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"THE CANADIAN ALTERNATIVE:"

Survival, Expeditions and Urban Change

W.W. Bunge and R. Bordessa

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continues that further Canadian enlightenment should be spread in the U.S.A. today. A specific comparison of Detroit and Toronto identifies some of the sources of the variations between Canada and the U.S.A. and proposes that the relationship of blacks to society, particularly on the housing question, is the crux of Canadian American differentials. An alternative model, based on the Indian culture is proposed for urban North America.

Finally at the scale of earth, all problems are subsumed under the survival issue. It is argued that we are, and should be moving in the direction of 'one world', which allows differentiation to remain. Issues of what sort of people might inherit the earth and where they might be located are examined. The geographic relationships between mankind, and machinekind, both antagonistic and co-operative, are introduced in an attempt to unravel where the threat to survival really lies. The conclusion is that the threat lies with the weapon machines and to avert this threat one should design a world that recognises the essential fact that 'to save life, save the children, including those of one's enemies' is more than a motherhood statement; it is literally a matter of the survival of mankind.

In the preparation of this monograph we have found it useful to have in front of us the original matrix of its contents. We include it here in case it also helps readers to organize their thoughts.

Spaces/Scale	I Christie Pits	II Toronto	III Canada	IV North America	V Earth
A: Mankind	Hidden Landscapes	People Defined Regions	Urban Nationalism	1. Detroit Humanly Viewed 2. The Black Sal- vation of Canada	One World
B: Machine- kind	Traffic, Parks and High-Rises	Recreation- al Geo- graphy: Two Views	Federal Prejudice Against Big Cities	Toronto- Detroit: A Tale of Two Countries	Children and Machine
C: Nature	The Upper Gerrard Ravine	Restora- tion of the Urban Environment	The Natural City	The Indian Plan for North America	Survival

PREFACE.

Detroit and Toronto folk geographers, often self depreciatingly referred to as 'plain ordinary people' were a source of ideas which were examined and expanded in this research. Of all the groups of folk geographers consulted, for example taxi-cab drivers, Italian and working class Anglo community leaders, the group who raised the most profound geographic questions were American and Canadian blacks. Gwendolyn Warren, Director of the Detroit Geographical Expedition and Institute, raised several basic research topics. Her perception of hunger filled children standing in slum ghetto windows and pressing their faces to the windows when the ice cream vendor went down the street; and her recognition of this as a torture that would not be tolerated if we were dealing with animals, defined the 'city of death'. Her understanding of urban money flows, and overcharging of the poor, led to the second and fourth maps on the cover. The theme of children and machines, central to the volume, grew out of her appreciation of the problem of children mechanically tumbling down the steps in front of their homes on Brush St. and falling into the arterial commuter traffic. John Watson, as the chief theoretician of 'The League of Revolutionary Black Workers' based in Detroit raised the question of "where does a nation form if it has no place upon which to stand". This question which was raised as "community control" eventually evolved into "urban nationalism".

The Canadian blacks represent two other essential themes: the open housing nature of Toronto developed by Grant Morris, who led a black arm of the Toronto Geographical Expedition focussed on urban planning for blacks; and the theme of Canadian continental leadership, in the spirit of Harriet Tubman, nurtured by Carol Tremaine.

Two other major non-white contributions are hidden landscapes, a theme first discovered in an attempt to find the Ojibways in Fitzgerald in north-west Detroit and the 'Indian Plan for North America' applied to Toronto and developed solely by Duke Redbird. Redbird also introduces the profound idea of 'natural order'. The non-white contributions are survival contributions, drawn from survival cultures. All that has survived in these two cultures (the black and red), under the centuries of violent oppression, is survival itself, the fundamental issue of the monograph. The contribution of these two cultures to the ideas and questions raised is especially acknowledged and emphasized.

Toronto became the focus of work under the 'urban expedition' model in 1972. The Toronto Geographical Expedition established its base camp in a downtown area in the spring of 1972 and terminated its work at the beginning of 1975. Many of the issues generated in the Detroit expedition were refined in Toronto, for example the children and traffic accidents theme originated by Gwendolyn Warren was generalized to include the wider relationship of children to machines. Thus the examination of children and traffic must be looked at in the context of community spaces (or lack of them) set aside for formal children's play. Inadequate play-space provision

drives children into the streets. Again high-rises, built around elevators, are antagonistic to children and cage them. Thus children-traffic collisions can be understood only in the context of general environmental quality in neighborhoods.

The Toronto expedition also began to raise issues that were self-generated. The nature, as opposed to the mankind and machine-kind elements, of the city became a significant focus. In the relationship with machinekind, nature in the city, in most instances, is in decline: investigations concerning use of natural spaces and mechanisms for restoring the city to a more natural condition were conducted. A focus on recreational geography and the inner city child was also initiated.

As a formal structure the Toronto expedition survived through two summer field seasons and the preceding, intervening and following periods. Much of the field work required a tremendous input of man-hours. This book is the collective effort of the Toronto Geographical Expedition receiving logistical support primarily from York University. It represents an estimated fifty man-years of labor. We record our indebtedness to the groups of students from many N. American universities and Toronto high schools who provided us with their labor in exchange for lectures about our work. The work of visitors to the Expedition was co-ordinated by full-time explorers who also assisted in the design of research and implementation. Chris Brunner, Cathy Cirko, Marilyn Linton, Marie Murphy, Gayle Olders, Jill Ovens, Tom Scanlan, Doug Smith, Derek Stephenson and John Warnke worked full time on the Expedition. But for them there would not have been a book to write. The burden of day to day operations fell on their shoulders and they proved themselves to be more than equal to the many demands and pressures placed upon them. We trust that they will approve of the final product as they did of the central themes of the Expedition which attracted them in the first place. We also record our thanks and indebtedness to the folk geographers - members of the Sussex-Ulster Residents' Association and the Christie-Essex Residents' Association without whom there could have been no Expedition at all. Especially helpful to us were Joan Doiron, Maria Minna, Carol Pasternak, Rosie Smith and Ermanda Vespasania. Dorothy Hubasinski and Gail Topitsch of the Upper Gerrard Ravine Committee were also helpful. For making us welcome in their neighborhoods, inviting our explorers into their homes and teaching us many things never discussed on university campuses, we are grateful. At York, Professor Bryn Greer-Wootten, Jill Gilmore and Vykki Silzer provided assistance and encouragement and John Tibert of the Institute for Behavioral Research did most of the computational work in the monograph.

Financial support for the Expedition was gained from the federal government of Canada's Ministry of State for Urban Affairs and the Office of the Dean of Atkinson College. The favor with which Dean Harry Crowe and Associate Dean Jim Cameron looked upon the Expedition saved us many times when we were in financial difficulties. We thank them for their generous support. Financial support for the Expedition

also came from the labor power of the full-time explorers. This source of support was, in the last analysis, our most significant resource and we have cause to be thankful to a fine group of people. Secretarial support for the Expedition was provided by the geography department of Atkinson College, through Linda Sykes and Elaine Yates. Their contribution was a valuable one and we trust that with the completion of this book their lives will return to a normal pace. Drafts of the manuscript were typed by Rita Marinucci and the final manuscript by Evelyn Cassalman. We thank them for turning almost illegible writing into the final product. The cartographic work was done by Garry Berssenbrugge and Chris Grounds, in the Cartography laboratory at Atkinson College. We thank them for their fine effort and can only regret there is insufficient space to also include the scores of additional illustrations. It is inevitable that we have left out many people who deserve thanks for their support of the Expedition. We therefore apologize for not being able to include everyone by name.

As we have noted, this book is the product of those associated with 'The Toronto Geographical Expedition.' Three identifiable inputs contributed to the text.

The first source of the text is the work done directly in the field by the expedition. The latter fused theory and practice. Thirteen theoretical manuals, dealing with topics and issues identified by the community and by expedition members were written by William W. Bunge. These manuals contained ideas and loose hypotheses. Each manual became the responsibility of a specific, field-team leader who collected data, modified hypotheses and suggested new avenues for research. Reports were prepared by those team leaders who developed manuals to the greatest extent: Marilyn Linton (Hidden Landscapes), Gayle Olders (Ravines), Tom Scanlan (Traffic), Derek Stephenson (Parks), and Doug Smith (High-rises). Others wrote pieces on more limited topics which grew out of the manuals: Cathy Cirko and Jill Ovens (Aspects of Local/Non-Local Land Use) and Marie Murphy and John Warnke (Aspects of Biological Bonding and Community Break-down). The Editors gathered together all such materials and used them to write the final text, with Vykki Silzer's assistance.

The second source of the text is the discussions that took place between the editors as the work progressed and events unfolded. Extensive portions of the text do not, therefore, derive strictly from field evidence gathered by the expedition, but rather, from the development of our thoughts as we worked with the field results. These portions of the text owe their generation to the expedition and, were written within its context.

The third source of the the text is three, independently written sections, for which credit can be specifically given. "Detroit Humanly Viewed" is a revised version of a paper by William W. Bunge. Bryn Greer-Wootten wrote "Detroit and Toronto: A Factorial Comparison". And Duke Redbird wrote "The Indian Plan for North America".

Before the reader embarks upon the text we ask one thing only. It is that he reserve judgment until the entire text has been read. The book is organized in a sequential and additive way. It is our hope that the picture we are trying to paint becomes clearer as the book goes on. Not until the concluding section is it really possible to pull the themes of the thoughts together.

R. Bordessa.

W.W. Bunge.

March 1975.

Toronto.

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Fig. 2 from Robinson "Toronto during the French Regime (U. of Toronto Press, 1965); Fig. 70 from Janelle & Millward (proceedings of the Association of American Geographers, Volume 6, 1974); Figs. 105, 117 from Skoda and Robertson "Isodemographic Map of Canada" (Geographical Paper no. 50, Lands Directorate, Dept. of the Environment, Canada); Fig. 136 from the Annals of the Association of American Geographers, Vol. 52, No. 2, 1962; Fig. 180 from Driver "Indians of North America" (U. of Chicago Press, 1969); Fig. 182 Map, "Death Rate," in Edward B. Espenshade, Jr., (Ed.), GOODE'S WORLD ATLAS, Thirteenth Edition, © 1970 by Rand McNally & Company, Chicago. Redrawn and adapted by permission of Rand McNally College Publishing Company; Fig. 189 from Nash "Music and Environment, an investigation of some of the spatial aspects of production, diffusion and consumption of music" (Journal of the Canadian Association of University Schools of Music, Vol. 5, no. 1, spring 1975); Fig. 209 from Machta (Journal of Health Physics Vol. 9, p. 1130, 1963) by permission of the Health Physics Society; Figs. 210, 211 from Machta & Telegadas (Journal of Health Physics Vol. 19, pp. 475, 479, 1970) by permission of the Health Physics Society; Figs. 220, 221 from Horvath "Machine Space", (reprinted from the Geographical Review, Vol. 64, no. 2, 1974, copyrighted by the American Geographical Society); Fig. 202 from Martin and Wright "Pleistocene Extinctions", (Yale University Press, 1967).

DEDICATION.

To the Children.

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ABSTRACT.

The monograph addresses the question of the survival of mankind: it discusses the threats to survival facing us today and puts forward the notion that to ensure survival mankind must treasure children so that they are seen as the 'weakest necessary link with life' and must be treated accordingly. The survival theme is examined at five scales: neighborhood, city, nation, continent and earth, through three foci- mankind, machinekind and nature.

Thus at the neighborhood scale the question of 'hidden landscapes' of people and groups oppressed by society is considered. This leads into the impact of machines, such as automobiles and elevators, on people, particularly children, in different types of neighborhoods. Finally, the destruction of nature in neighborhoods and its consequences is examined.

At the city scale the broad question of regions within cities is examined, largely from the point of view of residents and leads into the issue of community control of space. The impact of machine-kind on the matter of recreational activity is examined. Recreational geography has been largely rural-oriented and middle class biased. The lack of private transportation and the restriction of poorer people to machined-over downtown spaces is discussed in the context of their recreational needs. Discussion then turns to how the city might be made more livable for those trapped in it, and others; and considers restoration of precious urban features, such as ravines destroyed by developments.

At the national level the question of identification of regions by communities escalates to that of urban nationalism. That is nations, such as the Indians, have moved to cities but have no formal power within them. Urban national spaces in cities is suggested as a mechanism to provide such a power base. But there is a prejudice on the part of the federal government of Canada against such national expression which might lead to antagonism between groups. Furthermore the federal government appears to lean towards new towns rather than learning how to govern existing metropoli adequately, and it appears to lean toward direct funding to rural areas for needs which are not supported in urban areas (compare flood control funding to lack of funding for sewer overflows). The discussion of the 'Natural City' points out that rivers in Canadian metropoli are as important when length is transformed to 'people along banks' as are nationally known rivers like the Fraser. This perspective again opens up the question of federal support for rural versus urban areas and extends the previously examined question of environmental restoration in urban areas.

Discussion at the level of North America evaluates Detroit as a living environment for mankind and finds it to be wanting. Attention is then switched to Canada and it is argued that in the nineteenth century enlightened innovation on the slave question spread from Canada to the U.S.A. via the 'Underground Railroad'. The argument

INTRODUCTION

THE SCALES OF SURVIVAL.

There is almost no geography of children, birth to puberty; yet it is the recurring theme of this book. Protecting children through geography, especially the children of one's enemies, is difficult. Those opposed present much opposition. "'They' grow up." It is certainly desirable. "There are too many of 'them'!" This is better than none of 'them' at all. 'They' are outbreeding 'us'. 'We' outbred 'them' earlier. "Why bring them into this hellish world?" They might do better than we did. Children are not selected because they are a safe subject. They are a furious subject: the most furious subject. The fury of the attack on the world's children from starvation, machines, napalm and radioactivity requires a manly as well as a womanly defence. The ultimate act of violence is to deliberately kill a child by direct or indirect means; therefore the ultimate act of antiviolence is to protect children, directly or indirectly, by all necessary means but by no means unnecessary. Men-fathers - should protect the children from deadly pressure as should women-mothers. Protection of children is strongest when men and women together cooperate. *Protecting children is such a physically hazardous labor that it is unmanly to suggest that women face this danger unaided.*

Children are not selected out of sentiment but out of science. They reflect the pressures of the environment more accurately, due to their very weakness. They are like canaries in a coal mine. If children are felled, adults have cause for alarm themselves. But apart from their utility as more sensitive indicators of environmental pressures, children contain the possible fatal weakness of mankind. If a famine occurs and children die, they can be replaced if the young adults have survived. "Only the strong survive" is the popular version of this thought. The difficulty is that all adults start life as very weak babies. If an environment develops and is sustained in which children cannot survive, then the species itself perishes. The pressure of the environment on the young is crucial to any species surviving. Almost all 'specicide' and even racial genocide occurs due to the unreproducibility of the species or race. In this deep sense, 'only the weak survive'. All strong adults started as weak infants.

To see just how unsentimental this line of reasoning is, notice it refers to the power of the necessary weak. The unnecessary weak include the old and the sick. They can die off without the species itself perishing. If the environment is made healthy for children, the sick and the old will also be protected, but this protection is a secondary benefit. The unnecessary weak receive protection because the necessary weak must receive protection. The geography of children becomes a serious survival tool. Grandparents are outstandingly pro-children and for that reason they should be kept in the community with the children, out of their utility not out of pitiable charity. The old should not be wasted

in old people's ghettos. This Darwinian logic of child protection, not sentimentality, not kindness, not value judgment, turns the search for survival, into a children book.

The Darwinian cruciality of children comes through in the various geographic scales of this book. The theme, 'to save life, save the children' is the cry of neighborhood environments, saving children from automobiles and from high-rises built around elevators. At a metropolitan level, infant mortality rates showing extreme differences across short distances, define the life and death geography of a city. Nationally and internationally the theme is equally as powerful. But at the global level, then the crucial nature of the planet's children becomes vivid. Concretizing the global scale produces a weird collection of maps, true, concrete; yet wild and unfamiliar; as if dealing with the science fiction world of space exploration - because that is precisely where the earth is today: not yet two generations off the farm and already on the moon. Science, which believes in testing hypotheses in the crucible of extreme conditions, finds the scale of earth seen from the moon most intimately related to the scale of the earth seen from the Upper Gerrard Ravine in eastern Toronto. It is not only that children must be saved, as tested through five scales of neighborhood, metropolis, nation, continent and planet; but a clear spatial antagonism to child survival is discovered; namely, machines, especially the machines called weapons, gone amuck. Sharp plans, concrete and specific, emerge from the theoretical work. There is nothing more practical than keeping the race going.

The interplay between the unique and the general is the practical and philosophical question of city neighborhoods. If the uniqueness of a city neighborhood is denied, then its identity is destroyed, because uniqueness is the very definition of identity. But if the generality of a neighborhood is denied, then the possibility of understanding, of making rational plans, is also denied. For practical reasons, both the uniqueness and generality of the neighborhood are studied, whatever the philosophical costs of such an eclectic approach. The particular colors of houses, the backyards of various cultures, the openness to children on Halloween, the use of porches, the street names, the nation of origin of flora and fauna, the exact sites occupied by children at a given moment, the unique characteristics of automobile traffic, the individual mental maps of children in high-rises as opposed to children in low-rises - all these uniquenesses blend into general plans for ethnic expression nationally, overall city transportation schemes and reconstruction of high-rises to childrenize them when children must be housed in them.

The Upper Gerrard Ravine in eastern Toronto, a small urban region in which high biomass in the ravine is in close proximity to intense machine spaces and human spaces, is examined. Any spaces in which children are killed or injured are considered unnatural spaces, spaces which if intensified and enlarged, could eventually

encompass the globe: they are therefore doom-indicating spaces extrapolated to the planetary scale. Three major spaces - nature (life or biomass), mankind and machinekind spaces are expanded to five by differentiation of the mankind spaces into three: children, women and men. In the Upper Gerrard Ravine, these five spaces and their combinations are searched for their effects on children.

One of the disturbing things about urban neighborhoods is that they are changing. The changes are of great magnitude, mostly pernicious, and have such massive power behind them that they seem to be, because they are, mostly inevitable. The task of humanists is to save not what they can, but what they must - the life of the species, living in the increasingly deadly North American city. To see some of the forces and the 'choices' left open, view the near-downtown urban neighborhood of Christie Pits, more formally, the Christie-Essex Residents' Association neighborhood in Toronto. How can this band of citizens, hard working, ably led, united around culture and church, hope to preserve their homes? Put this neighborhood into the context of the forces shaping Toronto as a whole. In which of the Burgess rings would the neighborhood fit? And beyond the descriptive rings, view the rings as the result of Thunen rent structures so that the geographic paradox of the most wealthy having the least convenient locations, in the commuting suburbs, is explained on the basis that the wealthy cannot afford to pay the high rents per square mile that the crowded poor of the inner city scrape up. The dynamism of the rings takes on the quality of tremendous social forces.

