time period.

The present study is closer to the second type of research described above. That this should be so largely follows from the general purpose of undertaking this project - to gain some insight into the effects of the structural reorganization of local government services on a series of organizationally related independent variables. Accordingly, much of the longitudinal statistical material to be presented in the data analysis chapter is basically descriptive and hypothesis generating rather than hypothesis verifying. Such an approach was gauged to be apt since no previous study, to the author's best knowledge, had ever been conducted before on this aspect of organizational change.

In many ways, this research has been organized in the form of a comparative case history design. This was considered superior to carrying out a single, intensive descriptive analysis because it allowed the introduction of contextual variables, notably degree of prior municipal fragmentation and dominance by central urban unit.
which were thought to be significant determinants of the shape and extent of change. Since the regional municipalities surveyed more or less constituted a universe, it was impossible to expand the number of cases. This could only have been achieved by increasing the number of services examined within each region, a strategy considered unadvisable since this would automatically introduce a number of variables (for example, technology) which would be difficult to control for given the elementary data analysis techniques used.

In one way, however, this analysis departs from a typical multiple case history. Rather than employing exclusively qualitative data, a number of quantitative measures were used, especially in relation to changes in resources and expenditures. This "mixing" of data types can be justified largely on the basis that the variables central to the analysis, for example size of administrative component, cannot be adequately captured in purely descriptive terms. Furthermore, since the genesis of much of the previous literature on local government reform is in the area of political-economy, many of the implicit hypotheses advising or opposing metropolitan reform have been articulated within a quantitative context. For example, most studies focusing on "output" indicators rely mainly on statistical measures such as per capita expenditures on services. Consequently, the "burden of proof" here must be at least partly quantitative in nature. What one gains in exactness can easily be lost in depth of understanding, however.

While considerable effort has been expended in trying to locate statistical changes within the context of the differing problems and political factors at work in each region (especially those prior to regionalization), this study would have been greatly improved by more in depth interviewing, particularly concerning the problems of transition upon regionalization. Given limited existing resources, however, more emphasis had to be given to documentary materials and questionnaire returns as data sources.

While the basic unit of comparison here is the regional municipality, the analysis deals with several other types of socio-political units.

Most studies of change found in the organizational literature focus on the organization itself as the entity which changes over time. Typically, Tsouderos' early study of organizational change found that increasing formalization and bureaucratization in voluntary organizations meant higher production, lower costs, but decreased membership. What is being studied in a longitudinal manner in Tsouderos' study, then, is differences in the magnitude of "means" and "ends" variables over time for the same set of voluntary associations. Similarly, studies which deal with changes in goals or "charter" are concerned with variations in the priorities and activities of the same organization(s) at time two as compared to time one.
More recently, it has been recognized that significant changes often cut across organizational boundaries and that it is profitable therefore to focus on variations over time in interorganizational relations. Such differences in interdependencies and boundary spanning activities can in turn influence the internal structure of each organization in the field. Thus, Aiken and Haig, for example, illustrate that changes in participation in joint programs are reflected in varying complexity levels within each constituent organization.

Another way of approaching change affecting multiple organizations has been to use a "systems" analysis. As conditions change in the general environment, changes are also evident in the components, domains and boundaries of the system itself. Taylor has recently used this approach to explain change in the mental health delivery system of an Ohio area after a major tornado disaster.

The present study cannot fully fit into any of the categories of organizational change research described above, especially with reference to changes in police servicing. At Time One, police protection within each region was the responsibility of multiple organizations, at Time Two it became the responsibility of a single consolidated organization. Similarly, fire protection was and still is in the hands of more than one department. This is not, then, strictly speaking, a study of change in the same organization(s) over time. On the other hand, it is not quite correct to use a "system" approach. For one thing, boundaries in a system are rarely rigid and are ultimately dynamic in nature. In contrast, the boundaries of each regional jurisdiction are legally drawn and can only change by legislative fiat. Secondly, integration of police or fire agencies within each region was/is relatively weak and linkages are more a matter of degree of co-ordination than of any type of centralized control. In this sense, the constellation of police units (and fire units) in each regional municipality more closely resembled a network than a system.

Perhaps, the most accurate manner in which to conceptualize the chief units of analysis in this study, then is to describe these as service jurisdictions. Prior to local government reorganizations these resembled networks; after regionalization, they underwent varying degrees of systemization ranging from merger into a single organizational unit (consolidated police departments) to creation of a formal network wide co-ordination role (regional fire co-ordinator).

Since a given jurisdiction can be serviced by one or many separate units, it was necessary to employ an "aggregation" technique in order to achieve before-after comparability. For example, to compare physical resource levels within a specific police service jurisdiction, the numbers of cruisers operated by each separate municipal police department had to be added together and this sum compared to
the number operated after regionalization by the consolidated force. What this "aggregated figure" doesn't reveal, however, is the difference between, for example, 100 police officers under a central command versus the same number under half a dozen authorities. Especially with resources, once a certain size threshold is reached different activities may be undertaken by the organization. As will be discussed later in this paper, size alone, then, can be misleading; it must be discussed in close proximity with the factor of dispersion.

Because all the emergency measures offices studied here were organized on a county basis before regionalization, change in this service was much more comparable to change within the same organization over time than with police servicing. The main exception to this was Niagara Region where regionalization involved the amalgamation of two county organizations - Lincoln and Welland - and the disengagement of part of the former to constitute another autonomous unit (Haldimand Emergency Measures Organization).

Data Collection and Sources

The fact that all regional municipalities studied had already been in existence for at least two years prior to the initiation of this study meant that a variety of methods had to be employed in order to assemble longitudinal information. In all, two major data gathering techniques - a mailed questionnaire and secondary analysis of documentary material were used; these were supplemented by two other methods: interviewing and non-participant observation. Each of these will now be described at greater length, starting with documentary materials.

Secondary Analysis of Documentary Materials

As a prelude to regionalization, in depth area studies called local government reviews were carried out under the auspices of the Ontario Government. Extensive use was made of these documents in acquiring some insight into the political and economic environments in which local government reorganization took place and into the nature of crisis management services in each region. In several cases, excellent "data books" were prepared by local government review commissions in advance of regional public hearings. These were of considerable aid in preparing demographic profiles of each regional municipality and in obtaining otherwise unavailable data about such matters as police training levels. Unfortunately, the overall scope and quality of these local government review reports varied greatly from region to region; consequently, these were an often valuable, but frequently uneven data source.
Of the available data sources, only two — Municipal Financial Information and the Municipal Directory — fully spanned the years 1968-74. The former was of particular value in documenting year changes in municipal expenditures on police and fire protection. In addition, the latest (1974) edition provided a provincial summary (1968-74) of changes in these expenditures, including indices of year to year changes and an average per annum percentage change for the total time frame.

Much of the information about police personnel and resources at Time One was calculated from figures given in an annual publication of Statistics Canada entitled Police Administration Statistics. This was most useful because all statistics were reported in a uniform manner and the annual return included all separate municipal police forces in Canada. Unfortunately, the last available edition of this publication was the 1972 volume; evidently after this time Statistics Canada felt that the difficulties encountered in ensuring a total return from all municipal forces were such that they outweighed the benefits of the end product. The data form used to gather these police administration statistics is reproduced in Appendix B of this dissertation.

Additional documentary sources utilized in this study included several Province of Ontario task force reports (Task Force on Policing in Ontario, Special Program Review), Parliamentary Debates (Ontario Legislature), specialized "professional" journals (for example, the Ontario Fire Marshal's Review), written regional municipal emergency plans (Durham) and newspaper reports concerning regionalized services (particularly in Waterloo Region).

Mailed Questionnaires

The greater part of the information gathered on organizational changes since regionalization came from questionnaires mailed to crisis management agencies in regionalized areas.

Given the author's status as Emergency Planning Canada Fellow at the Disaster Research Center, little difficulty was expected with returns from emergency measures offices. However, more difficulty was expected in obtaining information from police and fire departments. As Levine has shown, gaining access to valid data on police practices is problematic, even under normal conditions. Regionalization has been a particularly potent public issue in the past and continues to remain a controversial change, especially for areas of servicing which have not yet been fully regionalized.
In order to overcome some of the expected resistance to a questionnaire largely concerned with change (or the lack of it) several strategies were adopted.

First of all, the questionnaire in each case was kept relatively short and designed to elicit hard data available from organizational records rather than emphasizing "opinion" type questions. This automatically reduced the scope and depth of the data obtained; however, this was seen as a "tradeoff" for ensuring a better return rate.

Secondly, all questionnaires were mailed from and returned to Emergency Planning Canada headquarters in Ottawa. Despite a clear explanation of the author's affiliation with the Disaster Research Centre in the covering letter, it was felt that there might still be some initial hesitation in directly sending information (even that of a mostly non-confidential nature) across the American border. In addition, this was preferable from a purely mechanical viewpoint, in that postal procedures were greatly simplified.

That these cautions were not without root was indicated by the reply to a question on the advantages and disadvantages of regionalization given by one full time fire chief: "under the present political atmosphere we feel it expedient to take the 5th amendment...". Fortunately, most other respondents felt less threatened and completed most questions in a complete manner.

Nine regional municipalities were surveyed through use of these mailed questionnaires. This represents all regional municipalities in Ontario whose effective operating date was on or prior to January 1, 1974. Specifically excluded was the Regional Municipality of Haldimand-Norfolk which became operative April 1, 1974. Haldimand-Norfolk was not surveyed for two reasons. First it was the only region to begin operation part way during the calendar year; consequently, statistics such as police and fire expenditures were available only for a nine month period. Secondly, it was felt that two full years was the minimum time period needed to allow a meaningful analysis of change, especially in regards to innovations; Haldimand-Norfolk fell short of this two year limit. Also excluded were other types of reformed political structures - metropolitan governments (Metro Toronto), regional districts (Muskoka) and reorganized counties which represent essentially different municipal forms than the regional municipalities studied here. In particular, none of these other reformed local governments were rural-urban amalgamations, and thus did not face all the same problems or demands.

In all, four different questionnaire schedules were drawn up and sent out: 1.) regional police forces, 2.) regional emergency measures offices, 3.) fire departments in regional municipalities, and 4.) police forces in the Ottawa-Carleton Region (where police protection was not regionalized).
All eight regional police forces replied to the regional police questionnaire. Eight emergency measures offices positively replied, while one (Peel) was found to be no longer in existence. Three of the four Ottawa-Carleton police forces answered the questionnaire although one was only partially useable.

Questionnaires were sent to all fire departments, in each of the nine regions, serving a municipal population of over 10,000 population (1974). Below this population, it was thought that the departments would be too small to meaningfully answer some of the questions posed with regards to professionalization and innovation. Also, such departments rarely maintain full time addresses; rather, they exist mainly as voluntary associations. The return rate on these questionnaires was 69.9 percent or 37 departments. Of the respondents, 92% were fire chiefs, 5% senior fire department personnel and one was a deputy city clerk. Of the fire departments replying, 16% were full time departments, 46% were "composite" departments using both full time firefighters and volunteers, 19% were volunteer departments with a full time chief, and 19% were fully volunteer departments.

Altogether, the questionnaire return rate was 75.7 percent. Compared to community surveys this is average, although the regional police response was much better than expected. However, for organizational research this is quite good. Kreps and Weller, for example, had a 37.2 percent response rate on their population survey of U.S. police forces from cities of 50,000 population and above.

Copies of each questionnaire and the appropriate covering letters may be found by referring to Appendices C and D at the end of the text.

**Supplementary Data Sources**

Prior to undertaking the empirical phase of this study, the author undertook to acquaint himself with the general problem of regional government through several methods.

First of all, open ended interviews were conducted, with five officials who served as "knowledgeables." Two of these were Provincial Government employees who were closely associated with the regionalization and county restructuring program (one was essentially the "architect" of the plan), two were affiliated with municipal associations in Ontario, and the remaining interviewee was a Federal Government official particularly knowledgeable about the Provincial emergency planning sector.
Secondly, the author attended a meeting of the Provincial Municipal Liaison Committee. This body is composed of Provincial officials and municipal representatives; its terms of reference are "to consider all matters related to the role, status and responsibilities of local government in Ontario, and to specifically consider Provincial Government policy proposals at the development stage." Observation of the proceedings of this conference were most helpful in sensitizing the researcher to the mutual concerns and differences of administrators at both levels of government, including those related to regional government.

In addition to the above, prior field work in Waterloo Region in 1974 had provided an insight into some of the problems which can ensue during an emergency period (in this case, following a flood) when a regional government is still in its initial period of operation. Indeed it was this concern which initially suggested to this researcher the importance of further studying the impact of regional government on crisis management services.

**Strengths and Limitations of the Data**

As has been repeatedly stressed, past studies of local government reorganization have either been impressionistic evaluations, mathematically based simulations or average unit cost studies. Accordingly, the main strengths of this data are that it is comparative, concrete and longitudinal. Since materials such as municipal expenditures must be in the form of audited statements, little misrepresentation could be expected. Similarly, questionnaire data involved a maximum of structured quantifiable answers and a minimum of attitudinal or opinion information (which require greater cross verification).

Nevertheless, the limitations of the data are considerable and must always be kept in mind.

Perhaps the most serious limitation is that in depth, organization wide interviewing with police, fire and emergency measures officials was not possible. While a considerable amount of secondary material was used to help minimize the incidence of data extrapolations divorced from knowledge of actual environmental contexts, this does not fully replace the insight possible through first person interviewing. Since the study was essentially unfunded, however, a mailed questionnaire had to be substituted as a major data gathering technique.

Secondly, strict comparability of some variables on a before/after basis was not always possible. This was a result of two inhibiting factors. First of all, data on some measures was simply not kept at the primary level. For example, with some exceptions, municipal
police force training and educational qualifications figures were not compiled prior to regionalization. Also, the existence of various township policing arrangements with the Ontario Provincial Police meant that the recorded "cost" of municipal policing before regionalization did not completely coincide with the "true" cost.

A third problem here was the inability to use census data on income, occupation etc. for each regional municipality. Unfortunately, census boundaries do not coincide with political jurisdictions; hence, the difficulty of adaptability. This was particularly true for regional municipalities such as Durham which include all or parts of several former counties. In addition, upon regionalization a number of new municipalities were formed at the lower tier of government, while most existing units annexed portions of former townships. Thus, patterns of intra-region population growth were most difficult to document since much of the increase for a city such as Oakville was likely to be due to annexations rather than natural growth.

Many of these problems are not unique to this particular piece of research. As the Task Force on Local and Regional Government Data of the Ontario Economic Council has pointed out, "it is very difficult to undertake a study of 'soft services,' given the data limitations and what assumptions have to be made with regard to a study of this kind." Wherever data comparisons do appear in this study, however, care has been taken to point out the limitations and the source of the particular statistic used.
Footnotes


8. For a more detailed discussion of these local government reviews see: Chapter Three, p. 32.

9. This was the explanation given the author by an Information Canada employee.


11. For example, in an interview with a London Free Press reporter shortly after his election as Provincial Liberal Party Leader, Dr. Stuart Smith said, "we are going to have to seriously consider dismantling every regional government except one or two." (January 31, 1976).


14. Costs of an initial field trip and administrative expenses associated with the questionnaire mailing were covered by Emergency Planning Canada, and for this the author is grateful.

CHAPTER SIX

ANALYSIS OF DATA

In this chapter, the analysis of data is presented for each of the three crisis management agencies studied. In order to provide a framework for comparison, the data presentation is preceded by two preliminary sections. In the first, the nine regional municipalities are compared and ranked on the basis of four "community contextual characteristics" which are closely related to the local government restructuring process. Then, the three crisis management services under consideration are contrasted on the basis of five organizational dimensions - complexity, visibility, technological dependence, planning orientation and autonomy.

The Regional Municipalities:
Contextual Characteristics and Basic Types

In this section, four community contextual characteristics are considered: degree of prior fragmentation (fractionalization), dominance of central urban unit, population density, and municipal wealth. Such community characteristics represent structural elements of the community which ultimately constrain the type and range of organizational actions possible. Palumbo and Williams illustrate this point in their model of decision making in local health systems and demonstrate that community characteristics can directly influence the nature of organizational outputs. Similarly, Dynes and Wenger empirically show that community structural variables can significantly affect the distribution, structure and exercise of social power in the community.

The specific four variables enumerated above were selected on the basis that they appeared to constitute key elements in influencing the demand-capability ratio for municipal public services. That is, with increasing population density, fire probabilities, certain health hazards etc. are generally assumed to increase in importance, thus creating additional strain on or demand on existing municipal services. In turn, low fragmentation, the "organizational slack" existent in large, dominant urban organizations and considerable municipal wealth are visualized as positive factors in enhancing the
capability for coping with these accelerated demands. This should be especially so where structural change of a political nature (i.e., regional government) engenders a whole new set of demands and capabilities.

As suggested in Chapter Four, an important contextual characteristic related to the consolidation of municipal services is the degree to which an area is fragmented or fractionalized in respect to local jurisdictions. In a highly fragmented region, effective decision making on areawide issues is generally thought to be paralyzed, and power (economic and political) to be inefficiently dispersed.

In the present research, a composite index of fractionalization was formulated based on both land area and population. Taking the number of municipal units existing before regionalization, the number jurisdictions per 100,000 population was calculated. Then, the number of jurisdictions per 100 square miles of land area was calculated. The two figures were then added together to form a composite index of fragmentation. As seen in Table 1, Durham, York and Niagara Regions were all highly fragmented with scores over 11. Also highly fragmented were Sudbury (10.3) and Waterloo (8.7). By contrast, Peel, Hamilton-Wentworth, Halton and Ottawa-Carleton were relatively low in fragmentation, all scoring in the 5-6 range.

A second contextual characteristic refers to the extent of domination by the central urban unit in the regional municipality. Regions dominated by a single centre are likely to experience less overall change because regionalization takes the form of an extension of service, much as with amalgamation. Regions where power is diversified to a greater extent, are more likely to undergo real change because essentially new political and administrative power structures have been created.

All nine regions were ranked in terms of the dominance of the major urban unit based on demographic, economic, and political factors. Demographic dominance was measured by calculating the percentage of the total regional population represented by the major urban unit. Economic dominance was measured by calculating the percentage of the total regional assessment represented by the major urban unit. Finally, political dominance was measured by calculating the percentage of votes on the regional council (excluding the chairman's vote) held by the major urban unit. To calculate a Total Regional Domination Score all three percentage figures were added together and then divided by three. (Table 2)

Hamilton-Wentworth ranked highest in terms of dominance of the major urban unit with a score of 72.3. Also ranking high were Sudbury (65.3), Ottawa-Carleton (64.7) and Peel (61.6). Clustered closely at 41-42 were Halton, Durham and Waterloo Regions. Low ranking regional municipalities were Niagara (28.3) and York (25.5).
### TABLE 1

Index of Municipal Fractionalization (Prior to Regionalization)

<table>
<thead>
<tr>
<th>Regional Municipality</th>
<th>Number of Jurisdictions per 100,000 population(^a)</th>
<th>Number of Jurisdictions per 100 sq. miles of land area</th>
<th>Index of Municipal Fractionalization</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Durham</td>
<td>9.5</td>
<td>2.4</td>
<td>11.9</td>
<td>1</td>
</tr>
<tr>
<td>York</td>
<td>9.3</td>
<td>2.2</td>
<td>11.5</td>
<td>2</td>
</tr>
<tr>
<td>Niagara</td>
<td>7.7</td>
<td>3.6</td>
<td>11.3</td>
<td>3</td>
</tr>
<tr>
<td>Sudbury</td>
<td>8.9</td>
<td>1.4</td>
<td>10.3</td>
<td>4</td>
</tr>
<tr>
<td>Waterloo</td>
<td>5.8</td>
<td>2.9</td>
<td>8.7</td>
<td>5</td>
</tr>
<tr>
<td>Peel</td>
<td>3.3</td>
<td>2.1</td>
<td>5.4</td>
<td>6</td>
</tr>
<tr>
<td>Hamilton-Wentworth</td>
<td>2.8</td>
<td>2.5</td>
<td>5.3</td>
<td>7</td>
</tr>
<tr>
<td>Halton</td>
<td>3.5</td>
<td>1.7</td>
<td>5.2</td>
<td>8</td>
</tr>
<tr>
<td>Ottawa-Carleton</td>
<td>3.9</td>
<td>1.4</td>
<td>5.1</td>
<td>9</td>
</tr>
</tbody>
</table>

\(^a\) Calculated on the basis of regional population the year before local government reorganization. Jurisdictions refers to the number of separate incorporated municipal units.
### TABLE 2

**Dominance of Major Urban Unit of Region (1974)**

<table>
<thead>
<tr>
<th>Regional Municipality - Largest Urban Unit</th>
<th>Percentage of Total Regional Population</th>
<th>Percentage of Total Regional Assessment</th>
<th>Percentage of Votes on Regional Council(^a)</th>
<th>Total Regional Domination Score</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hamilton-Wentworth:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hamilton</td>
<td>75.33</td>
<td>78.65</td>
<td>62.96</td>
<td>72.3</td>
<td>1</td>
</tr>
<tr>
<td>Sudbury:</td>
<td>60.11</td>
<td>85.72</td>
<td>50.00</td>
<td>65.3</td>
<td>2</td>
</tr>
<tr>
<td>Ottawa-Carleton:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ottawa</td>
<td>60.33</td>
<td>78.44</td>
<td>53.33</td>
<td>64.7</td>
<td>3</td>
</tr>
<tr>
<td>Peel:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mississauga</td>
<td>67.28</td>
<td>69.85</td>
<td>47.62</td>
<td>61.6</td>
<td>4</td>
</tr>
<tr>
<td>Halton:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Burlington</td>
<td>45.97</td>
<td>43.07</td>
<td>37.50</td>
<td>42.2</td>
<td>5</td>
</tr>
<tr>
<td>Durham:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oshawa</td>
<td>43.94</td>
<td>44.14</td>
<td>36.67</td>
<td>41.6</td>
<td>6</td>
</tr>
<tr>
<td>Waterloo:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kitchener</td>
<td>45.50</td>
<td>41.43</td>
<td>37.50</td>
<td>41.5</td>
<td>7</td>
</tr>
<tr>
<td>Niagara:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>St. Catharines</td>
<td>33.11</td>
<td>30.41</td>
<td>21.43</td>
<td>28.3</td>
<td>8</td>
</tr>
<tr>
<td>York:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Markham</td>
<td>26.90</td>
<td>30.78</td>
<td>18.75</td>
<td>25.5</td>
<td>9</td>
</tr>
</tbody>
</table>

\(^a\)Excludes vote of Regional Chairman.
To achieve a composite picture of the regions, a typology was formulated cross relating prior fragmentation with domination of the major urban unit. As seen in Figure 4, five types of regions resulted from this cross classification. Type 1 ranking high on both axes was represented by Sudbury Region. Type 2, with high domination and low fragmentation described Hamilton-Wentworth, Ottawa-Carleton and Peel. Type 3 with moderate domination and high fragmentation included Durham and Niagara Regions. Type 4 with moderate domination and low fragmentation was represented by Halton Region. Finally, Type 5 with low domination and high fragmentation described Waterloo and York Regions. No empirical example of low domination and low fragmentation existed. This is not surprising since such an area would have neither the financial base nor the pressing raison-d'etre for regionalization.

Two other contextual characteristics will be considered here in addition to fragmentation and central city-town domination.

Population density was measured by dividing the 1974 assessed population for each region by the total regional area (in square miles). As seen in Table 3, Hamilton-Wentworth was the densest region with 929 inhabitants per square mile, while Sudbury was the least dense with 151 inhabitants per square mile. Also, low in population density were Durham (260) and York (294). Population density is at least partially a kind of "proxy variable" for urbanization, in that it gives a broad idea of residential clustering in built up urban areas. This has particular implications for fire and police services which tend to be highly sensitive to differing levels of population concentration. Fire probability, for example, usually increases as population density increases, as do certain types of criminal offences.

The process of structural consolidation is further influenced by municipal wealth differentials to the extent that: 1.) the degree of intra-regional disequilibrium of service levels and 2.) the capacity of the regional municipality to institute changes in the quantity and quality of services, both vary according to the size and distribution of revenues.

In the present analysis, total per capita revenue for 1974 (both tiers combined) for each regional municipality has been utilized as the operational measure of municipal wealth. This is based on the sum total of all revenue from municipal taxation, payments in lieu of taxes (including amounts paid by senior levels of government on tax exempt properties), Province of Ontario grants (conditional and unconditional) and other revenue (from permits, fines etc.).

As seen in Table 4 Ottawa-Carleton, Hamilton-Wentworth and Durham all ranked high in municipal wealth, with per capita revenues over four hundred dollars. Lowest were York, Waterloo and Halton with per capita revenues between three hundred and thirty five dollars, and three hundred and forty dollars.
FIGURE 4

Typology of Regional Municipalities

<table>
<thead>
<tr>
<th>Dominance of Largest Urban Unit</th>
<th>Fractionalization</th>
<th>High</th>
<th>Moderate</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>High</td>
<td>(1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sudbury</td>
<td>(3)</td>
<td>(5)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Durham</td>
<td>Niagara</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Waterloo</td>
<td>York</td>
</tr>
<tr>
<td>Low</td>
<td></td>
<td>(2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hamilton-Wentworth</td>
<td>(4)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ottawa-Carleton Peel</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Halton</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### TABLE 3

**Population Density: 1974 (by regional municipality)**

<table>
<thead>
<tr>
<th>Regional Municipality</th>
<th>Population Density (number of persons per square mile of area)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hamilton-Wentworth</td>
<td>929</td>
</tr>
<tr>
<td>Peel</td>
<td>683</td>
</tr>
<tr>
<td>Waterloo</td>
<td>534</td>
</tr>
<tr>
<td>Halton</td>
<td>526</td>
</tr>
<tr>
<td>Niagara</td>
<td>491</td>
</tr>
<tr>
<td>Ottawa-Carleton</td>
<td>445</td>
</tr>
<tr>
<td>York</td>
<td>294</td>
</tr>
<tr>
<td>Durham</td>
<td>260</td>
</tr>
<tr>
<td>Sudbury</td>
<td>151</td>
</tr>
</tbody>
</table>
### TABLE 4

**Per-Capita Revenue: 1974 (by regional municipality)**

<table>
<thead>
<tr>
<th>Regional Municipality</th>
<th>Total Per-Capita Revenue (1974)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ottawa-Carleton</td>
<td>$444</td>
</tr>
<tr>
<td>Hamilton-Wentworth</td>
<td>402</td>
</tr>
<tr>
<td>Durham</td>
<td>404</td>
</tr>
<tr>
<td>Peel</td>
<td>361</td>
</tr>
<tr>
<td>Niagara</td>
<td>351</td>
</tr>
<tr>
<td>Sudbury</td>
<td>347</td>
</tr>
<tr>
<td>York</td>
<td>339</td>
</tr>
<tr>
<td>Waterloo</td>
<td>337</td>
</tr>
<tr>
<td>Halton</td>
<td>336</td>
</tr>
</tbody>
</table>
Comparison of Crisis Management Services

The present empirical research on the impact of regionalization focused upon three different municipal service areas - police protection, fire protection and emergency measures. Of these, only fire services have not been regionalized. All three serve "crisis management" functions; however, there are significant differences among them in terms of structure and activities.

Figure 5 summarizes the similarities and differences among each of the three types of crisis management services under consideration here using five bases of comparison - complexity, visibility, technological dependence, planning orientation and autonomy.

Organizational complexity is highest in the area of police protection. Each functional area, for example, traffic control, criminal investigation and vice usually has a separate structural unit, each of which is further differentiated. Fire departments have considerable role differentiation, for example, pump operators, ladder truck operators, but less functional differentiation than with police departments. As new functions such as fire prevention and emergency medical services grow in importance, fire departments can be expected to grow in their degree of complexity. Emergency measures offices are usually small (often only one or two employees) and thus have little differentiation of role or function.

Public visibility is constantly high for police departments. To a large extent this visibility is demanded by the community as it is visualized, in part, as a deterrent to crime. The visibility of fire departments is only intermittently high, since the service is generally activated on a "reactive basis." When in action, however, fire fighters are highly visible, largely because of the nature of their uniforms and equipment. Emergency measures offices have extremely low visibility most of the time and this often leads to problems of organizational legitimacy. This is particularly true in areas of low disaster probability where tasks are largely contingency-connected rather than operational.

Technological dependence is highest for fire departments where hazards are materially based. Police services are, to a greater extent "people-processing organizations," although communications and investigative procedure demand a relatively sophisticated level of technology. Emergency measures offices deal frequently with complex technological matters, for example, radiation hazards, but maintain only a small supply of their own resources (largely radio equipment).

Emergency measures offices, on the other hand, are largely planning oriented, and this contingency planning is normally of a long range nature. Police departments are basically operationally oriented,
FIGURE 5
Comparison of Three Crisis Management Services

<table>
<thead>
<tr>
<th>Variable</th>
<th>Police Protection</th>
<th>Fire Protection</th>
<th>Emergency Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complexity</td>
<td>High</td>
<td>Medium</td>
<td>Low</td>
</tr>
<tr>
<td>Visibility</td>
<td>Constantly High</td>
<td>Intermittently High</td>
<td>Generally Low</td>
</tr>
<tr>
<td>Technological Dependence</td>
<td>Medium</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Planning Orientation</td>
<td>Medium</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Autonomy</td>
<td>High</td>
<td>Medium</td>
<td>Low</td>
</tr>
</tbody>
</table>
but, increasingly, new programs and technologies (especially computer based ones) demand a greater degree of planning. Indeed, several of the regional police departments surveyed here maintained full time planning and research officers. Fire departments are beginning to move into the area of planning, especially in regards to prevention programs; to a great extent, however, most activities are still purely operational.