Where does the change come from? The change comes from the fact that the city as a whole is growing, and this means, as geographers know from Nordbeck's (1965) allometric growth work, that the parts of the city are growing proportionately. To state this law of allometric growth more convincingly, small cities have small slums and large cities have large slums. If a city starts small, and they all do, and then grows large, its slum growth is just keeping up with the proportionate growth. Looking at Toronto's projected population growth it is clear that it is continuing to grow. In 1971 the population of the 'Toronto region' was 2,755,000: two estimates of the population for the year 2001 are; 5,185,000 and 6,510,000 (Met. Tor. Planning Brd. 1974 and Lithwick (1970)). The expanding Thunen rent model will continue to inevitably extract its rents, causing the growth of Burgess's rings. How then can Christie Pits and its Christie-Essex Residents' Association stave off more automobiles slicing up the neighborhood and running over children on their way to school? How can the rising values of real estate keep the high-rise developers from offering such fabulous profits to homeowners that they cannot afford not to sell? Can anything human be saved at all? Only some things can be saved and to save them they must be restored.

At the national scale, Canada is more urbanized than the United States. The most interesting result of this more advanced Canadian

condition, can be seen in its effects on nationalism. With four fifths of Canadians living in cities, if national expression is not given in the landscape of the cities, what national expression is there? Native peoples live increasingly in Toronto, in Winnipeg and other cities and native peoples' political rights are less and less a reservation matter and more and more a community matter inside great agglomerations. The political geography that must be changed is the reliance on Canadian provinces as opposed to city-centered regions. Rapidly, especially in the private sector, the province is being abandoned as the geographic administrative unit below the national. This implies the abandonment altogether of provinces in Canada and states in the U.S.A. What is needed, as seen in the trend of evidence, is city-centered regions. America might have to redefine itself as the 'United Cities of America'. The urban national question is closely related to survival as can most clearly be seen by the differentiation of infant mortality rates among the various national neighborhoods. In America, it is popularly assumed that blacks have large and 'immoral' families: but there is zero population growth among blacks in America. In Canada the English express similar prejudice against the Catholic French, though Quebec has a very low birth rate. If national groups are pressed down badly enough, (such as a forty percent unemployment rate among blacks in the ghetto of Detroit and only a five percent unemployment rate among the whites), then the map of infant mortality rates is explained. "One baby one vote", assures enough democracy in power to result in democracy in food. The ultimate tyranny is starving children.

The discussion at the international scale appears to contradict that at the metropolitan scale. At the scale of metropolitan Toronto, Toronto is criticized. Toronto is not flattered in all aspects - the geography of race, transportation, political divisions, destruction of biomass and especially the geography of children. But at the continental scale, the international comparison to the American city of Detroit, Toronto emerges as a practical paradise; a wonder. How can the book have it both ways? The seeming contradiction is resolved when it is seen that most of the pernicious features of Toronto, such as its rat region, are much more a feature of Detroit. The rat bitten baby region of Toronto is 'the American side of town'. By getting rid of such features Toronto is becoming more Canadian. By allowing such horrors to spread and intensify, Toronto is becoming more American. So, the features criticized at the scale of the city in reference to itself, turn out to be not Canadian but American features. It becomes, in addition to the more important survival duty, a patriotic duty for Canadians to export these features back south of the border.

The book searches Toronto (therefore Canada) because it is more survival prone than Detroit. Then it searches Detroit (therefore America) for the opposite reason. At the international scale, the research strategy is to start with the base of Detroit, move up to Toronto, and then project the trend even higher. Nationalistically,

make Canada even more Canadian. Increase the difference between Detroit and Toronto, at least in the short run. In the long run, after scientifically understanding the difference between the two cities, persuade Detroit (and America) to change their ways toward the Canadian alternative.

At the global scale nothing stands still. All is change and only the life of the species must not be a variable. If only human life must be invariant, then how can irresistible changes that contain the global threat to the species' existence be stopped? Science can do it. Mankind is the only species which understands the physical laws that govern him. In an age of political connivery, corruption and militarism, it may sound old fashioned to appeal to reason, but it is the species' only chance and, a good chance. If through the process of classic science, of hypotheses tested against evidence, we can understand what is happening to our cities, then we can set about improving matters. The inevitable forces of change will then lose their déadliness and will hold the promise of at least survival. Situations barely at the survival level do not mean that survival is assured, but that survival is in jeopardy. The strategy must be to find what is threatening survival, the edge of the cliff; then, not teeter on the brink of that cliff but to move resolutely to remove the threat.

The final scale of this book finds that we, the species, worship machines over children and, that this misplaced priority is killing us. Preliminary results are encouraging for the species. They indicate that the machine spaces, not the human spaces, are deadly to children. Therefore the threat to the species' survival resides not in mankind's "innate" nature, but, in mankind's relationship to machines. The species is not innately vicious; our relationship with machines is the trouble. We, as a species, have the chance to save the planet for generations yet unborn.

CHAPTER I

CHRISTIE PITS.

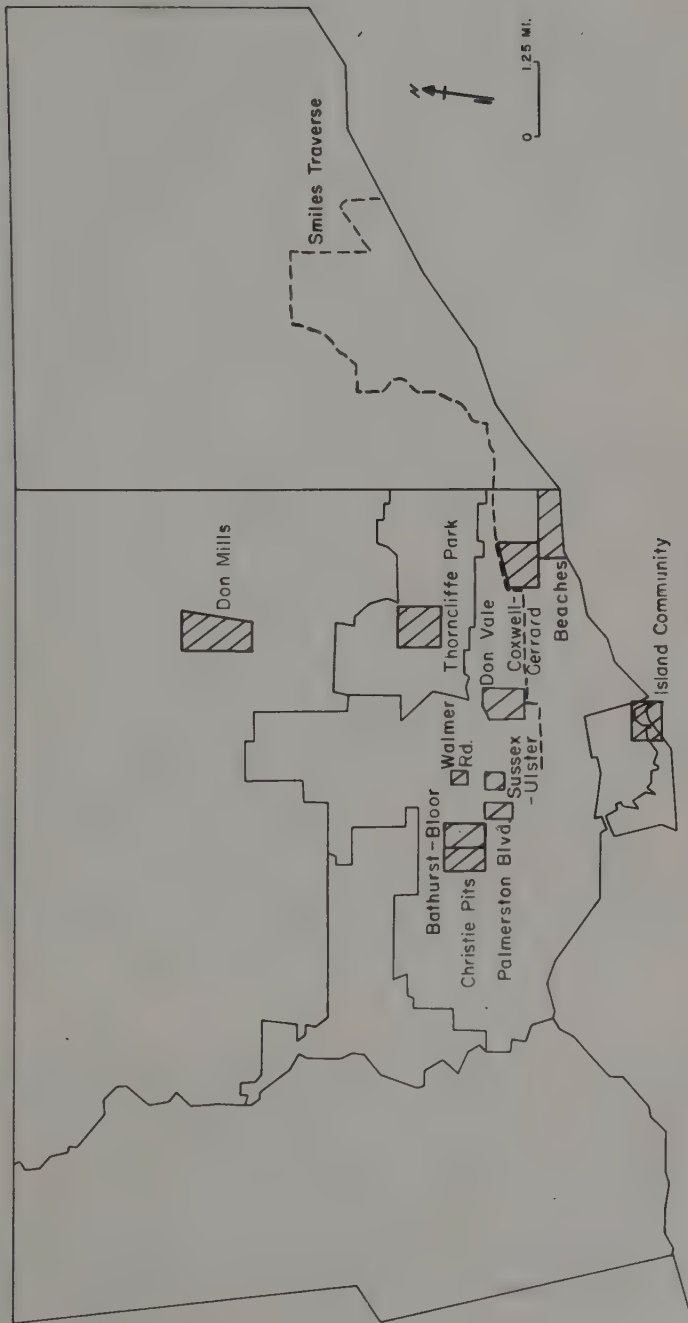
A great difficulty with the science of geography, with serious consequences for the political art of governing, is scale. Many geographers, and the general public, have lost the most intimate scale, the individual human being and his immediate friends and neighbors, his community. Little is known of the spatial dynamics of communities. Why should one not mix industrial and residential land uses? What is wrong with elevator shafts in the sky...residential high-rises? What does it matter if some individuals do not learn to speak Italian or French as their ancestors did? These questions and others are given metropolitan or even national geographic scale, which is why they are so little understood. This book tries not to make such an error and begins at a small scale.

I: Hidden Landscapes and
Unseen Forces in Community Change.

The cultures of non-Anglo ethnic peoples and the Anglo working class in Toronto are so oppressed that the most sensitive monitoring of the landscape is needed to detect their presence. Underground cultures require extreme sensitivity in observation to the point of appreciation of uniquenesses to discover the slightest hints of the beauty of the poor. Before a culture can express itself its geography must be discovered.

A: Geographic Uniqueness and Generality.

All places can be viewed as unique or general. The corner of Queen St. and Yonge St. can profitably be viewed as the center of Toronto, one of the highest land value intersections in Toronto, the one corner node that more than any other, Torontonians would know of, the unique essence of Toronto itself. 'All Toronto sooner or later passes by there and only there.' The same corner can be viewed with profit as a general location. It is relatively near King and Yonge compared to Steeles and Yonge. It is part of a set of places, a region, called 'downtown Toronto'. It is similar to central points in urban centers the world around. These two points of view, the unique and the general, seem to be in unending war with each other not just in geography but in science in general, in art, and even in philosophy. Since generations of the world's most intelligent people are unable to determine which point of view is 'right', why not accept both? Uniqueness tends toward a point of view that there are almost endless ways in which a particular region is perceived. Since it takes much labor to begin to regionalize from this point of view, only a small area of the city can be studied. The area examined in this book is the area in which the base camp of the 'Toronto Geographical Expedition' is located: Bathurst and Bloor is the closest major intersection.



LOCATION OF SAMPLE AREAS WITHIN METRO. TORONTO

Fig.1

Unique Landscapes.

All words are generalizations and therefore inaccurate. No two places are exactly alike. No two brains viewing the same place at the same instant of time are exactly alike. Therefore, words fail when viewing a landscape with the intent of 'really understanding it'. All that individual human beings can do is throw out of their minds all words about the region, (and that certainly includes all sets of words such as books they may have read) and just nakedly let the region flow into their minds. Training the senses to be totally open and aware is not easy since our minds are so structured by words that our senses develop a tunnelled vision. To discover the essence of the landscape, the ultimate uncommunicable 'feel of the region', geographers should just open their eyes, ears, noses and touch to what is around them.

Perceived Landscapes.

A map of smells, a map of sounds (like the almost drowned out songs of birds or yelps of dogs), a map of the colors of buildings: these and similar maps are fascinating. Surprisingly other people have noticed them too. Surprisingly because they do not talk about it to each other much. Lying in bed in the morning in the summer they might hear a morning dove. When certain sounds occur, like the screeching brakes of a speeding automobile trying to avoid an accident, all the people on the street go tense and listen to hear if there is a crash at the end of the screech. Like other mammals, mankind still has herding ways of communicating with his fellows in small spaces. But, if these sorts of maps are made, already philosophically the landscape is not viewed as unique. A unique landscape, truly unique, is beyond the communicative generality of a map. Thus already two techniques of studying hidden landscapes have been discussed: first, the truly unique direct perception of the region, an uncommunicable experience achieved by individuals in front of the landscape, perceiving its 'thusness'; second is a mapping of some rarely commented upon general perceptions. The first technique leads to the second.

Private Landscapes.

Hidden Landscapes can also include private spaces. Jacobs (1962) claims that the number of 'eyes on the street' determines crime rates. This hypothesis can be tested though techniques to measure 'street watching' need to be developed. How would one record the 'little old ladies' who while away their lonely days just peeking out their windows at life? Private spaces are used by children to do secret things from playing 'doctor and nurse' to holding 'club meetings'. Many private activities should not be spied upon but at least a map of 'public and private spaces' would be more revealing than the much more discussed classification of 'open spaces'.

Personal Landscapes.

Moving further away from uniqueness in a continuum toward generality, it is possible to construct a matrix of cross characteristics. To be overly mechanical about it, take the census categories and cross classify them. 'This gives a large number of classes such as 'old Italians of average income living in houses without kitchens...' Since the odds of two or more people in the neighborhood appearing in any one box of the classification system approaches zero, it would be easier, as a practical matter, not to construct the matrix but simply to do the personal geographies of as many individuals in the neighborhood as energy permits. This would be highly instructive, at least for a few such studies with proper titles such as 'The Personal Geography of Mrs. William Smith'. Techniques include following her (with her permission) through her week and creating an atlas of her every move. Other techniques include asking her to draw the space around her. Certain lead questions help, such as for example asking her (if she had lived in the neighborhood all her life), to describe her trip to school each day. It is surprising how the journey to school, even down to the smallest details, is often remembered throughout life. Driving or walking around the neighborhood and asking her to comment on the geography she sees also stimulates much recall.

Illegal Landscapes.

Moving toward a higher level of generality, hidden landscapes can be viewed as an uncovering of furtive and underground groups relative to public and assertive groups. It is easy to find the most respectable groups in an urban region. These are the proud people who feel they really belong there, should direct matters and open public places like churches or associations, to announce their proud respectability. Each group tends to have its own sense of community, where its members live. One technique for finding these geographies of groups is to elicit mental maps by sketches. A literature on this technique exists, derived mainly from Lynch's early work (1960). If membership records are public, they can be mapped as another way to define the region of a group. Beyond demarcating the boundaries of the group, is the need to map and describe how they view the space in which they live.

Less 'respectable' groups are often forced into illegal activity in order to survive and are more difficult to examine. Public groups, Italians, West Indians, Portuguese, Anglo-Saxons and so on usually also have black sheep elements. The 'immigration reception center' is often the site of illegal immigrants as desperate people try to reassemble their families from the old country. This activity is important and must be hidden. Children who are not fed at home must steal food to eat (and usually they steal toys as well). As they grow up they steal other things. This community, the community of thieves, extends well beyond itself since usually a thief will have kin who are not thieves. Persons who are forced to flee to avoid paying rent or who cannot make furniture payments, find it hard, once they have become a 'midnight mover' to settle down again since the bill collectors might catch up with them. Obviously people involved in narcotics have their own group and a

vivid and peculiar geography. In poorer neighborhoods the only hope for any extra cash is a death with a cheap insurance policy payment or to 'hit on the number'. For poor people, gambling is not irrational. To give up the hope of 'a hit' is less survival prone than to waste some petty cash in some other way. An elaborate landscape develops for people who play 'the numbers'. Numbers are played by selecting three digits. To assist the player an elaborate industry has developed so that all sorts of common everyday objects tell the player what to play. A player walking down the street sees numbers over the entire landscape like a painting done by putting the appropriate color in the appropriately numbered section of the painting.

Where do hidden landscapes end? A good cut off point is illegal activity; if not, the geographer is turned into a police spy, a 'stool pigeon'. Nor is this rule beneficial only to people of lower income. To illustrate, the 'crime' of prostitution if mapped always appears in lower income neighborhoods. If ever a 'criminal' were a victim it is the prostitute. Women often turn to prostitution to feed themselves and their children. If, instead of mapping arrests of 'criminal' prostitutes, the men and organizations that produce the prostitutes were mapped, then suburban neighborhoods, rather than 'tenderloins' and 'red light districts' would be illuminated. If the homes of users of prostitutes, the 'johns' were mapped, the geography of prostitution would become a suburban crime. Similarly, if instead of mapping the spatial distribution of men sent to jail for theft, the total value of thefts were mapped, then white collar crime in the suburbs would dominate the petty thievery of the slum. So by drawing the line on the legal side of groups, all groups are protected on their darker side. To run an urban geography expedition any other way is impossible. The community, including corrupt police officials, would close down such an expedition, one way or another, in an instant. An expedition itself must be scrupulously non-criminal but must not expose illegality in the landscape.

Landscapes of the Powerless.

Powerless legal groups are part of the hidden landscape. Finding these groups and establishing their geography, their perception of space, helps them establish a rightful claim to 'the turf'. One device the more powerful use on the less powerful is to challenge their right to existence. The argument is that the abused should be grateful that they are not even more abused. "It can get worse," is the slogan of tyranny. The geographic equivalent is to insist that certain people really do not belong where they are located. They can be moved any time by people claiming to really belong at the same location. False historic geographies are established to reinforce the arrogance of 'the true Canadians' or the 'true citizens of the neighborhood'. For instance, Toronto was not founded by the English, but by the Indians. Are there any Indians living in the Bathurst-Bloor region...are they homeowners...

do they feel they have been cheated out of their land? Are there any French? Toronto was a French site long before it was an English one - a fact missing in early historic geographies and historic plaques in the city. This hidden landscape is worse because there are so few 'native peoples' that they can be easily controlled. The French, on the other hand, represent, potentially, a more powerful group. Other underpowered and legal groups with their own view of the geography of the neighborhood are the sick and the old. Certain geographic features are important to them: rampways rather than steps at curbs; traffic lights that hold long enough to enable them to cross the street.

Survival Landscapes.

This brings the discussion to the final set of hidden landscapes: the most generalized and the most elemental set. It is argued that of all the types of hidden landscapes (unique, perceived, private, personal, illegal, and powerless) the most important groups are biological. The geography of children is more important than 'cute'. Children are the life of life. Logic compels that they be studied since the primary product of the neighborhood is children. Residential neighborhoods are the point of reproduction. Life is not work alone. Life is work and children, and their landscape is almost ignored.

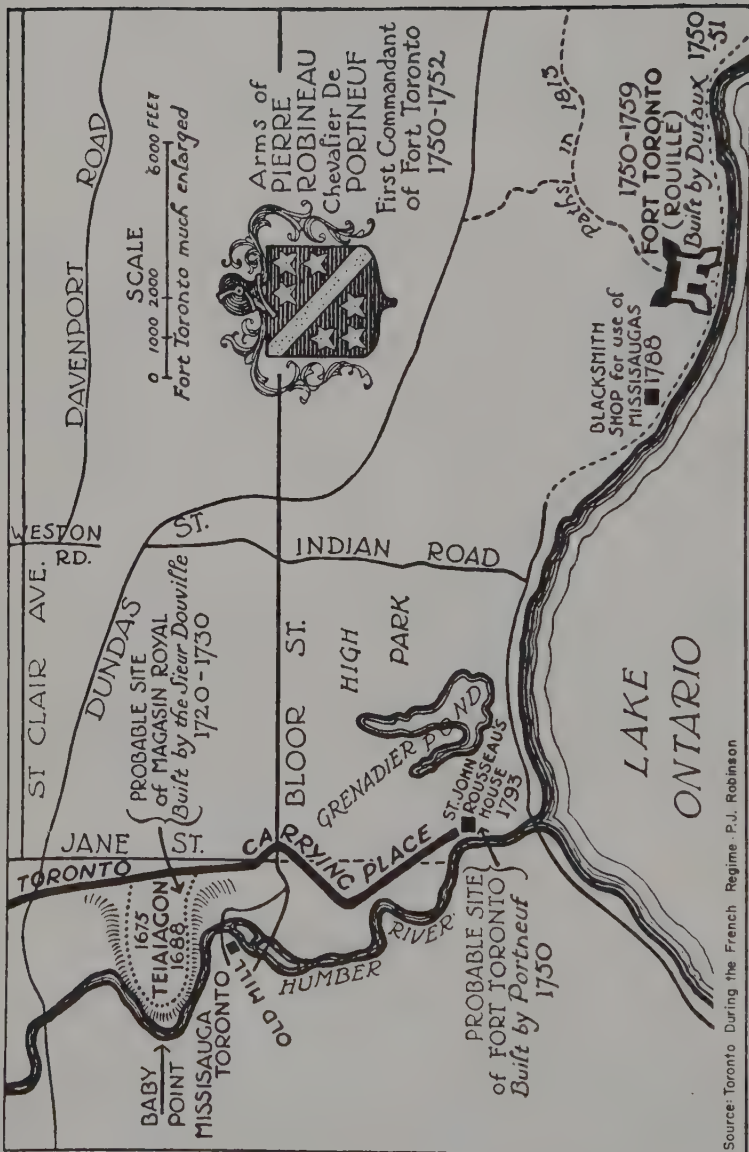
B: Hidden Landscapes in Christie Pits.