Finally, the three crisis management services differ in the degree to which they are autonomous. James Q. Wilson has suggested that on the whole police protection is difficult to bring under administrative control. A chief reason for a city's failure to exercise influence over police protection potentially at its disposal is that, other than in regards to particularistic complaints such as unjust traffic tickets, the citizenry at large and public officials are not generally interested in police matters. In Ontario, police protection is not directly a responsibility of municipal or regional councils - rather it is supervised by police commissions. Fire departments are under direct municipal control; however, due to their volunteer makeup in many communities, they tend to remain closer to citizen association and input. Emergency measures offices are largely non-autonomous, and are completely dependent on municipal and federal levels of government for support. Most of the emergency measures offices studied here were only nominally autonomous, and were part of either the regional public works department or the regional administrator's office.

Nature of the Analysis

The research data will be presented and analyzed here under the headings of each of the three crisis management services discussed above. The analysis will employ the impact indicators indicated in Chapter Four - innovation, resources, professionalization structuring of organizational activities, interorganizational co-ordination and municipal expenditures.

The chief research focus will be the eight regional police departments. These are of special interest because they: 1.) are large complex organizations, and 2.) have been consolidated, thus providing actual longitudinal information. Since they are of minimal size, the emergency measures offices are inappropriate foci for information about changes in organizational structure (for example, size of administrative [supportive components]). Rather the main points of analysis in relation to these agencies concern: 1.) changes in the priority of emergency related activities, and 2.) changes in the resources and cooperation extended to emergency offices as a result of regionalization. Fire departments in regional areas have not been regionalized and thus comprise networks of separate organizations. The impact of
regionalization will be discussed mainly with respect to changes in inter-organizational co-ordination. Also, data will be presented which indicate perceived advantages and disadvantages of regionalization as reported by these fire forces.

The data reported here will be articulated within the framework of the model of structural consolidation presented in Chapter Four. Due to the relatively small number of sample units, to the paucity of available baseline information for some variables, and the relatively short operational time of most of the regional governments this cannot be construed as a full test of the relationships posited in this model. Rather, it should be seen as a basically descriptive, exploratory attempt to chart the short-term impact of a significant but previously scarcely studied phenomenon.

**Structural Consolidation and Changes in Police Protection**

**Problems Before Regionalization**

Before local government reorganization, the size of expenditures and resources of police services varied erratically from municipality to municipality within each regional area.

As indicated in Table 5, nearly fifteen percent of all former separate local police forces in the eight regions where police protection has been regionalized had personnel complements under five in number two years before police force regionalization. Another eighteen percent had staff sizes of from 10-19 employees. In contrast, only eleven percent of the forces had a staff of 100 or larger.

According to the 1974 Task Force on Policing in Ontario, the minimum complement requirement for municipal police forces is between 15 and 20 police officers plus a chief constable, deputy and secretarial help; below this size threshold local responsiveness cannot be significantly achieved. Thus if one takes the minimum staff size as twenty, it appears that two years prior to regionalization fifty-nine percent of municipal police forces in the eight regional areas would have fallen below this minimum figure.

Many of the police forces below minimal size lacked resources with which to purchase communications equipment, or to operate on a twenty-four hour basis. In the Niagara Region, for example, most small forces relied on the telephone as their only method of communicating with other municipal police departments. And in the Waterloo Region, smaller forces could not afford round the clock service.
<table>
<thead>
<tr>
<th>Number of Police Personnel (police officers and civilians)</th>
<th>Number of Municipal Forces</th>
<th>Percentage of all Forces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fewer than 5</td>
<td>9</td>
<td>14.8</td>
</tr>
<tr>
<td>5-9</td>
<td>11</td>
<td>18.0</td>
</tr>
<tr>
<td>10-19</td>
<td>16</td>
<td>26.2</td>
</tr>
<tr>
<td>20-49</td>
<td>10</td>
<td>16.4</td>
</tr>
<tr>
<td>50-99</td>
<td>8</td>
<td>13.1</td>
</tr>
<tr>
<td>100+</td>
<td>7</td>
<td>11.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>61</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>
Other problems accruing from the small size of municipal police forces included recruitment problems due to irregular work hours and low pay, the lack of specialized services, and the inability to provide relief for staff in order that they might receive professional training at the Ontario Police College.

A second major problem in police servicing prior to regionalization was the "free policing" carried out in some areas by the Ontario Provincial Police. Not only did this add a foreign element to the municipal policing network, but it meant that some municipalities were receiving benefits without costs, while other adjacent municipalities faced rapidly rising expenditures in order to maintain their own police organizations. In addition, this "free policing" involved only a general patrol service, meaning that other functions such as bylaw enforcement were handled by other means or not at all. As long as townships and villages remained essentially rural, this low extensiveness of service was not problematic; as urban growth reached into these areas, however, this type of arrangement was bound to grow less satisfactory.

Other problems relating to police services prior to regionalization included the use of private security personnel to perform public protective functions (Sudbury Region) and jurisdictional difficulties in policing common bodies of water (Niagara Region).

Organizational Changes

1. Resource Base

For the functional area of police protection, basic resources will be empirically examined using two categories - human resources and physical resources. In turn, the former will be operationally defined as the total number of: 1.) police officers (sworn personnel) and 2.) civilian (support) staff actually employed by the organization, while the latter will be measured by the number of police cruisers (autos) owned and operated by the police force under study.

As previously pointed out, definitive longitudinal comparisons are made somewhat more difficult due to the no-cost general patrol service offered to some municipalities through the O.P.P. prior to regionalization. What can be empirically demonstrated however are: 1.) the relative degree of resource base expansion needed to cover an extension of service to those areas formerly not part of the municipal police force network, and 2.) the overall increase in human and physical resources in regional municipalities since consolidation.
<table>
<thead>
<tr>
<th>Regional Municipality</th>
<th>% Change in Number of Sworn Personnel (police officers)</th>
<th>% Change in Number of Civilian (support) Personnel</th>
<th>% Change in Number of Police Cruisers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Durham</td>
<td>+16.0</td>
<td>+91.3</td>
<td>+71.8</td>
</tr>
<tr>
<td>Sudbury</td>
<td>-25.4</td>
<td>+3.4</td>
<td>+56.2</td>
</tr>
<tr>
<td>Waterloo</td>
<td>+19.7</td>
<td>+65.5</td>
<td>+55.6</td>
</tr>
<tr>
<td>Niagara</td>
<td>+9.6</td>
<td>+61.5</td>
<td>+51.8</td>
</tr>
<tr>
<td>Halton</td>
<td>+2.5</td>
<td>+95.6</td>
<td>+40.5</td>
</tr>
<tr>
<td>Hamilton-Wentworth</td>
<td>+4.0</td>
<td>+73.3</td>
<td>+21.0</td>
</tr>
<tr>
<td>York</td>
<td>+8.5</td>
<td>+45.4</td>
<td>-17.9</td>
</tr>
<tr>
<td>Peel</td>
<td>+37.8</td>
<td>+113.5</td>
<td>+54.5</td>
</tr>
<tr>
<td>All Regions</td>
<td>+9.1</td>
<td>+68.7</td>
<td>+41.7</td>
</tr>
</tbody>
</table>

*a 'Before refers to two years prior to consolidation.

"After" refers to the first year of regionalized police protection.*
As shown in Table 6, increases in civilian (support staff) between the second year prior to regionalization and the first year of consolidation were most substantial (68.7%) followed by upward changes in the numbers of police cruisers (41.7%) and in sworn officers (9.1%). The considerable rise in civilian personnel reflects the greater importance of administrative and co-ordinating structures in larger scale consolidated public organizations. In contrast, most small municipal forces only maintained one clerical staffer, chiefly for secretarial purposes. The problem with this often was that uniformed personnel had to cope with administrative tasks in addition to operational activities, creating conflicting demands on their time and priorities.

It will be noted that two negative percentages were calculated. The decrease in the number of police officers in Sudbury Region is somewhat misleading in that it includes the return of 148 mining company security personnel in the former town of Copper Cliff to private status. If this contingent were not included, Sudbury would also show a considerable increase in police officers. Secondly, the number of police cruisers in York Region decreased with regionalization. York was unique among the regions studied in that each municipality formerly maintained its own police force, usually on a contract basis. Consequently, before regionalization each municipal force operated at least one police cruiser. This overlap was at least initially reduced upon consolidation.

Of particular use here is what has been called the stress-strain perspective based on the relationship between demand and capability. According to this perspective, regionalization can be seen as creating two specific types of demands for the areas of police protection: 1.) the demand for and extension of regular municipal servicing to areas formerly without their own police forces (quantity of demands), 2.) the demand for improved organizational output in activities such as crime prevention (quality of demands). In the section to follow on innovations, the latter "demand" will be discussed at greater length. At this point, however, the demand-capability notion will be applied to the question of service extension.

Continuing this idea, the greater the need for service extension, the greater the probable demand on the regional agency or organization. One way of disposing of this demand would be to declare it "illegitimate"; however, given the autonomy level of a public organization this is usually unlikely, especially when political pressure is contrary. Alternatively, changes may be made in the resource capacity of the organization in order to meet this demand for an increase in the quantity of services.

In order to at least partially test this demand-capability notion, measures of both variables were formulated. Demand was operationalized as the percentage of the regional land area (in square miles) formerly without separate municipal police force protection and subsequently the responsibility of the consolidated force. It was thought that this
represented a new demand, whereas policing the rest of the area was more a matter of adapting existing municipal policing to a centralized structure. Capability was represented by changes in the quantity of police cruisers operated municipally before and after regionalization. It was expected that the greater the need for service extension, the greater would be the increase in the physical resource base of the regionalized police force, specifically in the number of police cruisers.

As seen in Table 7, when each regional municipality was ranked as to demand and capability, there was a mild positive relationship (Spearman's $r_s = 0.739$, $p = .05$ : two-tailed test). The chief exception here was Hamilton-Wentworth Region which had a considerable increase in new territory to be policed, but only a moderate (21%) increase in the number of police cruisers. A possible explanation here could be this: because it was by far the largest police force studied, Hamilton-Wentworth Regional Police was able to subsume some of the needed resources out of the "organizational slack" maintained by the former Hamilton Police.

Given considerable initial resource expansion, in order to meet the demand of service extension, what of the subsequent period after the regional organization has been established for some time? As indicated by Table 8, the average yearly increase in resources for all regional forces since the first year of consolidation was still considerable. This was found to be greatest for civilian (support) staff (13.4%), followed by increases in the number of police cruisers (10.7%) and sworn officers (9.8%). A cursory examination of pre-regionalization data confirms that those annual resource changes are somewhat higher than was formerly the case.

The present data, then tends to uphold the positive correspondence between consolidation and an increase in the resource base predicted in the model of structural centralization presented in Chapter Four, at least in reference to basic operational resources. Furthermore, a significant intervening variable here appears to be the magnitude of the demand for service extension as against merely service "equivalence." There was also some indication that the need to acquire new resources may be partially mediated by existing organizational slack which can be applied to demand problems.

2. **Innovation**

Earlier, innovation was defined here as deliberate organizational change involving alterations in technology, practices and programs. As Kreps and Weller have observed, innovation in police departments varies along a continuum of structural impact. Some innovations
TABLE 7

Demand-Capability Comparison: Extension of Police Services to Areas Without Separate Municipal Forces Prior to Regionalization

<table>
<thead>
<tr>
<th>Regional Municipality</th>
<th>Demand Rank: Percentage of Region in Land Area Formerly Without Separate Municipal Police Forces</th>
<th>Capability Rank: Percentage Increase in Number of Police Cruisers a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Durham</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Halton</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Hamilton-Wentworth</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Niagara</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Sudbury</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Waterloo</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>York</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Peel</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>

a See Table 6

Spearman's $r_s = 0.739$ p. = .05 (two tailed test)
TABLE 8

Changes in Resource Base of Regional Police:
From First Year of Consolidation to Present

<table>
<thead>
<tr>
<th>Regional Municipality</th>
<th>% Change in Number of Police Officers</th>
<th>% Change in Number of Civilian (support) Personnel</th>
<th>% Change in Number of Police Cruisers (autos)</th>
<th>Numbers of Years Since Regionalization (minus one year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Durham</td>
<td>+29.2</td>
<td>+20.4</td>
<td>+11.7</td>
<td>1</td>
</tr>
<tr>
<td>Halton</td>
<td>+15.1</td>
<td>+13.3</td>
<td>+9.6</td>
<td>1</td>
</tr>
<tr>
<td>Hamilton-Wentworth</td>
<td>+2.3</td>
<td>+3.8</td>
<td>+3.5</td>
<td>1</td>
</tr>
<tr>
<td>Niagara</td>
<td>+17.0</td>
<td>+59.5</td>
<td>+39.0</td>
<td>4</td>
</tr>
<tr>
<td>Sudbury</td>
<td>+9.8</td>
<td>+23.3</td>
<td>+2.0</td>
<td>2</td>
</tr>
<tr>
<td>Waterloo</td>
<td>+15.1</td>
<td>+45.8</td>
<td>+22.9</td>
<td>2</td>
</tr>
<tr>
<td>York</td>
<td>+50.0</td>
<td>+28.1</td>
<td>+56.2</td>
<td>4</td>
</tr>
<tr>
<td>Peel</td>
<td>+18.8</td>
<td>+20.2</td>
<td>+26.9</td>
<td>1</td>
</tr>
</tbody>
</table>

Average Annual Change (all regions)\textsuperscript{b} +9.8 +13.4 +10.7

\textsuperscript{a} This approximates the 'effective organizational life' of the consolidated forces.

\textsuperscript{b} Calculated by dividing percentage changes for all regions by number of years since regionalization (minus one year).
such as "team policing" involve fundamental changes in police roles and in basic patrol practices and patterns; others, in particular, general equipment changes involve little or no structural adaptation. Innovation can also differ in the degree to which it affects the extraorganizational environment. Program changes such as community relations programs obviously have direct environmental impact. Changes in police practices such as the assignment of police women to patrol may also have a direct impact on the population serviced. Technological changes normally have greater internal impact; some however, like an improved emergency reporting system involve organization clientele as well as internal elements.

If these two dimensions are cross-classified, four "types" of police innovations can be found (Figure 6). Type One, as typified by family crisis intervention involves both high internal structural impact and high environmental impact. Type Two, typified by in-service training, has significant structural consequences but little general environmental impact. Type Three, typified by the "ride along plan" has a marked impact on the public at large, but involves little real internal change. Finally, Type Four, as typified by an improved tele-type system upgrades organizational performance but has little direct impact on either the internal structure or the external environment.

In the present study, innovations reported by regional police forces were divided into three categories: 1.) the adoption of "community-preventive" programs, 2.) changes in police practices and training, and 3.) equipment changes. The first of these involves a high degree of environmental impact, the second generally involves changes in internal structure, with varying but usually latent environmental consequences, and the third a change in the resource base, but minimal change in internal structuring or external relations.

Table 9 presents a frequency distribution of the 91 innovations reported by the seven regional police forces surveyed. Of these innovations 42.8% were equipment additions or improvements, 37.4% involved changes in police practices and training and 19.8% concerned the adoption of community-preventive programs. The most frequently reported change was that of implementing an in-service training program; all regional forces indicated that they had adopted this measure. Other frequently reported innovations were new radar equipment, crowd control training and the assignment of policewoman to patrol (each of these was adopted by 7 departments). Addition of a high school counselling/speakers program was the most common community-preventive program with five forces reporting implementation. In contrast, only one force each indicated that they had adopted a family crisis intervention program, team policing or automatic data processing. It was expected that several of the new regional police forces would have adopted automatic data processing; however, only one had done so (for traffic violations) and another had approved a long range program towards this end.
### FIGURE 6

**Types of Police Force Innovations**

<table>
<thead>
<tr>
<th>Environmental Impact (external)</th>
<th>Structural Impact (Internal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Family Crisis Intervention (1)</td>
</tr>
<tr>
<td>Low</td>
<td>In-Service Training (2)</td>
</tr>
</tbody>
</table>
**TABLE 9**

**Regional Police Department Innovations**

<table>
<thead>
<tr>
<th>Nature of Innovation</th>
<th>Number of Departments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Equipment Changes:</strong></td>
<td></td>
</tr>
<tr>
<td>Tape recording of police radio traffic</td>
<td>7</td>
</tr>
<tr>
<td>New radar equipment</td>
<td>7</td>
</tr>
<tr>
<td>Improved dispatch system</td>
<td>6</td>
</tr>
<tr>
<td>Electronic sirens and beacon lights for cruisers</td>
<td>6</td>
</tr>
<tr>
<td>Closed circuit television equipment</td>
<td>5</td>
</tr>
<tr>
<td>Improved emergency reporting system</td>
<td>4</td>
</tr>
<tr>
<td>Improved teletype system</td>
<td>2</td>
</tr>
<tr>
<td>Improved radio system</td>
<td>1</td>
</tr>
<tr>
<td>Public address system</td>
<td>1</td>
</tr>
<tr>
<td><strong>Police Practices and Training:</strong></td>
<td></td>
</tr>
<tr>
<td>In-service training program</td>
<td>8</td>
</tr>
<tr>
<td>Crowd-control training</td>
<td>7</td>
</tr>
<tr>
<td>Assignment of policewomen to patrol</td>
<td>7</td>
</tr>
<tr>
<td>Program evaluation methods</td>
<td>5</td>
</tr>
<tr>
<td>Increased bilingualism</td>
<td>2</td>
</tr>
<tr>
<td>Emergency measures training</td>
<td>2</td>
</tr>
<tr>
<td>Team policing</td>
<td>1</td>
</tr>
<tr>
<td>Automatic data processing (for traffic violations)</td>
<td>1</td>
</tr>
<tr>
<td>Sex-crime training</td>
<td>1</td>
</tr>
<tr>
<td><strong>Community-Preventive Programs:</strong></td>
<td></td>
</tr>
<tr>
<td>High-school counselling/speakers program</td>
<td>6</td>
</tr>
<tr>
<td>Community relations program</td>
<td>5</td>
</tr>
<tr>
<td>Alcohol and drug abuse program</td>
<td>4</td>
</tr>
<tr>
<td>Ride-Along plan</td>
<td>2</td>
</tr>
<tr>
<td>Family crisis intervention</td>
<td>1</td>
</tr>
</tbody>
</table>
It would appear, therefore, that the emphasis in the consolidated police forces has been on upgrading equipment quality and in adopting changes in practices and training which are responsive to general environmental pressures and contingencies, for example, assignment of police women to patrol and crowd control training. Less evident are innovations which are more exploratory and which imply a greater change in internal structure. For example, as Kreps and Weller point out, team policing involves "fundamental changes in police practices - delineation of general and specialist roles, altered patrol practices and substantially upgraded training." Similarly, family crisis intervention involves a fundamental role change for police officers as well as increased training in the social sciences. To date, such high impact, far reaching organizational changes have not generally been adopted by regional police forces in Ontario.

In examining innovation by individual regional police force, caution must be exercised as to data interpretation. The innovation score for each force does not describe how "advanced" one force is as compared to another. In some cases, innovative measures formerly adopted by one or several of the forces consolidated were automatically carried over into the regional force. For example, the Hamilton Police Department conducted a weekly television show entitled "Crime Desk" which was designed to inform the public of investigations underway and the role of the police in the community. This would not be specifically listed here, however, as an innovation adopted by the Hamilton-Wentworth Police since regionalization. What it is possible to compare however is the frequency and type of innovations which are adopted during the first years following regionalization and how these vary according to each basic "structural complexion" of the region. This in turn provides basic and previously uncollected information concerning the priority of changes in newly consolidated organizations and how these vary according to initial demands and capabilities. Table 10 provides a summary of police innovation patterns by regional municipality.

According to the present data, the mean number of innovations per regional police department was eleven. The highest number of innovations were reported by Niagara and Halton with fifteen each, the lowest by Hamilton-Wentworth with five.

Prior to regionalization one of the major problems of municipal policing in most regions was the non-standardized and generally deficient communications system. This was particularly true in regions with a large number of separate municipal police departments. It was expected, therefore, that regions formerly having a high number of police departments would place a priority on implementing equipment (material) changes, especially those designed to improve inter-unit communications.
TABLE 10

Police Protection Innovations (by regional police force)

<table>
<thead>
<tr>
<th>Nature of Innovation</th>
<th>Niagara</th>
<th>York</th>
<th>Waterloo</th>
<th>Sudbury</th>
<th>Hamilton-Wentworth</th>
<th>Halton</th>
<th>Durham</th>
<th>Peel</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Equipment Changes:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New radar equipment</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Improved dispatch system</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Electronic sirens, beacon lights for cruisers</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Tape recording of police radio traffic</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Closed circuit television equipment</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improved emergency reporting system</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improved teletype system</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improved radio system</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public address system</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Police Practices and Training:</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In-service training program</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Crowd-control training</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Assignment of policewomen to patrol</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Program evaluation methods</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Increased bilingualism</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Team policing</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Emergency measures training</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>ADP (for traffic violations)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Sex-crime training</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td><strong>Community Preventive Programs:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school counselling/speakers program</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Community relations program</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Alcohol and Drug Abuse program</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Ride along plan</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Family crisis intervention</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
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</tbody>
</table>
To test this notion, following Ostrom's suggestion\textsuperscript{14} an index of municipal police fragmentation was calculated based on the number of separate police departments per 100,000 population prior to regionalization. The comparative rankings on this measure are given in Table 11. Ranks on this index of police force fragmentation were then compared to how each region ranked in terms of the number of equipment changes reported. The Spearman $r_s$ for this was found to be .929, significant at the .001 level of probability (two-tailed test).

Two criteria were visualized here as being optimal for a high degree of social (non-equipment) change. First of all, the fractionalization level prior to regionalization should have been fairly low. As has just been shown, high fragmentation requires that a new police force commit a large part of its initial resources to equipment improvements; this means that "soft" innovations must be accorded a lower priority. In contrast, low prior fragmentation minimizes the funds which have to be committed to technological innovations. Also, high prior fragmentation means that the change-over process will be extremely taxing, in that a great number of heterogenous units must be converted into one relatively homogenous one. On the other hand, with a small number of units, prior (to consolidation) consultation and planning among constituent forces is more realistically possible. Secondly, and probably more important, the nature of the organizational core - the municipal force around which the new regional police is built, is important. If this force is already large and has dominated policing in a region prior to consolidation, then regionalization will tend to take the form of an extension of service, with relatively little actual structural reformulation as well as a limited degree of innovation. Alternately, if a region lacks a "critical core" around which to build an area-wide urbanized force, then much of its initial effort must be devoted to overcoming the "liability of newness." Ideally, then, a regional force should represent a merger between several medium to large sized urban departments. This would seem to ensure a critical core while at the same time creating an essentially new structure likely to be open to innovations in programs and practices.

The present data partially support this rationale. The highest innovation score, both overall and in social changes was reported by the Halton Regional Police, which among other things, had implemented team policing, family crisis intervention and a ride along plan. The new regional police force in Halton is essentially a merger of two moderate sized departments (Burlington and Oakville), each of which accounted for approximately 40 percent of the total municipal expenditures on policing in Halton prior to regionalization (1973). Similarly, Niagara, which ranked third in the number of social innovations (7), is essentially a merger of former police forces in St. Catherines and Niagara Falls, which accounted for 30 percent and and 23 percent of the regional expenditures on policing prior to regionalization (1970). Also ranking high was Durham (8), where Oshawa
TABLE 11

Comparison of Equipment (material) Change and Prior Degree of Municipal Police Force Fragmentation (by regional municipality)

<table>
<thead>
<tr>
<th>Regional Municipality</th>
<th>Number of Equipment Changes (rank)</th>
<th>Prior Degree of Municipal Force Fragmentation (rank)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Niagara</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>York</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Durham</td>
<td>3.5</td>
<td>3</td>
</tr>
<tr>
<td>Waterloo</td>
<td>3.5</td>
<td>4</td>
</tr>
<tr>
<td>Sudbury</td>
<td>5.5</td>
<td>5</td>
</tr>
<tr>
<td>Peel</td>
<td>5.5</td>
<td>7</td>
</tr>
<tr>
<td>Halton</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Hamilton-Wentworth</td>
<td>8</td>
<td>8</td>
</tr>
</tbody>
</table>

Spearman's $r_s = .929$  \( p = .001 \) (two tailed test)
previously accounted for 61 percent of municipal police expenditures in 1973, the year before regionalization. In contrast, where the core force was either extremely dominant - Sudbury, or very small (> 50 full time personnel) - York, the subsequent regional department ranked low in the adoption of programs and practices. Contrary to expectations, prior degree of fragmentation did not appear to be directly related to the adoption of social changes, although the Halton Regional Police ranked quite low in this regard.

The influence of organizational age (length of time since consolidation) appeared variable here. This did correspond with equipment changes to some extent, but did not seem to make any difference in social innovations or in the total innovation score.

To summarize, then, the process of regionalization of municipal police forces has resulted in considerable innovation in "hardware," especially communications equipment, and in changes in police practices and training (in-service-training, assignment of policewomen to patrol) which are typical of contemporary Ontario policing. Less evident have been changes which promise to lead to more fundamental changes in internal structure and in community relations. Equipment additions and improvements such as new dispatch systems were most evident in regional municipalities which formerly had a large number of separate municipal police forces. Social changes, on the other hand, were most frequently adopted in those regions in which several medium-large sized urban forces were merged to form a regional force with an essentially new identity. Regional police departments which were built around previously dominant urban forces tended to score low in the adoption of innovations of either type.

3. Professionalization

According to the existing literature on metropolitan reorganization, reformed metropolitan institutions lead to an increased role for professionals at the senior administrative and policy-making levels of municipal government. For example, in Nashville Metro Grant found that nearly all departments experiencing consolidation in the city-county merger sought outside technical experts and consultants to aid in the transition and tried to recruit qualified nationally known professionals to head the various agencies. Furthermore, Coomer and Tyer found that recruit training increased more than 200 percent in the first decade of metropolitan government in Nashville. In addition, a major program of college assistance for police officers was instituted and a Federal grant was obtained by a local junior college to develop a Police Science Degree program.
The present study used two measures of professionalization in regionalized police forces, police college training and method of determining promotion eligibility. A third measure, college background of police personnel was also included in the mailed questionnaire, but organizational records were generally not well kept on this variable. In general, regionalization appeared to have a positive effect on the professional training of police officers. In Niagara Region, prior to regionalization (1965) only 52.1 percent of all police officers had attended a recognized police college. In the first year of regionalization, 64 officers (16 percent of all officers on the force) were sent to the Ontario Police College; at present 77.3 percent of the regional force has police college training. The change in professional training is even more marked for Sudbury Region where the percentage having attended police college increased from 52.1 percent to 92.5 percent (a 40 percent increase) since regionalization. Hamilton-Wentworth despite its urban base had a relatively low professional training level before regionalization (46.2 percent for the Hamilton Police in 1968); since consolidation it has sent 124 of its 613 police officers for basic professional training. Professional training levels were initially higher in Halton and Waterloo (80.5 percent and 91.9 percent) at the time of consolidation; however, both these regional forces have recorded increases (16 percent and .1 percent respectively). Finally, Peel, Durham and York reported that almost 100 percent of their forces now had police college training or would have by the end of the year.

Six criteria: oral exams, written exams, work performance, length of service, educational achievement and psychological testing were used by regional forces in evaluating candidates for promotion. Kreps and Weller suggest that written examinations and oral testing represent more conventional approaches to promotional testing while educational achievement and formal evaluation of work performance entail increased professional emphasis. Of the remaining criteria, length of service is typically bureaucratic and traditional, while psychological testing is still an innovative measure not in common use.

As seen in Table 12, length of service has clearly declined as a significant criterion in the promotion procedure since regionalization (4 of 7 departments indicated that this was less important) while work performance and educational achievement are growing in importance. Partially offsetting this, however was the fact that oral and written exams were also generally accorded increased importance. Psychological testing is not yet widely employed in the promotion procedure (only one regional force presently used this method).

In sum, the present data do tend to indicate that the process of consolidation has led to a general increase in professionalism as indicated by more universal professional training and more emphasis
### TABLE 12

Changes in Criteria Used by Regional Police Forces in Determining Promotion Eligibility (since consolidation)

<table>
<thead>
<tr>
<th>Criteria for Determining Promotion Eligibility</th>
<th>Number of Regional Forces Presently Employing Criterion</th>
<th>Number of Regional Forces Where Criterion Has Become More Important</th>
<th>Number of Regional Forces Where Criterion Has Become Less Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Performance</td>
<td>8</td>
<td>5</td>
<td>-</td>
</tr>
<tr>
<td>Length of Service</td>
<td>8</td>
<td>-</td>
<td>4</td>
</tr>
<tr>
<td>Written Exams</td>
<td>7</td>
<td>5</td>
<td>-</td>
</tr>
<tr>
<td>Oral Exams</td>
<td>6</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Educational Achievement</td>
<td>3</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>Psychological Testing</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

*a More/Less important since consolidation*
on non-traditional promotion procedures. As Kreps and Weller point out, the effect of this increased professional expertise and knowledge development on quality of output is somewhat ambiguous, and not necessarily reflected in short term improvements in community service or crime reduction. However, professionalization can change the general "style" of policing, a fact which may have useful long range benefits for the community. In this regard the Task Force on Policing in Ontario suggests that formal training courses, continuing education (especially in the social sciences) and innovative performance evaluation systems all positively contribute to the development of a constable-centered management approach which "has potential for focusing police efforts on the highest priority community needs and for developing systematic solutions which meet these needs."20

4. Structuring of Activities: The Civilian Component

As modern police forces grow more complex the use of civilian personnel tends to become a more significant factor in the structuring of police activities. Civilians have been used to operate communications rooms, for specialized duties such as operations research and in Europe, even to head up criminal investigative units.21

Many of the small forces in the municipal policing network prior to consolidation made only limited use of civilian staff. As shown in Table 13, almost 30 percent of these municipal police departments employed no civilian staff members, while another 21 percent employed only one full time civilian. Furthermore almost a third of the 61 departments employed between two and five civilian staff. This often meant that uniformed employees were tasked with clerical duties such as typing and filing, thus effectively reducing the amount of time available for patrol and criminal investigation activities.

In the section on resource changes, figures were presented which suggest that there have been striking increases in the size of the civilian component in the municipal policing system since regionalization. Data on the relative mix of civilian versus sworn personnel before and after consolidation further reinforce this observation.