The primary neighborhood explored by the Toronto Geographical Expedition is situated northwest of the central core of Toronto. It is bounded by four main arterial roads: Dupont St. to the north; Bloor St. to the south, Ossington Ave. to the west; and Christie St. to the east. The area is known locally as 'Christie Pits', because at one time the south-east section of the large valley shaped park was a gravel pit. Yet this name does not appear on a map of Toronto for Toronto's bureaucrats chose to call the core of the area 'Willowvale Park'. This is the name on the official map of the city and on signs on the site; but for every time someone says 'Willowvale Park', thousands say 'Christie Pits'.

Human Characteristics.

According to the 1971 census, the neighborhood has a population of 8,205 residents, of which 2,595 were children under the age of 15. There are 1,970 dwelling units, 1,215 of which are owner-occupied. The area is now stable in terms of residential turnover, which is less than five percent annually. The decade from 1951-1961 saw a noticeable change in the ethnic composition of the area, with large influx of Europeans, especially Italians. In 1951, for example, there were 236 Italian people living in the area. By 1961, Italians were the dominant ethnic group, numbering 2,900. The 1971 census indicates that 5,725 people regarded their mother tongue as "other", as compared to 2,410 English and 75 French.

Location of the Three French Posts at Toronto



Source: Toronto During the French Regime. P.J. Robinson

Fig. 2

Sites in Christie Pits

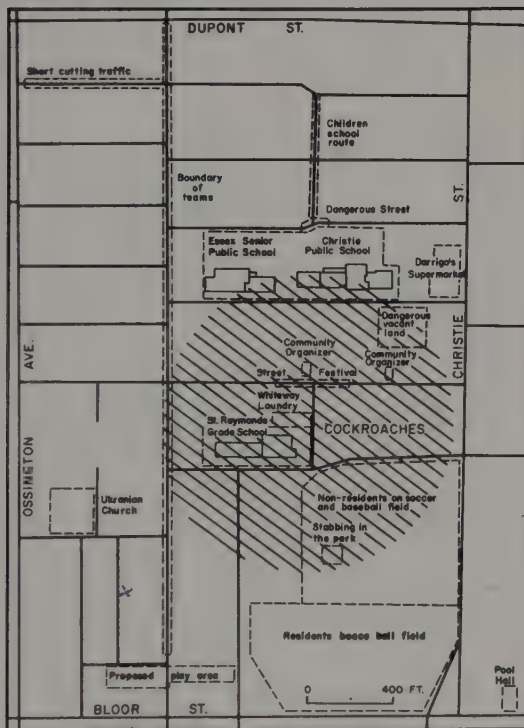


Fig. 3



Fig 4

Christie Pits is a working class neighborhood. 'Laborer' is the employment category most commonly registered in the assessment roles. People in the Christie Pits neighborhood have enough money to maintain the payments on their houses and keep up the repairs necessary on the property. Savings are used to fill the gaps caused by seasonal employment or to cover the cost of a special trip home. Very few of the residents of the Christie Pits area would turn to welfare in times of unemployment unless they had depleted their savings totally and had no kinship source of financial aid.

There are three schools in the area, many small grocery-type outlets, two larger commercial establishments - a laundry and a large grocery store, three churches (including a Ukrainian Catholic Church, although there are very few Ukrainians in the area) and the park itself.

Fathers, mothers and especially children from this area understand that Christie Pits has deadly aspects. Children, particularly those in lower school grades, are vulnerable to high speed, short-cutting automobiles. There are no pocket parks close at hand for children to play in safety. But the children are better off than children in neighboring high-rise developments where the problem is simply that of no places to play - safe or otherwise.

Yet despite the disadvantages of living in Christie Pits, it is very much a community to the people who live there, and has an identity of its own. It is unique. Unlike certain areas in Toronto, for example Rosedale, Forest Hill and Cabbagetown, it is not clearly defined for the outsider. It is not isolated by fences, hedges and an entrance gate to keep outsiders from entering as is Whychwood Park - a wealthy exclusive community. It has not put a stamp on its identity by holding street festivals as the 'Republic of Rathnelly' did. In Christie Pits, the ethnic groups express their cultures starting in their homes and working outwards to their porches, gardens, backyards and the streets.

Unique Smells in Christie Pits.

Part of this culture is expressed in the smells of the area, although in certain parts and at certain times, these smells are suppressed by machine-smells. At 7 p.m. on a summer evening, the cooking smells from kitchens waft out into the street. Onions and garlic are a strong feature in the tempting aroma from tomato sauces. In late September, when grapes, tomatoes and peppers are ripe and ready to use for wines and sauces, the smells from these become a part of life in Christie Pits. Households make their yearly supplies at this time.

Saturday is a busy day for residents and smells of cleaning, painting, gardening and garbage are present. Two foreign and strong smells intrude on the community daily: the smell of roasting oil

from the near-by Planter's peanuts factory, and that of freshly-baked bread from the plant of Canada Bread. Christie Pits, compared to many communities, is fortunate in this respect. The major arterial roads are quite different. They have a continuous smell of exhaust fumes from heavy traffic and occasional buses. In places, the smells of car paint from body-repair shops are choking and at Bloor and Shaw the steam and soap from the commercial laundry can be stifling. As in any downtown or near-downtown community, nowhere at any time is the air really clear of exhaust fumes and other polluting odors. Unfortunately these and other constants, for example noise pollution, unless really extreme, become an accepted part of life.

The Mix of Sounds.

Sounds can tell an extraordinary amount about an area. The heavy and consistent machine sounds on Bloor, Ossington, Dupont and Christie define the boundary of the community. Similar sounds on Shaw St. point out a barrier within the community, actually dividing it into two parts. The machine sounds on these streets overpower other sounds in intensity, volume and harshness. Machine sounds and human sounds are conflicting and close. The car is audibly on top of the people. Other sounds indicate that there is a lot of house activity in the form of upkeep, repair and renovation. Because the houses are small and close together, oral interaction is frequent and audible. Always someone is talking to or shouting at someone else. Nature sounds can be heard - especially near the park, where birds are heard most frequently, but also dogs the wind and even a cricket or two. Children's play sounds indicate where they play - streets, lanes, porches and grassy areas. These spaces are small.

It is not only the intensity and repetition of certain sounds heard in the community, but also the images evoked by these sounds, that are important. Church bells and a police siren can both be loud enough to emerge clearly out of the ambient sounds of a community, but their messages are very different. The siren broadcasts distress and is designed to scatter people in its path, while the church bell attracts and intends to unify its community. Although some sounds are pleasing to certain people, to others they are distasteful. The sound of a motorcycle, for example, may be as offensive to one person as it is smooth and beautiful to another. But however subjective the quality of sound is, some generalizations are possible. The sounds of nature are cleansing and refreshing; machine sounds intrude. When a neighborhood's sound of life - walking, talking, mending, playing, music - are intruded upon, then the intruding sounds are objectionable. One boy in Christie Pits summed it up by saying "I like to visit my friend in Oakville, because in Oakville I can play on the road for an hour before I hear or see a car coming."

Sounds important for the individuality of this community are those made by people in everyday life. But in terms of domination,

Quiet Groves in Christie Pits

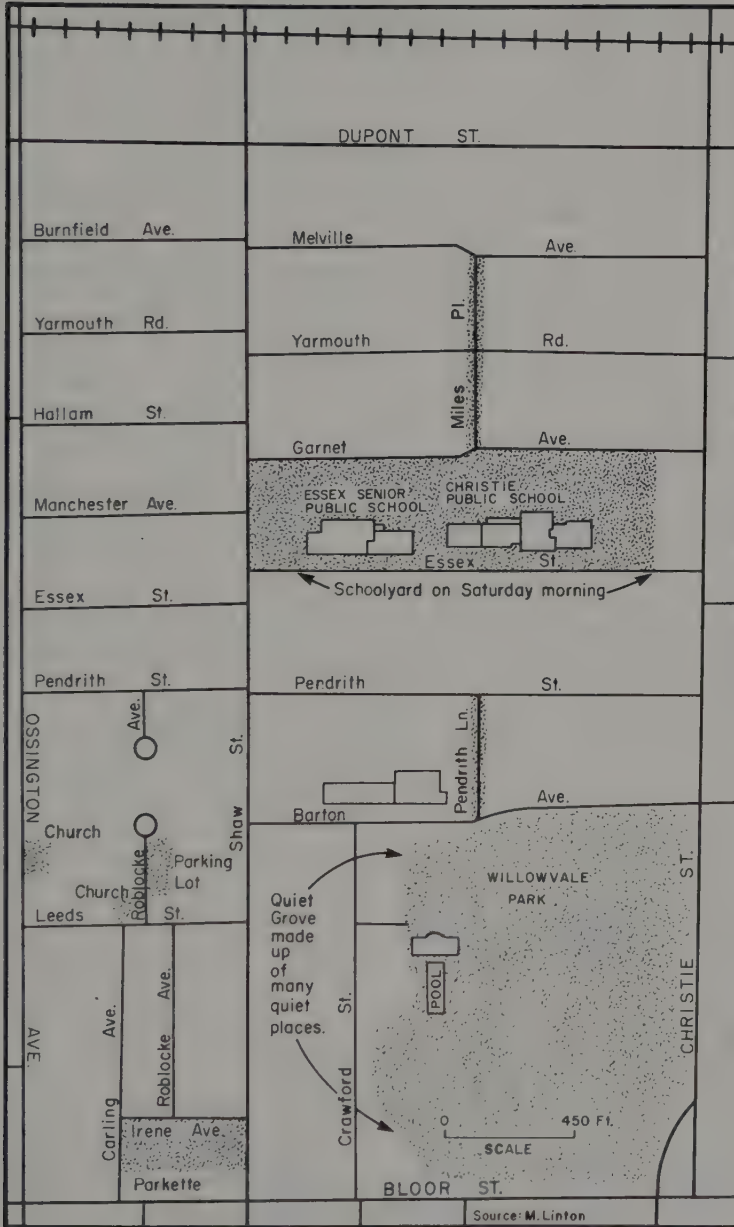


Fig. 5

 Quiet Groves

the machine sounds often crowd out human expression. Other dominant sounds are recess and church bells, but these are less common and in more pleasant sound frequencies than machine blares. They impart information and are part of an area's individuality, whereas machine sounds carry low information and are highly redundant. But the sounds of horns or brakes symbolize danger and give machines a power in the community. The mothers on Shaw St. are always anxious and afraid of such sounds. In this intimidating sense, machine sounds negate the power of the people in the community. In Christie Pits, as in many communities, machine sounds overwhelm human sounds to such an extent that there is danger of a completely inhuman sound environment being created.

Because we are so inundated with machine sounds, people in urban communities may need quiet groves. The medieval city had its monasteries. The village had fields nearby. Today churches are often places of organized activity designed to compete with the hustling environment instead of quiet retreats. Wealthy communities have quiet groves in the form of private secluded gardens and screened porches; they usually have few if any non-community functions to attract machines that generate so much of the noise that causes problems. In Christie Pits, the only quiet groves are the church yards on Ossington, and Leeds Ave., the back lanes, the schoolyards on a non-school day, and parts of the park. Any corner of this community where one can have a quiet game of marbles or where there is a bench to read a newspaper is a sought after commodity. The following table summarizes changes over time in the proportions of different types of sounds, and adds a sample Saturday afternoon in the neighborhood for comparison.

A Comparison of Cultures and Their Relation to Sound.

	<u>nature sounds</u>	<u>human sounds</u>	<u>technical sounds</u>
Primitive Cultures	69%	26%	5%
Medieval, Renaissance, and Pre-Industrial Cultures	34%	52%	14%
Industrial Cultures	9%	25%	66%
Today	6%	26%	68%
Christie Pits Sept. 24/73	14%	43%	43%

Source: M. Shaeffer (Pollution Probe), Christie Pits, estimated by
table I.1 M. Linton.

The soundscape of Christie Pits provides some interesting examples of the conflicts between men and machines. The laundry at

Bloor and Shaw is a spot where two different sound masses meet and interact: machine sounds and human voices. The machines are loudest and tend to submerge the voices, which are forced to yell to compete. The location where people 'spoke' the loudest was on Ossington Ave., where ladies shouted back and forth across the traffic-filled street during a five-minute conversation from porches.

The Visual Landscape.

People use their front porches in this neighborhood, they are an extension of their living space. By observation, front porch features were noted which indicated uses people made of their porches. Some of the front porch features noted were plants, chairs, tables, beds, bicycles, iceboxes, beer cases, baby gates, crucifixes, plastic parrots, toys and chalk. These were categorized into porch uses as follows:

- 1) sitting - evidence of sofas, chairs, people actually seen sitting on steps
- 2) plants - evidence of plants on porch
- 3) child use - gates, toys, games played on porch
- 4) storage - beer bottles, fridges, stoves, heavy bicycles
- 5) communication - plastic parrots, madonnas, signs.

Some porches had several uses. They contained chairs, tables, toys and were adorned with plastic parrots which communicate a sense of gaiety to the passer-by. Often the porches showed evidence of singular usage by a couple of chairs or a table for exotic plants. Mapping the data which emerged, showed that the most frequent porch use was for sitting. In this way, people could relax outside in summer, supervise children at play, and with interest, watch the goings on of their neighbors and friends. For these reasons, the porch use map was identified as an 'Eyes on the Street Map' because the predominant use of porches in the Christie Pits area represented a kind of social policing as discussed by Jane Jacobs. Possibly more important than this, however, is the way this use of porches shows the openness of people to their neighbors: porches are as much a part of community life as they are a part of the home.

One of the particular features of this area is winemaking. Every fall the streets are pervaded by its influence. Garbage cans are stocked full of crushed grapes, backyards have barrels and wine bottles and presses are set up. The smells from cellars and garages are enticing. How the wine that is produced in Christie Pits compares to that of the Niagara peninsula in quality and quantity is unknown. Yet yearly, St. Catharines has a winemaking parade and festival to honor the corporate growers. In Christie Pits, the whole process is hidden by comparison, and yet is vital to that community's identity.

The expressions of culture in Christie Pits are largely Italian

or Portuguese and are often passed on by the grandmothers - still dressed in black - making 'old country' values, particularly superstitions, part of the children's lives. For example, young girls, their ears already pierced at an early age, play hand-clapping games to rhythms belonging to their grandparents' culture - often watched by their mothers returning from work in a local factory. Many signs indicate expressions of individuality: flying the Italian flag; "will baby-sit" - in Italian or Portuguese, dressed-up automobiles with crucifixes and special colors and houses with their bricks gaily painted. Such outwardly visible signs are in part a function of the concentration of one or two groups in the neighborhood. In comparison, the relatively dispersed black population of Toronto expresses its culture in terms of business and entertainment outlets rather than in changes to residential properties, as in Christie Pits. The closeness of ethnic shopping and other facilities on Bloor St. tends to strengthen the cultural geography of 'The Pits': 'downtown' is a more foreign place when "all of our needs" are met locally. The lesson seems to be that if the community desires it, then allowing the hidden landscapes to become more evident will increase the visibility and self-identification of a local community.

C: Community and Foreign Land Use: An Engine of Change.

The hidden forces for community change must remain hidden or local opposition to the changes would intensify and profits would drop. Basically, in the inner city the people who live outside the area are more powerful than those who live in the area, while the situation in the affluent suburbs is reversed. The man who commutes from the suburbs to an inner city factory is the 'boss', not only of the factory but of the landscape of the factory and beyond. If he needs to expand his facilities he is likely to have the power to do so. The commuter to the suburb from the inner city is likely to be a domestic or a garbage man. He is hardly in a position to dictate anything at the location of his work.

The earth's surface can be classified as being occupied either by people who live there or by people who live elsewhere. An internal tyranny can and often does lead to civil war, but an external tyranny, an invasion, is more likely to draw resistance. There are degrees of foreignness, such as the percentage of foreigners and the distance these foreigners have traveled. While degrees-of-foreignness maps are useful, the simple dichotomy, foreign or community space, most clarifies planning problems.

Community and Foreign Traffic Example.

Consider the problem the suburban commuter causes the child at Bathurst and Bloor. If commuters have not built a special path for themselves into downtown Toronto then they 'run over' Toronto. If they have built (and paid for) a subway, a 'Go train' or some other rapid transit form then they in no way have aggressed against

CHRISTIE PITS: Sample Map of Ethnicity and Painted Brick

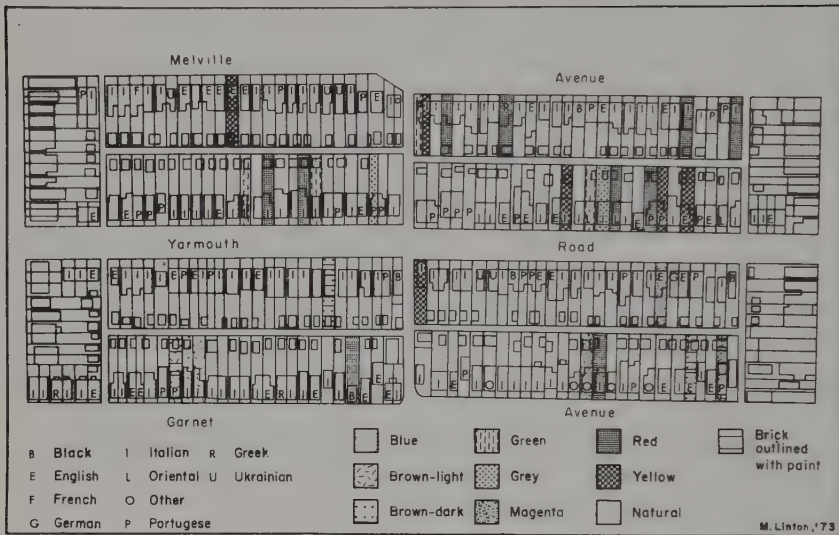


Fig. 8

CHRISTIE PITS: Sample Map of Coloring of House Trim

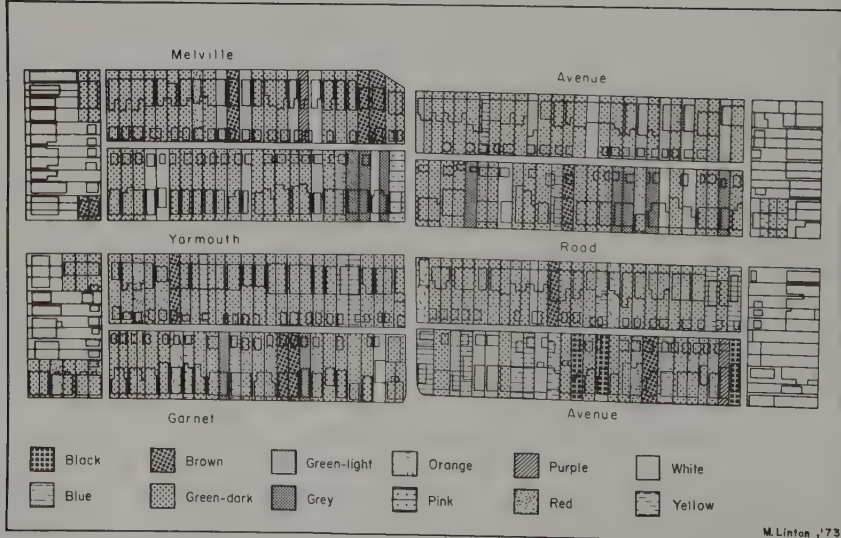


Fig. 9

Toronto: but if they use a transportation form designed for more local people than themselves, then they clog the transportation network hierarchy from the top. This important point is generally not understood. There exists a hierarchy of transportation networks. It is more complex than just local and foreign traffic. It consists of the fundamental traffic - children, especially when on their trip to school; and then on that foundation comes residential traffic. These two traffics can and should be completely separated. The next level is city people trying to get to other parts of the city and this level of the traffic hierarchy should be confined to commercial streets like Bathurst and Bloor and never allowed to 'flood' residential streets. There should be no through traffic on residential streets just as there is no through traffic in the cul-de-sac pattern of suburban road networks. The next level is that of suburban commuters: the expressways (the worst of the devices at this level), the subways extending to Finch Ave. on Yonge St., the 'Go train' and so forth.

Suburban commuters use inner city residential streets to shorten their trip to and from work. If such streets were to be blocked to them the following chain of events would ensue. Arterials would become clogged, relief would be sought by use of expressways which themselves would become clogged. The conclusion then must be that since commuters choose to use residential streets to avoid clogging arterials and expressways, clearly the inner city pays the costs incurred by the suburban-downtown journey to work pattern. This can be seen through historic geography. The 'innocence' of the process by which community streets become occupied by 'foreign' traffic in no way diminishes its vicious effects. In early Toronto all streets were local streets. No streets were foreign. People walked from work to home. As the city expanded, the residential streets, used by totally local traffic, began to pick up an increasing percentage of foreign traffic, of people passing through who were not from the community but lived well beyond it, at the expanding city's edges. At first no one would notice it much, since the process was insidious. The streets could handle more than the community traffic; so a few strangers went down the roadway every day. But as the city kept expanding, the downtown residential streets became congested. Then the plan developed to build boulevards and thoroughfares. These higher order roads were not designed to take all the through traffic off residential streets, just enough so that they became unclogged. Thus commuters used both systems of roads, those designed for them and those designed for others. This is the continuing logic of traffic engineers, to keep the traffic moving freely, not to make the streets safe for children.

The domino effect of commuters on local streets can be seen in the Christie Pits region. By studying the percentage of foreign traffic on these streets as opposed to community traffic a map of the 'foreignness' of the streets can be produced. If the percentage of community traffic is fifty percent or more, the street

land use is designated 'community', the remaining streets are 'foreign'. It is clear that residential foreign streets as opposed to the bounding commercial streets, must be made community, especially to stop planned 'accidents' to children on their own streets. Foreign traffic is a pernicious invasion of the community and must be repelled: 'no through traffic over children'!

The General Concept of Community Versus Foreign Land Use.

The difference between community and foreign traffic leads into a more general concept of community versus foreign land use. If the space is occupied by fifty percent or more local people, it is community; if not it is foreign. Besides traffic, commercial land use is community or foreign. A corner grocery store is filled with neighborhood people and the owner is likely to live above the store himself with his family. Along the commercial streets, however, many businesses are totally foreign. These stores have a different attitude to the community. Their owners want to build parking lots behind them and in order to do so they buy up homes then try to persuade the city to change the zoning category. This puts them into conflict with the community people on the street behind. Store employees and customers tend to park their cars in front of residences leaving residents without parking space for themselves or visitors.

The principle of the foreignness of the people in commercial stores can be extended to the foreignness of almost all industries. Neighborhood small plants, filled with employees from the neighborhood and perhaps an owner living there too, are a rarity. Industrial land use is almost always foreign and conflicts with communities are often severe. Zoning violations and a battle to appeal and make exceptions to existing regulations are often initiated by foreign industry mislocated in communities. As a result of zoning appeals and violations by foreign commercial businesses and foreign industry, the community is in a constant war of attrition with foreign land use. An old cynical real estate principle is: "A neighborhood starts going down hill the minute it is built." Wealthy neighborhoods notwithstanding, the cynical 'law' is too often true. If the zoning category is always being eroded both by appeal and violations, then the neighborhood can lose its morale.

Another foreign land use in communities is government. Schools are filled with local community children and commuting teachers. Most governmental presence is totally foreign. By and large, police live outside the community, as do the street repair men, garbage men, parks employees and so forth. By contrast, the small town's locally resident people teach in the schools, collect garbage, maintain law and order and so forth. The informal and effective social control that small towns maintain over their public officials is lost in inner city communities.

The Humanness of Community-Foreign Land Use Mapping.

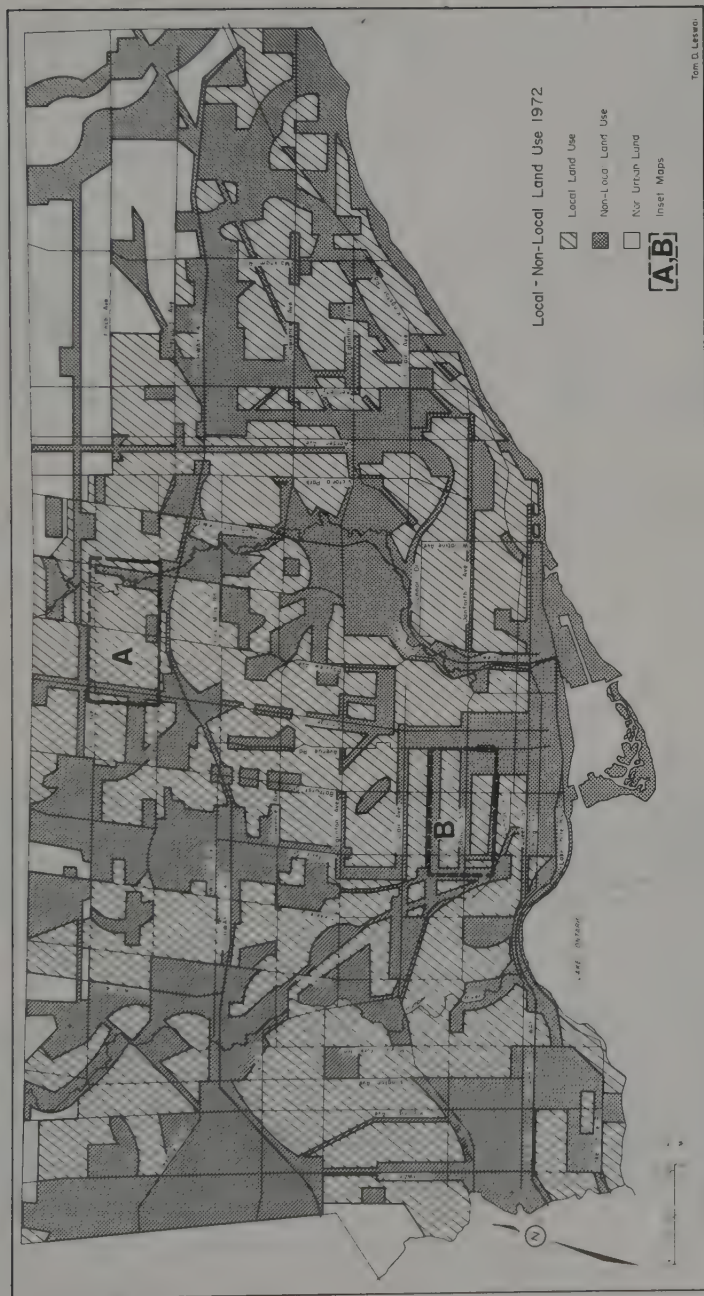


Fig. 10

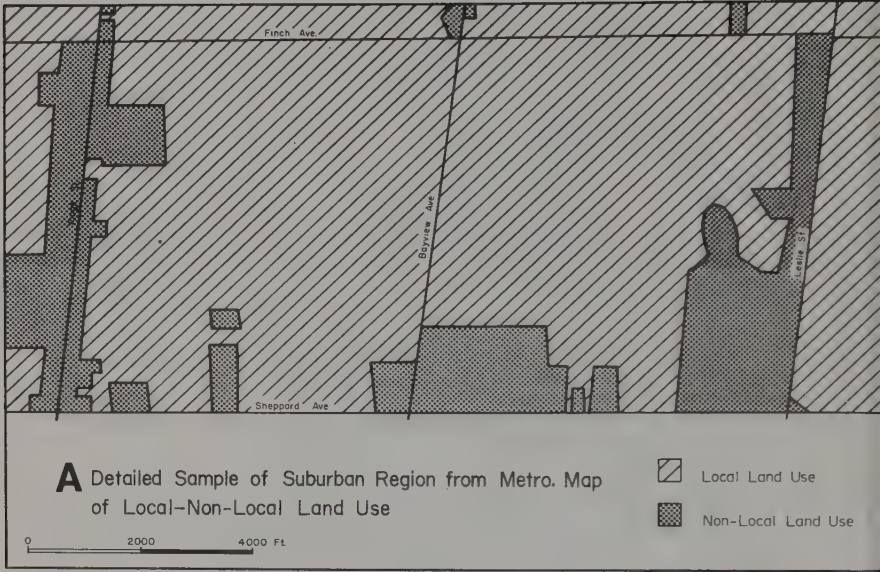


Fig.11

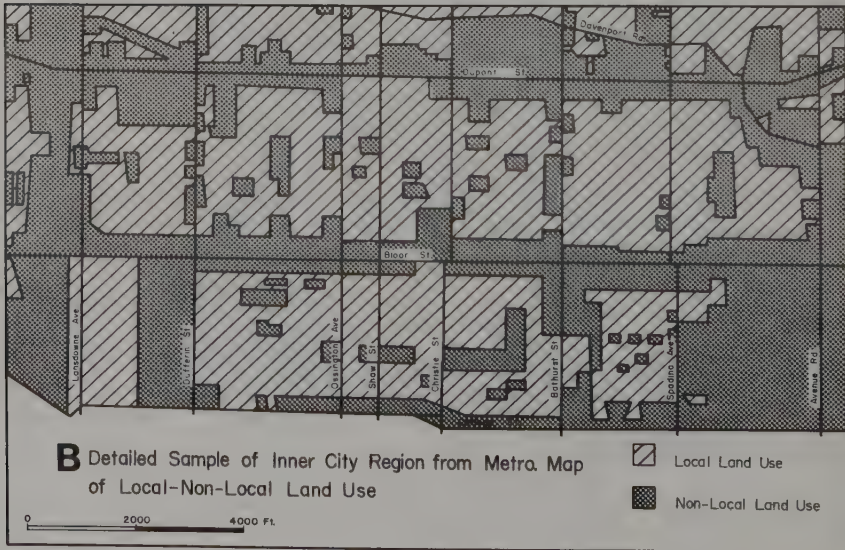


Fig.12

Community land use is dominantly occupied by people who live there. This kind of land use map is peculiar, because, until this concept was introduced, land use always referred to the quality of property, not to the quality of people. One never sees in planning work, 'jumping' spaces, or 'shouting' land use, though surely children need such spaces. Perhaps adults do. Community-foreign land use is also most geographic since it refers to the spatial quality of the people; do they live there or commute there?

The Antagonism Between Community and Foreign Land Use.

Why community and foreign land use should not be mixed is also fundamental geography. Neighborhood residents may use the facilities of the foreign uses. But, a whole city, or large districts of it also use the facilities. This means that as a metropolitan region grows foreign or non-local facilities also grow since they serve the larger metropolitan base. The local community is fixed in size; so, community based facilities, those filled with community people (like the corner grocery store), never need to geographically expand. A food warehouse, serving the metropolis, needs to expand if the metropolis expands. Non-local land use set in local communities is like water in cracks in the concrete. When winter comes, ice forms and irresistably expands.

D: Foreign Versus Community Warfare in Toronto Communities.

Case studies of laundries, large food stores and other merchants in Christie Pits, reveal a persistent mini-war as the non-local functions keep trying to physically expand. They seek approval for expansion, buy up homes to build parking lots for additional customers and choke alleys with trucks and refuse. Noise pollution, smell pollution and trucks jamming residential streets: all these spatial aggressions are continual. What can the community do other than resist such endless environmental aggression?

But from the merchants' point of view, what can they do? They feel constricted. They have customers who cannot park. They often employ local people and could expand that employment if only they could physically expand. A service land use, such as a restaurant, cannot move: it takes years to develop and advertize the address. Moving might mean bankruptcy. Instinctively, the restaurateur thinks of buying surrounding homes to tear down for car parks. Universities are also a big inner city aggressor. They buy up adjacent private homes to facilitate expansion. At first the homes are usually turned into offices, later to be replaced by new buildings. But whether done slowly by universities with the resources for patience, or aggressively and blatantly by little businesses at the margin of bankruptcy, the community is torn down. The downtowns of all major cities sit on the wreckage of former homes.

Although urban planners have no concept of local, non-local or community-foreign land use to guide them, they have in fact

segregated these two land uses out of art, if not science, in newer districts. The monotony of landscape in the suburbs comes from not mixing the various local uses. Local uses should be mixed but local, non-local should not. Planners have achieved the latter advance, just as they have cul-de-saced suburban streets, another advance.

Brunswick Avenue and Bloor Conflict.

Looking at a micro-geographic example of a classic merchant-resident's clash, consider the street of the base camp of the Toronto Geographical Expedition, at 283 Brunswick Ave. The house is in basic disrepair requiring a set of actions against the landlord who is also a local merchant. He has special interest in the houses immediately behind his place of business on Bloor St. since he wants to expand parking facilities. The merchant adjacent has the same ambitions.

But there is a geographic argument to be made from the side of the merchants. Since urban planners had not recognised the different expansion needs of local and non-local land uses at the time when the inner city was planned it is difficult to blame merchants who attempt to expand and prosper. Merchants can argue that the antagonistic spatial situation described is not of their making and therefore they have no recourse but to make the best they can of the situation. But in arguments involving homes of children, and general children environments, their helpless interests must be considered first. Merchants have no rights, in any sense, in the slum landlord business of providing housing unsuited for children. Allowing housing to deteriorate is a standard way of ensuring demolition at an early date, thus allowing a merchant to substitute a car parking lot. Residents can frustrate such strategies by insisting that housing by-laws are enforced. A series of suits, Health Department actions, demonstrations and mutual harassments at least temporarily stopped the Brunswick Ave. foreign land use aggressions.

Suburban Communities Dominate Inner City Communities.

The city-wide local-non-local land use map generalizes too much. By looking at smaller portions the texture emerges. In the suburbs, the lack of intrusion of non-local land use means the citizens are powerful enough to prevent the intrusion or the local people are more powerful than the non-local. In the inner city, riddled like a 'Swiss cheese' by non-local 'exceptions' to zoning laws, the outsiders are more powerful than the neighbors. Thus, a map of power can be derived. The powerful live in areally discrete sections of the city, the powerless in the 'chopped up' neighborhoods. The powerful do to others what they clearly understand is pernicious to themselves: they locate foreign land use in the middle of residential communities.

Land Use in Christie Pits.



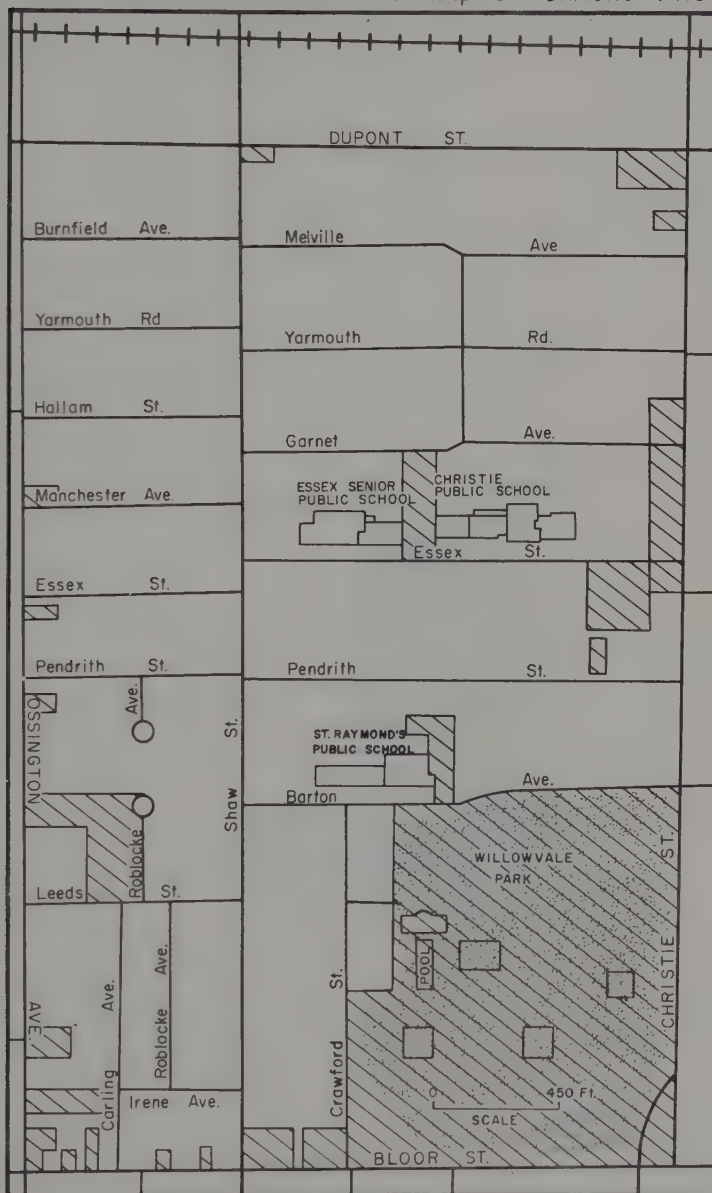
Fig. 13

The most detailed study of community versus foreign land use was in Christie Pits, summer, 1973. 73 of the owners of 85 commercial establishments who answered our questions were non-local. The variation, by street, in the proportion of non-local uses was striking. Corner variety stores and foodmarkets, the commercial outlets on Shaw and Prendrith Streets were 77% local. The highest proportion of non-local use was on the West side of Ossington (77%) and the South side of Dupont (62%.) Christie and Bloor Streets (50% and 45%, respectively,) were nearer the average for the Pits. The low figure for the North side of Bloor substantiates local residents' reports that Bloor South is a local shopping street. The highest proportion of non-local commercial use is on those bounding streets with high industrial land use.