Table 14 compares the ratio of sworn personnel to civilian staff prior to regionalization, (two years before), during the first year of regionalization and at present for each regional municipality. In all cases this ratio has decreased since regionalization (average decrease from 2 years before consolidation to first year of regionalization = 3.6), indicating relatively larger civilian components.

According to the model of structural consolidation, an increase in the civilian (administrative) component is partially a function of increased professionalization and innovation. The assumption here is
### TABLE 13

**Size of Full-time Civilian Personnel Component in the Eight Regions Where Police Services Were Consolidated: Two Years Before the Establishment of Regional Police Protection**

<table>
<thead>
<tr>
<th>Size of Full-time Civilian Personnel Component</th>
<th>Number of Separate Municipal Forces</th>
<th>Percentage of All Forces</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>18</td>
<td>29.5</td>
</tr>
<tr>
<td>1</td>
<td>13</td>
<td>21.3</td>
</tr>
<tr>
<td>2-5</td>
<td>19</td>
<td>31.2</td>
</tr>
<tr>
<td>6-9</td>
<td>5</td>
<td>8.2</td>
</tr>
<tr>
<td>10-20</td>
<td>3</td>
<td>4.9</td>
</tr>
<tr>
<td>20+</td>
<td>3</td>
<td>4.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>61</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>
that increasingly specialized services, technologies and programs demand a greater number of support personnel to perform special coordinating and administrative tasks. For example, introduction of automatic data processing would entail hiring support staff for data preparation and compilation.

As a limited test of this, the present sworn personnel-civilian staff mix and changes in this were compared to innovation levels for both equipment (material) changes and for social (practices, training and programs) changes since regionalization. Two significant relationships were found. First, the relative increase in the police officer-civilian ratio from prior to regionalization (two years) to after regionalization (first year) is related to the level of social innovation since consolidation ($r = .762, p = .05$, two-tailed test). Secondly, the present police officer-civilian ratio is negatively related to the level of material innovation since consolidation ($8r = .999, p = .001$, two-tailed test). These comparisons may be inspected more closely in Tables 15 and 16.

These relationships suggest that upon consolidation, programs, specialties and activities non-existent in the more fragmented municipal police network resulted in a significant initial increase in the relative number of support staff.

Since consolidation two kinds of priorities have existed. Some departments, faced with the demands created by high prior fragmentation have channeled organizational resources into equipment changes designed to improve areawide communications and basic technological capacity. Other forces, having the advantage of lower prior fragmentation, have been able to minimize material innovation and concentrate on continued program-practice changes. This in turn has meant hiring more civilian support staff. Further, more intensive research (for example, a detailed analysis of the job descriptions of each civilian staffer) is needed, however, to conclusively determine the validity of the relationships suggested by the present data.

5. Municipal Expenditures on Policing

In the past, much of the debate on regional policing has concerned its effects on municipal expenditures. Opponents have pointed out that an increase in scale also means an increase in expenditures. In particular, former township and small town police would need to have their wages brought up to city police levels after consolidation. Also, standardized communications equipment, more patrol cars and special areawide programs are factors cited as adding to regional police expenditures. On the other hand, proponents of regional policing argue that a single relatively large department would provide certain
### TABLE 14

Police Officer-Civilian Ratio: Prior to (2 years before) Consolidation, First Year of Regionalization and Present (1976) — (by regional municipality)

<table>
<thead>
<tr>
<th>Regional Municipality</th>
<th>Police Officer-Civilian Ratio (2 years before consolidation)</th>
<th>Police Officer-Civilian Ratio (first year of regionalization)</th>
<th>Change</th>
<th>Present (1976) Police Officer-Civilian Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Niagara</td>
<td>14.4</td>
<td>9.8</td>
<td>-4.6</td>
<td>7.2</td>
</tr>
<tr>
<td>Halton</td>
<td>8.7</td>
<td>4.6</td>
<td>-4.1</td>
<td>4.6</td>
</tr>
<tr>
<td>Durham</td>
<td>9.5</td>
<td>5.7</td>
<td>-3.8</td>
<td>6.2</td>
</tr>
<tr>
<td>Hamilton-Wentworth</td>
<td>9.6</td>
<td>5.8</td>
<td>-3.8</td>
<td>5.7</td>
</tr>
<tr>
<td>Waterloo</td>
<td>10.6</td>
<td>7.7</td>
<td>-2.9</td>
<td>6.1</td>
</tr>
<tr>
<td>Sudbury</td>
<td>9.0</td>
<td>6.5</td>
<td>-2.5</td>
<td>5.8</td>
</tr>
<tr>
<td>York</td>
<td>8.0</td>
<td>6.0</td>
<td>-2.0</td>
<td>7.0</td>
</tr>
<tr>
<td>Peel</td>
<td>10.6</td>
<td>5.9</td>
<td>-4.7</td>
<td>5.8</td>
</tr>
</tbody>
</table>

*Calculated for all separate municipal police forces in each region*
TABLE 15

Comparison of Decrease in Police Officer/Civilian Ratio and Social Innovation Since Regionalization (by regional municipality)

<table>
<thead>
<tr>
<th>Regional Municipality</th>
<th>Decrease in Police Officer/Civilian Ratio: Between Two Years Prior to Consolidation and First Year of Regionalization</th>
<th>Rank (highest to lowest)</th>
<th>Number of Social Innovations since Regionalization</th>
<th>Rank (most to least)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peel</td>
<td>4.7</td>
<td>1</td>
<td>7</td>
<td>3.5</td>
</tr>
<tr>
<td>Niagara</td>
<td>4.6</td>
<td>2</td>
<td>7</td>
<td>3.5</td>
</tr>
<tr>
<td>Halton</td>
<td>4.1</td>
<td>3</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>Durham</td>
<td>3.8</td>
<td>4.5</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Hamilton-Wentworth</td>
<td>3.8</td>
<td>4.5</td>
<td>5</td>
<td>5.5</td>
</tr>
<tr>
<td>Waterloo</td>
<td>2.9</td>
<td>6</td>
<td>5</td>
<td>5.5</td>
</tr>
<tr>
<td>Sudbury</td>
<td>2.5</td>
<td>7</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>York</td>
<td>2.0</td>
<td>8</td>
<td>3</td>
<td>8</td>
</tr>
</tbody>
</table>

$S_r = .762 \; p = .05$ (two tailed test)

a A decrease in this ratio means the civilian component has grown relatively larger in size.
### TABLE 16

Comparison of Present Police Officer/Civilian Ratio and Material (Equipment) Innovation Since Regionalization (by regional municipality)

<table>
<thead>
<tr>
<th>Regional Municipality</th>
<th>Present Police Officer/Civilian Ratio a</th>
<th>Rank (highest to lowest)</th>
<th>Number of Material (equipment) Changes Since Regionalization</th>
<th>Rank (most to least)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Niagara</td>
<td>7.2</td>
<td>1</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>York</td>
<td>7.0</td>
<td>2</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Durham</td>
<td>6.2</td>
<td>3</td>
<td>6</td>
<td>3.5</td>
</tr>
<tr>
<td>Waterloo</td>
<td>6.1</td>
<td>4</td>
<td>6</td>
<td>3.5</td>
</tr>
<tr>
<td>Sudbury</td>
<td>5.8</td>
<td>5.5</td>
<td>5</td>
<td>5.5</td>
</tr>
<tr>
<td>Peel</td>
<td>5.8</td>
<td>5.5</td>
<td>5</td>
<td>5.5</td>
</tr>
<tr>
<td>Hamilton-Wentworth</td>
<td>5.7</td>
<td>7</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Halton</td>
<td>4.6</td>
<td>8</td>
<td>4</td>
<td>8</td>
</tr>
</tbody>
</table>

$R_s = .999 \quad p = .001$ (two tailed test)

a A low ratio means the civilian component is relatively large.
economies of scale in such areas as purchasing and training of personnel. Further savings could be expected from reducing the number of police detachments in the area. In its recommendations for an area-wide law enforcement plan for Anchorage, Alaska, the Greater Anchorage Borough Planning Commission suggested that consolidation could be of particular financial benefit to City residents because present costs of operating the department etc. would be spread over the entire community.

The question of the cost of regionalizing police protection comes at a time when the financing of police services is becoming a potential crisis for all of the province of Ontario. From 1968 to 1974, municipal expenditures on police protection rose a total of 158 percent or an average increase of 17 percent per year. This was 52 percent higher than the municipalities total own expenditures and 120 percent higher than municipal education expenditures for the same period. The Task Force on Policing in Ontario attributed this rise to two factors: 1.) increases in salary, overtime payments, fringe and pension benefits, and 2.) increases in the number of police officers related to population growth. If this escalation trend continued, warned the Task Force, by 1980 policing costs could exceed the taxpayers' ability to pay for the services by at least fifty-five million dollars.

Given this context of general financial crisis, what implications has structural reorganization had for municipal police spending?

Table 17 contrasts per capita municipal expenditures on police services for the year before and the first year of regionalized police protection for the eight regions presently possessing consolidated forces. Without taking into account the effects of inflation, Sudbury recorded the highest per capita increase and Niagara the lowest ($3.49).

To properly compare per capita increase in police protection expenditures, however, the figures in Table 17 must be adjusted: 1.) to account for inflation between the year before and first year of regionalization in each case and then, 2.) to reduce each increase to a common dollar base so as to account for the inflationary spiral from 1970 to 1974. As can be seen in Table 18, both steps were carried out in analyzing the present data. A uniform comparison is thus possible based on 1970 (the year before Niagara and York consolidated their forces) dollars. When this was done, it was found that Sudbury still had the largest per capita increase in expenditures ($8.57 per capita) while Halton had the lowest increase ($1.08 per capita).

However, while municipal expenditures on police services in regional areas have increased, so also have conditional Province of Ontario per capita grants for municipal and regional police services. Prior to 1974, the Province paid $3.25 per capita to municipal police
<table>
<thead>
<tr>
<th>Regional Municipality</th>
<th>Per Capita Expenditures: Year before Consolidation</th>
<th>Per Capita Expenditures: First Year of Regionalization</th>
<th>Per Capita Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sudbury</td>
<td>$13.95</td>
<td>$24.50</td>
<td>$10.55</td>
</tr>
<tr>
<td>Peel</td>
<td>18.72</td>
<td>28.69</td>
<td>9.97</td>
</tr>
<tr>
<td>Durham</td>
<td>20.52</td>
<td>27.08</td>
<td>6.56</td>
</tr>
<tr>
<td>York</td>
<td>16.50</td>
<td>22.18</td>
<td>5.68</td>
</tr>
<tr>
<td>Hamilton-Wentworth</td>
<td>26.86</td>
<td>31.56</td>
<td>4.70</td>
</tr>
<tr>
<td>Waterloo</td>
<td>19.54</td>
<td>23.80</td>
<td>4.26</td>
</tr>
<tr>
<td>Halton</td>
<td>19.69</td>
<td>23.34</td>
<td>3.65</td>
</tr>
<tr>
<td>Niagara</td>
<td>16.40</td>
<td>19.89</td>
<td>3.49</td>
</tr>
</tbody>
</table>
forces and $5.00 per capita to regional municipal departments. In 1974, this was changed to $5.00 per capita to regional municipal departments and $7.00 per capita for regional forces. The following year these grants were again raised to $8.00 per capita for municipal police departments and $12.00 per capita for regional police forces. What this has meant is that the first regional forces to be regionalized have had to do so with a considerable lower level of subsidization.

To properly gauge the comparative financial impact of police consolidation, it was thought necessary to adjust per capita cost increase figures to take this 1974 subsidy increase into account. Accordingly, $1.41 per capita (the equivalent of $2.00 adjusted per capita in 1970 dollars) was subtracted from adjusted per capita increases for Halton, Hamilton-Wentworth, Durham and Peel Regions. The final column of figures in Table 18 gives comparative increases in per capita costs for police protection controlling for both inflation and subsidy increases. It can be seen that these range from a high of $8.57 per capita for Sudbury to $1.08 per capita for Halton; with an average of $4.14.

Increases in municipal expenditures on police protection upon regionalization may also be expressed in percentage terms. (Table 19). In order to take account of the general rise in police costs throughout the Province (discussed at the beginning of this section) these percentages were adjusted according to the average increase for all Ontario municipal police forces between each set of years for which a percentage change was calculated in column one. When this was done, Sudbury was found to have the largest increase (54.5 percent) while Hamilton-Wentworth's increase actually fell 2.2 percent below the average for Ontario. The average increase for all eight regions was found to be 36.8 percent absolutely and 19.6 percent after adjustment.

The twin financial demands created by the addition of former "free policing" areas and of inflation have clearly been exacting for Ontario's regional municipalities. For example, in the debate over the Regional Municipality of Durham Bill, it was estimated that 50,000 - 60,000 residents formerly outside the municipal policing network would require servicing upon regionalization. To provide policing services in rural areas was said to cost the Ontario Provincial Police approximately $20.00 per capita and regional policing costs more than this. This meant that, even using a conservative estimate, approximately one million dollars would be needed to meet this new demand. In addition, inflation between 1973 and 1974 meant an increase of 20-21 percent or close to $925,000. As it happened, Durham had an increase in expenditures of $1,590,000, below this estimate, but still a 36 percent rise over municipal police spending for 1973. Despite the $5.00 per capita subsidy increase in 1973, it is clear that policing continues to exert a considerable financial strain on the new regional municipalities.
TABLE 18
Comparison by Region$^a$ of Per Capita (dollars) Increase in Municipal Police Protection Costs upon Regionalization: Adjusted for Inflation and for 1974 Increase in Provincial Police Grants

<table>
<thead>
<tr>
<th>Regional Municipality</th>
<th>(a) Per Capita Increase in Municipal Police Expenditures (unadjusted)$^b$</th>
<th>(b) Column (a) adjusted for Inflation$^c$</th>
<th>(c) Column (b) expressed in 1970 dollars Per Capita</th>
<th>(d) Column (c) adjusted for 1974 Increase in Provincial Police Grants</th>
<th>(e) Comparative Increase in Per Capita Police Costs for Municipalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sudbury</td>
<td>$10.55$</td>
<td>$9.50$</td>
<td>$8.57$</td>
<td>--</td>
<td>$8.57$</td>
</tr>
<tr>
<td>Peel</td>
<td>9.97</td>
<td>8.82</td>
<td>7.25</td>
<td>$5.84$</td>
<td>5.84</td>
</tr>
<tr>
<td>York</td>
<td>5.68</td>
<td>5.45</td>
<td>5.45</td>
<td>--</td>
<td>5.45</td>
</tr>
<tr>
<td>Waterloo</td>
<td>4.26</td>
<td>3.84</td>
<td>3.47</td>
<td>--</td>
<td>3.47</td>
</tr>
<tr>
<td>Niagara</td>
<td>3.49</td>
<td>3.35</td>
<td>3.35</td>
<td>--</td>
<td>3.35</td>
</tr>
<tr>
<td>Durham</td>
<td>6.56</td>
<td>5.45</td>
<td>4.48</td>
<td>3.07</td>
<td>3.07</td>
</tr>
<tr>
<td>Hamilton-Wentworth</td>
<td>4.70</td>
<td>3.90</td>
<td>3.20</td>
<td>2.27</td>
<td>2.27</td>
</tr>
<tr>
<td>Halton</td>
<td>3.65</td>
<td>3.03</td>
<td>2.49</td>
<td>1.08</td>
<td>1.08</td>
</tr>
<tr>
<td>Average</td>
<td>$6.11$</td>
<td>$5.42$</td>
<td>$4.78$</td>
<td>--</td>
<td>$4.14$</td>
</tr>
</tbody>
</table>

$^a$ (i.e.) The eight regional municipalities where police services were consolidated.

$^b$ Increase between year prior to consolidation and first year of regionalized protection. See Table 17.

$^c$ Between the two years specified above.
TABLE 19

Percent Change in Municipal Expenditures on Police Protection Upon Regionalization: Adjusted According to Average Provincial Increase (by region)

<table>
<thead>
<tr>
<th>Regional Municipality</th>
<th>Percentage Increase from Year Prior to Consolidation to First Year of Regionalization</th>
<th>Average Provincial Increase for Same Time Period</th>
<th>Net Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sudbury</td>
<td>69.5</td>
<td>15</td>
<td>+54.4</td>
</tr>
<tr>
<td>Peel</td>
<td>67.4</td>
<td>21</td>
<td>+46.4</td>
</tr>
<tr>
<td>York</td>
<td>32.9</td>
<td>12</td>
<td>+20.9</td>
</tr>
<tr>
<td>Durham</td>
<td>36.5</td>
<td>21</td>
<td>+15.5</td>
</tr>
<tr>
<td>Waterloo</td>
<td>23.9</td>
<td>15</td>
<td>+  8.9</td>
</tr>
<tr>
<td>Halton</td>
<td>24.9</td>
<td>21</td>
<td>+  3.9</td>
</tr>
<tr>
<td>Hamilton-Wentworth</td>
<td>18.8</td>
<td>21</td>
<td>-  2.2</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>36.8</strong></td>
<td><strong>-</strong></td>
<td><strong>+19.6</strong></td>
</tr>
</tbody>
</table>
Finally, there is the question of whether regional policing "costs" more. According to the present data, regionalization has resulted in expenditure increases for all eight areas where consolidation occurred, although the magnitude of this varies considerably by region. As the example of Durham illustrates however, most of this increase disappears once inflation and the demand for rural policing are taken into account.26

For the taxpayer formerly receiving "free policing" or limited local policing, the cost of regionalized policing is obviously higher, and not surprisingly, this has resulted in a generally negative feeling towards consolidation of this service in some areas. For the urban ratepayer, a more equitable spread of servicing undeniably means higher costs; however, indirect costs (O.P.P. costs for policing rural sections) are now eliminated.

**Emergency Measures Services and Regionalization**

In contrast to the regional police departments just discussed, emergency measures offices in regional areas are small, underfunded and have low public profiles. Upon occasion, however, such offices can become the key agency in co-ordinating the response to a community emergency. In part, the salience and effectiveness of these offices is closely linked to their degree of integration into the ongoing system of municipal administration. In this section, the impact of a major change in the form of this system (regionalization) on the position and activities of emergency measures offices in reorganized areas will be discussed, based on questionnaire data supplied by the nine regional emergency measures units. First, however, the general environmental context for this change will be presented through a brief discussion of the nature of intergovernmental arrangements for the provision of emergency measures services in Ontario and of the problems encountered by E.M.O.'s (Emergency Measures Organizations) in enlisting and maintaining support for their activities.

**Emergency Measures in Ontario: Decline and Loss of Identity**27

As with most other emergency measures offices, emergency measures in Ontario originally had its roots in the civil defense program of the mid 1950's and early 1960's. From 1955 onwards, municipal civil defence projects began to obtain support from both the Province and the Federal Government. By 1963, the formation of emergency measures offices was made mandatory by the Emergency Measures Act. In contrast to the regular municipal structure, cities and towns were joined with the county in which they were situated for E.M.O. purposes. As a
result, by 1969 there were 47 municipal E.M.O. organizations, embrac­
ing 271 municipalities and these agencies were utilizing 90 percent
of the aide available to them through the Federal Aid Program. The
vehicle for this aid disbursement was a Provincial Emergency Measures
Organization centered in Toronto. Activities of these municipal
E.M.O.'s were often geared to war-related (nuclear) emergencies but
were generally more strongly oriented towards peacetime disasters than
were Provincial E.M.O. programs.

As Kueneman has recently shown, changing international condi­
tions led to a decline in the perceived seriousness of the nuclear
threat and this in turn undercut the legitimacy of the Ontario E.M.O.
program. By 1970, both senior levels of government were cutting their
level of financial support and substantial program cutbacks were nec­
essary. Probably, municipal emergency measures organizations would
have folded altogether except for the decision of the Provincial E.M.O.
to continue to subsidize municipal programs at the expense of its own
training and public relations activities.

In 1975, the Ontario Government decided to phase out the provin­
cial organization and to end support to municipal E.M.O. programs,
moving instead to a "lead ministry" concept. This combined with a
sizeable cut in Federal aid to emergency planning at all levels meant
that municipal emergency measures offices had to enlist increased
local government support or more or less effectively cease to function.

Structural Location of Regional Emergency Measures Units

Unlike with police departments, the regionalization of emergency
measures units did not imply a large scale consolidation of services,
since most municipal E.M.O's were already organized on a county basis.
Three types of reorganization occurred here: 1.) transformation from
a county to a regional responsibility where county and regional munici­pality were coterminous (York), 2.) amalgamation of two county units
to form a regional organization (Niagara), and 3.) transformation from
a county to a regional responsibility and extension of services to
parts of the regional municipality not formerly part of the county.

More significant, however, has been the structural location of
the emergency measures offices in the new regional governments. Where
formerly these units had been more or less isolated from the rest of
municipal government in each area, now these were integrated into the
mainstream of regional municipal operations. As illustrated in Table
20, most of these now report to the chief administrative officer of
the regional council. In Niagara Region, the emergency measures unit
is actually part of the Regional Public Works Department, while in
Durham Region the Emergency Planning Officer is on the staff of the
### TABLE 20

**Structural Location of Regional Emergency Measures Offices**

<table>
<thead>
<tr>
<th>Regional Municipality</th>
<th>Structural Location of Regional Emergency Measures Offices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Durham</td>
<td>On staff of Chief Administrative Officer. Reports to Management Committee of Regional Council.</td>
</tr>
<tr>
<td>Halton</td>
<td>Reports to Chief Administrative Officer.</td>
</tr>
<tr>
<td>Hamilton-Wentworth</td>
<td>Reports to Regional Administrator.</td>
</tr>
<tr>
<td>Niagara</td>
<td>Part of Regional Public Works Department. Reports to Director of Engineering.</td>
</tr>
<tr>
<td>Ottawa-Carleton</td>
<td>Reports to Executive Committee of Regional Council.</td>
</tr>
<tr>
<td>Sudbury</td>
<td>Reports to a committee of Regional Council.</td>
</tr>
<tr>
<td>Waterloo</td>
<td>Reports to Chief Administrative Officer.</td>
</tr>
<tr>
<td>York</td>
<td>Reports to Regional Council as a whole.</td>
</tr>
</tbody>
</table>
Chief Administrative Officer. These new structural arrangements are in marked contrast to the pre-regional situation, where the County E.M.O. usually reported to a special E.M.O. Committee, made up of representatives from the County Council and from several urban councils.

Dynes and Quarantelli in their study of twelve U.S. local civil defense organizations, concluded that if the position of the civil defense director is structured so that the person is involved in the daily on-going process of municipal administration, this tends to create a situation in which his function is both appreciated and utilized when emergencies do occur. By contrast, if a director is organizationally isolated from the major daily activities of municipal government, then attempts to integrate his function into municipal operations become very problematic during an emergency when operational demands are pressing. The latter situation appeared to have special applicability to the position of emergency measures before regionalization. Under present structural conditions, however, emergency planning officers are much more closely integrated into municipal administration on a day to day basis. Typically, emergency planning officers reported that "I see the chief administrator once a week" and "I am now made aware of any or all emergencies (large and small) taking place in the Region." This change in the structural position of emergency measures appears, then, to tend to encourage closer co-ordination and to make this activity a more salient part of regional administration.

Change in Resources and Support

In order to further probe changes in support levels at the regional level, emergency planning officers were asked whether they felt that the move to regional government had allowed them "to obtain any resources or engage in operational and/or planning activities which would not have been possible before." As indicated in Table 21, with one exception, all respondents felt that planning had been simplified and improved because of regionalization. Where previously a large number of municipalities had to be approached individually now it was possible to work through one federal structure. Less change was evident in relation to operational activities, with only four emergency officers reporting that they have been able to engage in new tasks of this type. Similarly, four offices indicated increased availability of resources. In particular, several regional E.M.O.'s felt that the existence of a regional public works department has greatly increased their access to needed personnel and equipment.

Table 22 summarizes basic information concerning financial support for regional E.M.O.'s at present and in the first year as a regional responsibility. This is generally quite low (average annual
### TABLE 21

Changes in Resource Availability and Planning and Operational Activities of Emergency Measures Offices Since Regionalization

<table>
<thead>
<tr>
<th>Type of Change</th>
<th>Yes</th>
<th>Percentage</th>
<th>No</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in Resource Availability</td>
<td>4</td>
<td>50.0</td>
<td>4</td>
<td>50.0</td>
</tr>
<tr>
<td>Change in Planning Activities Made Possible</td>
<td>7</td>
<td>87.5</td>
<td>1</td>
<td>12.5</td>
</tr>
<tr>
<td>Change in Operational Activities Made Possible</td>
<td>4</td>
<td>50.0</td>
<td>4</td>
<td>50.0</td>
</tr>
</tbody>
</table>
### TABLE 22

**Financial Support of Regional Emergency Measures**

<table>
<thead>
<tr>
<th>Regional Municipality</th>
<th>Emergency Measures Budget: First Year as a Regional Responsibility</th>
<th>Percentage Paid for by Regional Municipality</th>
<th>Present Emergency Measures Budget</th>
<th>Percentage Paid for by Regional Municipality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Durham</td>
<td>$42,300</td>
<td>17</td>
<td>$25,957</td>
<td>30</td>
</tr>
<tr>
<td>Halton</td>
<td>10,000</td>
<td>10</td>
<td>7,000</td>
<td>15</td>
</tr>
<tr>
<td>Hamilton-Wentworth</td>
<td>38,650</td>
<td>10</td>
<td>40,700</td>
<td>49</td>
</tr>
<tr>
<td>Niagara</td>
<td>45,000</td>
<td>10</td>
<td>44,000</td>
<td>39</td>
</tr>
<tr>
<td>Ottawa-Carleton</td>
<td>67,300</td>
<td>35</td>
<td>91,500</td>
<td>49</td>
</tr>
<tr>
<td>Sudbury</td>
<td>45,000</td>
<td>10</td>
<td>44,000</td>
<td>40</td>
</tr>
<tr>
<td>Waterloo</td>
<td>38,856</td>
<td>33</td>
<td>55,000</td>
<td>51</td>
</tr>
<tr>
<td>York</td>
<td>16,700</td>
<td>10</td>
<td>18,500</td>
<td>49</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>$37,976</strong></td>
<td><strong>17</strong></td>
<td><strong>$40,832</strong></td>
<td><strong>40</strong></td>
</tr>
</tbody>
</table>
budget = $40,832) and has changed little since regionalization; in four regions the budget has actually declined. Due to the withdrawal of Provincial support, the regional municipality has increased its share in all cases (average increase since regionalization = 23%); however, in only one case (Waterloo) does the region carry 50 percent or more of the costs. Thus, while the emergency measures offices have benefitted from increased integration into the ongoing municipal structure, they are still primarily dependent upon the Federal Government for financial support.

Changes in Priorities

As Dynes and Quarantelli point out, the two usual "products" offered by civil defense agencies are planning and co-ordination. These are somewhat abstract and intangible in nature and are promoted as resources largely undeveloped in crisis management agencies such as police and fire departments which specialize in the provision of "hard" services. Sometimes, however, local emergency offices engage in other activities which are more operationally oriented and which appear to have more immediate payoff. For example, some emergency measures organizations have become involved in the operation of emergency medical services such as rescue unit dispatching. As has been pointed out in several recent publications (Dynes and Quarantelli: 1975; Hannigan and Kueneman: 1976) such activities and programs can be extremely valuable in raising organizational visibility and in enlisting increased environmental support from relevant others.

Table 23 contrasts the priority given to different types of emergency related activities at the time of regionalization and at present. Respondents were asked to indicate their three most important activities; these were then scored on a three point scale (most important = 3). Clearly, contingency planning has been and continues to be the major priority activity since regionalization. The co-ordination of disaster responses and individual disaster involvement have declined somewhat in importance, however, while disaster drills and hospital exercises have assumed a higher priority since regionalization. Thus, there is some evidence that regionalized emergency measures offices are slowly adding more visible, "practical" activities to their roster. This notion is reinforced by reports from several regional E.M.O.'s that their responsibilities now include coping with spill of hazardous materials, bomb threats and emergency housing. With the present small size of staffs and budgets, however, the extent of such diversification is somewhat restricted; this in turn, limits the possibility of increased regional support for new and existing programs. This kind of "vicious circle" can really only be broken by a widely recognized strong performance in an actual disaster situation (as occurred in Waterloo Region) which often translates into increased financial support afterwards.
<table>
<thead>
<tr>
<th>Activity/Program</th>
<th>Priority Score&lt;sup&gt;a&lt;/sup&gt;: First Year of Regionalization</th>
<th>Priority Score: At Present (1976)</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional Contingency Planning</td>
<td>22</td>
<td>22</td>
<td>-</td>
</tr>
<tr>
<td>Co-ordination of Disaster Responses</td>
<td>5</td>
<td>4</td>
<td>-1</td>
</tr>
<tr>
<td>Disaster Drills/Exercises</td>
<td>3</td>
<td>6</td>
<td>+3</td>
</tr>
<tr>
<td>Hospital Exercises</td>
<td>-</td>
<td>2</td>
<td>+2</td>
</tr>
<tr>
<td>Compilation of Contact Lists</td>
<td>2</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Public Information and Education</td>
<td>2</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Nuclear Energy Contingencies</td>
<td>2</td>
<td>3</td>
<td>+1</td>
</tr>
<tr>
<td>Training</td>
<td>4</td>
<td>1</td>
<td>-3</td>
</tr>
<tr>
<td>Conference Organization</td>
<td>-</td>
<td>1</td>
<td>+1</td>
</tr>
<tr>
<td>Response to Individual Emergencies</td>
<td>5</td>
<td>3</td>
<td>-2</td>
</tr>
<tr>
<td>Emergency Medical Services</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

<sup>a</sup>highest Priority = 3  
Second Highest Priority = 2  
Third Highest Priority = 1
Fire Protection Services in Regionalized Areas

Of these crisis management services under study, fire protection alone is still the responsibility of the lower tier of municipal government. The reasons for including fire departments in this research were: 1.) to provide a contrast to the regionalized situation of police protection, 2.) to explore whether regionalization of other municipal services had resulted in any "spillover" into the area of fire services, and 3.) to delineate positive and negative aspects of regionalizing fire services by asking fire department officials themselves about perceived advantages and disadvantages of centralization.