Both major industries in Christie Pits are non-locally owned laundries, employing local labour. Their clientele is Ontario wide - hotels, restaurants, diaper service customers. Conflicts between community and foreign land uses have been recorded in Christie Pits. Non-local customers use residential streets for parking, often violating parking bylaws. Trucks serving the industries block alleys, making residents' access to their garages difficult. One laundry (Whiteway Industrial Linen Service Ltd.) is a constant source of air and noise pollution; the firm stores fire hazard chemicals and cleaning fluids. Like all commercial establishments in the area, this laundry is a "legal non-conforming use" according to the 1971 restrictive area bylaw, in which Christie Pits was zoned residential, except for commercial strips along the north side of Bloor and East side of Christie, together with the park. Land uses outlined on the map existed then, and are exempt from the bylaws operation as long as they continue in present use. No additions to buildings can be made without application to the Committee of Adjustment.

The Committee, in 1958, granted Whiteway (61 Pendrith) approval to build a single storey concrete addition and roof over a portion of the existing walls. The firm obtained permission, July, 1979, to demolish a frame structure to the laundry's rear and replace it with a masonry addition. The firm built the addition, but, retained the frame structure. The firm again, December, 1972, sought approval to replace the frame structure. When the Committee of Adjustment receives such applications it mails notices to local residents and allows them to object to the proposals, in writing, or orally, at the hearing. In January, 1973, local residents were informed that the laundry had applied to the Ontario Municipal Board to appeal the Committee's refusal to grant a land use variance. Several residents appeared before the Board, June, 1973, and the laundry's appeal was dismissed. Such incidents boost neighbourhood morale, since they reverse normal trends in which appeals and violations erode zoning, aggressive foreign land users win battles, and the neighbourhood's residential quality deteriorates.

Local—Non-Local Land Use Map of Christie Pits



Source: J. Ovens '73

- Local Land Use
- Non-Local Land Use

Fig.14

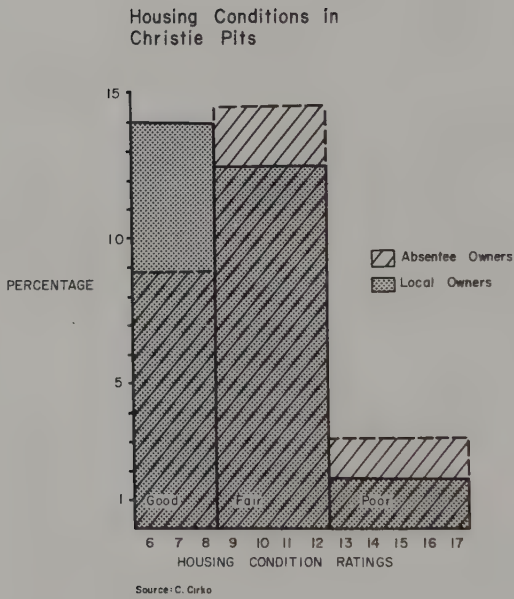


Fig.15

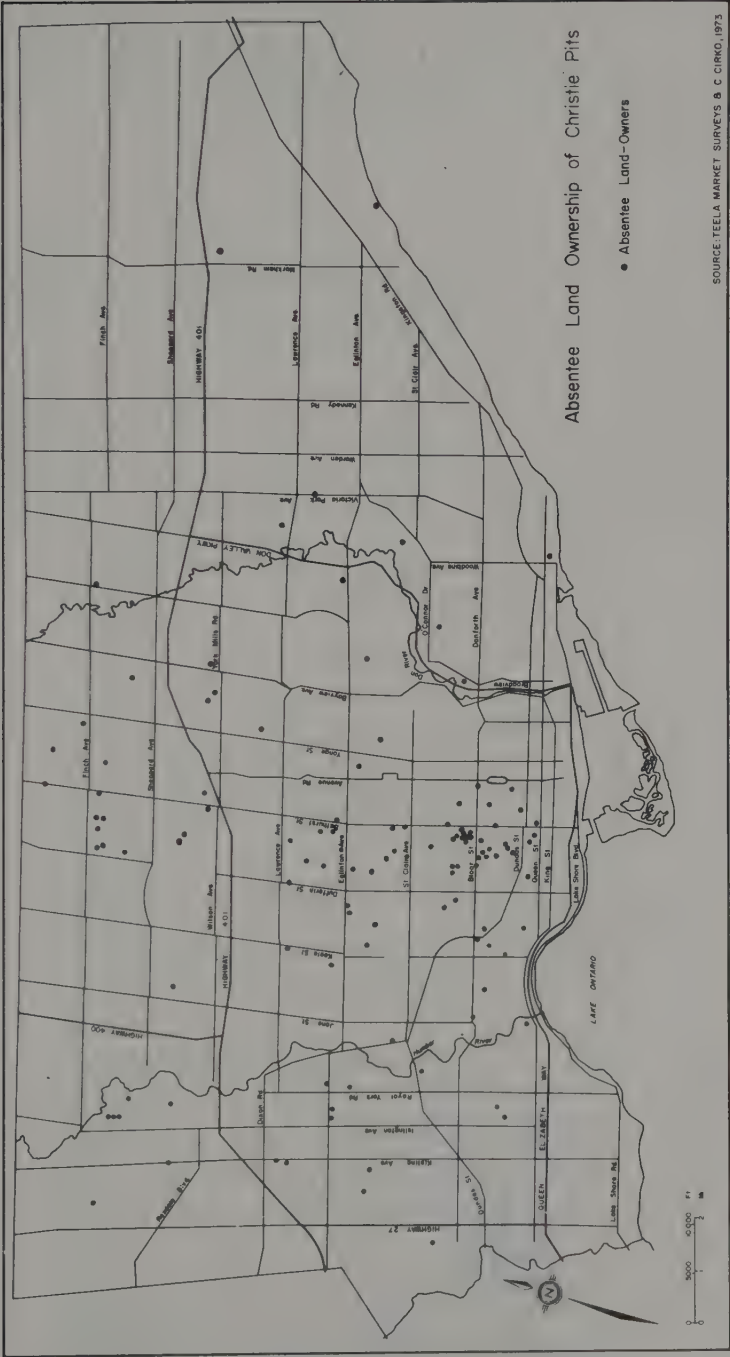
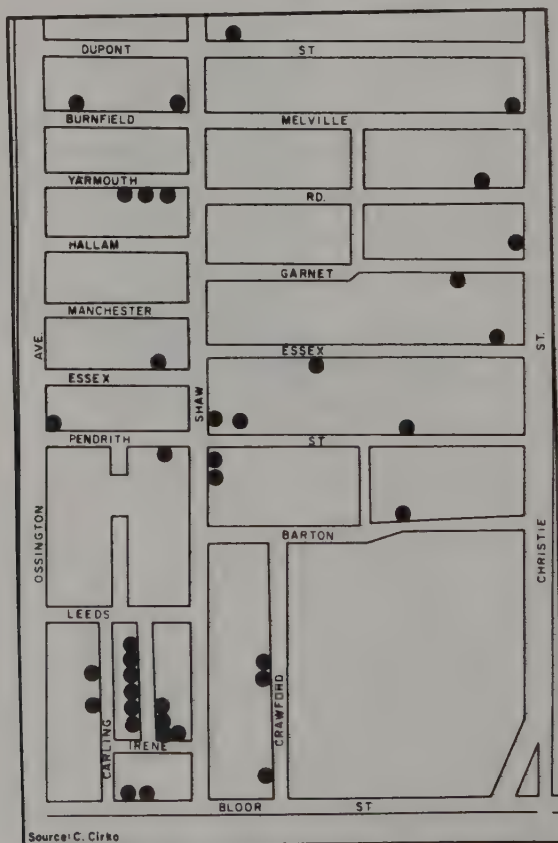


Fig. 16

Other examples of non-local land use, with differences in costs and benefits for a community, are more subtle than commercial and industrial. Most governmental presence is foreign. Christie Pits is in a police division with 300 regular officers. Patrol car officers are rotated, every six weeks, leaving them little opportunity to know a neighbourhood well. The large number of traffic violations attests to minimal protection in Christie Pits.

Absentee land ownership compounds the problem. Absentee owners held 13.5% of the lots (11.4% the residential lots) in Christie Pits. Again, variation by street was striking, ranging from 82% on Bloor to zero on Barton. Boundary streets tended to be relatively high (Christie, 26.8%; Ossington, 25%). The spatial distribution of the property of absentee owners, who deteriorate housing, appeared to be random.

Churches and parks may be other examples of foreign land use. Christie Pits had three churches: the Ukrainian Catholic Church - Our Lady of Perpetual help, the Church of Jesus Christ of the Latter Day Saints, and the Christadelphian Church. All h widely dispersed congregations. These saturate local streets



Detailed Map of Christie Pits Area from Metro. Map of Absentee Land Ownership

and increase parking problems at weekends. In a similar manner, Christie Pits park draws people from a wide area. Certainly, some non-local land uses are of benefit to a neighborhood - for example, in maintaining the viability of many small stores. Against such a benefit, the costs of increased traffic and the constant danger to safety in the streets, must be weighed heavily.

A Community Planning Principle.

A general principle is emerging, land occupied by fifty percent or more non-local people is foreign land and tends to be at war with community land and its people. Absentee owners tend to be slum lords or to sell out to developers. Parks filled with other than community people are less socially controlled. Churches that draw from outside the neighborhood flood the streets with traffic and parking problems. So a general 'battle plan' map for a community is preparation of a foreign versus community land use map. The strategy is then to convert foreign use to community use. A small industry, carefully policed as to blight, with local employees and local ownership might be a neighborhood asset. To tear up the streets so that foreigners stop using them is not proposed. Anarchy is no solution. Rather the localization of government, the distribution of government to city people, the democratization of urban government is suggested.

We are back to an earlier argument. To alleviate increased traffic on the through streets, generated by driving non-local traffic off local streets, take commuter traffic off commercial streets and lure it into an adequate rapid transit system. This would possibly pedestrianize commercial streets along Bathurst and Bloor somewhat, so that they might win back community people who now travel to distant modern shopping centers. Speciality items, (e.g. Christmas shopping) will still have to be done up the commercial hierarchy. But current alienation of merchants and citizens needlessly costs merchants local business.

Biological Bonds in Christie Pits.

How is a community of individuals formed? The two community leaders for the entire region live on Pendrith street. Seven families from the small town of Terelle in Italy, about sixty miles south of Rome, with a population of only 1,000, now live on Pendrith St. The ancestors of these families lived in that town for hundreds of years. Today's generation is close, assisting each other in immigration and help each other today.

Beyond Pendrith St., in the Christie Pits neighborhood, the network of family ties and friends is extensive, creating a strong, tightly knit community. The majority of the people living in the Christie Pits neighborhood are immigrants to Canada from the farming villages of southern Italy. Due to the Canadian immigration sponsorship policy, many of the residents have brought

Biological Bonding in Christie Pits

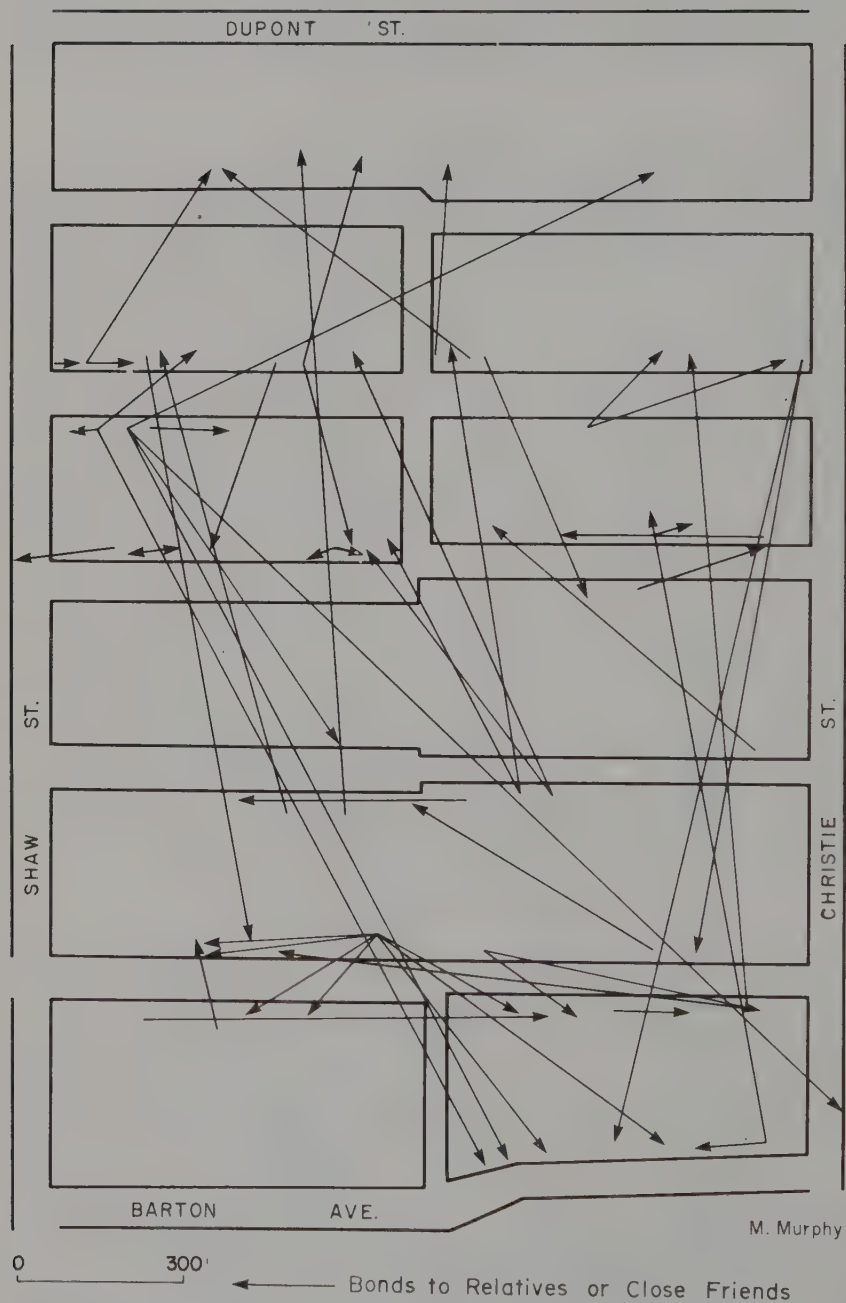


Fig. 13

their families - brothers, sisters, cousins and in-laws to Canada where they reside in the Christie Pits neighborhood until they get established. In some cases even marriages are arranged to allow another family to start the immigration process. These biological bonds create an informal organization within the neighborhood where the porch becomes the meeting room. Residents of the area define their neighborhood in terms of their friends and relatives and there is very little identification with the physical definition of the area. The Christie-Essex Residents' Association reflects the biological bonds that exist in the neighborhood in terms of the members of their organization and the way in which the group organizes. Unlike other community groups in Toronto, there is no tension between the home owners and the tenants in the group and there is almost no 'formal' organization within the group. In a crisis, fifty people can be brought together within a couple of hours to discuss the point at issue and often the problem has already been discussed and strategies to cope with it have been worked out in smaller groups.

As the Italian families of Christie Pits become more affluent, they move out toward the suburbs - North York typically. Spatial segregation of Italians is maintained but kinship ties and friendship ties are geographically scattered. Perhaps this happens to other suburbanizing groups and explains the lack of a 'felt' community as represented by the lack of specific, small urban regional names in the suburbs.

Evidence on the Process of Breaking Biological Bonds in the Palmerston Boulevard Region.

If kin and friendship ties are so intense, how could an inner city community ever be broken up against its will: for example, how could developers or expanding universities get control of the land? Only a biological force of equal power could overcome the biological force of the bonding. This force is provided by the death or retirement of a resident: by aging. An aging population opens up a neighborhood to non-local land uses: aging is a major cause of deterioration in a neighborhood. In an examination of the Palmerston Boulevard area to the south east of Christie Pits eleven percent of the resident owners are retired. Fifty percent of the retired population is contained in an area where there is extensive non-local land use. Furthermore seventy percent of all the retired homeowners live within one house lot of a non-local land use and thus increase the potential for land assembly by outside forces.