Changes in Co-ordination Since Regionalization

Despite the decision not to centralize fire services, two steps toward greater co-ordination did occur concomitant with local government reorganization in regional areas.

First of all, the considerable municipal amalgamation which accompanied the introduction of regional government meant that the number of autonomous fire departments did decline considerably. In contrast to regionalized services, this did not, however, mean any real decrease in the number of organizational locations (dispersion); most local forces remained intact as sub-units of a larger amalgamated organization.

Secondly, a "Regional Fire Co-ordinator" was appointed for each regional municipality. This official is normally the fire chief of the largest fire department in the region and receives only an honorarium (median = $2,000 per annum) for his duties. The Fire Co-ordinator's responsibilities involve liaison with the Ontario Fire Marshal, activation of the Mutual Aid System, the procurement of specialized fire fighting equipment and the development of a regional fire plan.

For the most part, pre-existing mutual aid agreements have not changed appreciably since regionalization, other than in the official number of departments participating (due to the aforementioned amalgamations). Also, in some cases, a municipality outside has been added to the mutual aid system (e.g., Bowmanville to Durham) while a municipality outside has been officially dropped from participation (e.g., Rockland in Ottawa-Carleton). An exception to this pattern has been fire protection in the Niagara Region, where the two former County Mutual Aid plans have been combined to form an overall Regional Mutual Aid Plan.

Finally, some effort has been made to co-ordinate training on a regional basis. The new Town of Rayside-Balfour, for example, now operates a regional training school for firefighters in the Sudbury
Region. Hamilton-Wentworth also operates a Regional School of this type. In addition, several regional municipalities (Ottawa-Carleton, York, Peel) have participated on areawide basis in sending firefighters to thirteen week fire prevention courses conducted by the Ontario Fire Marshal.33

Changes in Activities and Technology

In comparison to police services, municipal level firefighting has not changed much materially over the last few decades. Ahlbrandt attributes this lack of change in technology and tactics to the "high degree of risk and uncertainty attached to such experimentation. "If a fire burns out of control or loss of life results," he points out, "the use of nonstandard technology may be sufficient cause for removing the fire chief from his job even though other factors may have been responsible."34

Many of the changes in firefighting have been changes in functions sometimes involving a change in organizational domain. For example, fire prevention has become a major concern over the last decade or so and many large departments now maintain a fire prevention bureau. Out of the fire prevention function has grown the idea that fire prevention officers might fruitfully become involved in municipal planning and engineering activities such as zoning enforcement and administration of the building code. This clearly involves expanding the domain of the local fire department. Similarly, increasing involvement in arson investigations or ambulance (rescue unit) operation can lead to fire department encroachment in the police or emergency health sectors of municipal servicing.

It is expected that regionalization would not make any significant difference in technology levels in existing municipal fire departments other than to facilitate and standardize the dispersion of existing material innovations. However, regionalization could be expected to encourage the growth of the kind of functional changes discussed above especially fire prevention and emergency services. This is especially so in contexts where the new function is basically of an interjurisdictional nature, for example, area zoning.

In order to ascertain current trends in fire protection innovations, respondents to the fire department questionnaire were asked about changes in programs, activities and technology adopted since the establishment of regional government. A breakdown by type of the 73 innovations reported is presented in Table 24.
<table>
<thead>
<tr>
<th>Nature of Innovation</th>
<th>Number of Departments</th>
<th>Percentage of all Innovations Cited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved Radio System Capacity</td>
<td>20</td>
<td>27.4</td>
</tr>
<tr>
<td>Administration of Building Code</td>
<td>11</td>
<td>15.1</td>
</tr>
<tr>
<td>Fire Prevention Education Program</td>
<td>10</td>
<td>13.7</td>
</tr>
<tr>
<td>Arson Investigations</td>
<td>9</td>
<td>12.3</td>
</tr>
<tr>
<td>Emergency Measures Training</td>
<td>7</td>
<td>9.6</td>
</tr>
<tr>
<td>Computer-Based Information and Control System</td>
<td>7</td>
<td>9.6</td>
</tr>
<tr>
<td>Zoning Enforcement</td>
<td>3</td>
<td>4.1</td>
</tr>
<tr>
<td>Emergency Medical Services</td>
<td>3</td>
<td>4.1</td>
</tr>
<tr>
<td>Regional Training School</td>
<td>2</td>
<td>2.7</td>
</tr>
<tr>
<td>Early Detection Warning System</td>
<td>1</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>73</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>
The single most prevalent innovation was found to be a technological improvement -- improved radio system capacity. However, most other innovations were typical of the functional changes discussed above, in particular those relating to fire prevention.

One innovation of possible significance in the future was the adoption of a computer based information and control system; 7 of the fire departments reported that they had wholly or partially adopted this type of system. A recent restructured up to date computerized statistical system for reporting fires, fire deaths and injured, and fire loss recently introduced by the Ontario Fire Marshal is expected to further encourage the large scale use of various forms of A.D.P. reporting systems in municipal fire services.35

Of the four types of fire departments surveyed, volunteer departments with full time chiefs reported the highest number of innovations (average = 3.3), followed by full time departments (2.8). Lower levels were reported by composite departments (1.5) and all volunteer departments (1.4).

Special Training Programs and Promotion Criteria

As with police departments, specialized training is a significant element in bringing about a higher level of professionalization for municipal fire departments. At present, only special training programs for pump operators have been widely adopted among the fire departments surveyed with 80.6% of the respondents indicating that their department had adopted this. This was up 8.3% since the first year of regionalization. This difference probably reflects the fact that almost all volunteer departments own a pumper truck; ladder trucks, however are more typical of urban full time or composite fire fighting forces. About half the departments surveyed required company officers and chief officers to take special training programs; this is an increase of 13.9% and 16.7% respectively since the first year of regionalization. There has also been a notable increase in the number of departments having training requirements for drivers of special vehicles; this rose from 27.8% in the first year of regionalization to 44.4% at present. Only three fire departments presently operate an ambulance service; all of these predictably maintained special training programs for ambulance drivers.

With a number of different forms of organization ranging from fully professional to fully voluntary, promotion eligibility criteria could be expected to vary somewhat in importance from department to department. Almost all (91%) of those surveyed indicated that work performance was an important factor in considering promotion eligibility criteria; furthermore, 17.1% of the respondents said that this had
increased in importance since regionalization. Written exams and length of service were also thought to be important (71.4% and 77.1%); however, the former appears to be increasing in importance while the latter is declining. Oral exams (62.9%) and educational achievement (37.1%) were utilized less often as promotion eligibility criteria; however, the latter had definitely increased in importance since regionalization. Finally, 8.6% of those surveyed (all volunteer departments) indicated that promotion is carried out through a system of election by one's peers.

Changes in special training programs and promotion criteria are summarized in Tables 25 and 26.

Clearly, there is considerable room for improved training levels among municipal fire departments in regional municipalities over and above the basic training given all fire fighting personnel. This is especially the case in areas where increasing urbanization brings new hazards such as high rise buildings, chemical industries etc. which cannot be met with just basic equipment and a good deal of manpower resources. As will be seen in the next section, standardized and improved training was frequently cited by the respondents themselves as one salient benefit which would accrue from a greater degree of centralization of fire services in Ontario regional municipalities.

Advantages and Disadvantages of Future Regionalization

Particularly salient in shaping the cost-benefit balance for centralized fire services in regionalized areas is the degree to which the area is rural versus urban. Rural areas have relatively little need of full time professional firefighting staffs since population densities are low and major conglagrations few. Yet, when fires do occur, a rapid response time must be assured and this usually precludes dependence on central urban units. For these reasons, volunteer firefighting forces have become a way of life in rural areas of Ontario. Such volunteer departments are frequently lacking in training, fire prevention resources and specialized equipment. Often too, they are reliant on mutual aid pacts and purchase of service agreements with other area fire departments. This can be especially detrimental to effective service in large rural jurisdictions where the nearest firefighting unit is not always in the taxpayer's municipality and rather complex "chargeback" arrangements must be negotiated.

The reliance of rural departments on volunteer assistance is the key to the problems of regionalizing fire protection. To replace these volunteers with professional firefighters would be economically impossible. Alternately, however, volunteer strength could not be kept up if local control of this service was removed to a central unit.
<table>
<thead>
<tr>
<th>Type of Special Training Program</th>
<th>Percentage of all Departments having program during first year of regional government</th>
<th>Percentage of all Departments presently having program</th>
<th>Percentage change since first year of regional government</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pump operators</td>
<td>72.2</td>
<td>80.6</td>
<td>8.3</td>
</tr>
<tr>
<td>Ladder truck operators</td>
<td>30.6</td>
<td>38.9</td>
<td>8.3</td>
</tr>
<tr>
<td>Special vehicles</td>
<td>27.8</td>
<td>44.4</td>
<td>13.9</td>
</tr>
<tr>
<td>Company officers</td>
<td>41.7</td>
<td>55.6</td>
<td>13.9</td>
</tr>
<tr>
<td>Chief officers</td>
<td>36.1</td>
<td>52.8</td>
<td>16.7</td>
</tr>
<tr>
<td>Ambulance drivers</td>
<td>5.6</td>
<td>8.3</td>
<td>2.8</td>
</tr>
<tr>
<td>Promotion Eligibility Criteria</td>
<td>Percentage of all Fire Departments using criterion at present</td>
<td>Percentage in which criterion has become more important since first year of regional government</td>
<td>Percentage in which criterion has become less important since first year of regional government</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>Oral exams</td>
<td>62.9</td>
<td>5.7</td>
<td>2.9</td>
</tr>
<tr>
<td>Written exams</td>
<td>71.4</td>
<td>11.4</td>
<td>2.9</td>
</tr>
<tr>
<td>Work performance</td>
<td>91.4</td>
<td>17.1</td>
<td>-</td>
</tr>
<tr>
<td>Length of service</td>
<td>77.1</td>
<td>8.6</td>
<td>8.6</td>
</tr>
<tr>
<td>Educational Achievement</td>
<td>37.1</td>
<td>14.3</td>
<td>2.9</td>
</tr>
<tr>
<td>Election by peers</td>
<td>8.6</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
addition, volunteers could not be expected to perform organizational tasks for which full time professionals were paid. Furthermore, volunteer fire departments often stand at the centre of the social life of a rural community. To eliminate local volunteer forces through centralization would not only be perceived as a serious violation of local autonomy, but it would also threaten a central community institution.

As urbanization spreads, however, volunteer departments become less viable. Increased industry, closer proximity to dwellings and less open land mean that the number and size of fires increase beyond volunteer capacity. In addition, as has occurred in Burlington, more residents enter job situations where they are unavailable for regular call to volunteer duty.

Clearly, then, some degree of change in the direction of larger, full time, more professional fire protection is desirable; however, full regionalization such as that carried out for police protection would be economically and socially disastrous.

In order to further explore the pros and cons of centralizing fire protection in existing regional municipalities, respondents were asked to indicate the advantages and disadvantages of implementing a regional fire department in their area (see Tables 27 and 28).

The chief advantage of regionalization was seen to be increased standardization of training, equipment operations and fire codes and regulation. In fact, 30 percent of those citing advantages mentioned some aspect of standardization. Also thought to be beneficial was the possibility of administrative centralization, especially centralized equipment purchasing and distribution, centralized equipment repair. Other factors cited included improved communications facilities, in particular a central dispatch system, and a better balance of stations and equipment throughout the region.

As expected, cost was the most frequently cited disadvantage of regionalization, with 50 percent of the respondents mentioning this as a factor. Specific aspects of cost which were given included the increased cost of upgrading equipment and manpower in small municipalities, the cost of switching to paid firefighters and the cost of relocating fire stations. Non-cost factors mentioned were loss of identity and community involvement, the disappearance of volunteers, lack of in depth knowledge about local areas (especially by dispatchers) and increased response times.

An overall favourable score was calculated for each department, based on the number of advantages and disadvantages cited. As might be expected, full time departments were most positive towards regionalized fire protection (+.67). Most negatively inclined were composite...
TABLE 27

Perceived Advantages of Regionalizing Fire Protection Services

<table>
<thead>
<tr>
<th>Perceived Advantage</th>
<th>Number of Forces Citing Advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standardization:</strong></td>
<td></td>
</tr>
<tr>
<td>-of training</td>
<td>10</td>
</tr>
<tr>
<td>-of operations</td>
<td>3</td>
</tr>
<tr>
<td>-of fire codes and regulations</td>
<td>1</td>
</tr>
<tr>
<td>-of equipment</td>
<td>1</td>
</tr>
<tr>
<td><strong>Centralization:</strong></td>
<td></td>
</tr>
<tr>
<td>-of equipment purchasing and distribution</td>
<td>5</td>
</tr>
<tr>
<td>-of administration and budgeting</td>
<td>3</td>
</tr>
<tr>
<td>-of equipment repair</td>
<td>1</td>
</tr>
<tr>
<td>-of communications facilities</td>
<td>1</td>
</tr>
<tr>
<td><strong>Improved fire prevention programs/facilities</strong></td>
<td>5</td>
</tr>
<tr>
<td>Closest fire department would respond without chargebacks</td>
<td>4</td>
</tr>
<tr>
<td>Central dispatch</td>
<td>4</td>
</tr>
<tr>
<td>Better fire station distribution</td>
<td>3</td>
</tr>
<tr>
<td>Equalization of response time</td>
<td>2</td>
</tr>
<tr>
<td>Additional resources could be secured</td>
<td>2</td>
</tr>
<tr>
<td>Bring up service levels of smaller departments</td>
<td>1</td>
</tr>
<tr>
<td>Presence of a full time chief</td>
<td>1</td>
</tr>
<tr>
<td>Regional fire inspection</td>
<td>1</td>
</tr>
<tr>
<td>Higher wages for smaller departments</td>
<td>1</td>
</tr>
<tr>
<td>Better balance of resources (human and material)</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total number of advantages cited</strong></td>
<td>50</td>
</tr>
</tbody>
</table>
TABLE 28

Perceived Disadvantages of Regionalizing Fire Protection Services

<table>
<thead>
<tr>
<th>Perceived Disadvantage</th>
<th>Number of Forces Citing Disadvantage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cost:</strong></td>
<td></td>
</tr>
<tr>
<td>-general cost</td>
<td>15</td>
</tr>
<tr>
<td>-of switch to paid firefighters</td>
<td>6</td>
</tr>
<tr>
<td>-of increased equipment and manpower for small municipalities</td>
<td>5</td>
</tr>
<tr>
<td>-of relocation of fire stations</td>
<td>3</td>
</tr>
<tr>
<td>-of 'urbanizing' rural services</td>
<td>3</td>
</tr>
<tr>
<td>-of central dispatch</td>
<td>2</td>
</tr>
<tr>
<td>-to small towns</td>
<td>1</td>
</tr>
<tr>
<td>-to areas of low commercial and industrial assessment</td>
<td>1</td>
</tr>
<tr>
<td>Disappearance of volunteers</td>
<td>7</td>
</tr>
<tr>
<td>Loss of local identity and community involvement</td>
<td>4</td>
</tr>
<tr>
<td>Insufficient knowledge of local geography</td>
<td>4</td>
</tr>
<tr>
<td>Increase in response time</td>
<td>4</td>
</tr>
<tr>
<td>Would be &quot;too large&quot; for efficiency</td>
<td>3</td>
</tr>
<tr>
<td>Higher citizen expectations</td>
<td>3</td>
</tr>
<tr>
<td>Reduced advancement opportunities and morale in existing departments</td>
<td>2</td>
</tr>
<tr>
<td>Personnel redistribution problems</td>
<td>2</td>
</tr>
<tr>
<td>Decreased service to fringe areas</td>
<td>1</td>
</tr>
<tr>
<td>Loss of input into town planning and engineering</td>
<td>1</td>
</tr>
<tr>
<td>Loss of cooperation from local industries</td>
<td>1</td>
</tr>
</tbody>
</table>

Total number of disadvantages cited 72
departments (-1.3), especially those which were essentially full time departments with volunteer help for rural parts of the municipality. Also negative were all volunteer departments (-.83). Reaction from chiefs of volunteer departments was mixed (-.29), no doubt indicating the basic conflict between their volunteer commitment and their professional desire for service improvements.

Disaster Preparedness in Regionalized Areas

While the existence of a written disaster plan by no means ensures an effective response, it is at least an indication of a basic organizational readiness for an emergency situation. This is particularly true where the plan is internally devised rather than externally written. 37

The present data indicate that regionalization has had some effect in terms of stimulating police and fire departments to formulate written disaster plans or to update existing ones. Of the seven regional police forces surveyed, five had formal written plans, all adopted since regionalization; while another is presently developing such a plan. In contrast, neither of the Ottawa-Carleton forces surveyed had a recent disaster plan. Of the 37 fire departments surveyed, 64.9 percent presently had a written plan for natural disasters; of these, three quarters have been initially adopted or revised since the change to regional government. Data on both regional police forces and municipal fire departments is summarized in Table 29.

Another indication of disaster preparedness is the existence of emergency measures training in municipal crisis management organizations. Only two regional police departments indicated that they had adopted such a training program since the establishment of regional government in its area. Furthermore, only 19 percent of the municipal fire departments surveyed indicated that they had implemented emergency measures training since the advent of regional government.

In sum, then, regional government does seem to have encouraged the formulation or revision of up to date written plans for natural disasters especially among fire departments. However, few police or fire departments have added any extra amount of emergency measures training beyond that contained in their basic training programs (for example, the applications of first aid).
<table>
<thead>
<tr>
<th>Crisis Management Agency</th>
<th>% of all departments presently having a written plan for natural disasters</th>
<th>% of those having a plan who have adopted or revised it since advent of regional government</th>
</tr>
</thead>
<tbody>
<tr>
<td>Police</td>
<td>62.5</td>
<td>100.0</td>
</tr>
<tr>
<td>Fire</td>
<td>64.9</td>
<td>72.7</td>
</tr>
</tbody>
</table>
Summary of Findings

In this chapter, the impact of regional government has been examined with reference to three different municipal service areas: police protection, fire protection and emergency measures.

Prior to consolidation, municipal police services were found to be heterogeneous and fractionalized, with widely varying staff size, communications equipment and levels of training. In addition, many rural jurisdictions relied on a general patrol service provided by the Ontario Provincial Police at no municipal cost.

Upon regionalization, considerable expansion of the resource base already existent within the municipal policing network was required, especially in areas taking over policing responsibility for large rural jurisdictions. In particular, the police officer/civilian ratio was found to have decreased substantially indicating a greater role for the non-uniformed component in regional police forces.

Three categories of innovations were studied relative to regional police departments - the adoption of community-preventive programs, changes in police practices and training and equipment changes. Of these, material (equipment) changes were found to have been most prevalent since regionalization while community-preventive programs were least evident. Innovations which involve a fundamental change in the internal structure of the police organization, for example family crisis intervention and team policing were not widely adopted. In general, three types of regional police organizations were found. Type One, faced with high prior fragmentation has channelled organizational resources into material changes designed to standardize technological capacity and to improve inter-unit communication. Type Two, characterized by low prior fragmentation and the former existence of several urbanized forces has attached greater priority to social innovations, especially program changes. Type Three represents a situation where regionalization has meant the extension of an already well-developed urban police service from the dominant "core force" to the remainder of the new region. Under these conditions, some social innovation is evident but relatively little material change is needed.

As predicted in Ostrom's basic model and in the present model of structural reorganization, regionalization has resulted in a definite increase in police professionalism. This was indicated by a rise in the number of police officers sent to the Ontario Police College for professional training, and in the decline of the traditional measure of length of service as a criterion for promotion evaluation.

A cost analysis of municipal expenditures on policing before and after regionalization revealed a definite increase, even after
controlling for the inflationary factor. Much of this increase, however, is tied to the requirement of bringing municipal policing to rural areas formerly patrolled by the Ontario Provincial Police.

The process of regionalization has had mixed effects for municipal level emergency measures offices. On the one hand, most have become considerably less isolated from the mainstream of municipal administration due to their structural location within the regular regional government system. This has meant greater planning co-ordination, and in about half the cases studied better access to resources and more opportunities to become involved in practical everyday operational activities such as coping with the spill of hazardous materials. On the other hand, financial support of emergency measures offices is still minimal and reliant on federal level subsidies.

Fire protection in regional areas has not been centralized and continues as a lower-tier responsibility. Nevertheless, regionalization has brought a greater measure of co-ordination through the appointment of Regional Fire Co-ordinators, through the amalgamations of municipalities which accompanied regional government, and through the establishment of regional fire training schools. Many of the fire chiefs surveyed here felt that further regionalization could be of benefit in standardizing equipment, training and fire regulations and in centralizing equipment purchasing, financing and communications (especially through central dispatch system). On the other hand, the economic and social costs of shifting from a largely volunteer system to a professional firefighting force are significant and represent the major barrier to such a change. Data on fire department innovations indicated rising involvement of fire protection forces in new functions (and domains) such as zoning regulation and emergency services.

Finally, the move to regional government appears to have encouraged the adoption of up to date written plans for natural disasters by regional police and municipal fire departments. However, specialized emergency measures training is still relatively rare and has been a seldom adopted innovation since the switch to regional government.

**Generalization of Findings**

In any study of local government administration and political organization, extreme caution must always be exercised in generalizing one's findings. This is especially true when making cross-national comparisons. In this regards, Anton suggests that "the organization of local units, and the subjective meanings attached to such activities by participants all vary considerably from one country to the
next." Even within an individual country this often holds true. Newton suggests that in the United States "there are so many different types of formal structure and modes of informal operation that almost any generalization about city government and politics must be subject to important qualifications and exceptions."\(^{39}\)

Although the research literature on the organizational effects of local government restructuring of crisis management services is practically non-existent, there is some evidence that the present findings are not totally ideosyncratic. In particular, Coomer and Tyer's assessment of the first decade of metropolitan government in Nashville supports many of the findings regarding police professionalization and innovation reported here. In addition, they report marked improvements in the areas of prevention, training and equipment purchasing for the Metro Nashville Fire Department.\(^{40}\) Similarly, Goldenberg's 1965 report on Metro Toronto points out improvements in police communications, recruiting methods and professional training.\(^{41}\) Although not directly concerned with local government reorganization, Dynes and Quarentelli's study of civil defense offices in American cities supports the importance of a central structural location in municipal administration for ensuring the participation of emergency measures personnel in emergency municipal operations.\(^{42}\)

However, there are differences in the Ontario political system which might serve to limit the representativeness of the present findings. First of all, the Provincial Government plays a much stronger role in municipal political life than do state governments in the United States but the Federal Government is less influential at the municipal level than in European nations such as England and Sweden. Secondly, political parties play no part in Ontario municipal life (at least manifestly), while party politics are a more integral part of local community politics in both Britain and the United States. Thirdly, Ontario did not experience the civil disturbances characteristics of urban affairs in American cities during the sixties. Consequently, changes such as community relations programs and crowd control training have not been adopted in direct anticipation of crisis and thus have evolved in a less "ad hoc" manner.

In the final chapter, these empirical findings will be further discussed with reference to their research and policy implications.
Footnotes


3. This was done to control for the effect of population distribution. Some regions (for example, Hamilton) had a low number of jurisdictions based on population; however, these municipal units were compressed into a relatively compact land area. Other areas had a great number of jurisdictions, based on population; however, many of these units encompassed large land areas and small populations (for example, Sudbury). The dual measure of fractionalization used here helps to balance these considerations somewhat, although population still remains the major denominator.


6. Other than with municipal expenditures on policing, most other before-after comparisons for police services will take "two years before regionalization" as the base line point. The main reason for this is that Police Administration Statistics, an annual government publication, was last published by Statistics Canada in 1972; however, in order to take the "year before regionalization" as the base line, annual figures from this publication would be needed for 1973 for Halton, Peel, Durham and Hamilton-Wentworth. To maintain uniformity among all "before" figures, therefore, two years rather than one year before consolidation was used as the point of comparison. Another advantage of this is that it eliminates the irregular effects of hiring slowdowns etc., implemented in the year before regionalization when it was known that existing forces would be phased out by the end of the year (See Chapter 3, page 35).


9. Some analysts have used "authorized" personnel rather than actual numbers of staff. The latter is a more reliable measure, however, since sizeable gaps often exist between authorized strength and actual strength.


12. Ibid., p. 43.


17. Of the five regional police forces reporting figures on the university qualifications of police officers, only two of their officers presently had credit for university courses. The Waterloo Regional Police has placed particular emphasis on this aspect of professionalization, increasing the number of university-qualified officers from 84 (22.7 percent of all police officers) to 168 (39.4 percent of all police officers) in 1976.

19. Ibid., p. 77.


21. Ibid., p. 117.


26. Future study in this area must be directed towards devising reliable cost-benefit ratios for regional police services. As discussed in Chapter Four, the problems here are legion, especially in the benefit evaluation of long range "soft services. Perhaps, a useful strategy here would be to initially focus on specific services, responsibilities and functions. For example, the Task Force on Ontario Policing suggests the cost effectiveness and propriety of such services as transporting prisoners and mental patients, serving summonses and issuing licences to be examined in depth to see if they are appropriate to the police role in the community. A collection of such specific cost-benefit studies would be an important step towards imparting greater meaning to the type of more general cost figures which have been used here and in other similar overviews of municipal spending on police protection.

27. This section is a condensation of a somewhat more extensive discussion found in: Rodney M. Kueneman, Organization-Environment Interaction: Organizational Legitimacy and the Non-Autonomous Organization. Unpublished Ph.D. dissertation, The Ohio State University, 1975, pp. 119-128.


30. These comments are taken verbatim from completed questionnaires.

31. Dynes and Quarentelli, op. cit., p. 53.
32. Ibid., Hannigan and Kueneman, op. cit.


36. The score was calculated by taking the difference (positive or negative) between the number of advantages and the number of disadvantages cited by each fire department, then dividing by the number of departments of each type.

37. As Dynes and Quarantelli have pointed out, externally written disaster plans often tend to make task assignments to organizations which are not aware of them.


40. Coomer and Tyer, op. cit., pp. 56-68.


42. Dynes and Quarantelli, op. cit.
In this final chapter, the research findings will be considered with reference to their sociological implications and their importance for the study of urban administration. Then a series of concrete policy recommendations will be advanced for each of the three crisis management services studied. Finally, further suggestions will be made as to the direction future researchers might follow in a more extensive and systematic study of the impact of local government reorganization.

Sociological Implications

Scott Greer has described urbanization as essentially meaning an increase in scale, a process which both expands the size of our social world and at the same time widens the network of interdependence. At the centre of this "radical shift in human organization" is a process of organizational merger which Greer terms "the dynamic form of increase in scale." In the corporate sector of society, this expanding sense of interconnectedness is typified by the modern, multinational corporation or the national "chain store." Brinkerhoff and Kunz suggest that larger scale organizations are those who can best adapt to changing environmental contingencies and that they expand through the processes of "merger, acquisition and internal growth."

In the public sphere, large scale organizations have also become typical, especially at the national level. A notable exception to this has been at the local community level of organization where administrative units have generally remained small and under local control. Yet, with the successful implementations of school consolidations, metropolitan plans, and other forms of administrative reorganization, this too is displaying a marked increase in scale.
As organizations grow larger, what effects accrue for their internal structure? Does an increase in scale also mean an increase in complexity? What accounts for the apparent ability of large organizations to better cope with environmental problems than can smaller ones? How does an increase in scale affect the "production strategies" and outputs of formal organizations? These are broad sociological questions which pertain to the growth of organizations in general and to the consolidation of municipal services in particular.

The present research suggests that there is a kind of "threshold" which must be reached before a public organization has the resources with which to diversify and expand its activities. Up to that threshold, the organization must direct its resources to carrying out basic services, for example, neighbourhood police patrols. A high division of labour, extensive professional training, and expanded supportive services are simply not possible because the small organization has no "slack." This study of regional government suggests that growth through consolidation provides a kind of critical concentration of resources which allows greater specialization, standardization of technology, and higher levels of professional training.

A key organizational variable related to the consolidation of municipal services was found to be dispersion - the spatial distribution of operating sites and the personnel occupying each site. Dispersion varies according to a number of factors. First of all, it depends upon the basic nature of the functions performed by the organization. Planning oriented agencies, such as the emergency measures organization, profit by low dispersion, both of their own personnel and of other administrative offices with whom they must interact on a regular basis. On the other hand, operationally oriented agencies like fire departments require a considerable degree of dispersion, since their degree of effectiveness depends upon maximizing response time during periods of peak demand. Secondly, the degree to which a demand is fixed versus intermittent influences the required pattern of dispersion. Where demands can be more or less predicted, for example, in low crime neighbourhoods, areawide service units can be set up based on the most efficient cost benefit ratios. Where demand fluctuates from nonexistent to high, for example, in rural fire jurisdictions, a network of highly dispersed units must be maintained on a contingency basis. Multiple volunteer fire companies, are thus the only organizational arrangements which allow the mobilization of many personnel on short notice at little relative cost.

In this study, we found that the potential benefits of reducing dispersion through consolidation were greatly limited by the two elements discussed above. In particular, consolidation of fire departments was only practical where the number of field locations was not reduced. The present data also suggest that the priorities
and production strategies of consolidated organizations are related to the degree to which operating sites have been reduced upon restructuring. Regions where police services were highly dispersed prior to regionalization faced substantial demands for material innovation, especially the standardization of communications equipment. Where dispersion levels had formerly been low, however, other more socially related changes could be undertaken, especially those which were externally related.

Like technology, therefore, dispersion appears to be a key variable in influencing the relationship between size and organizational structure. In particular, the linkage between dispersion and the size of the supportive (administrative) component of the organization is notable. According to this data, a decrease in dispersion within a service network leads to an increase in the relative size of the supportive component vis a vis the operational component. This tends to contradict previous findings by Anderson and Warkov for hospital administration and support the findings of Haas, Hall and Johnson for thirty heterogeneous organizations.

This study also illustrates the real difficulties in maintaining the delicate balance between functional efficiency and local autonomy discussed in Chapter One. As urbanization continues to spread to undeveloped areas, existing institutions such as volunteer fire departments become increasingly problematic as effective ways of delivering municipal services at reasonable cost. In this case, volunteer firemen will likely face increasing role conflict as the number of fire calls increases and the ability to leave one's job during the day decreases. Yet, such institutions are still central to community life in many areas and their demise would be considered a blow to community involvement, autonomy and identity. In one municipality where police services were regionalized, this became evident when two former police detachments were to be closed to cut operating costs. As the mayor of the affected city cautioned, this imperiled the sense of "security" of a community not yet used to its new amalgamated identity. Clearly, then, local government reorganization has real and significant implications for the changing meaning and definition of the concept "community."

Implications for the Study of Urban Administration

Although exploratory, this study hopefully contributes to expanding our knowledge of urban administration in two ways. First, it is one of the only research projects to date to utilize a longitudinal design in assessing the impact of municipal structural modernization. Secondly, the findings reported here suggest a revision of
of the orthodox theory of metropolitan reform, based on a set of demand-capability factors. These points will be elaborated further under two headings - methodological and theoretical implications.

Methodological Implications

In the past, evaluative studies of metropolitanization and other forms of local government reorganization have been of two basic types: 1.) largely qualitative case studies with some longitudinal elements, and 2.) comparative research based on survey data and cross-sectional in nature.

In the last quarter century, a number of case history studies have been carried out, on the consequences of metropolitan reorganization, especially that in Toronto, Miami and Nashville. The focus of this research has been the municipal political system, and in particular, the process of decision making in the governing bodies of reformed metropolitan institutions. As a result, organizational variables such as professionalism have been utilized only to the extent that they relate to such political processes as controlling the metropolitan council "agenda." Furthermore, such studies tend to deal with the overall civic administrative process rather than with specific public agencies which are part of the reorganization.

A second stream of research, also in the political science tradition has focused upon the comparative effects of different forms of municipal organization. Frequently concerned with the implications for local control of services of increasing the scale of municipal service jurisdictions, these comparative analyses are basically cross-sectional in nature. For example, the evaluative research projects carried out by Ostrom and her students contrast consumer-evaluated outputs of police departments in consolidated-service neighbourhoods as compared to that for matched neighbourhoods in independent non-consolidated communities. Similarly, Ahlbrandt discusses differences in costs and benefits for privately operated departments serving multiple jurisdictions as compared to publicly operated departments serving a single jurisdiction. This type of research is by and large less impressionistic than is the case study literature and relies more on "hard" data. However, as Weller has rightly observed, a weakness of such cross sectional studies lies in their tendency to adapt propositional language which "often wrongly implies that variables are related in temporal sequence." Typically, Ostrom et al use NORC data to test (and refute) the proposition that "an increase in the size of the jurisdiction providing police services to citizens will be positively associated with higher service levels." The "increase" here is measured by comparing different jurisdictions of varying sizes,
not by focusing upon the consequences of changing size over time for the same jurisdiction(s). The same is true for the variable, fragmentation as measured by the relative number of jurisdictions.

In marked contrast, the present research has been squarely cast in an explicitly longitudinal framework. Impact indicators have been calculated by comparing organizational characteristics such as resource levels prior to regionalization and after implementation of this structural change for the same overall municipal area. Where this was not possible, the degree of change since regionalization was determined. Although still admittedly crude, indices of prior fragmentation and of central urban unit dominance (based on economic, political and demographic factors) were formulated in order to better understand the differential contexts in which consolidation took place.

The present research, then, is a pioneering effort in applying longitudinal techniques to the problem of local government reorganization and municipal services. Furthermore, it illustrates that many of the concepts and empirical measures used in the orthodox complex organization literature can be fruitfully employed in studying change in the area of municipal servicing. In the future, however, more systematic studies are required in order to more conclusively test the notions suggested by these preliminary findings and the propositions implied in the model of structural reorganization presented in Chapter Four.

Theoretical Implications

Since the beginning of this century, "metropolitan reform" theory has argued for larger scale public organizations, citing the key benefits as being increased co-ordination, resources, planning and ultimately heightened control over the environment. Accordingly, the present research set out to gauge the accuracy of these predictions in relation to a specific sphere of municipal administration - crisis management services.

The empirical results suggest that the effects of an increased scale and a decreased number of jurisdictions is by no means uniform for all types of public services or for all regional municipalities. Rather, the extent of regionalization undertaken and the style of change required by this reorganization are dependent upon the relative demand-capability ratio or balance for each specific type of municipal public service within its regional context. The present data suggest that demand is influenced by three factors: 1.) the magnitude and pattern of resource dispersion required for optimal servicing, 2.) the amount of service-extension required due to a rural imbalance, and 3.) the organizational priorities dictated
according to degree of prior municipal fragmentation. Capability is affected by two further factors: 1.) the degree of extra support from the enabling environment and 2.) the amount of "organizational slack" available upon consolidation.

In the first place, regionalization is limited by the extent to which the service function allows low unit dispersion. For example, in the case of fire protection, the necessity of maintaining large manpower resources at multiple locations for only intermittent activation makes centralization problematic. This is especially salient in rural areas where there is still considerable reliance on volunteers. In this case, then, the demands which must be met in order to ensure optimal servicing outstrip the capability to cope under a restructured arrangement; as a result, structural change must be limited to regionalizing only specific activities, for example, training.

If consolidation is realistically possible, several new demands can be faced. In Ontario, the municipal policing jurisdiction was instantly expanded by the addition of large rural land areas formerly policed free of charge or at minimal cost by provincial police officers. This immediately meant that organizational priorities had to be committed to basic resource expansion rather than more qualitative types of changes. If the gap between existing urban services and that formerly existing in these rural areas is closed too quickly, or if support for this service extension is not built into the terms of local government reorganization, demand can easily surpass capacity and organizational breakdown can ensue.

Other extra demands are associated with a high degree of prior municipal fragmentation. Under such conditions, most equipment is not standardized, wages and training are variable and inter-unit communication is less than co-ordinated. Upon consolidation, these problems must be rectified, often at considerable initial cost.

Counterbalancing these potential demands are extra sources of available support. If a consolidated municipal agency is organized around a large, urbanized "core department" then the organizational slack of this unit can be utilized in stabilizing the demand-capability ratio. Also if significant parts of the "enabling environment," usually senior levels of government, can be persuaded to increase normal operating subsidies or to extend special conditional grants then special facilities such as a modern police communications centre can be constructed in order to further balance demands and capabilities.

In sum, this study found that many of the benefits of structural centralization cited by the proponents of "metropolitan reform" were indeed evident in the regionalized crisis management agencies studied,
in particular, increased professionalization, closer areawide co-ordination and a certain degree of innovation. However, this comparative study of Ontario regional municipalities strongly suggests that these benefits are neither automatic nor "magical" results of an increase in scale and that the viability of structural reorganization varies according to conditions under which it operates for each type of public service. For this reason, careful in depth cost-benefit studies are advisable before structural consolidation is advised for particular municipal service areas.

Policy Recommendations

Policy Protection

Given present inflationary economic conditions, continued urban expansion and overall changes in the types of problems faced by contemporary police, major changes in the delivery structure of municipal police services in Ontario have been inevitable. In particular, small urban centres and potential high growth rural townships have no longer been able to "make do" with small, understaffed and underfinanced local police forces, despite the benefits this may have for local autonomy. Increasingly, more and more local municipalities have been looking to the Province to take over police protection functions or else heavily subsidize existing units. Under these conditions, only two types of solutions have been possible: 1.) full or partial police force consolidation, and 2.) increasing involvement of the Ontario Provincial Police in municipal policing.

The latter solution, while attractive to some is not viable for several reasons. First of all, many of these municipalities, especially small towns require special police services over and above general patrol surveillance, for example, intensive traffic bylaw enforcement. Secondly, by relying upon the Ontario Provincial Police for protection, little local control over services can be exercised. Thirdly, in keeping with the recommendations of the Task Force on Policing in Ontario existing "free policing" or inexpensive policing due to favourable O.P.P. contracts cannot continue to be the basis for use of this force for purposes of municipal police protection.

"Regional policing" then has been the only viable solution to the problems cited above. However, the present research has indicated that the transition from many units to a single centralized unit has not always been as smooth as possible. In particular, the issues of costs and local autonomy have sometimes not been successfully dealt with. In this regard, it is possible to recommend three
"strategies" which might be employed in future police consolidation situations in order to reduce possible financial stress and to enhance public acceptability.

First of all, change in police service levels should be implemented in a "phased" fashion. Rather than immediately urbanize protection throughout the regional municipality, this should be done gradually in conjunction with urban growth patterns. In particular, rural residents accustomed to low tax levies for police protection should not have to face a sudden "tax shock" to pay for suddenly escalated and largely unwanted services, although they should be expected to henceforth contribute directly to the cost of basic police protection.

Secondly, regional structural consolidation should not imply undue organization centralization. Within the bounds of financial feasibility, a neighbourhood or community structure should be maintained. In particular, local detachments should not be closed just to cut overall operating costs. As the case of Waterloo Region illustrates, undue centralization can be detrimental where it interferes with responsiveness to local needs, especially in emergency situations. Particularly instructive here is an approach which draws upon the major force in the region prior to consolidation for resources and senior administrative personnel, but which places the regional police headquarters in another part of the regional municipality (where adequate physical facilities can be found or constructed).

Thirdly, adequate advance planning prior to regionalization in order to "iron out" possible problems, set policies and formulate procedures can be highly beneficial (as in the case of Peel Region). It is at this stage that cost-benefit studies on particular aspects of regionalized police service could be most useful. Particular consideration might be given in advance of regionalization to divesting the police of time consuming administrative tasks, for example, serving warrants or parking regulation, which might better be carried out by civilian non-police personnel.

Fire Protection

Unlike police protection, full regionalization of fire services in regional municipalities is not practical. However, regional municipalities must overcome their present "enmity" in relation to fire services. Towards this end, a special regional fire unit is recommended. The major functions of this unit would be fire prevention, regional fire inspection and inter-unit emergency planning. In addition, the regional fire unit should be tasked with two additional important activities: 1.) central equipment purchasing, and 2.)
planning the gradual relocation of fire stations. This relocation must be carried out with maximum possible consultation with local fire departments and should be financed from the regional levy. Whenever possible the establishment of regional fire training schools is recommended. However, in lieu of this, continued participation on a regional level in courses conducted by personnel from the Ontario Fire Marshal's office is advisable, especially for largely volunteer forces.

The problem of dwindling volunteer support in urbanizing areas remains an important consideration in improving fire protection services in Ontario regional municipalities. One possible solution to this would be to adopt a "wrangler" system similar to that employed in Scottsdale, Arizona. According to this system regular city employees are used to supplement permanent firefighting personnel. Primarily employees of the city's public works and parks department, these "wranglers" are equipped with belt paging units and are available for use as firefighters in case of major fires. Especially in small but growing towns in regional municipalities this plan could be introduced on a limited scale.

Emergency Measures

The present study has upheld the recommendations made elsewhere that structural integration into the mainstream of municipal administration can greatly aid the emergency planner in becoming a more integral part of the municipal process. In particular, integration into the regional public works department appears to be of value in plugging emergency measures officers into salient day to day activities. Such involvement, in turn, can greatly aid organizational legitimacy and build support for less practical long range planning projects.

It has been illustrated here that most emergency measures offices continue to rely upon the Federal Government for at least half of their operating funds. This is clearly a millstone for these offices, in that they remain vulnerable to the type of budget cuts which have characterized the national emergency planning scene for the last decade. In this connection, it is recommended that full financing of local emergency offices be taken over by the regional municipality. At the same time, emergency measures staffs must be expanded in order to constitute a "critical mass." Present arrangements where one employee constitutes the whole organization automatically restrict the scope of activities and tend to "force" a contingency planning role upon E.M.O. offices. Additional emergency planning staff should be assigned half time to normal municipal duties in allied areas while having the other half of their time assigned to "high profile" emergency related tasks such as the conducting of hospital disaster drills.
Suggestions for Future Research

In large part, the present study is exploratory in nature; as a result there are many improvements and extensions which might be made in the future.

First of all, the empirical focus here has been relatively narrow and confined to one specific type of municipal service, what has been called "crisis management." It is likely, however, that municipal reorganization might have a much different impact on other types of public services which are not basically concerned with the protection of persons and property. In particular, variations in level and type of technology utilized may be a significant intervening variable. Furthermore, all three municipal agencies analyzed here have, in the past at least, tended to utilize a "military" model of internal structural organization. Departments more closely modeled on the "professional" mode of organization, for example, urban planning units, presumably will differ in their response to regionalization. Future research in this area, then, might be extended to include a wider range of regional municipal agencies; differences and similarities could then be determined controlling for function, technology, etc.

A continual problem faced in the research reported here was the difficulty in obtaining longitudinal information ex post facto. At the time this project was undertaken former municipal police departments had been regionalized for at least two years in all cases. As a result, Time One data had to be compiled from secondary sources such as Police Administration Statistics. Among other things, this greatly limited the range of variables which could be employed in the longitudinal analysis. Accordingly, future studies on the effects of local government reorganization might find it helpful to start with jurisdictions on the brink of regionalization or metropolitanization. Annual or bi-annual updates could then be carried out, comparing present data with baseline data gathered directly prior to structural change. As the establishment or regional municipalities in Ontario is at least temporarily complete, Canadian researchers might want to turn to the "County Reorganization Program" as the basis for future projects of this type.

As previously emphasized, the present study constitutes what is, in effect, only an initial and limited test of the model of structural reorganization of municipal services which has been outlined in Chapter Four. Particular attention was given here to stage two of the model -- the effects of consolidation upon organization change variables. Other parts of the model are, however, particularly promising realms for future empirical research. In particular, there is a need to probe citizen reactions to the creation of regional services on a longitudinal basis. As Hall, Georgopoulos and Mann and others
have recognized, such evaluations can be an often ignored, but valuable dimension in the attempt to measure effectiveness. A community survey, perhaps somewhat similar to the type developed by Ostrom et al can thus be a worthwhile step in further developing the longitudinal study of the effects of regionalization and other major forms of municipal structural reorganization. Certainly several of the issues discussed in the present research (the alienation felt upon the imminent closing of municipal police detachments, the problems for community integration attached to phasing out volunteer firefighting forces) suggest that this line of research might be most fruitful.

Another possible strategy would be to include structural reorganization as a variable or set of variables in a larger study of municipal departments in Ontario or in Canada as a whole. Organizations such as police departments are changing not only as a result of local changes in form of government, but also in response to more general changes in the "macroenvironment." For example, Meyer has fruitfully probed the change over time of the domains of municipal financial officers as a reaction to overall environmental changes such as the growing importance of the computer. The greatest benefit of this type of study would be that it would allow the use of multivariate analytic techniques designed to introduce a greater amount of control in exploring the relative importance of variable "factors" such as that constituted by changes in local government organization.

Finally, two further improvements over the present research may be suggested.

Aside from information concerning organizational innovations, most of the comparisons made here were between two specific years. In part, this was dictated by the decision to keep the questionnaires sent to municipal crisis management agencies as concise and easy to answer as possible. As Stallings has pointed out, however, single year statistics for variables such as budgeting are often too narrow and do not accurately reflect overall trends. Accordingly, future research on this topic would do well to compile year by year statistics wherever possible especially for easily quantifiable measures such as staff size or expenditures.

Furthermore, the variables used in this study should be supplemented by other frequently used organizational indicators. For example, organizational complexity, formalization, authority structure and external linkages are all useful sources of information which might be utilized in the study of municipal public agencies.
Conclusions

In the past two decades, few sociological topics have been so ubiquitous as that of the existing or impending "urban crises." Proposed solutions to this problem have generally been of two types. One school of thinkers has suggested that what is needed is a reversal in the trend towards an increase in scale. Rather, programs should be formulated which encourage the re-emergence of a sense of "community," especially at a neighbourhood level. In contrast, a second stream of opinion argues that such notions are at best "romantic" and that increased geographic mobility, the growth of large scale economic institutions and increased interest-group and lifestyle diversity make the local community unit increasingly vestigial. The real problem has been the failure of local government to adapt to the changes produced by intense urbanization. Accordingly, fragmented and overlapping government in metropolitan areas should be replaced by larger scale metropolitan or regional jurisdictions which will be better suited to matching resources and social needs and which will allow greater efficiencies in municipal servicing.

As Letwin has observed, governments have attempted to reconcile these two positions by "establishing successive tiers of local government" which it is hoped will both satisfy the demand for self determination or local autonomy, and at the same time, permit a maximum of efficiency in certain public services. Regional government in Ontario has constituted such a "compromise" solution.

In order to assess the long range viability of such structural changes, concrete data are needed, especially on the impact of local government reorganization on specific municipal level services. Towards this end, the present study has examined a number of selected organizational changes in the area of crisis management during the first five years following the formation of regional government in nine Ontario jurisdictions. Hopefully, the results will help contribute to the establishment of a more adequate and informed base on which to make future decisions concerning the costs and benefits of municipal structural reorganization. In addition, it is hoped that the present report will have the effect of stimulating further, in depth study of this facet of contemporary urban life.
Footnotes


7. Ostrom et al., op. cit., p. 75.

8. According to Kueneman, the enabling environment "includes all organizations, groups and individuals which control or directly influence the sources of support which enable the organization to exist." See: Rodney M. Kueneman, *Organization-Environment Interaction: Organizational Legitimacy and the Non-Autonomous Organization*. Unpublished Ph.D. dissertation. The Ohio State University, 1975, p. 18.

9. See the reprint of an article originally appearing in the *Brampton Guardian* on March 28, 1974 in: *Municipal World* (June, 1974), p. 159 for comments about the value of prior planning for the Peel Regional Police.

10. This innovation is reported by Ahlbrandt, op. cit., p. 50.


APPENDIX A

CASE HISTORIES

The Regional Municipality of Niagara

Situated on a peninsula between Lake Erie and Lake Ontario, Niagara Region is an amalgamation of two counties -- Lincoln and Welland. In 1974, the population of Niagara Region was 353,325, 65 percent of which resided in the three major cities - St. Catherines, Niagara Falls, and Welland. The economy of the region is based on three main revenue producing sources: heavy industry (St. Catherines, Welland), tourism (Niagara Falls) and fruit farming (especially that related to the Ontario wine industry). In addition, the Welland Canal which cuts across the Niagara Peninsula has generated considerable commercial activity.

The Change to Regional Government:
General Issues and Problems

As the second regional municipality to be legislated in Ontario, Niagara has appeared to have encountered a number of problems, especially in its early years. In 1971, the mayor and members of the St. Catherines City Council presented a brief to the Province of Ontario pointing out a number of problems which they perceived as existing with respect to regional government in the area. Following the presentation of the brief, the City Council passed a resolution requesting the Provincial Government to impose a moratorium on any further regional restructuring until the existing regional governments had undergone a critical and detailed examination. The St. Catherines brief, in turn, formed the basis for a resolution the next year by the Association of Municipalities of Ontario that "further extension of regional government be withheld until a complete re-examination is completed." The St. Catherines resolution was also endorsed by delegates at the 1971 convention of the Association of Ontario Mayors and Reeves.

In its brief, St. Catherines charges that the goal of more "equitable" revenue distribution was being achieved at its expense.
TABLE 30

The Regional Municipality of Niagara

Statistical Profile

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population (1974)</td>
<td>353,325</td>
</tr>
<tr>
<td>Surface Area (sq. mi.)</td>
<td>720</td>
</tr>
<tr>
<td>Population density (persons per sq. mi.)</td>
<td>491</td>
</tr>
<tr>
<td>Date of effective operation</td>
<td>January 1, 1970</td>
</tr>
<tr>
<td>Number of Municipalities (present)</td>
<td>12</td>
</tr>
<tr>
<td>Reduction in number of municipalities upon regionalization</td>
<td>14</td>
</tr>
<tr>
<td>Per Capita taxable assessment (1974)</td>
<td>$197</td>
</tr>
<tr>
<td>Equalized Assessment per household (1974)</td>
<td>$24,387</td>
</tr>
<tr>
<td>Per Capita Expenditures on police protection (1974)</td>
<td>$27.90</td>
</tr>
<tr>
<td>Per Capita Expenditures on fire protection (1974)</td>
<td>$15.96</td>
</tr>
<tr>
<td>E.M.O. budget (1974)</td>
<td>$44,000</td>
</tr>
</tbody>
</table>
For example, transitional adjustment funds were not provincially provided, but were taken from area municipalities and redistributed. In addition, unconditional grants were now pegged to a "sparsity factor," which meant that St. Catherines received no part of these so called "density grants." In sum, then, St. Catherines alone did not receive "a net gain as a result of the application of the transitional adjustments and the increase in the per capita grants."2

A second point stressed in the brief was that the "split services" such as water and sewage were inefficient and confusing to the ratepayer. In place of these a "systems" approach was recommended, wherein existing inter-municipal systems be maintained under one level of authority and based on a "user benefit" approach. According to this view the regional government's function would be restricted to acting, where necessary, to "facilitate the development of inter-municipal systems" and to "establish minimum standards."3 The brief cited welfare services as an area where only one authority was responsible and thus where development under the regional system was easy and efficient.

Finally, the St. Catherines resolution claimed that many of the existing problems with the regional arrangement were due to the fact that some elements of the restructuring were too quickly implemented, without proper planning studies especially with reference to cost implications.

The problems perceived by St. Catherines cogently illustrate the real difficulties involved in any major restructuring. If servicing in "underdeveloped" sections of the region is to be upgraded revenues must somehow be redistributed, since the villages or townships themselves have an insufficient financial base. This money can only come from two places -- more prosperous portions of the region or from provincial coffers. In the former case, opposition will be on a local level; in the latter it will come from other municipalities in the province who will face reduced grants as a result. The imposition of uniform service rates similarly penalizes the urban component of the region. Yet, to maintain a user-benefit system, obviously acts to stifle the capability of underdeveloped municipal units to initiate new capital projects or to be included in the kind of voluntary system expansions envisioned by St. Catherines. This is the essential dilemma of regional restructuring, and it is not easily solved.

The Impact of Regional Government on Emergency and Protective Services

1. Police Protection

In a 1970 report, the Regional Development Branch of the Department of Treasury and Economics attached a "medium priority" to the
to the necessity of increasing the level of police protection in Lincoln and Welland Counties. Earlier, the report of the Niagara Region Government Review Commission had isolated six problem areas in relation to policing in the region - the large number of separate police forces, free policing by the Ontario Provincial Police in some townships but not in others, the small size of most local forces, the lack of communication among them, the problem of encouraging the formation of larger police forces and the problems of law enforcement on the Great Lakes.

Certainly, the Niagara Region was a melange of different forms of police protection, with widely varying budgets and manpower strength. The Commission Report indicated that in 1965 there were eight police commissions, one county force of two men, seven municipal police forces operating under the direction of council, three municipal forces staffed under contract with the O.P.P., which patrolled the seven townships of the Region without police forces of their own.

A particular problem was that of communication among the various forces in the region. In Lincoln County, the only communication between any two forces was the telephone. Furthermore, some of the smaller forces did not have access to the modern intercommunications system introduced by the O.P.P. in 1964. The situation was slightly better in Welland County where most forces still relied upon the telephone for intermunicipal communication.

A problem especially applicable to the present analysis was the low number of police officers with formal training. In 1965, only a little more than half (52.1 percent) of all police officers in the region had attended recognized police schools for specialized training of several weeks duration or more. This varied widely from force to force with Wainfleet Township having the best record (all five officers) and Grimsby Township the worst (none of the three man force). Two of the three cities in the region -- Niagara Falls and Welland were below the regional average with only 44.9 percent and 38.5 percent of their forces having formal training. The 118 man St. Catherines' force was above the regional average with 59.3 percent, but this was still a relatively low percentage.

Finally, the size and budget of the various police forces in the region varied widely. The Commision pointed out that 11 of the local forces employed less than 10 permanent police officers, with six of these forces having less than five men on permanent strength. Furthermore, of those municipalities which paid for their own police protection, the 1964 expenditure per capita ranged from $21.08 in the village of Crystal Beach to $1.33 in Clinton Township. More than half the area of Lincoln County and about 15 percent of Welland County received "free policing" from the O.P.P., a source of irritation to
townships of similar population and financial resources who pro-
vided and paid for their own police services.

Changes Since Regionalization

On January 1, 1971 the eleven remaining police forces in the
Niagara Region were consolidated into one Regional Force. Seven
detachments were established - Grimsby, St. Catherines, Niagara Falls,
Fort Erie, Port Colborne, Welland and Thorold. There was no detach-
ment in Wainfleet Township, which had most vociferously opposed a
larger area of jurisdiction, nor was there one in West Lincoln Town-
ship, the largest land area in the Region. The core of the Region
Force was the former St. Catherines Police Department with the present
chief and one deputy chief previously holding the posts of chief and
inspector in the latter organization. A second deputy chief held a
similar position in the Niagara Falls force. The new headquarters is
situated in St. Catherines.

In general, regionalization has had the most impact in two areas
of police organization -- professionalization and material innova-
tion.

While the Niagara Regional Police still has a relatively low
percentage of officers with police college training (77 percent),
this is nevertheless a 25 percent increase over the pre-regional sit-
uation. In addition, the traditional promotion eligibility criterion
-- length of service has declined in importance.

Also notable is the fact that the Niagara Regional Police Force
scored high on innovations (15 overall). Eight of these innovations
were classified as equipment changes, the highest score recorded in
this sub-category for any regional force. On the other hand, Niagara
had only one change in police practices - the assignment of police-
women to patrol. Of the five categories of community oriented -
preventive programs, the Niagara Force had adopted four - a community
relations program, an alcohol and drug abuse program, a "ride along"
plan and a high-school counselling/speakers program.

That the Niagara Force should rank highest in terms of material
changes no doubt partly reflects the pressing need to upgrade the
generally uneven and inadequate system of inter-organizational com-
munications which characterized police protection in the region be-
fore restructuring. In this regard, improvements were made in tele-
type facilities, the dispatch system and in the emergency reporting
system. It should also be noted that a provincial grant of $350,000
was provided for the development of a central communications system
and alterations to the regional headquarters facility.
2. **Emergency Measures**

Before regionalization, the Niagara Region contained two Emergency Measures Organizations - the Consolidated Emergency Measures Organization (E.M.O.) of Lincoln and Haldimand Counties serving St. Catherines and Thorold, and the Welland County E.M.O. serving Niagara Falls, Port Colbourne and Welland.

The Niagara Region Local Government Review Commission, in its report, indicated that emergency planning for the area was "hampered by the reluctance of some municipalities to support the programme." It concluded that "E.M.O. might benefit from having to deal with a single regional government."

Late in 1969, negotiations were begun towards an amalgamation of the Welland County E.M.O. with the Lincoln portion of the Lincoln-Haldimand E.M.O. Haldimand County had decided to reinstitute its own E.M.O. as of January 1, 1970, and thus was excluded from the proposal for the Regional Emergency Measures Services. On December 3, 1969, representatives of both E.M.O. organizations and of a Fact Finding Committee of the Regional Municipality of Niagara met at the Welland City Hall and soon after a submission regarding a Regional E.M.O. was approved by all relevant municipal councils.

**Changes Since Regionalization**

At the time when the Niagara Regional E.M.O. was formed, the new organization was given a budget of $45,000. Of this, 75 percent was paid for by the Federal Government, 15 percent by the Province and 10 percent by the Regional Government. However, in October, 1973 the Minister of National Defense announced a major cut in federal Civil Emergency Measures Financial Assistance Program. Two years later, the Province of Ontario decided to drop funding for Emergency Measures Organizations in favour of a "lead ministry" concept. As a result, by 1976, the Niagara Region E.M.O. budget had actually dropped $1,000.00 below what it had been in 1971. Of this, 61 percent was Federally provided and the regional government share increased to 39 percent.

As with its budget, the Regional E.M.O. has suffered a slight decline in staff since regionalization, going from three full time employees to two full time and one part time. The present co-ordinator previously held the position of co-ordinator of the Welland County organization.
In contrast to other municipal E.M.O.'s, the Niagara organization has become part of the Regional Public Works Department and is directly responsible to the Director of Engineering. This appears to be beneficial to its survival, in that it is in a position to become involved in day to day problems such as oil, gasoline and other spills of hazardous materials. In addition, all emergency planning for the Public Works division is done through the E.M.O. staff. This connection with the Public Works Department was also felt to be useful in that it gives E.M.O. access to all the personnel and equipment of this municipal department, resources which would normally be unavailable if Regional E.M.O. operated autonomously.

As with all of the regional E.M.O.'s studied here, contingency planning continues to be considered the primary "activity" of the agency. Next in importance is the co-ordination of disaster responses, especially chemical spills and severe snow storms. Since regionalization, the Niagara Regional E.M.O. has been significantly involved in two emergency responses - a 1972 acid spill and a severe ice storm in 1976. Finally, since regionalization, responding to individual emergencies has declined as an important organizational activity, while disaster drills and exercises have gained in importance.

In sum, in spite of initial legislative neglect, E.M.O. in the Niagara Region has appeared to benefit from the regional connection. As this writer has stressed elsewhere, involvement in short-run emergency-related tasks can be a useful strategy in order to maintain support for longer range planning activities. In Niagara, affiliation with the Public Works Department makes such involvement possible. That Regional E.M.O. will continue to play a useful visible role in municipal government in the area is perhaps best indicated by the recent statement by the Mayor of Fort Erie who told a C.B.C. Toronto interviewer that E.M.O. had done a good job in coping with the recent ice storm and accompanying massive power outage.14

3. Fire Protection

In 1970, the Design for Development report for the South Ontario Region assigned a "high priority" to the reduction of both the incidence of fires and the property damage from fires in Lincoln and Welland Counties.15 In part, this was based on statistics released the year before by the Ontario Fire Marshal which put the annual number of fires per 1,000 dwellings from 1965 to 1969 at thirteen, two above the provincial average.16

The Niagara Region Review Commission pointed out several potential problems in its 1966 report.17 In all forces except St. Catherines, volunteers were found to form the majority of
firemen. In Niagara Falls, Welland, Port Colbourne and Thorold some full time professionals were employed, but the majority of the force was made up of volunteers. Secondly, as with police protection, expenditure on service varied widely, from 47 cents per capita in Caistor Township to $9.29 per capita in Niagara Falls.