A townhouse redevelopment scheme on a site assembled by a developer, on Clinton St., now occupies the site of houses once occupied by retired or deceased residents. Retiring homeowners increase the potential deterioration of an area. By contrast, areas

PALMERSTON BLVD.: Local and Non-local Land Use, Retirees and Development

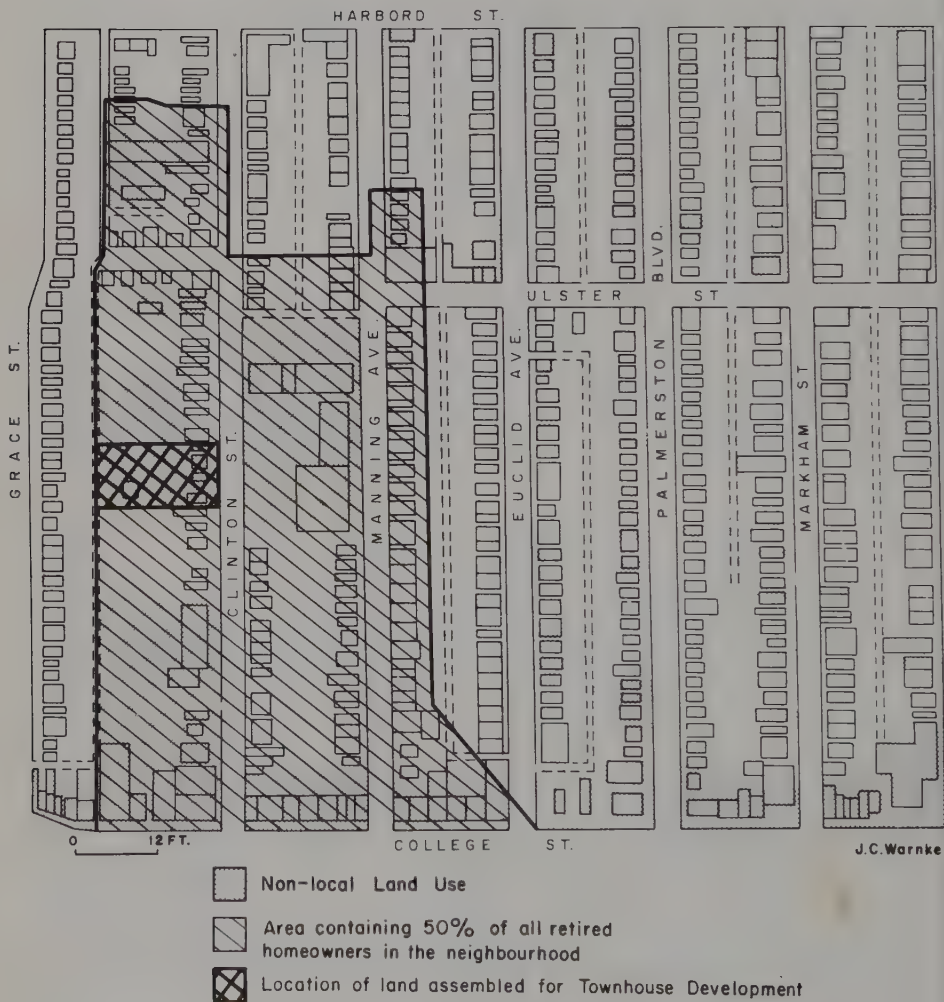


Fig.19

which are 'saved' reflect the arrival of young families who rehabilitate deteriorated housing: these families are a stabilizing influence. Owners who sell out at a great profit are often accused of betrayal, greed or selfishness: the evidence from the Palmerston Boulevard area is much more benign: inevitable old age, not disloyalty, appears to be the weak link in the community armour

II: Traffic, Parks and High-Rises: Urban Machines and Neighborhoods.

Territoriality has biological roots. Many species have a sense of both personal and collective space. In men this sense can be greatly modified by cultural conditioning. How close to each other people sit when conducting a conversation varies greatly from culture to culture. Some groups seem rooted in the land while others wander: but even wanderers have their own territories - their camps and camp sites - in spite of their space being portable. With increased mobility, "where do you live?" becomes an interesting question. A family living on a barge on the Rhine River obviously lives along the line of the navigable Rhine. That line on the map is their 'place'. If the logic and emotional adjustment to the logic required is accepted, then people who are 'just passing through' in fact are living in the space through which they are passing. When a man drives on an expressway through a neighborhood he is living there during that period. It is easier to see the other way, in that since he is not dead when he drives through he must be living there. In this way expressway traffic represents a permanent population of a neighborhood. One can take the average number of people day and night on an expressway and consider that number as permanent residents.

A: A Theory of Community Machines.

Why this tortured reasoning to make an esoteric point? The point is fundamental. If people passing through are permanently passing through, can be frozen in the space if not in time, then they are a part of the community and the community has some rights over them. That is, each community should have some rights over expressway users since they are human beings living in the space of the community as a part of the community. They are not just machines on a conveyor belt, not just 'traffic'. A highway planner or traffic engineer must blanch at such a truth because it implies that the community has continuing rights over the traffic in its community. He might imagine that each community might pass its own laws governing the traffic, might even set up toll booths. Where would it end? Would the sidewalks in front of each house have toll booths for pedestrian traffic? Obviously the local community cannot have total rights over the local expressway because the community at large, more than two million people in Toronto, has collective rights too. The traffic of the majority cannot be blackmailed by a tiny minority. But if this extreme is to be avoided

so is the other extreme now in effect -- that the community has no rights over its space. The conflict between local rights and even national or international rights, or between decentralists and centralists is not resolved by one side 'winning' over another but by a division of powers along a hierarchical scheme first discovered by Christaller. The community should have some, not all, powers over the local effects of through traffic. For example, they should be able to insist that noisy vehicles, trucks, should not be allowed to use expressways on Sunday and holiday mornings, or that the walls and sides of expressways be soundproofed to certain acceptable noise levels. The hierarchy of what decision making rights over 'through traffic' the local community should have, should be engineered in detail but some crude examples can be tentatively put forward.

Residential Traffic.

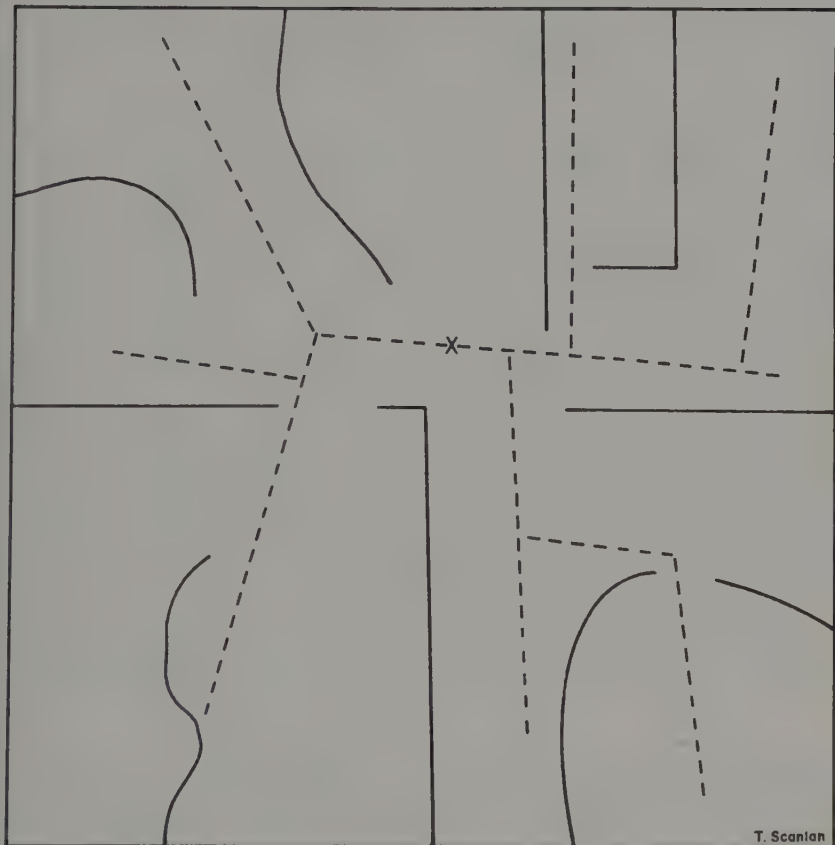
As mentioned, the amount of through traffic on local streets, streets containing nothing but homes, should be zero. If this statement sounds extreme, consider the contrast between urban and suburban streets and the historic urban-geographic evolution of streets. Suburban street systems are often designed as mathematical trees, topologically dead ends, rather than well connected networks. In addition they are made unattractive to through traffic by their narrowness, by their crookedness, by their confusion of pattern and by their on street parking. Suburbs were built after the downtown area was established and it became evident that downtown grid-iron streets carried much through traffic. Geometric neatness and quick travel time by horse and buggy and pedestrian modes made the open 'Manhattan geometry' appropriate in olden days. But as the city grew out from the downtown so that the residential streets began carrying heavy loads of through traffic and automobiles that were much more deadly than horses and buggies, then the downtown pattern became clearly damaging.

Networks 1 to 4 are a chronological representation of changes in the road networks of Toronto. Network 1 is an area in the inner city of Toronto while 2 to 4 are progressively further from the downtown core. A non-local driver wishing to use residential streets as a 'short-cut', avoiding the more heavily traveled main arteries would react differently to these various networks.

Network 1 is the pattern of roads in the Bathurst-Bloor area of downtown Toronto. There is a number of possible methods of routing through the residential streets to avoid the four arterials surrounding the area. In fact, it is possible to travel from the Bloor-Dufferin intersection to the Queen-Bathurst one, by alternating east and south bound residential streets, without adding any distance to the length of a similar trip on the arterials.

Network 2 is not as conducive to the short-cut routes. The distance travelled by a non-local resident is greatly increased by the circular pattern of the network at Lawrence and Bathurst.

TOPOLOGICAL TREE NETWORK



T. Scanlan

————— AUTOMOBILE ROUTES

----- CHILDREN ROUTES

X SCHOOL (DESTINATION)

Fig.20

Network 3 is in the suburb of Don Mills at Lawrence, it is an even more advanced plan. The circular crescents and cul-de-sac streets offer very little advantage to the non-local driver.

Network 4 is the most advanced network at Derry Road and Indian Line. The entire neighborhood is connected to the arterials by only two streets. Not only is non-local traffic eliminated but local traffic is restricted in its routes in and out of the area.

TORONTO ROAD NETWORKS

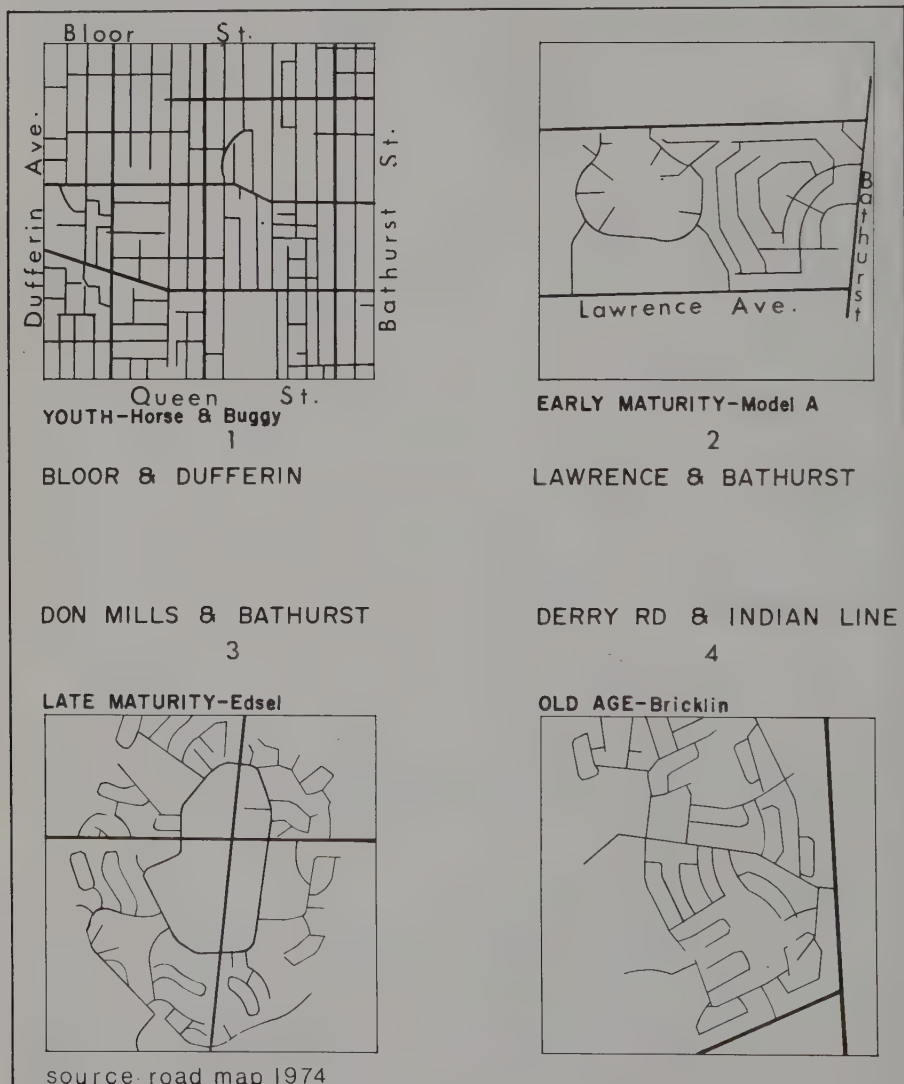


Fig. 21

What is needed, then, in the older residential areas of the city, is a geography of streets, which like the suburban cul-de-sac system, reduces through traffic to near zero, leaving only lost vehicles trying to get through and not realizing they cannot. There are many schemes to accomplish this. First the topology of the community residential street pattern can be plotted. Then the mathematical goal is to cut the network as many times as necessary to produce 'trees' that are connected to through traffic streets only, (but not cut any street into isolation). A great number of possible trees could be produced and presented to a community which could choose a few patterns that best fit the local terrain.

If the elimination of through traffic on residential streets is absolutely good, what of through traffic on commercial streets? If all through traffic is eliminated, the cities can have no downtown automobile commuters. Some advocate eliminating automobiles from downtown. In cities like Chicago, vast areas of the central business district are served by underground streets for commercial delivery. Given enough public transportation of various types, the car could conceivably be eliminated. In the hierarchy of machine use of spaces, the most humane transportation system, that is, the system interfering least with human use of space is the subway. The subway is buried and therefore does not cause noise or visual pollution. Most importantly, it does not run over children. If children are to be given as near as absolute protection from machines as possible by not mixing their spaces; if the machines, rather than the children, are to be caged, then clearly the subway, buried deep in the earth and 'out of harm's way', is the best transportation form. This might explain why the subway, which was an early form of transportation is still so popular, even increasingly popular, among modern cities. All public transportation in Toronto in 1972 killed 6 people compared to 136 private automobile associated fatalities.

The Right of Way.

Since children are the most fundamental order of traffic in the traffic hierarchy, they should have the right of way. At sea the least mobile transportation form has the right of way over all others, the second least mobile the second right and so forth. For instance, a swimmer in the water has the right of way over a canoe, a canoe over a motorized ship. At sea an aircraft carrier has to yield to fishermen's lobster pots. In spite of the nautical tradition of Western Europeans, their rules of the road reverse the rules of the sea. Trucks and buses bully automobiles, who in turn intimidate bicycles and they in turn, pedestrians. The nautical tradition should replace the terrestrial one. This would mean that children, the most vulnerable of terrestrial traffic, would be the most protected. The most dangerous children's trip is the trip to school; it is a leap in their geography that they are ill-prepared to make: the school trip must be given the right of way.

Automobile 'Accidents' to Children.

Typically several children are injured or even killed at particular corners on their way to school. Since a pattern develops, the 'accidents' are not accidents but predictable events and parents protest to the point where crossing guards or stop lights or pedestrian cross walks are installed. It is proposed that a radical and sensible departure from these emergency measures be accepted: children should not simply be given a dangerous right of way over traffic, but a right of way over the streets themselves. 'Children ways', not unlike deer trails in the woods or bird flyways, the paths to school that children make should be turned into children's malls, into 'streets' for children. Simply construct malls across streets, blocking them along the routes that children take to school so that no child has to cross a street. The design would be technically a 'tree' and it would also turn the streets into trees. A simple way of thinking of the technical problem is to consider the school to be on a hill and the children's malls to school to be the ridges, the watershed boundaries, and the streets to be the rivers. It is easy to see that two sets of lines (watersheds and rivers) can exist and completely connect the surface to themselves without crossing each other at all. This dual purpose plan cuts out all through traffic on residential streets. It is the suburban cul-de-sac plan plus a safe route to school plan for children. It is thus a doubly human plan.

In addition to a safe trip to school, the children's malls minimize traffic, not only through traffic, but internal circular traffic, for instance of teenagers circling the block in 'hot rods' or motor cycles. The streets are made much safer for the children to play in and road hockey in the inner city would be as safe as in the suburbs. To see the overall safety effect on children, study the map of children's 'accidents' in Toronto as a whole and notice the pattern of these so-called accidents. If the map shows a pattern, and it does, then the accidents are not accidents. One can stand at a corner and say, "Next year at this spot the odds favor a child being hit by a car." Such corners exist. Even adjusting for density of children does not change the pattern. A 'sophisticated' argument is made that if children are not raised among dangerous cars then they will be killed by them when they finally encounter dangerous streets outside their neighborhood. The argument has been disproven in a study done in England by Preston (1972). "It has sometimes been suggested that children can only learn to cope with the dangers of traffic by being exposed to such dangers. If this were so then one might expect the areas with the highest accident rates for the under 5-year old children to have lower accident rates for older children and vice versa. This was not the case."

In addition to saving children, the children's malls of children's streets, have benefits to the general population. Motorists develop short cuts and backways through residential streets. The map of community through traffic shows such a pattern. It is frightening to study how the children adjust to this environment of speeding cars. The noise level is raised especially when trucks

take these short cuts through the children. Cul-de-sacing the streets would also obviously reduce pollution from exhausts.

Criminal Traffic.

The great number of undetected traffic violations is a scandal. Upon reflection this might be expected. The 'short cutters' are playing a game of minimizing travel time. Many motorists cut the commuting boredom by seeing how fast they can get home. One trick is to cut corners both literally and legally. So, cul-de-sac streets would reduce traffic infractions just by eliminating infraction prone through traffic. In addition, suburban street patterns with their dead ending greatly slows down even local traffic. Law and order would come to the inner city with a big reduction of its most common and dangerous street crime, traffic violations. This is not a rhetorical exaggeration. The fact that most citizens commit untold numbers of traffic violations, does not make this crime less criminal than armed robbery. Far more people are hospitalized in Toronto by criminal drivers than by criminal thieves.

Global Street Pattern Experience.

The global experience with grid-iron inner city street geographies as opposed to suburban cul-de-sac geographies, is that the grid-iron produces several hundred percent more 'accidents' controlling for all other variables. Grid iron means needless child death - cause and effect. "Comparing grid and limited-access street patterns, total accident rates in grid subdivisions are 77.7 accidents per year with 10.2 accidents per year in the limited access. 50% of all intersections in the grid pattern have at least one accident in a five-year period, compared to 8.8% of intersections in limited-access subdivisions." Pollowy (1973). Pollowy continues to say these general figures would probably increase if children had longer trips to school.

Blaming the victims of 'accidents', children or their mothers, is frequent but misguided since as Pollowy (1973) points out "... because of the immaturity before the 11th or 12th year of various important mechanisms, such as sight, hearing and the ability to differentiate right from left, fast and slow, near and far, children are especially vulnerable in traffic situations." It is biologically impossible for young children to cope with traffic; it is not a discipline problem. It is the engineering of the streets, their geography, that causes so many inner city children to be hit, not negligent mothers or spoiled children.

Less Desirable Traffic Reducers.