The report concluded that a full regional firefighting force was not advisable since by its very nature fire fighting "demands decentralization of men and equipment with well defined areas of operation." However, some kind of regional co-ordination of fire services beyond the existing Mutual Aid Systems was recommended. Aspects of fire protection which should be put on a regional basis were listed as: supervision of standards, training, siting of stations, purchasing, dispatching, capital financing and general co-ordination.

Changes Since Regionalization

Since regionalization, the major change in the area of fire protection has been the extension of the County Mutual Aid Plan to a Regional Area. This expands the resources available to a municipality in case of a major conflagration, although it does little to upgrade the quality of protection on a day to day basis.

As with all other regions, there is now a Regional Fire Co-ordinator, the St. Catherines Fire Chief. However, there is no full time planning co-ordinator position at the regional level. Nor are any of the departments tied in to an inter-municipal central dispatch system.

As with the basic quality of protection, fire department innovations varied widely. One volunteer department reported that it had adopted eight of the nine innovations listed in the questionnaire sent to the organizations involved in this study. Another volunteer department, geographically adjacent to the first organization, listed only three changes. The most frequently mentioned area of change appeared to be that of "function." That is, most departments listing innovations indicated that they had become involved in the administration of municipal building codes since regionalization. Several departments also indicated that they had taken over responsibility for zoning enforcement.

In general, the consensus among all respondents was that other than expansion of the mutual aid plan, "regional government has done little or nothing to change or better the fire service area."
The Regional Municipality of York

Extending across Metro Toronto's northern boundary up to Lake Simcoe is the Regional Municipality of York. Most of the 189,797 residents of York (1974) live in the southern portion of the Region. Generally, the economic, social and physical development of this southern section has been "inextricably bound" to Metropolitan Toronto. In part this is due to the greater employment opportunities available in the large city. Also important, however, is the fact that the municipalities in southern York Region have not geographically been in a position to provide their own water and sewage services for the purposes of development and have had access to Lake Ontario only through Metro Toronto. The northern part of York Region is largely rural, much less intensively developed and dependent upon agriculture. In contrast to the other regional municipalities under study, there are no cities in York Region, although there are several large towns (Richmond Hill, Markham, Newmarket).

The Change to Regional Government:
General Issues and Problems

Throughout the sixties, a potential conflict became likely over the subject of the expansion of Metro Toronto's boundaries. Metro officials, recognizing that the amount of development land within existing municipal boundaries was dwindling, argued for further growth to the north. Such plans included suggestions for converting the semi-rural townships of Vaughan and Markham into Metro Toronto boroughs.

In the 1967 Report of the Royal Commission on Metropolitan Toronto Commissioner Goldenberg recommended partial amalgamation of built up areas of these townships if the required water and sewage facilities could not be otherwise provided. The Provincial government, on the other hand, appeared to favour a "freeze" on Metro expansion. This position was confirmed when, at the beginning of 1971, the Regional Municipality of York was incorporated, with its southern boundary corresponding to the Metro's northern boundary. Like the Halton residents, southern York County residents were therefore faced with a "lesser of two evils" situations, with amalgamation to Metro Toronto as the political alternative to regionalization. In contrast to other regional areas, then, regional government more visibly protected local autonomy in the long run, rather than appearing to threaten it.

Nevertheless, acceptance of regional government has not been automatic among all residents, especially those in rural areas.
TABLE 31

The Regional Municipality of York

Statistical Profile

Population (1974) ................................ 189,797
Surface Area (sq. mi.) ......................... 645
Population density (persons per sq. mi.) ... 294
Date of effective operation ..................... January 1, 1971
Number of Municipalities (present) .......... 9
Reduction in number of municipalities upon regionalization .......... 5
Per Capita taxable assessment (1974) ....... $8597
Equalized assessment per household (1974) .. $34,994
Per Capita expenditures on police protection (1974) ..................... $26.56
Per Capita expenditures on fire protection (1974) ..................... $9.89
E.M.O. budget (1976) ........................ $18,500
The familiar objections of unnecessary cost for regional services and removal of the apparatus of government from the community have been advanced in York as in most reorganized municipal areas. For example, during the debate on the Regional Municipality of Halton Act in 1973, the member for York Centre talked of the regional police forces "imposed on us" as constituting an extra cost, and suggested that the force had lost the support of rural communities in the Region.24

The Impact of Regional Government on Emergency and Protective Services

Prior to regionalization, all municipalities in York County maintained separate municipal police forces, largely on a contract basis with the Ontario Provincial Police. These ranged in size from 30 (Richmond Hill) to 2 (Woodbridge) in 1970.

A decade before regionalization actually took place, Provincial Magistrate J. Roberts wrote a report to York County officials urging the amalgamation of York County police departments.25 The report indicated that the basic problems with existing small forces were: 1.) that they could not provide the level of services normally available in larger areas, for example, twenty-four hour services and constant patrol and surveillance, and 2.) they lacked proper accommodation and adequate assistance to deal with emergencies. Other arguments in favour of amalgamation included the gains from specialization which would result from a better division of labour and the reduced costs of vehicles and other items which would result from bulk purchasing.26

Changes Since Regionalization

On January 1, 1971 the fourteen separate police forces in the York Region were consolidated into one Regional force. Headquarters were centered in the Town of Newmarket with detachments in Keswick (Georgina Twp.) and Richmond Hill. Recently (December 1, 1975) an ultra modern $1,887,000 police building was completed in Richmond Hill to serve district #2 (Markham, Richmond Hill, Vaughan areas).27

In contrast to the other regional forces studied the present senior personnel were not entirely recruited from existing police officials in York County. That is, the Chief was formerly with the Toronto Port Police, while one his deputy chiefs came from the Metro Toronto Force. Two other senior officials were formerly with local forces, however.
Since it lacks a large urban core, York Region has no doubt faced a somewhat different set of demands than other more urbanized regional areas. Perhaps this accounts for the absence of such social innovations as crowd control training and the assignment of policewomen to patrol duty.

On the other hand, considerable emphasis appears to have been placed by the York Police on material change; that is six innovations of this type were recorded. In 1975, a computer system designed to monitor and analyze the issuing of police uniform tickets for traffic offences, snowmobile violations, liquor licences and fisheries etc. was put into operation. An offshoot of this system breaks the uniform ticket audit down into monthly reports using 19 specific categories. This computer application is described as the first phase in a Police Management Information System.28

A priority problem for the York Regional Police has been that of juvenile crime. In 1975, a "youth bureau" was formed in order to deal with adolescent offenders or potential offenders before the juvenile court stage. In addition, the department operates a high school counselling/speakers program.

2. Emergency Measures

Prior to regionalization, the York Regional E.M.O. existed at the county level and had two co-ordinators. All fourteen municipalities contributed to varying degrees in its support through the county levy.

Changes Since Regionalization

Upon regionalization, the York Region E.M.O. had a budget of $16,700 (second lowest of all E.M.O.'s studied) and a staff of two. Of this, the greater part (75 percent) was covered by the Federal Government, while 15 percent and 10 percent was paid for by the Provincial Government and the Regional Municipality respectively.

At present, the director is the only employee while the budget has gone up slightly to $18,500. After inflation, however, this would actually represent a decreasing amount of financial support. After the Province of Ontario withdrew its active support, the Federal Government assumed 51 percent of the costs while the Region upped its support to 49 percent.
In contrast to other regional E.M.O. offices, the present director is not a carryover from the County E.M.O., but commenced his present duties in 1973. This official is directly responsible to Regional Council as a whole and makes a formal report to this body once a year.

No major emergencies have occurred in York Region since Hurricane Hazel struck in the fifties. Consequently, the E.M.O. office has had few actual emergency situations with which to cope. In 1974, however, E.M.O. did operate the central communications centre in an areawide search for a kidnapped child.

It was indicated that regional government had made a difference in planning to the extent that planning activities could be agreed upon at a single meeting rather than at a number of separate meetings with each municipality. No change was indicated for resources levels or operational activities since regionalization.

In the first year of regionalization, training was the activity given highest priority, followed by response to individual emergencies and contingency planning. At present, however, training has more or less been dropped and priorities are as follows: 1.) contingency planning, 2.) response to individual emergencies, and 3.) public information and education.

4. Fire Protection

York was the only regional municipality studied which depended on volunteer firefighters to some extent in all constituent municipalities. In the southern portions of the region, departments tended to be mixed volunteer-professional units, while in the less settled northern portion, all volunteer forces predominated. Mutual aid agreements existed within the County; however, such arrangements were also maintained with adjacent municipalities, for example, Brock Township (now in Durham Region), Scarborough and North York (both part of Metro Toronto).

Changes Since Regionalization

Other than a fewer number of municipalities, there has been little change in fire fighting arrangements in York Region since regional government. Like Halton, in cases where expanded townships were formed at the time of regionalization, existing forces were maintained and termed district "areas" (for example, Georgina Twp.). Existing mutual aid agreements have been maintained with municipalities
outside the regional jurisdiction, as have existing reciprocal pur-
chase of service agreements with several townships in Durham Region.
A regional fire co-ordinator, the Vaughan Township Fire Chief has
been appointed and is responsible for centrally activating the mutual
aid system.

The Regional Municipality of Waterloo

Sixty miles west of Toronto, the Regional Municipality of
Waterloo is part of the "peripheral belt" of the Toronto Metropolitan
region. There are two geographically and socially distinct urban
complexes in the Waterloo Region -- Kitchener-Waterloo and Cambridge.
The former is larger, populated by residents of Germanic background,
contains two universities and a community college and is the adminis-
trative centre of the region. The latter is a new city composed of
the former city of Galt and the towns of Preston and Hespeler.
Cambridge is populated by residents with Scottish-English ancestry,
and has an economy based largely on manufacturing, in particular
textiles and metal fabrication. There is relatively little inter-
action between the two urban complexes, other than that connected
with shopping, a fact which has made the emergence of a sense of
"regional community" most difficult. Most of the region's popula-
tion of 277,284 lives in these two urban nodes; the rest of the re-
gional area (80 percent in 1970) is more or less rural. In contrast
to the other regional municipalities under study, Waterloo Region is
flood prone; especially the Galt portion of the City of Cambridge.
This has limited industrial expansion to areas of higher land and led
to the creation of an areawide regulatory and planning agency -- The
Grand Valley Conservation Authority.

The Change to Regional Government:
General Issues and Problems

It will be recalled that the first of the Provincial guidelines
for designing regional governments was that an area have a "sense of
community based upon sociological characteristics, economics, geo-
graphy and history." Clearly, this sense of community has never
really existed between Cambridge and Kitchener-Waterloo. It is this
fact which has led to many of the problems encountered by the new
regional municipality. These have been particularly applicable to
the area of emergency and protective services.

In May 1974, the Grand River seriously flooded parts of its
watershed following an extraordinarily heavy period of rainfall.
Downtown Galt was the area of most extensive damage, especially the
TABLE 32

The Regional Municipality of Waterloo

Statistical Profile

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</tr>
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</tr>
<tr>
<td>Reduction in number of municipalities upon regionalization</td>
<td>8</td>
</tr>
<tr>
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<td>Equalized assessment per household (1974)</td>
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<td>E.M.O. budget (1976)</td>
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</table>
the business section. Considerable hostility and bitterness was engendered in the flood area due to lack of an adequate warning and also to the lack of involvement of regional officials, in particular the regional police chief, in the emergency response. Citizen pressure subsequently led to the establishment of a Provincial Inquiry which was tasked with the responsibility of investigating these flood-related problems.

Eight months later, Cambridge was informed that the Hespeler and Galt police departments would likely be closed within the year. At a public meeting at Cambridge City Hall, a number of elected officials expressed opposition to this plan. The incumbent Cambridge Mayor expressed the local opposition in this way: "Cambridge is a young city and must find its focus and identity before its police detachments, which are symbols of security, can be taken away."

Clearly, a strong sense of local autonomy on the part of the Cambridge ratepayers has played a major role in the less than total adjustment to regional government. This feeling of local autonomy has not eroded, but in fact was undoubtedly strengthened by the overwhelmingly local nature of the 1974 flood response and by the subsequent formation of a citizen's group to press for aid and for a judicial inquiry.

The Impact of Regional Government on Emergency and Protective Services

1. Police Protection

Prior to regionalization, local police forces existed in nine of sixteen municipalities in the Waterloo area. In 1966, there were five police commissions, while the remaining four municipalities administered their police through the local elected council. Areas without their own forces were provided with general patrol service by the O.P.P. at no direct cost.

In the 1970 Waterloo Area Local Government Review Report, Fyfe and Farrow pointed out several police protection problems which existed in the study area.

As with the other regions, it was the small towns and villages which were facing the most serious policing problems. Major problems in recruiting were faced by such municipalities because of difficult working hours and low salary levels. In addition, these smaller forces could not afford to provide an adequate around the clock
service and had difficulty in letting junior officers away to the police training college. Finally, in some of the smaller municipalities, such as Hespeler, police quarters were both cramped and inadequate.

A deficiency applicable to the whole area that was especially worrisome to the Ontario Police Commission was the lack of in depth intelligence service. This type of police work was "available only in a limited way locally."^36

There were some positive aspects to the policing situation in the Waterloo area. According to the Fyfe Report, there were a number of co-operative efforts among police forces in the region. For example, the Kitchener and Waterloo forces assisted one another in emergencies and various aspects of lab and technical investigation. And, the Galt police relayed messages to Preston and Hespeler cruisers when the switchboard at the police station in those municipalities closed down until the morning.37

In addition, police statistics for 1966 show that 81.94 percent of all police officers in the Waterloo area had professional training, that is, they had completed recognized police courses such as that given by the Ontario Police College at Aylmer. Kitchener had a particularly high proportion of its force with formal training; 86.21 percent had taken formal police college courses.38 The qualifications of police officers in rural towns and townships were not as high, however, although no municipality had less than half its force without formal training.

Finally, in contrast to the Niagara Region, inter-force communication was generally adequate. All local forces were radio equipped and had communication between vehicles and police station and at least one other local force.39

Like the Niagara Region, the per capita expenditures on police services before regionalization were highly variable. In 1965, these ranged from a high of 11.52 dollars per capita in Kitchener to $ .03 in the Village of Wellesley.40 Similarly, manpower varied widely from 116 men in Kitchener to one officer in Bridgeport (1966). In 1966, four local forces had under ten men and six had a smaller force than twenty. About ten percent of the regional population received "free policing" from the Ontario Provincial Police.

Changes Since Regionalization

On January 1, 1973, the nine police forces in the Waterloo area were consolidated into the Waterloo Region Police Department. At that
time seven detachments were established - Kitchener, Waterloo, Elmira, New Hamburg, Preston, Galt and Hespeler. Two detachments were closed down -- Bridgeport and Waterloo Township. Headquarters were situated in Kitchener and the Regional Chief was the former Kitchener Police Chief.

The most notable change in police protection in the Waterloo Region since consolidation has been the increase in the number of police officers who have attended university. In 1973, the first year of regionalization, approximately 23 percent of all police officers had taken university courses; by 1976 this had risen to nearly 40 percent. This was by far the highest proportion of officers with university education of any regional force for which this information was provided.

Among other changes since consolidation worth noting are: 1.) the continuous growth of the civilian personnel component (46 percent since the establishment of the regional force), 2.) the establishment of a new $250,000 communications system in February 1975, and 3.) the decision to send a selected group of detectives to Toronto to obtain special training regarding the handling of rape and other "sex crimes."^41

2. Emergency Measures

Before regional government, emergency measures planning was carried out at the County level. The emergency planning officer was responsible to a commission with members from the councils of Kitchener (3 members), Waterloo (2), Galt (2) and Waterloo County (4). The stated goal of the Waterloo County Emergency Measures Organization at this time was "to plan and develop a co-ordinated emergency measures for both war or civil disasters in the area under its responsibility."^42

Upon regionalization, the emergency planning officer along with two staff members became regional employees under the Chief Administrator of the Regional Municipality. At this time, E.M.O. had a budget of $38,856; of this 56 percent was federally financed, 11 percent provincially, and 33 percent by the region.

The regional affiliation of the emergency planning staff was obscured, however, by an incorrect listing in the Kitchener-Waterloo telephone directory. Rather than appearing with other regional government departments in a special "Government" section, the emergency office appeared under "E" as the Emergency Measures Organization for the County of Waterloo. As the emergency planner later informed the Regional Council, this was doubly a misnomer in that by 1974 he was the only remaining employee.
Changes Since Regionalization

Until the 1974 flood, the future of the emergency planning office in Waterloo Region appeared less than encouraging. In 1973 the Federal Government cut the emergency measures budget for Waterloo by forty percent as part of its overall E.M.O. cutback. In October of the same year, the Kitchener-Waterloo Record condemned E.M.O. suggesting that the $1.5 million spent on emergency planning in Canada should be taken away and spent on world peace.43

With the flood response however, the image of the emergency planning office was refurbished. During the initial phase, the emergency planning officer was instrumental in conveying warnings of the high water danger to many area municipalities as well as in co-ordinating requests for supplies. At the Provincial Inquiry into the Grand River Flood, the inquiry counsel praised this official as doing more than his formal responsibilities required and said "the community will not forget what you did for a long time."44

At present, the emergency planning office has added another planning official and its budget has risen to $55,000 - a 41.55 percent increase over 1973. The region now pays 51 percent of the total budget for this office, the only case under study here where a regional government pays more than 50 percent of the costs of a Regional E.M.O.

Shortly after the flood, the emergency planning officer presented a proposed peacetime disaster bylaw to Regional Council. Support for such a plan was later given by the Inquiry judge who urged adoption of a civilian disaster plan "immediately."

Other than an increased interest in peacetime disaster planning within some municipalities, however, regional government has not made available any resources not formerly available, nor has it allowed the emergency planning office to engage in any new operational activities.

Since regionalization, the major activities of the E.M.O. office have been contingency planning, disaster drills/exercises and public information and education. The primary order of importance of these activities had not changed since the first year of regional government.

3. Fire Protection

As in most mixed urban-rural regions, a variety of fire protection services have existed in the Waterloo Region. In 1970 only Kitchener, Waterloo and Galt were fully staffed by full time firemen,
all the rest being served by volunteer forces. Exceptions to this were the Town of Preston which employed four full time firemen, and the Township of North Dumfries which relied on other municipalities for protection. As with police protection, expenditures varied widely from municipality to municipality. Per capita expenditures in Kitchener were highest at $9.76 while the Town of New Hamburg was lowest at $1.14 per capita (1965).^*  

Unlike many regions, Waterloo has a type of central dispatch system. That is the Kitchener Fire Department takes fire calls for surrounding rural areas and activates alarms to call volunteers in rural areas. The Kitchener force also assists in the training of voluntary departments. In addition, as in most areas, a complex of inter-municipal agreements and a mutual aid system are utilized.

In its 1970 report, the Waterloo Region Local Government Review Commission recommended a reduction in the numbers of fire departments in the two urban areas of the region. This was not judged to be practical for rural volunteer departments but some greater measure of unification was advised. One particular problem given some discussion was the crossing of jurisdiction. That is, on occasion the fire station closest to a resident's home was in another municipality. To reach a fire in such a situation, the ratepayer's own volunteer department would have to come from a relatively greater distance and in some cases pass through another department's area to reach portions which they cover. This is a problem which has surfaced in other emergency service areas, for example in ambulance service in parts of the state of Illinois.

Changes Since Regionalization

The most significant change in fire protection as a result of local government reorganization in the Waterloo area has been the amalgamation of the former Galt, Preston and Hespeler units into a Cambridge Fire Department. This follows the Commission's recommendations that the latter two forces move to a more professionalized full time staff. The new Cambridge department quickly (June 1974) became the first Ontario force to hire female dispatchers for the fire station, some evidence of an initial spirit of innovation.

Other than this, there were no major changes in the co-operative arrangements and mutual assistance arrangements existing before regionalization, although the various amalgamations of area towns and villages into their surrounding townships have helped to eliminate certain jurisdictional problems.
The Regional Municipality of Sudbury

Located 250 miles northwest of Toronto, Sudbury is the only other regional community in Northern Ontario and the only other regional municipality besides Ottawa-Carleton which is outside the orbit of Toronto. The economy of the region is dependent upon one industry --nickel mining. The City of Sudbury is the only major urban centre in the 1080 square mile regional area and approximately 60 percent of the population resides there. The rest of the 167,775 (1974) residents of Sudbury Region live in small mining towns, with rocky, uninhabited land in between. This terrain has made the extension of "hard" services, especially water and sewage lines difficult and expensive; as a result, much of the region beyond Sudbury (with the exception of the "company towns") has traditionally been "under-serviced."

The Change to Regional Government:
General Issues and Problems

In the case histories presented thus far, most of the difficulties encountered in the regionalization process have concerned two basic issues - increased costs and infringement upon local autonomy. With Sudbury, however, an element of class conflict clearly entered the debate over regional government; as will later be discussed, this class conflict dimension also appeared in the discussion over the inclusion of Burlington in the Hamilton-Wentworth Region.

Basic to this conflict has been the eligibility of smelters and concentrators for municipal taxation. Since 1904, and up to the time of regionalization, a section of the Ontario Assessment Act forbade municipal councils from sending tax bills to mining corporations in Ontario. This was no problem for "company towns" such as Copper Cliff which were privately maintained by the mining companies. However, this did bring serious revenue problems to municipalities other than those where the smelters are situated, but which had significant numbers of mining workers living there. In announcing the plan for a new regional municipality in the Sudbury area in 1971, then Municipal Affairs Minister Dalton Bales rightly suggested that "the establishment of a regional municipality would go a long way towards distributing this tax revenue (i.e. mining revenue payments) over the entire mining community and this would bring very real benefits to the whole Nickel Basin."47

However, considerable debate was stimulated over the revisions in the mining revenue payment system. In the legislative debate on
**TABLE 33**

The Regional Municipality of Sudbury

*Statistical Profile*

<table>
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<th>Description</th>
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<td>Number of municipalities (present)</td>
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<td>E.M.O. budget (1976)</td>
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the Regional Municipality of Sudbury Bill, several Sudbury area members charged that the two main mining companies had been under-assessed by at least $675 million. This underassessment, one opposition member claimed, would "doom to failure" the regional government in Sudbury because of a scarcity of capital.48

Corporate domination was also an issue in relation to the composition of the Regional Police Commission, as set out in the regional bill. In particular, objection was made to the fact that three of the five appointees to the Police Commission were to be supervisory personnel from one of the mining companies. In this regard, one opposition member said: "I think the Cabinet just doesn't understand what the resentment is in Sudbury to such domination by this large corporation."49

From this it is clear that local government reorganization does not occur in a "social vacuum" but rather is intricately tied into the ongoing social structure of an area. This social structure in turn is a product of historical conditions and relationships. In seeking to produce a better regional balance of municipal services through structural centralization, the regional government program is clearly a social reform measure. As such it is inevitable that it intrude upon long standing community relationships and social cleavages such as that represented by the special position of the mining companies in the Nickel Belt. Clearly, this can also have implications for some organizations within the crisis management sector, for example, the police department and its accountability structure (i.e. the Police Commission).

Impact of Regional Government on Emergency and Protective Services

1. Police Protection

Prior to regionalization, local police forces were maintained in Sudbury, Copper Cliff, Caperol Neelon and Garson. Copper Cliff, in turn provided police services for the towns of Lively and Levack, while Falconbridge and Onaping obtained police services from Falconbridge Nickel Mines for an annual contract price. Remaining areas received "free policing" from the Ontario Provincial Police. Police protection in the Sudbury area was thus of a mixed nature with municipal, provincial and private security police all having different jurisdictions.
Contrary to what might be expected, the Sudbury Police Department was not the largest force before regionalization. In 1972, the year before the move to regional government, the Sudbury force had 131 full time staff, while Copper Cliff had 148. Furthermore, all but one employee of the latter force was a police officer compared to only 78 percent of the Sudbury force. Copper Cliff, however, was the site of the major smelter in the Nickel Belt and thus company security staff would be included in the total of 148. Also Copper Cliff policed the nearby towns of Lively and Levack.

In his 1971 statement regarding local government reorganization in the Sudbury Area, Municipal Affairs Minister Bales did not recommend a regional force; rather it was suggested that the police function "would initially continue to be performed as it is now until a thorough study could be carried out by the Ontario Police Commission." However, upon regionalization two years later, a regional force was formed. In February of 1974, the Task Force on Policing in Ontario upheld the advisability of operating a separate regional force for the entire region of Sudbury.

Changes Since Regionalization

On January 1, 1973, the Sudbury Regional Police Department was created. Headquarters were located in Sudbury, with detachments in Rayside-Balfour and in the former town of Copper Cliff. The Regional Chief and three other senior administrative officials (Deputy Chief, Chief of Detectives, Head of Traffic Division) were former City of Sudbury police, while a second Deputy Chief was formerly the Copper Cliff police chief.

The most notable consequence of police force consolidation in the Sudbury area has been the marked increase in police training. At the time of regionalization, 52 percent of the police officers in the new regional force had attended police college. By 1976, this had gone up to almost 93 percent, a 40 percent increase over 1973. In addition to this, written exams and work performance have increased in importance as promotion criteria, while length of service has declined.

To date, the major tasks of the regional police force appear to have been the upgrading of equipment and the extension of service to outlying areas formerly policed by the Ontario Provincial Police.

In this regard, two thirds of the innovations adopted by the forces have been material changes, notably an improved dispatch system, new radar equipment and closed circuit television equipment. Also, as about a third of the Sudbury Region population is French speaking, the
Regional Police has implemented measures designed to increase the bilingual capacity of staff members.

2. Emergency Measures

Prior to regionalization, emergency measures in the area was a responsibility of the consolidated Sudbury-Manitoulin Emergency Measures Organization. The Sudbury and Manitoulin organizations had previously been separate, but amalgamated in 1966. This combined E.M.O. covered a wide geographic area and was supported by twenty-six municipalities.

Changes Since Regionalization

Upon regionalization, the Sudbury Regional E.M.O. had two full time staff members and one part time employee. The 1973 budget was $45,000 of which 75 percent was federally provided, 15 percent was provincially funded and 10 percent was paid for by the regional municipality.

By 1976, the emergency planning director was the only staff member and the budget had dropped slightly to $44,000. With the province no longer involved in E.M.O funding, the region took over 40 percent of the costs and the federal government 60 percent. The emergency planning director is now responsible to a committee of Regional Council, to whom he reports formally five times a year.

Despite a cut in staff, regionalization was thought to have made some difference for the Sudbury E.M.O. In particular, planning was thought to be easier with one regional structure rather than with 26 separate municipalities. Also, as is the case in the Niagara Region, the Sudbury emergency planning director has a working relationship with the Regional Public Works Department. This has been beneficial, especially in terms of the availability of resources.

In the first year of regionalization, priority activities were contingency planning, the co-ordination of disaster responses and public information and education. At present, the actual co-ordination of responses has been replaced by hospital exercises as a second priority.

Since regionalization, no major disasters have occurred in the region, but E.M.O. has been involved in a number of minor emergencies such as a bomb threat and arranging for housing for 50 stranded people.
4. Fire Protection

Prior to regionalization, there was only one fire department in the Sudbury area with a paid full time staff -- the City of Sudbury. In addition, the 40 man volunteer force in Valley East had a paid chief and deputy chief. As with police protection, Falconbridge Nickel Mines sold fire fighting protection to Falconbridge and Onaping. Each of the other twelve municipalities had a volunteer fire force. All area fire forces were linked together in the Sudbury and District Mutual Aid System.

In outlining the plan for regionalization in the Sudbury area, Municipal Affairs Minister Bales recommended continuation of fire protection as a lower tier responsibility, but suggested the appointment of a regional fire co-ordinator to establish an emergency fire service plan.53

Changes Since Regionalization

Typically, co-operative fire fighting arrangements have changed only to the extent that the number of municipalities participating has decreased. Also as recommended, a Regional Fire Co-ordinator (Fire Chief of Sudbury) has been appointed.

There was some evidence that emergency preparedness in the region has been somewhat improved. Several fire departments reported that they had adopted a written plan for operations in natural disaster in December of 1975. The Rayside-Balfour Fire Department indicated two emergency relevant innovations since regionalization — emergency measures training and the establishment of emergency medical services (including a special training program for ambulance drivers). Also there is now a Regional Fire Training School in the Sudbury Region.

The Regional Municipality of Hamilton-Wentworth

Situated at the southwestern end of Lake Ontario, the Hamilton-Wentworth Region is the western boundary of the "Lakeshore Urbanized Area." The region is economically and socially dominated by the City of Hamilton which accounts for 76 percent of the regional population (1974) and 79 percent of its total taxable assessment (before equalization). Hamilton is a "steel town" and the major employer is the Steel Company of Canada (Stelco). Along the fringe of Hamilton are three municipalities - Dundas, Stoney Creek and Ancaster - which
<table>
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<td>E.M.O. budget (1976)</td>
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depend upon Hamilton for the employment of a high proportion of their residents and also utilize various specialized services and facilities provided by the City." Beyond the urban fringe are two rural townships - Glanbrook and Flamborough. In 1974, the population of Hamilton-Wentworth was 401,163.

The Change to Regional Government:
General Issues and Problems

Throughout the process of local government reorganization in the Hamilton area, the question of the relationship of Burlington to Hamilton continued to be a matter of controversy.

Burlington is a city of 97,972 (1974) across Hamilton Harbour from the City of Hamilton. Unlike other municipalities in the area, however, it was part of Halton rather than Wentworth County before the advent of the local restructuring program.

In the Report of the Hamilton-Burlington-Wentworth Local Government Review, Chief-Commissioner Steele came out strongly in favour of the inclusion of Burlington in the Hamilton Region. The Steele Report reported at great length a number of statistical measures which indicated the close interdependence of the two urban areas. In 1969, 40.5 percent of the Burlington work force was employed in Hamilton; only 37.9 was employed in Burlington itself. A 1968 study was presented which indicated that about nine of every ten leaders of the City of Hamilton, in both the public and private sectors, were residents of Burlington. An even higher percentage (96.3 percent) of Burlington residents subscribed to the Hamilton Spectator. Further evidence of this "community of interest" was given in relation to voluntary club membership and social welfare agencies.

In its brief to the Commission, Burlington claimed that its orientation was actually towards Oakville and the east. Stressing its own self-sufficiency, Burlington pointed out to its own "past achievements, effective administration, and growth potential." It was stressed that the noise, traffic congestion and general urban deterioration of downtown Hamilton were not the problems of Burlington and that many Burlington residents had left Hamilton to escape these. It was emphasized that Burlington had no dependence on Hamilton or any other part of Wentworth County for physical services such as water and sewage and was, in fact, in an entirely separate drainage area. Finally, Burlington stressed education, health and hospitals as three areas which would be seriously disrupted if Burlington was removed from the County.
Commissioner Steele emphasized that Burlington's reaction was typical of the urban situation in North America today wherein "suburban communities while making use of the high level of services of the central city refuse to share in the responsibilities for the maintenance of the core." In the Parliamentary debate over this question, several provincial members went further suggesting that the senior executives of Burlington were "snobs" and did not want "to be associated with the factory workers of Hamilton." The leader of the opposition later attacked the decision to include Burlington in the Halton Region as a "political" move that went against all expert advice.

The issue of Burlington can easily be seen in the context of a wider sociological debate over the basic nature of the "community." The "community of interest" identified by the Steele Commission derives from a conceptualization which views the community as both a territorial unit and as a network of interaction. The Burlington brief, on the other hand stresses a third element -- the community as a "psychocultural unit." According to this conceptualization, the community is seen as a basic unit with which people identify and from which they gain a sense of security and belonging. As in the case of Cambridge, the three elements of a community are not always compatible. Clearly any attempt to change local government structures which stresses any one element at the expense of the others is destined to produce conflict for this reason. In this connection, the local government reorganization plan for Ontario would have benefited from a more detailed operationalization of what it meant in its first regional government guideline by the phrase "a sense of community."

The Impact of Regional Government on Emergency and Protective Services

1. Police Protection

Prior to regionalization, local police forces existed only in Hamilton, Dundas, Stoney Creek, Ancaster and Saltfleet Townships; the rest of the region was patrolled by the O.P.P.

In marked contrast to the other regions discussed thus far, the less urbanized areas had a much higher proportion of their police forces with formal training than did the major city force. In 1968, all of the police officers in Ancaster, Stoney Creek and Saltfleet Township had completed recognized police courses in the Ontario Police College at Aylmer, while 15 of the 18 officers in the Dundas force had done so. In contrast only 46.23 percent of the 424 man Hamilton Police Department had formal training of this type. However, this
was partially offset by the requirement that all Hamilton recruits attend a one-week training seminar conducted at the Hamilton Police Training Academy. In addition, the Hamilton Institute of Police Science assisted a number of local officers (87 in 1967) to attend special courses and seminars in law enforcement outside of regular police training.63

Like the Waterloo area forces, the general police communications system prior to regionalization was fairly good. With the exception of Stoney Creek, all forces were linked to one another and to the O.P.P. by telephone, radio and telex. Stoney Creek police were dispatched by Hamilton or Saltfleet Township police dispatchers and their vehicles were equipped with radios that operated on the frequencies of both dispatching forces.64

The Steele Commission, in contrast to most other local government reviews, recommended that the O.P.P. continue to patrol rural portions of Hamilton-Wentworth. However, their report recommended a "metropolitan" force which would amalgamate all existing urban police units. General advantages of this centralization were listed as being: greater flexibility, improved crime detection and better coordination of policing for both routine and special services throughout the entire area.65

Changes Since Regionalization

On January 1, 1974 the five police forces in the Hamilton-Wentworth Region were consolidated into the Hamilton-Wentworth Regional Police Department. Detachments were located in Hamilton (4), Ancaster, Dundas and Stoney Creek. One detachment was closed, the former town of Stoney Creek (Stoney Creek and Saltfleet Township were amalgamated into an expanded Town of Stoney Creek upon regionalization). The Chief of Police, the two Deputy Chiefs, the Chief of Detectives and the Head of the Traffic Division were all selected from the former Hamilton Police Department. As might be expected, the headquarters were situated in Hamilton.

In general, regionalization of police in the Hamilton-Wentworth area has meant that an already well developed police system has been extended to the suburban fringe and the rural townships. In contrast to regions formerly having a large number of separate municipal forces with weak overall co-ordination, Hamilton-Wentworth already had a partial system of inter-unit communications. It is not surprising, therefore, that the Hamilton-Wentworth Regional Police reported no material innovations since regionalization. Those changes that were adopted were of a social nature, for example, a community relations and a high school counselling/speakers program. In addition,
there has been a general increase in police officer training; about a fifth of the regional force have attended police college in the two years since consolidation. This is in addition to training provided internally at the Hamilton Police Academy.

2. Emergency Measures

Prior to regionalization, the Hamilton area E.M.O. existed at the county (Wentworth County) level. At this time, municipalities other than the City of Hamilton participated only through the county levy. In the Steele Commission Report, it was recommended that the existing responsibilities in relation to emergency measures be exercised by the metropolitan (i.e. regional) council but little else was said regarding emergency planning.66

Changes Since Regionalization

Upon regionalization, the Hamilton-Wentworth E.M.O. had three full time staff members and a budget of $38,650. Of this, 43 percent was covered by the Federal Government, 47 percent by the Province and 10 percent by the Region.

At present, the emergency planning officer is the only staff member and the budget has risen slightly to $40,700. Since the Provincial withdrawal from the E.M.O. program, the regional municipality has assumed 49 percent of the costs, with the Federal Government making up the other 51 percent. The emergency planning officer is directly responsible to the regional administrator, whom he sees regularly in lieu of any type of formal reporting system.

Generally, regionalization seems to have made little difference to emergency planning in this area. It was indicated that the move to regional government did not increase the availability of resources, nor did it allow emergency planners to engage in any new operational or planning activities.

In the first year of regionalization, the E.M.O. staff was occupied full time in amending and re-writing emergency plans that had been produced prior to 1974. At present contingency planning is still a paramount priority, followed by conference organization and training. There appears to be little involvement with actual disaster responses, although no major emergencies have occurred since regionalization.
4. Fire Protection

Prior to regionalization every municipality in Hamilton-Wentworth maintained a fire department but the City of Hamilton alone, whole or in part did not depend on volunteers. Volunteer strength ranged from a high of 70 in a joint Stoney Creek-Saltfleet department to a low of 17 in Binbrook Township (1968). As in most areas a number of municipal agreements existed; specifically a joint fire area board and a Mutual Aid agreement for Wentworth County. The latter was and is directed by the Hamilton Fire Chief.

As with police protection, the City of Hamilton has available resources not commonly found in other regions. For example, Mohawk College of Applied Arts and Technology offers a three year, six subject course leading to a Fire Science Certificate. In 1968, forty men employed by the City of Hamilton Fire Department were enrolled in this course. The urban character of the Hamilton force is also indicated by the fact that 19 fire prevention officers were employed by that department in 1968. The Steele Commission Report recommended against regionalization of fire services, but it did suggest the appointment of a metropolitan fire co-ordinator who would be responsible for establishing an emergency fire service plan and for directing a mutual aid system for the area.

The Review Commission also mentioned a problem not discussed in other local government reviews but of seemingly great importance to other rapidly urbanizing areas. Both Burlington and Ancaster reported difficulty in maintaining sufficient volunteer strength as the residents of urban areas become less able to leave regular employment to attend fires and practices. This would appear to be an increasingly important factor to consider for the future when many Ontario counties will become a more even mix of rural traditionals and urban newcomers.

Changes Since Regionalization

As is the case with most other regions, the creation of the regional municipality has made a difference in fire service only to the extent that the amalgamations which accompanied it have reduced the actual number of volunteer departments. Since these continue as non-professional departments, however, little real change is involved.
In the future, however, a computer based information and control system, now being developed in Hamilton, is to be extended to other parts of the regional municipality; this would seem to be a positive aspect of the regional arrangement.

The Regional Municipality of Halton

Located west of Toronto, between the Peel and Hamilton-Wentworth Regions is the Regional Municipality of Halton. It encompasses 405 square miles, making it the smallest regional municipality in Ontario. Most of the 213,123 residents live in the residential city of Burlington (46 percent of regional population) and the town of Oakville (31 percent), a major automobile manufacturing centre. The rest of the region is rural, with the exception of the Town of Milton and the former towns of Acton and Georgetown (now part of Halton Hills). The region is within commuting distance of both Hamilton and Toronto, and is the western terminus of the GO train, a high speed commuter train service into Toronto.

The Change to Regional Government: General Issues and Problems

In large part, the key to the viability of Halton as a distinct region lay with the inclusion or non-inclusion of Burlington. With Burlington, Halton had the financial base to "go it alone" as a regional municipal unit. Without Burlington, financial exigencies would probably have led to some type of combined government structure with the municipalities in the Peel Region.

During the Peel-Halton hearings, Burlington initially opposed any proposal suggesting it become part of a single tier Halton Region. Subsequently, a less acceptable spectre -- inclusion in a Hamilton-Wentworth Region was raised. At the Hamilton-Wentworth Local Government Review, Burlington's brief strongly objected to and argued against this inclusion and a 15,000 signature petition was presented in support of this brief.

As a political compromise, a new regional municipality encompassing only Halton was created by the Ontario Government; a move which was more or less satisfactory to Burlington, but which went against the recommendations of both the Plunkett Report (Peel-Halton) and the Steele Commission (Hamilton-Wentworth). Milton's position on regional government appeared to be more positively favourable than that of Burlington (which wished to avoid all regional government if possible).
TABLE 35

The Regional Municipality of Halton
Statistical Profile

<table>
<thead>
<tr>
<th>Description</th>
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<tr>
<td>Population (1974)</td>
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<tr>
<td>Surface Area (sq. mi.)</td>
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<td>Date of effective operation</td>
<td>January 1, 1974</td>
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<tr>
<td>Number of municipalities (present)</td>
<td>4</td>
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<td>3</td>
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<tr>
<td>Per Capita taxable assessment (1974)</td>
<td>$265</td>
</tr>
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<td>Equalized assessment per household (1974)</td>
<td>$31,940</td>
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</tr>
<tr>
<td>Per Capita expenditures on fire protection (1974)</td>
<td>$13.07</td>
</tr>
<tr>
<td>E.M.O. budget (1976)</td>
<td>$7,000</td>
</tr>
</tbody>
</table>
Halton Region has been blessed with one major advantage favourable to regional government, yet alternatively it has faced a significant disadvantage. The fact that all municipalities included in the Region participated in the Halton County Government prior to regionalization has no doubt provided a foundation on which to build the regional government which has been unavailable to regions where urban centres were previously excluded from county level government. On the other hand, the marked orientation of Burlington towards Hamilton in service areas has meant that some regional organizations do not have a pre-existing set of intermunicipal organizational linkages which can help mitigate the "liability of newness" which all such new organizations face.

The Impact of Regional Government on Emergency and Protective Services

1. Police Protection

Prior to regionalization, municipal police forces existed in Burlington, Oakville, Milton and Georgetown. The rural sections of the region were patrolled by the O.P.P.

The Burlington and Oakville forces were about equal in size; in 1972 the former had a staff of 95 and the latter 89. Georgetown and Milton had much smaller police organizations with staffs of 27 and 12 respectively (1972).

In contrast to most other regions, then, Halton had no one large metropolitan force around which to fashion a regional police force, nor did it have a large hinterland which required a transition from rural to urban policing service.

Changes Since Regionalization

On January 1, 1974, the Halton Regional Police Force was created with headquarters in Oakville. Eight detachments were established with three in Burlington, two in Oakville and one each in Milton and in the former towns of Acton and Georgetown (in Halton Hills).

The Regional Police Chief and one Deputy Chief were formerly members of the Burlington force, while a second Deputy Chief had been attached to the Oakville Police. Thus both Burlington and Oakville appeared to have been accorded an important role in the Regional Force.
Also all areas of the former County formerly employing a municipal police force continued to have a local detachment. Collectively, these factors can be seen as beneficial in ensuring that no lower tier municipality in the Halton Region felt "deprived" of police service.

In a number of ways, Halton appears to have benefitted greatly from the regionalization of police services. Professional training levels are now high (96.6 percent of the police officers have attended a police college). The Halton Regional Police is the only department surveyed which indicated that psychological testing is employed as a method of determining promotion eligibility. Furthermore, Halton ranked highest both in total number of organizational innovations and in social changes. All five community preventive programs have been implemented including family crisis intervention. In addition, Halton was the only regional force to adopt "team policing."

The case history of Halton seems to indicate that where an extensive upgrading of equipment and extension of staff is not required after regionalization, but where a restructured organization is essentially new (and not simply an enlargement of an existing metropolitan force), then the resources of that new organization can be applied to improving the quality of service through non-material, community oriented changes, for example, family crisis intervention.

2. Emergency Measures

Prior to regionalization emergency planning in the area was carried out by the Halton County Emergency Measures Organization. All seven municipalities in the County participated in the support of this organization. Upon consolidation, this agency was given regional status and made responsible to the Chief Administrative Officer of the Regional Municipality.

Changes Since Regionalization

Of all the regional E.M.O.'s studied, Halton has had the smallest budget. In 1974, the first year of regionalization, this was $10,000 with 75 percent paid federally, 15 percent provincially and 10 percent regionally. At present, the E.M.O. budget has been reduced to $7,000, the salary of the emergency planning officer. Of this 85 percent comes from federal funds and 15 percent from regional support. Since regionalization, the emergency planning officer has been the only employee. No formal reporting system has been set up concerning emergency measures and planning.
It was reported that the availability of resources, communication regarding impending emergencies and co-operation from relevant regional municipal agencies have all increased since the move to regional government. In large part, this was thought to be a function of the fact that the Chief Administrative Officer is now directly responsible for emergency planning.

Present priorities in terms of activities are: 1.) contingency planning, 2.) co-ordination of disaster responses, and 3.) response to individual emergencies. Since regionalization, co-ordination has become more important than actual participation in disaster situations. One major emergency has occurred in the region since regionalization -- a flood threat in 1975. The role of the Emergency Planning Officer in this consisted of providing needed equipment.

4. Fire Protection

Prior to regionalization, Halton County was a typical mix of partly professional departments (Burlington), volunteer departments with several paid personnel (Milton) and rural township volunteer forces (Esquesing and Nassagaweya). Mutual aid agreements existed within the County and between specific municipalities and neighboring municipalities in adjacent regions (e.g. Burlington-Hamilton, Milton-Mississauga). As with Ancaster (in Hamilton-Wentworth Region), Burlington reported increasing difficulty in finding volunteers for firefighting due to job commitments etc.

Changes Since Regionalization

There are presently five fire departments in the Halton Region. This is one larger than the number of municipalities because there are two separate Halton-Hills Departments, each with its own chief. All four of the departments which responded to the questionnaire reported an improved radio system capacity and one (Halton-Hills, Area #1) indicated that it had adopted a computer based information and control system. There is now a Fire Co-ordinator for the area (the Oakville Fire Department Chief), although this post has been temporarily vacant due to the retirement of the incumbent chief. The preexisting Mutual Aid agreements have stayed intact, although agreements with some outlying areas in the Region have been formalized since regionalization.
The Regional Municipality of Durham

Extending from Lake Simcoe to Lake Ontario, Durham is the only regional municipality in the Toronto Centered Region which is east of Metro Toronto. At present, except for an urban band along Lake Ontario, most of Durham is still predominantly rural; however, future growth projections have foreseen this as the area of greatest population growth in the next 25 years. The Durham Region has one city - Oshawa with a population of 100,066 (1974). Like its counterpart west of Toronto, Oakville, Oshawa is the site of an automobile assembly plant (General Motors) which is the largest single employer in the area. In addition, there are four towns, Ajax, Whitby, Newcastle and Pickering, all with present populations under 30,000. The rest of the region is predominantly agricultural land and is divided into three townships - Brock, Scugog and Uxbridge.

The Change to Regional Government:
General Issues and Problems

Unlike many other regional municipalities, Durham required considerable work in fixing the regional boundaries. As it was, Durham Region incorporated parts of three counties, Ontario, Durham and Northumberland. In addition, a number of municipal areas split by creation of the new region were joined into other existing counties of which they were not formerly a part. With the exception of one section of lots, relatively little conflict over boundaries was engendered, especially given the complexity of the reorganization. In part, this may be a product of the fact that the official government review in Durham (the OAPADS study) was more or less locally initiated although provincially overseen.

As with any region with a large rural area, the issue of costs was the paramount focal point of discussion. In particular, it was felt that the new regional government would immediately incur a sizeable debt by taking over the rural policing previously handled by the Ontario Provincial Police. One opposition member calculated that it would cost the new regional government $500,000 beyond that covered by the increase in police grants simply to replace the O.P.P. services, not counting any addition costs incurred from bringing up the salaries of constables in underpaid forces nor the increased costs of improving the quality of policing in some of the smaller municipalities served. In reply, proponents of the regional force admitted that an extra cost might be involved but suggested that "the isolation of the past in rural areas has to come to an end" and that it made sense to make regional policing a regional responsibility right from the beginning.
### TABLE 36

The Regional Municipality of Durham

Statistical Profile

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Area (sq. mi.)</td>
<td>875</td>
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<tr>
<td>Population density (persons per sq. mi.)</td>
<td>260</td>
</tr>
<tr>
<td>Date of effective operation</td>
<td>January 1, 1974</td>
</tr>
<tr>
<td>Number of municipalities (present)</td>
<td>8</td>
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<tr>
<td>Reduction in number of municipalities (upon regionalization)</td>
<td>13</td>
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<tr>
<td>Per Capita taxable assessment (1974)</td>
<td>$378</td>
</tr>
<tr>
<td>Equalized assessment per household (1974)</td>
<td>$28,066</td>
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<tr>
<td>Per Capita expenditures on police protection (1974)</td>
<td>$27.08</td>
</tr>
<tr>
<td>Per Capita expenditures on fire protection (1974)</td>
<td>$20.07</td>
</tr>
<tr>
<td>E.M.O. budget (1976)</td>
<td>$25,957</td>
</tr>
</tbody>
</table>
1. Police Protection

Prior to regionalization, there were seven municipal police forces in the Durham Region, ranging in size from 135 staff members in Oshawa to one man force in the Town of Uxbridge. Of these, Oshawa, Whitby and Pickering Township forces were responsible to a Board of Commissioners while in Ajax, Bowmanville, Cannington and the Town of Uxbridge the responsibility for the police department lay with the municipal council. The remainder of the region was policed by the Ontario Provincial Police at no cost to the municipalities.

As discussed in an earlier section, the chief problem regarding regional policing was seen as the considerable cost of replacing O.P.P. services in rural areas. For example, the OAPADS study cited figures which indicated that the sixty man Whitby detachment of the O.P.P. handled 7632 charges (including traffic charges) in the year 1969.

Changes Since Regionalization

On January 1, 1974, the Durham Regional Police was established with headquarters in Oshawa. Detachments were located in Oshawa, Whitby, Ajax, Pickering, Uxbridge (including a substation at Cannington) and in the Bowmanville section of Newcastle. The Regional Chief was formerly the Oshawa Police Chief. Three other senior police officials came from the former Oshawa force, while one each were formerly with the Ajax and Pickering forces.

Since regionalization, the Durham Regional Police has implemented a number of material and social changes, including an improved dispatch system, a community relations program and program evaluation methods. Of special interest, however, are the changes in emergency preparedness adopted since 1974. Durham was only one of two police forces surveyed (the other was Peel) which has implemented a specific emergency measures training program for its officers. In addition, the Durham Regional Emergency Plan spells out in detail the responsibilities of the Regional Chief of Police in the event of a peacetime emergency. These responsibilities are: 1.) crowd control in the emergency area, 2.) traffic control, 3.) ensuring free movement of ambulances over routes to hospitals, 4.) building evacuation, 5.) arranging for the maintenance of law and order in any communal emergency welfare facility, 6.) protection against looting, 7.) advising the Coroner in the event of fatal casualties, and 8.) arranging for a
temporary morgue if needed. A second contingency plan^\textsuperscript{79} tasks the Regional Police Chief with operating a telephone alerting system in case of a disaster at the Pickering Nuclear Generating Station. According to both plans, the Regional Police are to be represented on the Regional Emergency Control Group in event of a peacetime emergency.

2. Emergency Measures

Before regionalization, emergency planning in the Durham Region was handled by the Ontario County Emergency Measures Organization. This agency was locally supported by nineteen municipalities and had a budget of approximately $30,000 (1968-69, 1969-70).\textsuperscript{80} The municipal share of the costs for the Ontario County E.M.O. was split between the City of Oshawa and the rest of Ontario County, with each paying fifty percent. Activities at this time included co-ordinating training courses and arranging for planning and administrative conferences.

Changes Since Regionalization

Upon regionalization, the Durham Region Emergency Measures Division had two full time staff members and a budget of $42,300. Of this 69.2 percent was paid for by the Federal Government, 13.8 percent by the Province and 17 percent by the Regional Municipality.

At present, as with many other regions, the Emergency Planning Officer is the only remaining employee. The present budget is $25,957, lower than before regionalization. Of this 70 percent is now Federally funded and 30 percent is covered by the Region. The Emergency Planning Officer is directly responsible to the Management Committee of Regional Council and is on the staff of the Chief Administrative Officer. Formal reports are made to the Management Committee at least every six months, but informal consultation with the Chief Administrative Officer occurs on a regular basis.

In the first year of regionalization, considerable planning activity was undertaken by the Regional E.M.O. Two plans - a Peacetime Emergency Plan and an Off Site Contingency Plan in the event of a radiation incident of the Pickering (Nuclear) Generating Station were developed in 1974.\textsuperscript{81} According to the former plan the main responsibilities of the Emergency Planning Officer are to: 1.) make arrangements for the provision of a functioning emergency control centre, 2.) to make available up-to-date inventories of supplies and equipment (including suppliers, location and method of procurement), 3.) to establish public information mechanisms such as a reporting and inquiry service, 4.) to provide emergency equipment such as generators owned
by E.M.O., and 5.) to arrange for assistance from local voluntary organizations such as snowmobile clubs. In addition, the Pickering plan provides for the emergency planning officer to assist the Regional Medical Officer of Health in establishing a radiation protection system for the use of Regional personnel who may be required to work in radioactive areas during a radiation contingency.

Since 1974, contingency planning has continued as the most important activity of the emergency measures division, with further planning for the Pickering Generating Station contingency a top priority. In the future, more specific plans will be produced as an annex to the overall Regional Plan and an attempt will be made to co-ordinate the Regional Plan with any Provincial Plan which might be forthcoming. Also disaster drills/exercises has replaced training as a priority activity. To date, no major emergency situation has occurred in the Region since local government reorganization.

It was felt that the move to regional government was highly beneficial to the Emergency Planning Division, despite a lack of growth in the agency itself. In particular, the access to any Regional equipment whose need can be justified, was cited as a valuable change. Also it was indicated that the formal power of the Region to look after emergency plans has reduced any conflict regarding "loss of autonomy." Finally, the Durham Region Emergency Measures Division is likely to become involved in additional peacetime functions of a more short-term nature. For example, an area mayor has suggested to Regional Council that the emergency office co-ordinate a spraying operation against St. Louis encephalitis, a disease carried by mosquitoes.

4. Fire Protection

Before regionalization there was a plethora of municipal fire departments in the Durham Region. Only three departments (Oshawa, Ajax, and Pickering Township) employed full time paid firefighters; Whitby and Bowmanville had a paid chief but a volunteer force. The 152 man (1970) Oshawa force was the only department which did not rely upon volunteers. Expenditures ranged from 98¢ per capita in the Town of Uxbridge to $18.45 per capita in Oshawa.

A considerable network of mutual aid and assistance agreements existed within the area and with municipalities in other areas (for example, Stouffville and Scarborough).
Changes Since Regionalization

Since regionalization, the number of municipal fire departments has been reduced, the former town of Bowmanville has been brought into the mutual aid system, and a Fire Co-ordinator (Oshawa Fire Chief) has been appointed for the Region. There is not, at present, any central dispatch system.

Formulation and adoption of a written disaster plan varies from department to department. However, the Regional Fire Co-ordinator is part of the Peacetime Emergency Plan and of the Pickering Generating Station Contingency Plan. Briefly, his responsibilities entail: 1.) co-ordination of rescue activities, 2.) activation of the Mutual Aid System, 3.) liaison with the Ontario Fire Marshal, and 4.) procurement of additional special equipment or supplies, e.g. airpacks. As is also the case for the Regional Fire Chief, he is also slated to be represented at the Regional Emergency Control Centre.

The Regional Municipality of Peel

Situated along the western boundary of Metro Toronto, Peel is largely urban region with a solid industrial base. Of its population of 330,632, 67 percent reside in the City of Mississauga, an amalgamation of the towns of Port Credit, Streetsville and Mississauga. Another 27 percent live in the City of Brampton, while the remainder reside in the rural-residential Town of Caledon. In contrast to other areas on the "fringe" of Toronto (York, Durham), the major part of Peel Region has both its own sewage outlets - water sources and a balanced assessment prior to regionalization. As might be expected Peel is densely populated (683 persons per square mile) and ranks second to Hamilton-Wentworth in this regard.

The Change to Regional Government: General Issues and Problems

Given its accelerated population growth and its considerable tax base, some form of metro or regional government has seemed logical for Peel County for some time. In 1965, for example, Goldenberg suggested in his report that consideration might be given to the creation of a "smaller Metro" on the western fringe of Metropolitan Toronto. In the same year, Toronto Township opened negotiations for amalgamation with the towns of Port Credit and Streetsville. Regional government, therefore has not been a particularly novel or
### TABLE 37

The Regional Municipality of Peel

**Statistical Profile**

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
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<td>Population density (persons per sq. mi.)</td>
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<td>January 1, 1974</td>
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<td>Number of municipalities (present)</td>
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<tr>
<td>Reduction in number of municipalities (upon regionalization)</td>
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<td>E.M.O. budget (1976)</td>
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</table>
unexpected action in the Peel area. Prior to regionalization, much of the discussion centered mainly on the inclusion of Brampton in the new regional unit. Since regionalization, the chief issue has been the management of cost increases, especially those in labour intensive services.

The Impact of Regional Government on Emergency and Protective Services

1. Police Protection

Before regionalization, five municipal police forces existed in Peel County - Brampton, Mississauga, Port Credit, Streetsville and Chinguacousy Township; the rest of the region was patrolled by the O.P.P. These ranged from a large staff of 232 in Mississauga to only ten in Streetsville.

Five months prior to regionalization, representatives from all police departments concerned began to meet daily to iron out problems, set policies, and formulate procedures. Undoubtedly this planning has contributed significantly to a smoother transition to a consolidated force.

Changes Since Regionalization

On January 1, 1974 the five separate forces officially amalgamated, forming the Peel Regional Police. Detachments were located in Mississauga, Mississauga (Streetsville) and Brampton. The Chief of Police and two deputies came from the Mississauga Police, while another deputy was formerly the Chief of Police of Brampton.

Notable changes since consolidation include the hiring of an increasingly large civilian component (14.5 percent of the force at present), the adoption of both a written plan for operations in natural disasters and emergency measures training and a particularly high level of professional training (all officers have attended police college and the number with university courses has doubled to 15 percent of all officers in the two years since regionalization).

However, Peel has faced sharp budget increases for improved police services; that is, the municipal police expenditures on policing have nearly tripled since regionalization has been implemented. In part, however, this reflects the fact that some municipalities held back police expenditures prior to the move to regionalization, causing an initial deficiency in human and physical resources.
2. **Emergency Measures**

A separate emergency measures office no longer exists in the Peel Region. Emergency related business is now handled through the Industrial Redevelopment Office.^9

3. **Fire Protection**

As was typical in other regions, fire protection in Peel Region varied widely prior to regionalization, in terms of both form and expenditure. Departments ranged from largely professional forces in Brampton and Mississauga to all volunteer departments in the rural areas. Mutual aid agreements existed both within Peel County and with other counties for border areas.

**Changes Since Regionalization**

Since regionalization a regional fire co-ordinator has been appointed (the Brampton Fire Chief), and a number of the smaller departments have now been combined into three large departments. This appears to have been particularly beneficial in Caledon, which plans to institute a central dispatch system in July 1976. This central dispatching is presently being created by the Brampton fire department for Caledon until such time as Caledon's own system is adopted. In addition, Mississauga has committed three full time personnel to a special survey project leading to a computer based information and control system.

**The Regional Municipality of Ottawa-Carleton**

Established in 1968, Ottawa-Carleton was the first regional municipality in Ontario and the only one to date not to have regionalized police protection. The region is composed of three types of municipalities. The City of Ottawa is the economic, commercial and administrative centre and most jobs are located there. Adjoining Ottawa are a number of large, autonomous, high income suburbs (Nepean Township, Gloucester Township), populated mainly by civil servants who commute to the city each day. The remainder of the region is composed of relatively poor, but geographically large rural townships (Rideau, West Carleton). The population of Ottawa-Carleton is 489,899 (1974), 91 percent of which is more or less urban (living in areas which have more than 1,000 people per square mile).^0
TABLE 38

The Regional Municipality of Ottawa-Carleton

Statistical Profile

Population (1974) .................................. 489,879
Surface Area (sq. mi.) ............................ 1,100
Population density (persons per sq. mi.) .......... 445
Date of effective operation ....................... January 1, 1969
Number of municipalities (present) ............... 11
Reduction in number of municipalities
(upon regionalization) .............................. 5
Per Capita taxable assessment (1974) ............. $2,192
Equalized assessment per household (1974) ....... $23,572
Per Capita expenditures on police
protection (1974) .................................. $30.97
Per Capita expenditures on fire
protection (1974) .................................. $27.31
E.M.O. budget (1976) .............................. $91,500
Intergovernmental relations are exceedingly complex in Ottawa-Carleton. Much of the parkland and Federal Government property in the region is the responsibility of the National Capital Commission, an agency which frequently becomes involved in municipal political life. In addition, the close presence of Quebec, across the Ottawa River necessitates considerable joint planning, especially since the Federal Government has moved a number of its office to the adjoining Quebec city of Hull.