In addition to treeing it is possible to prevent any through traffic by either blocking streets but allowing circular routes in part of the community, or by a system of one way streets that makes it impossible to get through. It is also possible to harass traffic by such devices as narrowing the streets, stop signing every

or many corners, roughening the road and so forth. But children's malls would be more permanent and more expensive to construct. The alternative is to continue to run over inner city children so that commuters can get home more quickly. If all the children had laneways to school in all the communities of Toronto, the whole tone of life in this city would change. Is not this tending to happen in Toronto with its sidewalk widening projects, with its yearly increasing malls, with its "cities are for people" flavor, with its global first at slaying an expressway? Rapid transit is not unique to Toronto but the thrust for it, the passion for it, the defense of greenery is remarkable. If this principle of segregating machine spaces from people spaces is correct the expressway is actually a superior form to local arterial streets though inferior to subways. The worst geography is the one discussed, through traffic on residential (children) streets.

The Hierarchy of Traffic.

As partially explored, there is a spatial hierarchy to traffic. As a rough guess as to what this hierarchy might be there is first the pedestrian level. Children are totally at this level unless transported by adults. This level of 'traffic' is never considered by planners. Traffic, to city engineers really begins with the second level, locally destined cars and trucks. The third level is the commercial streets mentioned. Typically a car on them is not heading either for the immediate community or the suburbs but a community in between, one or two farther out in the afternoon traffic rush. The suburban traffic tends toward expressways, commuter trains and the like, the fourth level. The fifth level is between cities, even traffic passing through Toronto altogether, such as on the 401 expressway between Windsor and Montreal. Other levels must be separated more and more from the lower. It is unthinkable to have children on an expressway. During recent repairs to the 401 a section of fence was removed and children swarmed onto the expressway, resulting in a death. If the idea of separation is thoroughly established as a principle then turn to the most fundamental level of the traffic hierarchy, children.

Since children are not considered by engineers to be traffic, they have been little studied. Can a curb be designed that would curb children? How do children flow and on what paths? What constitutes an obstacle to them? What is an obstacle to an adult but attractive to a child? It is hard to remember childhood because there is a gradual shift over to an adulthood space. Once the existing traffic of children is better understood, then engineering can begin at once to further separate children from even the local traffic after all the through traffic has been eliminated. In suburbs houses are set well back from the street. This might help toddlers who can not toddle as far as the street. A true distance decay function of toddlers is yet to be constructed. Also in suburbs concrete aprons on driveways do provide space for basketball and other sports needing a hard surface. But a discouraging amount of 'road hockey' takes place on suburban roads, suggesting solutions must be sought for suburban problems of traffic, children

interaction.

One approach to the traffic of children might be to concentrate on the necessary trips they make. These seem to occur in revolutionary leaps as well as in a gradual evolution. For instance, it might be a revolutionary event, a turning point geography, the time the child first plays on the sidewalk in front of his home. The big leap is the trip to school. This sends him across dangerous streets. City schools are often located in heavy traffic areas, unlike suburban ones. What can be done to engineer the traffic of children to and from school so that they do not have to run the hazard of automobiles. The necessary trip to school is filled with 'short cuts', avoiding bullies, picking up friends, teasing and fearing neighborhood cranks. Perhaps the alleyways can all be turned into walkways, an existing trend; but in the name of the school children. Perhaps small strips of land can be expropriated for children's paths between houses. If large pieces of land can be expropriated for large machines, why not a little piece of land for tiny children?

B: Empirical Evidence on Children and Automobiles in Christie Pits.

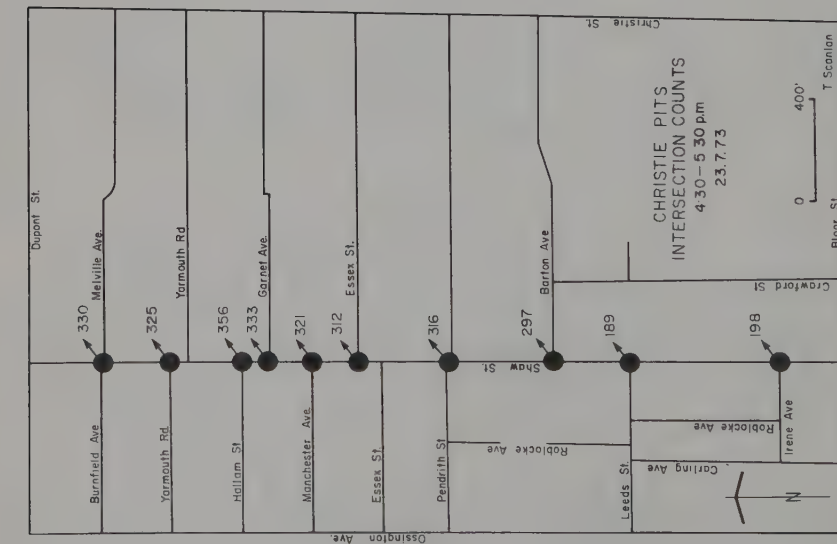
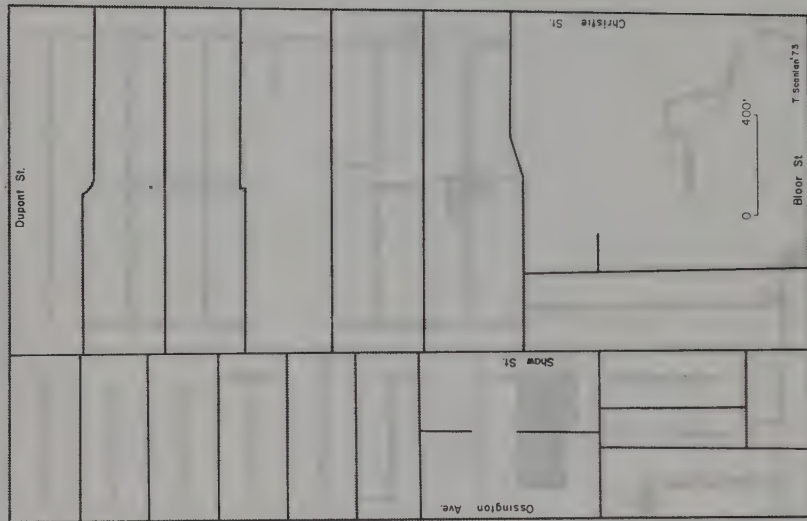
In Christie Pits, 32 percent of the population is under the age of 15: thus the need to develop transportation networks for the protection of children is urgent. As mentioned previously, the non-local functions in this area generate considerable traffic as well as the use of this community's roads by short cutting non-resident drivers. The streets are laid out in a grid pattern, developed in Toronto's early history. Shaw St. is the main north-south artery dissecting the community. It is a two way street as far south as Barton Ave., where it runs one way south. The east-west streets tend to alternate their one-way direction.

The Flow of Automobiles in Christie Pits.

There are two flows of prime importance to be considered: automobile flows and children flows. The interaction between these two must then be evaluated. A study of vehicular traffic was conducted in the summer of 1973. Three aspects of the traffic were of particular importance: (a) quantity and direction of traffic, (b) origin of traffic (i.e. is the traffic of a local nature or is the area being used as a thoroughfare by non-residents) and (c) quality of traffic (i.e. traffic violations).

Traffic counts were taken at various times of the day to evaluate quantity and direction of traffic. The results are extreme for a residential area housing so many children. Shaw St. is the busiest north-south street. Well over 200 cars an hour passed by the counters at various points on Shaw St. Total intersection counts during the evening rush hour period vary from 297 to 356 in the area where Shaw St. runs north and south. (i.e. north of Barton St.) The street with the highest east-west count

Machine Spaces in Christie Pits



Machine Spaces

Fig. 22

Fig. 23

is Barton St., on which St. Raymond's Separate School is located. The intersection showing the highest quantity of traffic during this rush hour count as well as during the children's school lunch hour period is the Hallam St., Shaw St. crossing. The results of the two counts were 356 and 353 respectively. (Unfortunately this intersection is also most commonly used by children, since two schools are on Garnet St., just east of this intersection). These high traffic counts are not peculiar to the rush hour period.

A method was developed to measure the proportion of traffic using the area as a short cut (that is non-local traffic). The grid pattern on the streets is, of course conducive to through bound traffic hoping to avoid the snarls of busy traffic on the arterials surrounding the area. Two counts have been developed producing significant results. One mid-morning hour count found 40 percent of the traffic to be through traffic. Some thoroughfares are more popular than others.

Local/Non-Local Traffic: Counts: 1973

	July 11 10:30-11:30 a.m.	July 24 3:30-5:30 p.m.
Number of cars that entered only:	184	991
Number of cars that exited only:	166	258
Number of cars that entered and exited without stopping:	236	332
Percent of cars that entered only:	31.40	63.0
Percent of cars that exited only:	28.33	16.0
Percent of cars that entered and exited without stopping:	40.27	21.0
Total number of cars in area in the one hour and two hour periods:	586	1581

table I.2

Table I.3 lists the ten most popular short cuts in the morning count. These are only ten of many possible short cuts. Short cuts vary with time of day, as the origin of the traffic changes (i.e. morning rush hour traffic into the city versus evening traffic out of the city). The second count taken at an evening time period indicates that 21 percent of the traffic is through traffic. A total of 332 cars were found to be non-local in nature during this two hour time period.

Local/Non-Local Traffic: Major Short-Cuts.

Rank Order of Flows of Non-Local Traffic (Top Ten)

I	IN	Dupont & Shaw	OUT	Bloor & Shaw
II	IN	Crawford & Bloor	OUT	Hallam & Ossington
III	IN	Carling & Bloor	OUT	Leeds & Ossington
IV	IN	Essex & Christie	OUT	Dupont & Shaw
V	IN	Barton & Christie	OUT	Bloor & Shaw
VI	IN	Hallam & Ossington	OUT	Bloor & Shaw
VII	IN	Dupont & Shaw	OUT	Tarmouth & Ossington
VIII	IN	Pendrith & Ossington	OUT	Pendrith & Christie
IX	IN	Crawford & Bloor	OUT	Bloor & Shaw
X	IN	Crawford & Bloor	OUT	Dupont & Shaw

Source: Survey, July 11, 1973, 10:30-11:30 a.m.

table I.3.

Attention was then given to the quality of traffic in the area. Traffic violations were monitored under three categories: speeding violations, parking violations and general violations contrary to the traffic signs and regulations in the area.

Speeding violations, particularly on Shaw Street, occurred frequently. Table I.4 indicates that a range between 36 percent and 67 percent of the traffic randomly monitored was speeding. The average proportion of automobiles speeding was 54 percent. Speeding violations monitored by the Department of Public Works for the City of Toronto, show a very similar pattern. The streets with the highest traffic counts (i.e. Shaw St. and Barton St.) also registered the highest percentage of speeding violations.

Date	Time	Speeding Violations: 1973			Location
		Number Clocked	Number Speeding	Percent Speeding	
July 12	10:00-10:45	14	9	64.3	Southbound traffic on one way portion of Shaw St.
July 12	11:00-11:45	23	9	39.1	Northbound traffic on Shaw St., above Barton Ave.
July 17	8:15-8:50	43	26	60.5	Southbound traffic on Shaw St. above Essex St.

table I.4 Continued

Date	Time	Number Clocked	Number Speeding	Percent Speeding	Location
July 17	8:05-8:50	6	4	66.7	Eastbound traffic on Burnfield Ave.
July 31	10:35-11:05	18	10	55.6	Southbound traffic on Shaw St. above Essex St.
July 31	11:10-11:40	14	5	35.7	Northbound traffic on Shaw St. above Essex St.
Average Percent Speeding				<u>53.6</u>	

table I.4.

The quantity of traffic parking on the streets has often been attributed to the lack of driveways in the area. However, a count of parked cars during a mid-day period when one might expect that many of the local cars would be outside the area, found very few empty parking spots. A count taken during the lunch break of the school children resulted in an observation of 59 parking violations during a half-hour period. Parking violations varied immensely in nature although parking too close to the corner was rather frequently observed. Violations other than speeding or parking were also monitored. The most frequent violation was failure to stop at stop signs. The intersection of Barton and Crawford, where St. Raymond's School is located, registered the highest number of 'stop' violations.

Traffic Violations: 1973

Intersection	Date	Time	Violations other than Speeding	Speeding Violations	Total
Barton & Crawford	July 10	11:00-11:45	18	5	23
Leeds & Carling			17	9	26
Essex & Ossington			5	0	5
Hallam & Shaw			8	1	9
Yarmouth & Shaw			32	31	63
Essex & Christie			5	0	5
Leeds & Carling	July 10	2:45-3:45	28	10	38
Barton & Crawford			60	3	63
Pendrith & Shaw			6	9	15
Hallam & Shaw			58	27	85
Yarmouth & Shaw			11	6	17
Essex & Christie			4	2	6

table I.5 Continued

Intersection	Date	Time	Violations other than Speeding	Speeding Violations	Total
Burnfield & Shaw	July 25	12:00-1:30	45	10	55
Yarmouth & Shaw			20	5	25
Hallam & Shaw			14	5	19
Manchester & Shaw			12	17	29
Essex & Shaw			27	42	69
Average per intersection:			21/hour	10/hour	31/hour

table I.5.

The Flow of Children in Christie Pits.

A child's trip to and from school is frequent and compulsory. The route may require the child to cross streets flooded with traffic. For the young child, who may be unaccustomed to such interaction, the trip could be fatal. In the Christie Pits area, 56 percent of the accidents occurring during the school months took place during the hours when a child might be en route to or from school.

Time and Season of Children/Automobile Accidents.

a	b	c	d	
Accidents Studied	Accidents in 'School' Months	Percent b/a	Accidents During to/from school trip hours	Percent d/b
62	48	77	27	56

table I.6.

The young school child is most prone to accidents. Sixty percent of the accidents involving children under the age of 15 were to those between 5-9 years of age.

Children/Automobile Accidents, by Age

Age	Percent of Accidents
0 - 4 years	27.5
5 - 9 years	60.0
10 - 14 years	12.5

table I.7.

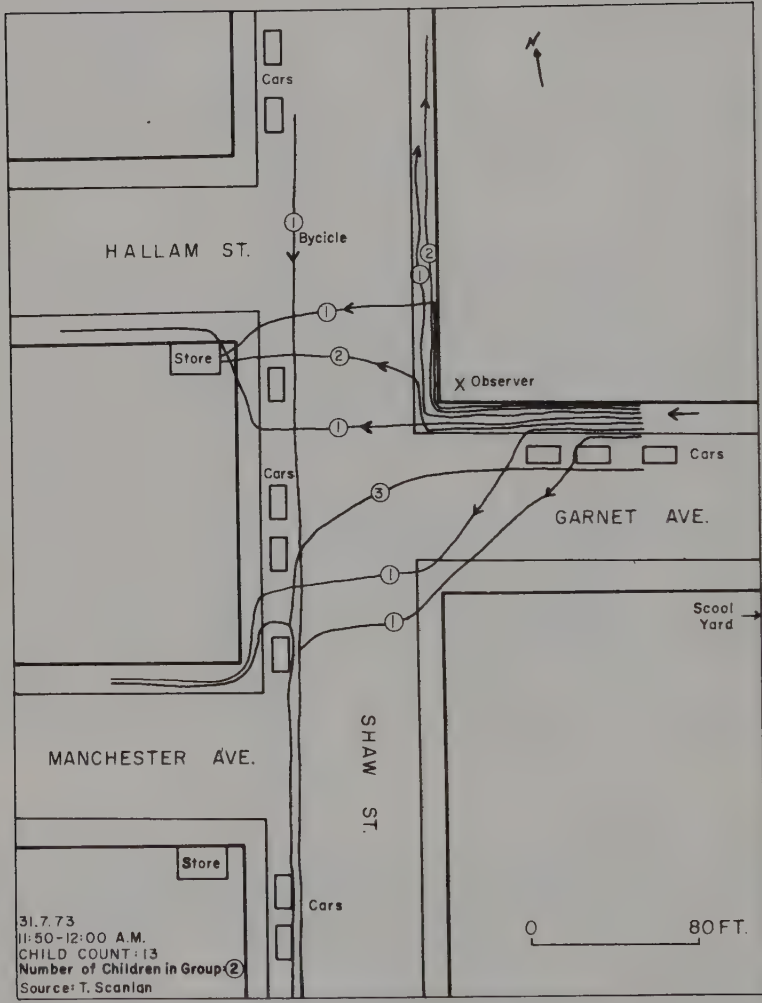
With so many accidents occurring during the trip to and from school this trip takes on great importance. With two schools located on the east side of Shaw St., anyone living west of heavily trafficked Shaw St. must cross at least four times a day. Thus, approximately 720 compulsory annual trips must be made: what are the chances that a child might be careless at least once out of 720 trips? Depending on residential location other streets in the area must be crossed as well. Children are instructed by their parents and teachers to cross at the corners or crosswalks, look both ways, cross only when safe and proceed in a direct path from one side to another. Observation in Christie Pits and elsewhere suggests that in reality this is far from the case. From maps of children crossing streets certain statements can be made.

Children tend not to cross in a direct path nor do they restrict themselves to the corners. The map indicates the weaving and indirectness that often accompanies a child's trip to school. In general children do tend to cross near the intersections: the choice of the exact spot depending on the direction the child will be going after he crosses the street. Children were filmed returning home from school and it was very common to observe a child running at top speed cutting across Shaw St. without so much as lifting his head to observe the cars. In areas where crosswalks were available little change in this pattern was noticed. A break in the school fence can be found on Garnet St. behind Christie school through which the children enter and exit the schoolyard. A crosswalk is provided but again the children cross in an unorthodox fashion. The crossing decision seems to be based more on whim than education. The sight of a child cautiously approaching traffic, looking both ways, pointing a finger where a crosswalk exists, then proceeding in a direct cautious manner was the exception rather than the rule. Furthermore, interviews with children in the school suggests that children travel in small groups, usually with brothers and sisters or friends, unaccompanied by adults.

Geography as a Cause of Child Injury.

'Driver education' had been the cry for cutting highway 'accidents' until Ralph Nader discovered structural defects in the machines themselves. Through Nader it became 'automobile manufacturer education'. But driver education and building vehicles that are safe at low speeds are not the only problems with automobile 'accidents'. It is not only how the driver drives but where the driver drives. The possibility of hitting a child pedestrian on an expressway is almost zero. The odds shoot up on arterial streets and become relatively astronomical on residential streets. 'A child always follows a rolling ball' is a good defensive driving maxim but a better one is to never place a car in a space where balls roll.