Regional Government and Emergency Protective Services

As pointed out at the beginning of this section, Ottawa-Carleton is the only regional municipality not to have regional police protection. In large part, this has been so because it is felt that the cost of bringing an urban level of service to the six townships now receiving free Ontario Provincial Police service would be most prohibitive.

Ottawa-Carleton thus provides a case of regional government without regional policing. In many ways, the policing situation here is more comparable to that of the U.S. metropolitan areas studied by Ostrom et al. That is, there is one large urban police force surrounded by several smaller but still urban departments in the surrounding suburbs.

As with the other regional municipalities, fire protection is also not on a regional basis. Emergency measures, however, have been regionalized, with headquarters in Ottawa.

1. Police Protection

Prior to regionalization, there were six municipal police departments in Ottawa-Carleton: Ottawa, Vanier, Gloucester Township, Village of Richmond and Torbolton Township. At present, the last two of these forces have been dissolved, leaving four separate municipal forces.

In the 1965 local government review report, Commissioner Murray Jones observed that "police protection appears excellent without formal agreements." Nevertheless, Jones foresaw a regional force with district or precinct stations and responsible to a Police and Fire Committee of Regional Council which would serve as a Police Commission.91
In 1974, the Task Force on Policing in Ontario recommended a regional force for Ottawa-Carleton, but once again no action was taken on this despite support of this by the Province of Ontario.92

In his brief review of the policing situation in Ottawa-Carleton, Mayo estimates the cost of operating the two Ontario Provincial Police detachments at Bells Corners and Rockland at $1.6 million. In contrast, the Region would receive $2.4 million more in provincial grants than do the municipalities now maintaining separate forces if consolidation was to be instituted.93 What level of service could be extended for this amount, however, is a matter for further in depth study.

Changes Since 1969

Police protection in Ottawa-Carleton has been characterized by differential growth since 1969, the first year of regional government. Increases in the number of police officers employed by the central city forces, Ottawa and Vanier, have been negligible. In 1969, the Ottawa Police was staffed with 541 officers; five years later this had more or less stayed the same (542). At present, 579 officers are employed, an increase of only 7 percent since 1969. Similarly, Vanier has gone from 26 officers in 1969 to 35 at present. In contrast, the suburban departments, Gloucester and Nepean have grown more rapidly. In 1969, the former employed 31 officers and the latter 49; by 1974 these figures were 53 and 78 respectively.

In contrast, the civilian component of the central city forces have grown at a much greater rate. In 1969, the Ottawa Police employed 51 civilians, 8.6 percent of the total force; at present 160 civilians are on staff, 21.6 percent of the total personnel complement. Similarly, in Vanier, the number of civilian employees has risen from one to eight. This represents a change from 3.7 percent of the total force to 18.6 percent. About half of the civilians who work with the Ottawa police departments are parking control attendants.

As might be expected, the City of Ottawa Police maintains a large number of specialized programs and services which are used to a greater or lesser degree by other local forces. Since 1969, the Ottawa Police has implemented an automatic data processing system for crime arrest information, an in-service training program, crowd control training, emergency measures training, a high school counselling/speakers program and a community relations program, as well as a number of equipment additions and improvements. The Vanier Police Force also implemented a community relations program and emergency measures training as well as several equipment changes. Both central city forces have stressed increased bilingualism in police services. Information on innovations in the two suburban police forces was not available.
As with staff resources, the greatest increase in expenditures has come in the rapidly growing suburban areas, especially Nepean Township. In 1969 the per capita police costs for each police force were as follows: Ottawa, $15.49; Vanier, $13.67; Gloucester, $10.23; Nepean, $9.19. Five years later (1974) these figures were $34.70, $34.38, $23.48, and $26.12. Police costs in Nepean have thus increased 184 percent as compared to 124 percent for Ottawa.

If and when the Province acts on the Task Force on Policing in Ontario recommendations and begins to require each community to directly finance the cost of police services provided to that community, the day of decision regarding regional policing will come. Clearly, the suburbs will strongly oppose full consolidation, despite increased provincial grants. A possible solution would be to form three large departments — one for the capital region, one for the area east of the Rideau River and a third for for the area west of the Rideau. These departments would have to be classed as regional police units for grant purposes in order to be financially viable. At any rate, as the population spreads into townships not presently possessing municipal police forces, some degree of consolidation is clearly advisable.

2. Emergency Measures

Prior to regionalization, emergency measures in Ottawa-Carleton was operated on a county basis. Upon regionalization, Cumberland Township (which before 1968 has been part of the united Counties of Prescott and Russell) was added to the organizational jurisdiction.

At present, the Ottawa-Carleton E.M.O. is the largest of the regional municipalities studied, with four full time staff members. In part, this reflects the greater disaster proneness of the Ottawa area as compared to the area around Toronto. The organization is directly responsible to an executive committee of Regional Council and reports formally once a year as well as after each emergency incident in which there was any E.M.O. involvement.

Changes Since Regionalization

Last year, the Ottawa-Carleton E.M.O. had the largest budget of any regional E.M.O. ($91,500), up 36 percent over 1969. Compared to other municipal services this represents little growth and in fact one staff position was eliminated. During the first year of regionalization half the budget was Federally provided, 15 percent came from the Province and 35 percent from the Regional Municipality. At present, costs are split 51 percent - 49 percent between the Federal Government and the Region.
The only real change in resources or activities reported by this organization has been the requirement of a regional emergency plan. One difficulty in implementing this, however, is that neither police protection or fire protection are on a regional basis.

There has been no change since 1969 in the priority of organizational activities. There were and remain as follows: 1.) contingency planning, 2.) compilation of contact lists, and 3.) disaster drills/exercises. No major emergency response has been undertaken by the Ottawa-Carleton E.M.O. since regionalization.

3. Fire Protection

Fire protection in Ottawa-Carleton has been provided by four municipal fire departments with full time paid staffs, Ottawa, Vanier, Nepean and Gloucester and six fully or partially volunteer fire brigades. The village of Rockcliffe Park purchases all fire prevention and fire fighting services from the City of Ottawa. A number of other inter-municipal fire service agreements exist, for example, March Township buys aerial ladder services from Nepean Township and in turn sells fire protection to the Federal Government communications research facility at Shirley Bay. Mutual aid is instituted on a regional basis; however, there is no central dispatch system. Fire prevention inspections are conducted in all area municipalities, though it is only in the City of Ottawa that there is a sizeable (25 officers in 1974) fire prevention staff.

Changes Since 1969

With regionalization, the chief of the largest fire department in the region (Ottawa) became the Regional Fire Co-ordinator and is responsible for facilitating co-operation among the ten area fire fighting units. Also, a number of formerly autonomous rural volunteer fire departments became part of new township forces. Beyond this, however, there has been little change in fire services due to regionalization, a point emphasized by several fire chief respondents.

Since 1969, expenditures by area municipalities for fire services have about doubled with the greatest changes coming in Gloucester and Cumberland Townships. Cumberland has been particularly active in expanding fire protection services, adding seven full time uniformed personnel (there were none in 1969) and doubling the number of active volunteers. There is still a tremendous disparity in per capita expenditures among municipalities, however, ranging from $44.74 in Rockcliffe Park to $1.54 in Osgoode Township (1974).
Footnotes

Niagara Region


3. Ibid., p. 168.


6. Ibid., p. 25.


8. Ibid., p. 37.


11. For example, in June 1966, a delegation of local taxpayers appeared before the Clinton Township Council objecting to the expense of maintaining a two-man Township force and complaining that police protection was inferior to that previously given by the O.P.P. without any cost to the municipality. See: Ibid., p. 26.


13. Through an oversight however, Provincial approval was not given for this regional organization. On April 18, 1973, the Provincial Member for Welland South, Ray Haggarty pointed out in the House that for 18 months, the Niagara Region E.M.O. had been operating in the Regional Municipality of Niagara without any jurisdiction for dealing with flooding and other such problems because no provision had been included in Bill 17a, the Regional Municipality of Niagara Bill. At that time, a Government spokesman announced
that this situation would be corrected and that corrective legislation was pending. See: Ontario Legislature, Debates (April 18, 1973), pp. 1153-1154.


15. Design for Development - Niagara (South Ontario) Region, op. cit., p. 112.


18. Ibid., p. 30.


20. This is a verbatim comment made by one municipal fire chief answering the questionnaire.

York Region


26. Some years later, this report came under attack from the Ontario Economic Council Task Force on Local and Regional Government Data. In brief, the Task Force critique pointed out that Roberts' arguments were "intuitively appealing" but that no statistical evidence was introduced to support the claim of economies of scale or higher quality services upon consolidation. Rather, the report should have demonstrated how the existing personnel
were inefficiently employed and explicitly shown the allocation of the proposed force among its various tasks and the various areas of the county (Ontario Economic Council, Task Force on Local and Regional Government Data, Information: A Critical Component for Better Government (Toronto: Queen's Printer, 1975).


Waterloo Region

29. See Chapter Three, p. 43.

30. In 1970, the Waterloo Area Local Government Review Commission concluded that, except for shopping and recreation, there was considerably less interaction between the two urban complexes than one might expect "given Kitchener's relative size and proximity," (Waterloo Area Local Government Review, Report of Findings and Recommendations (1976), p. 16.

31. See Chapter Three, p. 48.

32. For a discussion of this flood emergency and the response to it see: Rodney M. Kueneman and John A. Hannigan, "The 1974 Grand River Flood," (Columbus, Ohio: Disaster Research Center, June 1974).

33. This inquiry was conducted by Provincial Judge W. W. Leach.


36. Ibid., p. 61.

37. Ibid., p. 60.


39. Ibid., p. 38.

40. Ibid., p. 79.


44. Ibid., p. 3.

45. Waterloo Area Local Government Review (1967), op. cit., p. 79.

46. This problem was pointed out to the Waterloo Review Commission by Fire Chief Johnstone of Kitchener, the Mutual Aid Co-ordinator. See: Waterloo Area Local Government Review (1970), op. cit., p. 63.

**Sudbury Region**


**Hamilton-Wentworth Region**


58. Ibid., p. 29.


63. Ibid., pp. 4-21.

64. Ibid., pp. 4-24.

65. Hamilton-Burlington-Wentworth Local Government Review (1969), *op. cit.*, p. 120.


68. Ibid., p. 4-6.


**Halton Region**

71. In the debate on the Regional Municipality of Halton Act, the Minister For Government Services described a questionnaire
delivered to most Milton households by a local high school history class; of the 70-80 percent who replied, 66 percent answered that they were in favour of restructuring the county system along the lines of the plan proposed by the Government. (Legislature of Ontario, Debates (June 18, 1973)).


Durham Region


76. Ibid., p. 3697.


78. OAPADS, op. cit., p. VIII - 43.

79. (i.e.): The Regional Municipality of Durham, Durham Region Off-Site Contingency Plan in the Event of a Radiation Incident at the Pickering Generating Station (November 1974), p. 10.


81. (i.e.): Durham Region Peacetime Emergency Plan (November 1974) and Durham Region Off-Site Contingency Plan, op. cit.

82. OAPADS, op. cit., p. VIII-44.

83. Ibid.
Peel Region

85. Ibid., p. 168.
86. Ibid., p. 168.
88. Brampton Guardian (March 28, 1974).
89. However, there is no longer any E.M.O. budget and equipment previously on hand for emergencies has been distributed to other municipal departments or disposed of.

Ottawa-Carleton Region

92. Task Force on Policing in Ontario, op. cit., p. 44.
94. Ibid., pp. 92-93.
95. Ibid., p. 94.
APPENDIX B

Judicial Division

FORM "A" - POLICE ADMINISTRATION STATISTICS

ANNUAL RETURN

1972

As of December 31

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<th>AREA POLICED AND POPULATION</th>
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<td>06. Motorcycles</td>
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</tr>
<tr>
<td>02. Miles of public thoroughfares</td>
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</tr>
<tr>
<td></td>
<td>08. Buses</td>
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</tr>
<tr>
<td>03. Population</td>
<td>09. Aircrafts</td>
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<td>11. Police Service Dogs</td>
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FULL-TIME PERSONNEL

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<th>Authorized strength</th>
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<th>Retirements from service</th>
<th>Other separations from service</th>
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MISCELLANEOUS

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</tr>
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</tr>
<tr>
<td>21. Motor vehicles recovered</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Signature of head of department

Date submitted
APPENDIX C

Covering Letters
January 27, 1976

Dear Chief:

I am contacting you at this time in order to seek your help in a sociological study of regional police forces in Ontario. This is part of a wider study of regional government and its impact on emergency and protective services in the province. In particular, this research project is concerned with change and innovation in regional "crisis management" organizations. Past studies have indicated that this is especially applicable to the police department, an agency which is in the forefront in seeking solutions to the challenge of a rapidly changing society. One of the aims of the present study is to assemble systematic data about such changes in order to better assist emergency relevant agencies in designing new and informed programs and contingency plans. In this connection, we fully intend to share our results with administrators and planners in this general service area.

The Disaster Research Center has been engaged in the scientific study of individual, group and organizational responses to community emergencies since 1963. Since its inception, over 300 different field studies have been carried out in Canada, the United States and abroad. General findings are reported in articles in professional journals and in the Center's own publication series and are available to all public and private agencies involved in community crisis management activities.

As part of its program of building an available source of sociologists who can be called upon to assist and advise government, organizations and industry in times of emergency, the Government of Canada through Emergency Planning Canada sponsors a research fellowship for disaster research studies at The Ohio State University. Since 1966, E.P.C. fellows have studied the sociological aspects of such events as the 1969 and 1974 Manitoba floods, the 1974 tornado which struck Windsor, Ontario and the 1973 Lake Erie erosion threat. In recent years, this research interest has expanded to include the study of emergency relevant organizations in non-disaster times as well as in community emergencies.
Enclosed you will find a short questionnaire designed to gather some specific information about your department. Mindful of your many obligations, many of the answers may be indicated by simply checking the appropriate category. The remaining questions should entail only a brief reference to your organizational records.

After you have filled out the questionnaire, please post it in the enclosed stamped pre-addressed envelope. If you could return this questionnaire by March 17, 1976 it would be of great assistance.

Thank you in advance for your co-operation.

Sincerely,

John A. Hannigan
Research Associate and
Emergency Planning
Canaga Fellow

Enclosure

JAH/abc
Dear

I am contacting you at this time in order to seek your help in a sociological study of regional Emergency Measures Organizations in Ontario. This is part of a wider study of regional government and its impact on emergency and protective services in the province. In particular, this research project is concerned with change and innovation in regional "crisis management" organizations. This is especially applicable to an agency such as E.M.O. which has become increasingly involved in peacetime emergency activities in recent years. One of the aims of the present study is to assemble systematic data about such changes in order to better assist emergency relevant agencies in designing new and informed programs and contingency plans. In this connection, we fully intend to share our results with administrators and planners in this general service area.

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Thank you in advance for your cooperation.

Sincerely,

John A. Hannigan
Research Associate
and Emergency Planning
Canada Fellow

Enclosure

JAH/mrw
Dear Chief:

I am contacting you at this time in order to seek your help in a sociological study of fire departments in regional municipalities in Ontario. This is part of a wider study of emergency and protective services in the province and of the impact of government reorganization on these services in regional areas. While it is recognized that fire departments are not part of the regional reorganization, nevertheless we feel it is important also to look at an emergency relevant service which has remained a responsibility of the first level of government. This will serve to give a more complete picture of crisis management activities at all levels of municipal government. A particular concern of this study is that of change and innovation in municipal agencies which must regularly cope with emergency situations. This is especially applicable to the fire department, an organization which is constantly acquiring new skills and technology in order to meet the challenge of a changing environment. One of the aims of the present study is to assemble systematic data about such changes in order to better assist emergency relevant agencies in designing new and informed programs and contingency plans. In this connection, we fully intend to share our results with administrators and planners in this general service area.

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Sincerely,

John A. Hannigan
Research Associate
and Emergency Planning
Canada Fellow

Enclosure

JAH/mrw
January 27, 1976

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logical study of the police departments in regional municipalities in Ontario. This is part of a wider study of emergency and protective services in the province and of the impact of government reorganization on these services in regional areas. While it is recognized that police departments are not part of the regional reorganization in the Ottawa-Carleton Region, nevertheless, we feel it is important to also look at an emergency relevant service which has remained a responsibility of the first level of government. This will serve to give a more complete picture of crisis management activities at all levels of municipal government. In particular, this research project is concerned with change and innovation in municipal agencies which must regularly cope with emergency situations. Past studies have indicated that this is especially applicable to the police department, an agency which is in the forefront in seeking solutions to the challenge of a rapidly changing society. One of the aims of the present study is to assemble systematic data about such changes in order to better assist emergency relevant agencies in designing new and informed programs and contingency plans. In this connection, we fully intend to share our results with administrators and planners in this general service area.

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Sincerely,

John A. Hannigan
Research Associate
and Emergency Planning
Canada Fellow

Enclosure

JAH/mrw
APPENDIX D

Questionnaires
REGIONAL POLICE DEPARTMENT QUESTIONNAIRE

Region ______________________

1. How many separate police forces were there in your region before the establishment of a regional force?
(excluding the R.C.M.P. and the O.P.P.)

________________________________________________________________________

2. Date regional police force was established. ___________ ________
month year

3. Location of headquarters ___________________________________________________________________________
     city

4. Number of detachments: ______________
   
a.) Location of detachments:
     __________________________________________________________________________
     __________________________________________________________________________
     __________________________________________________________________________
     __________________________________________________________________________

b.) Have you closed down any detachments since the establishment of the regional force?
YES ______ NO ________

c.) If "yes" above, which ones?
     __________________________________________________________________________
     __________________________________________________________________________
     __________________________________________________________________________
     __________________________________________________________________________

5. Which of the following are you directly responsible to?
   Board of Police Commissioners ______________________
   Regional Council ______________________
   Other (specify) ______________________
REGIONAL POLICE DEPARTMENT QUESTIONNAIRE

Region _____________________________

1. How many separate police forces were there in your region before the establishment of a regional force? (excluding the R.C.M.P. and the O.P.P.)

2. Date regional police force was established. ________________________
   month
   year

3. Location of headquarters _____________________________
   city

4. Number of detachments: _______________________
   a.) Location of detachments:
   _____________________________ _____________________________
   _____________________________ _____________________________
   _____________________________ _____________________________
   b.) Have you closed down any detachments since the establishment of the regional force?
   YES _______ NO _______
   c.) If "yes" above, which ones?
   _____________________________ _____________________________
   _____________________________ _____________________________

5. Which of the following are you directly responsible to?
   Board of Police Commissioners _______________________
   Regional Council _______________________
   Other (specify) _________________________
6. Now, we would like to know something about the background of senior personnel in your department. In the appropriate space below, please indicate what your (regional chief's) position was before you joined the regional force or before your force was regionalized (e.g., Police Chief, Oshawa Police Department). Now please do the same for your Deputy Chief(s), Chief of Detectives and the Head of your Traffic Division.

<table>
<thead>
<tr>
<th>Position</th>
<th>Force</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chief</td>
<td></td>
</tr>
<tr>
<td>Deputy Chief(s)</td>
<td></td>
</tr>
<tr>
<td>Chief of Detectives</td>
<td></td>
</tr>
<tr>
<td>Head, Traffic Division</td>
<td></td>
</tr>
</tbody>
</table>

7. What is the size and budget of your department at present? What was its size and budget during the initial year of operation as a regional force? Please indicate answers below:

<table>
<thead>
<tr>
<th>During Initial Year of Operation as a Regional Force</th>
<th>At Present</th>
</tr>
</thead>
<tbody>
<tr>
<td># of police officers</td>
<td></td>
</tr>
<tr>
<td># of civilian personnel</td>
<td></td>
</tr>
<tr>
<td>Total budget (in dollars)</td>
<td></td>
</tr>
</tbody>
</table>

8. How many police cruisers do you presently have? How many did you have during your first full year of operation as a regional force?

<table>
<thead>
<tr>
<th>During First Full Year of Operation as a Regional Force</th>
<th>At Present</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Police Cruisers</td>
<td></td>
</tr>
</tbody>
</table>
9. Please check which of the following procedures your presently employ when determining the promotion eligibility of police officers (you may check more than once category if applicable). Have any of these methods become more important since the first full year of operation as a regional force? Have any of them become less important?

<table>
<thead>
<tr>
<th>Promotion Methods Presently Employed</th>
<th>Become More Important</th>
<th>Become Less Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Exams</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Written Exams</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work Performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length of Service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational Achievement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (please specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

10. How many officers in your department have attended the Ontario Police College at Aylmer or another recognized police college? How many officers have taken university courses for credit? How does this compare to the number having these qualifications during your first full year of operation as a regional force?

<table>
<thead>
<tr>
<th>First Full Year of Operation as a Regional Force</th>
<th>At Present</th>
</tr>
</thead>
<tbody>
<tr>
<td># of officers who have/had attended police college</td>
<td></td>
</tr>
<tr>
<td># of officers who have/had taken university courses</td>
<td></td>
</tr>
</tbody>
</table>

11. Does your department have a written plan for operations in natural disasters?

YES ___________ NO ___________

a.) If yes, when did you adopt it?
12. Below is a list of changes in police programs, methods and technology. Various of these changes or innovations have been adopted by police forces in North America over the last decade or so. Please check which (if any) of these have been adopted by your department since the establishment of the regional force. You may check more than one.

Community Relations Programs

Family Crisis Intervention Program

Alcohol and Drug Abuse Program

"Ride Along" Plan

High School Counselling/Speakers Program

Emergency Measures Training

"Team Policing"

Crowd Control Training

In-Service Training Program

Assignment of Policewomen to patrol

Program Evaluation Methods (e.g., cost benefit analysis)

Automatic Data Processing for Crime-Arrest Information

Automatic Data Processing for Personnel Records

Improved Dispatch System

Improved Teletype Facilities

New Radar Equipment

Closed-Circuit Television Equipment

Improved Public Emergency Reporting System

Tape Recording of Police Radio Traffic

Electronic Sirens and Beacon Lights for Police

Increased Bilingualism of Police Services
Other (please specify) ________________________________

Name of Respondent ________________________________
Position _______________________________________

REGIONAL EMERGENCY MEASURES ORGANIZATION QUESTIONNAIRE

Region________________________

1. How many E.M.O. co-ordinators were there in your region before the move to regional government?

_____________________________________________________

2. What was your (i.e., E.M.O. Regional Co-ordinator) position and location before you took over your present regional post?

__________________________________________

3. Total budget of your Regional Emergency Measures Organization for the first year of operation as a regional organization and present fiscal year:

<table>
<thead>
<tr>
<th></th>
<th>First Year as a Regional Organization</th>
<th>Present Fiscal Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Budget</td>
<td>(in dollars)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a.) What percentage of your total budget was/is paid for by the Federal Government, the Province of Ontario, and the Regional Government?

<table>
<thead>
<tr>
<th></th>
<th>First Year as a Regional Organization</th>
<th>Present Fiscal Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Government</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Province</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional Government</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Size of staff (including yourself):

<table>
<thead>
<tr>
<th></th>
<th>First Year as a Regional Organization</th>
<th>Present Fiscal Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Full Time Staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Part Time Staff</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5. Who are you directly responsible to?

Regional Council as a Whole
A Committee of Regional Council
Other (please specify) ________________________________

a.) How often do you make a formal report to this body?

Every six months
Once a year
Once every two years
Do not report formally
Other (please specify) ________________________________

6. Do you feel that the move to regional government has allowed you to obtain any resources or engage in operational and/or planning activities which would not have been possible before?

Yes No

Resources
Operational Activities
Planning Activities

a.) If "yes" to any of the above, please specify what these are:

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________
7. Below is a list of things which Emergency Measures Organizations often do. Please indicate which of these you see as your three most important activities now by writing in the number 1 beside the most important, 2 for the second most important and 3 for the third most important. How does this compare to your first full year as a regional organization? (rank from 1 to 3 in the same manner).

<table>
<thead>
<tr>
<th>Activity</th>
<th>Present</th>
<th>First Year as a Regional Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contingency Planning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disaster/Drills Exercises</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital Exercises</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Response to Individual Emergencies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compilation of &quot;contact&quot; lists</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Information and Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Co-ordination of Disaster Responses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conference Organization</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergency Medical Services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (please specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8. Since you have become a regional organization, what courses (if any) have you (Regional Co-ordinator) participated in or attended at the E.M.O. College in Arnprior?
9. Since you have become a regional organization, what major emergencies (if any) have occurred in your region? What was the nature of your involvement in the emergency response?

<table>
<thead>
<tr>
<th>Year</th>
<th>Emergency</th>
<th>E.M.O. Involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Name of Respondent ________________________________

Position ________________________________
FIRE DEPARTMENT QUESTIONNAIRE

Name of Department __________________________

1. What is the size of your department at present? What was its size during the first year of operation of regional government in your area? Please indicate below:

<table>
<thead>
<tr>
<th></th>
<th>Present</th>
<th>During First Year of Regional Government</th>
</tr>
</thead>
<tbody>
<tr>
<td># of full time uniformed personnel</td>
<td></td>
<td></td>
</tr>
<tr>
<td># of full time civilian staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td># of Volunteer firemen</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. What is/was your total budget for the present fiscal year and the first year of regional government in the area? What percentage of this was paid by the Municipality, the Regional Municipality, the Province of Ontario?

<table>
<thead>
<tr>
<th></th>
<th>Present</th>
<th>First Year of Regional Government</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Budget (in dollars)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of above paid for by:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Municipality</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional Municipality</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Province</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. With what other fire department do you presently have "mutual aid" or other types of co-operative arrangements?

__________________________________________________________________________

__________________________________________________________________________
a.) Have these co-operative arrangements changed at all since the implementation of regional government in the area?

Yes _______  No _______

b.) If "yes", please specify how:

________________________________________________________

________________________________________________________

________________________________________________________

4. Are you tied in to a central dispatch system?

Yes _______  No _______

5. Is there a "Fire Co-ordinator" in your region?

Yes _______  No _______

a.) If "yes", who? ____________________________________________

6. Are you part of any reciprocal purchase of service agreements?

Yes _______  No _______

7. Below is a list of some changes in programs, activities and technology which have been adopted by various fire departments in North America over the last decade or so. Please check those changes/innovations which have been adopted by your department since the establishment of regional government in your area.

Fire Prevention Education Program

Emergency Medical Services

Arson Investigations

Zoning Enforcement

Administration of Building Code

Emergency Measures Training

Computer Based Information and Control System

Early Detection Warning System
8. Do you have special training programs for any of the following? Did you have these in the first year of regional government in your area?

<table>
<thead>
<tr>
<th></th>
<th>At Present</th>
<th>First Year of Regional Government</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pump Operators</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ladder Truck Operat-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambulance Drivers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special Vehicles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Company Officers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chief Officers</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. Please check which of the following procedures you presently employ when determining the promotion eligibility of fire protection personnel. Have any of these methods become more important since regional government has come into operation in your area?

<table>
<thead>
<tr>
<th>Methods</th>
<th>Presently Employed</th>
<th>More Important</th>
<th>Less Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Exams</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Written Exams</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational Achievement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (please specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
10. Does your department have a written plan for operations in natural disasters?

Yes ________  No ________

a.) If "yes", when did you adopt it? ________________________

11. What advantages and what disadvantages can you foresee if a regional fire department was implemented in your area?

Advantages _______________________________________________________

Disadvantages _____________________________________________________

Name of Respondent ________________________________________________

Position __________________________________________________________
OTTAWA-CARLETON AREA POLICE QUESTIONNAIRE

Name of Department ______________________

1. What is the present size and budget of your department? What was its size and budget in 1969? Please indicate below:

At Present 1969

| # of police officers | __________ | __________ |
| # of civilian personnel | __________ | __________ |
| Total Budget (in dollars) | __________ | __________ |

2. Please check which of the following procedures you presently employ when determining the promotion eligibility of police officers (you may check more than one category if applicable). Have any of these methods become more important since 1969? Have any of them become less important?

<table>
<thead>
<tr>
<th>Promotion Methods</th>
<th>Presently Employed</th>
<th>More Important</th>
<th>Less Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Exams</td>
<td>__________</td>
<td>__________</td>
<td>__________</td>
</tr>
<tr>
<td>Written Exams</td>
<td>__________</td>
<td>__________</td>
<td>__________</td>
</tr>
<tr>
<td>Work Performance</td>
<td>__________</td>
<td>__________</td>
<td>__________</td>
</tr>
<tr>
<td>Length of Service</td>
<td>__________</td>
<td>__________</td>
<td>__________</td>
</tr>
<tr>
<td>Educational Achievement</td>
<td>__________</td>
<td>__________</td>
<td>__________</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>____________________</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. How many officers in your department have attended the Ontario Police College at Aylmer or another recognized police college? How many officers have taken university courses for credit? How does this compare to the number having these qualifications during 1969?
4. Below is a list of changes in police programs, methods and technology. Variations of these changes or innovations have been adopted by police forces in North America over the last decade or so. Please check which (if any) of these have been adopted by your department since 1969. You may check more than one.

- Community Relations Programs
- Family Crisis Intervention Program
- Alcohol and Drug Abuse Program
- "Ride Along" Plan
- High School Counselling/Speakers Program
- Emergency Measures Training
- "Team Policing"
- Crowd Control Training
- In-Service Training Program
- Assignment of Policewomen to patrol
- Program Evaluation Methods (e.g., cost benefit analysis)
- Automatic Data Processing for Crime-Arrest Information
- Automatic Data Processing for Personnel Records
- Improved Dispatch System
- Improved Teletype Facilities
- New Radar Equipment
- Closed-Circuit Television Equipment
5. Does your department have a written plan for operations in natural disasters?

   Yes _______  No _______

a.) If "yes", when did you adopt it? ____________________________

Name of Respondent ____________________________________________

Position ______________________________________________________
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