The habit of mind of drivers is so concentrated on the thought of minimizing time that it has become the great game of commuters, delivery boys, taxi-cab drivers and just about all drivers excepting



CHILD FLOW IN CHRISTIE PITS Fig.24

the Sunday promenade sort. Looking at the problem in scientific detail requires a brief education, which is itself worth it, in Toblerian map projections. Imagine an esker, a small glacially formed narrow hill found over the northern portion of the continent, located in a typical surrounding swamp. Assume you are standing at point B in the swamp and want to move to point A on the esker. You would not try to move 'straight' toward A through the swamp but would sensibly head in a bee line for the edge of the esker and then proceed along the hard dry ground. In terms of time-distance your 'crooked' path down the curve of the esker would minimize the duration. In this most important sense, of minimizing the time-distance, your curved path would be straight, the shortest time-distance between two points. To see this more clearly, imagine an isochrone, a line of constant time-distance drawn around point A. How far in all directions around point A can a hiker go in one minute? This is the one minute isochrone line and although the closed curve does not look like a circle it is a circle in the important sense that it is a closed curve of constant radius - one minute. Add other such isochrones for two minutes and so forth until they at least extend to point B. Now notice that if the hiker standing at point B moved along the five minute isochrone line through the swamp all the way to point C, it would appear as if he were closer to A than initially but it would not be the case because he would still be exactly five minutes away from A. All that walking in the exhausting swamp would have been to no avail. Moving parallel to the isochrones represents no gain in time on A. Moving partially parallel does proportionately no good either. That component of travel which is parallel to the isochrone is wasted effort. The only motion that moves the hiker closer is one that crosses over the isochrones. So to minimize travel time the hiker must step over the isochrones at right angles, and travel orthogonally down the gradient. In going straight, the motion is ~~to never~~ turn left or right relative to the surface. Going at right angles to the isochrone lines is going straight in the most profound mathematical sense.

But why use a map in which the circles of equal time radius do not look like circles and the straight lines do not appear straight? Why indeed. Drawing the isochrones as concentric circles of equal intervals and the line connecting A to B as straight, transforms the space into a much more sensible mapping. The projection looks to geographers something like a polar azimuthal projection, that is, looking down on the globe over the North or South pole, with the isochrone lines of equal time projecting into circles like latitudes, and the curved line B projecting like a single straight longitude. In order to complete this projection it is clear that what is needed is more longitudes so placing more points like B around the esker and drawing the curves to A then gives a complete coordinate system and when projected into its straight form, really does appear like the globe's latitudes and longitudes viewed from above a pole. This is a Toblerian projection of modern geography and is useful because the two sets of lines enable people to map the 'true' time shape of the esker as

Circles of Constant Time and Straight Line Shortest Paths

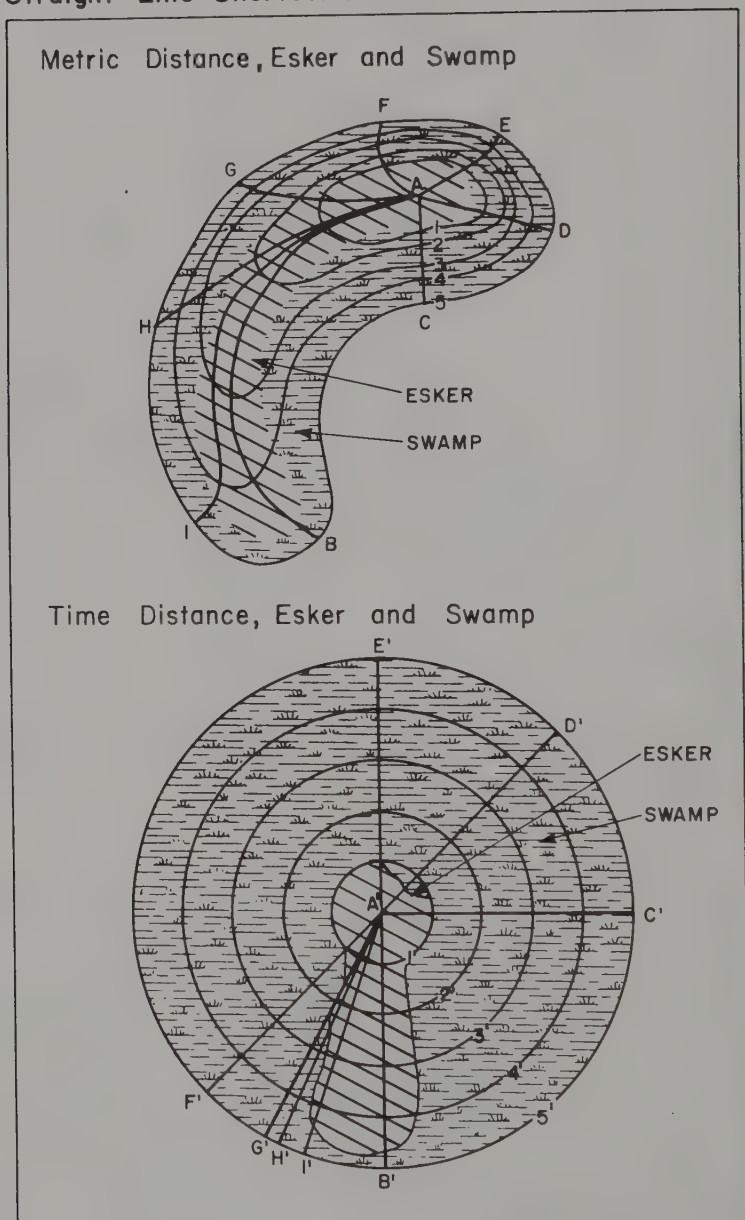


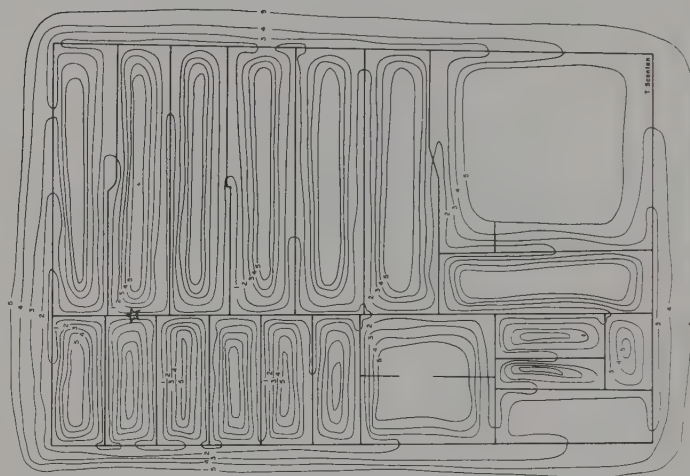
Fig. 25

seen from Point A. Notice that on the first map, the familiar un-projected one, the edge of the esker lies on the intersect of the line 'AE' and the line '1 Minute'. On the projected map the same edge of the esker can be plotted, this time at the intersect of the line 'A'E'' and the '1' Minute'. Other edge points of the esker can be plotted and then all joined together to form the outline of the esker in true time-space.

What this technical lesson in geography has to do with saving children can be seen with the application to the Christie Pits region. Apologies are extended for the technical discussion, but this insight from modern mathematical-theoretical geography becomes so crushing that we implore the non-geographer reader to persist with his concentration and the trade geographer to contain his ennui with well known trade skills.

The mental map in the urban motorist's mind is an isochrone map, a map designed to minimize his travel time. Looking at the Christie Pits region from this perspective it is the arterials surrounding Christie Pits where travel is slow, swampy, and the interior residential streets which are comparable to the high ground of the esker. Therefore the least time paths avoid the arterials which surround the residential region and use the residential streets as much as possible. The average speed on the arterials around Christie Pits is only nine miles per hour compared to twenty-six miles per hour within Christie Pits. This map can also be transformed into the isochrone view in which the least time lines are shown as straight and the isochrone lines shown as true circles. If the 'game' of driving is changed from least time routes to least likelihood of killing children routes the space reverses. The isolines become distances before the likelihood of hitting a child. In the residential streets in Christie Pits, motorists are likely to travel only 227,000 miles before hitting a child; on the surrounding arterials the comparable figure is 3,258,000 miles; that is odds 14 times less likely per unit of distance travelled. The arterials are the least likely places to kill children and the residential areas the most likely. For the speed of traffic the isolines are spaced far apart in the residential areas and close together along the arterials. The 'kill-kid' lines are spaced oppositely with the residential areas displaying closely spaced lines and the arterials lines far apart. In the analogy to the esker, the swamp now becomes the residential streets and the high ground esker a ring around the swamp in the middle, a square shaped doughnut of high ground. The motorist now heads for the high ground, trying to get out of the residential area and onto the high ground of the arterial. These two mental maps, time minimization, and children accident minimization, are spatial reversals - complete opposites - revolutions in thinking. The two are not modifications of each other. This proves the impossibility of a driver education program to modify existing motorist behavior. What chance would admonition have to reverse completely the spatial habits of all drivers, to eliminate a 'short-cut' mentality.

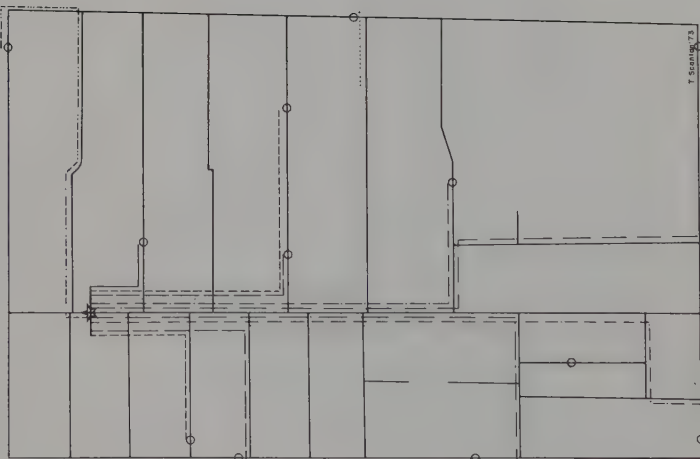
"Circles" of Time in Christie Pits



Scale: 50 feet. Interval between each number interval. ☆ Destination of Trip

Fig. 26

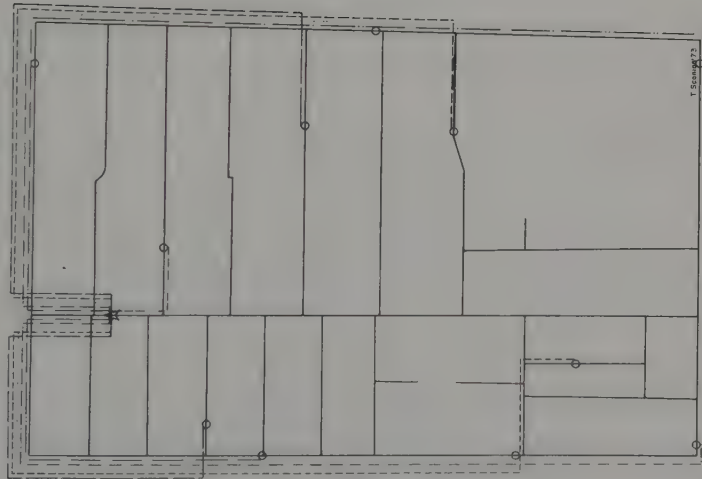
Minimized Time Auto Routes in Christie Pits



Broken lines indicate Auto Routes
○ Origin of Trip
☆ Destination of Trip

Fig. 27

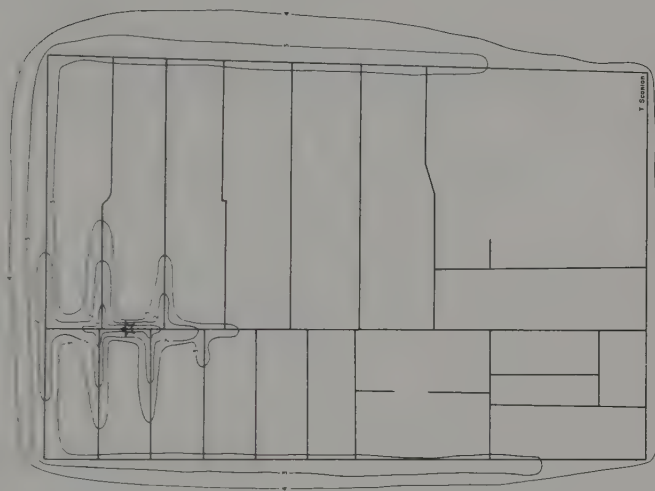
Minimized Child "Accident" Auto Routes in Christie Pits



Broken lines indicate Auto Routes
 ○ Origin of Trip
 ☆ Destination of Trip

Fig. 29

"Circles" of Child "Accidents" in Christie Pits



Scale One-in-4,356 million-chance-of-hitting-a-child-within-of
 ☆ Destination of Trip

Fig. 28

But an engineering solution does work. By cul-de-sacing the streets with children's malls, little parks along the routes that children take to school, then the isochrone map, the least time map, is forced to conform with the least 'kill-kid' map. The driver does not have to reverse a lifetime pattern of driving to minimize time. He can continue to try to minimize his time path, but even with this driving habit maintained he will now be forced into the least likely path of child injury. This is a practical, non-utopian solution of forcing the motorist to avoid driving in spaces unsafe at any speed.

Metropolitan Effects of Complete Inner City Cul-de-Sacing.

But it is objected that if all inner city streets were cul-de-saced thus frustrating short-cutting traffic, then the city would grind to a halt. But this is not so. Traffic short-cutting through Christie Pits represents only 10 percent of all traffic (that is on the residential streets and surrounding arterials). For all inner city Toronto, the peak rush hour traffic is 171,500: 73,700 (43 percent) use automobiles and 97,700 (57 percent) transit. A 10 percent shift from automobiles, that is, eliminating the short-cutters through complete cul-de-sacing, would generate only an extra 7,300 persons, a mere 7 percent increase in existing mass transit peaks. Toronto increases its mass transit rides by 14 percent per year already. The 'Go-trains' alone are planning to increase from a current 20,000 to 200,000. What a change would occur in the inner city environment were cul-de-sacs to be introduced.

Allowing Slow Humans to Move.

Traffic engineers do not even know the average speed of a child. The human race knows the average speed of a giraffe but not of our own species. To rectify this fundamental oversight, 96 children (age range 5 to 13 years) were clocked for their speeds in three sites, Christie Pits, the Upper Gerrard Ravine area and the Toronto Islands. A distance of 200 feet was marked along obvious child routes, including sidewalks, through parkland and crossing a street to school. Only children walking unaccompanied by adults were timed: (only three children were observed running). The average walking speed of a child was observed to be 100 feet in 28 seconds or 3.6 feet per second. Is this fast enough to dodge the traffic or to make the light changes at stop lights? Young children are particularly prone to such hazards since their speeds are lower. Cul-de-sacing frees them all. In addition to making the streets safe for children and other weak and slow moving humans, the noise level plunges allowing people sounder sleep and conversations without shouting and the pollution level drops. The streets also become available for other activities.

C: Geographic Theory of Streets and Play.

Roads are much more than a channel for vehicles and an obstacle.

to children. They also act as play spaces for children. Those most trapped in a neighborhood are its most powerless. Thus the very young and the very old tend to be imprisoned since they have no automobiles and are physically slow on their feet. It is therefore suggested that neighborhoods be designed around the needs of children.

Age of Maximum Entrapment.

If neighborhoods are designed as good children's environments, then automatically they are a good environment for the sick and the old. If a child can walk to school without crossing a street, then a mother can push a baby carriage without going up and down curbs, and an elderly invalid can navigate his wheel chair with similar ease. If parks are built for the very young, separately considered from teenagers who are too active for two year olds, then surely the elderly will find the benches, placed there primarily for the infants' mothers, most pleasant in the afternoon sun. So saving the children is the key for protecting all the weak.

Which age group of children is the most spatially trapped? The very young are naturally imprisoned. They can move very little and only with help. So they are not unduly trapped. It is as the child gets older that the tension between his biological ability to move and the machine deadliness of the streets becomes apparent. "Don't play in the streets" is the universal cry of urbanized mothers. Related is the maximum distance a child can travel when not threatened by machines. Mothers keep young children 'in sight' or 'within ear shot' and perhaps just a certain maximum distance away. Play spaces, for example parks, beyond this range are of no value, except that mothers will walk their children to a park and supervise them there. This increases the range of the park considerably. A rough rule of thumb is that each block ought to have a park.

The difficulty in inner city neighborhoods is that of finding space for parks. A solution is to block the streets turning them into suburban cul-de-sacs (trees) with 'child ways', which could also accommodate 'tot lots'. In the micro geography of the Christie Pits region the problem becomes one of blocking the street without blocking the parking in front of the houses. The best places are on street intersections which also puts the tot lots into visual range down two streets.

The special park needs of teenagers should be segregated in a hierarchy of parks, like the hierarchy of space for other community activity. Teenagers need adventure playgrounds, large spaces for running games, safe roads for road hockey and so forth. With the streets empty of all but the lightest traffic, these spaces should fill up with teenagers, who by that age are much better able to cope with traffic than younger children.

Where are the Children?

It can be assumed that children place themselves on the map at sites they enjoy. The first task, therefore, is to micro map children. At a given time of day, precisely where are they? Who do we expect to find in given spaces? One hypothesis, the entire intellectual basis for creative playgrounds, is that children like to manipulate materials. Therefore, they should be found at construction sites playing in a pile of sand, or playing in mud along gutters or streams, or damming up gutters and streams, or building tree huts out of miscellaneous boards. To test this hypothesis, not only should children themselves be dot mapped but possible creative materials also should be mapped separately. If the two maps coincide the hypothesis tends to be reinforced; if they do not, then the hypothesis is in doubt.

A second hypothesis is that children are attracted to danger. While there is no theory of thrill, as there is for creative playgrounds, at least much of popular playground equipment does seem to have a thrill feature. For instance, a slide terrorizes little children as they first go down it and one can see the terror in their faces and hear it in their screams. Other equipment: swings monkey bars and merry-go-rounds have thrilling features as do carnivals with everything from ferris wheels to horror houses. This requires a third map independently constructed, a map of dangerous or thrilling features (they might not be identical), which could be compared again to the map of actual distributions of children. If the hypothesis is confirmed, if it is found that children prefer to play in the streets precisely because of the danger of the automobiles - the thrill of playing with the machines the way a matador might play with a charging bull - then the construction of parks is vastly complicated. All thrilling things must be removed from the landscape and placed in the park. Park and carnival equipment provide safe thrills. The landscape provides dangerous thrills. If boys like to walk on the top of bridge rails to prove their courage to themselves or girl friends or for the sheer thrill of it, then these thrilling but dangerous features must be removed from the map. The horrifying thought occurs that the reason there are automobile accidents involving children is that the children are 'playing' with automobiles and sometimes 'lose the game'.

D: Empirical Evidence on Children at Play.

An hypothesis developed by Gregory Powe, then a student at Carleton University, is that children cluster in the middle of their own territories. Children display characteristics of territoriality. Therefore, if a park is located between territories the children will not play there and will go there only to fight using the area as a kind of 'no man's land' between warring tribes of children. This implies that children be closely interviewed as to their 'turfs'. If it turns out that play 'gangs' shift randomly over space from year to year it means that parks will come in and out of use as they shift from the periphery to the center of play groups. If, on the other hand, there is a spatial stability to the play groups, then parks can avoid locations which are

CHILDREN IN THE GLEBE IN OTTAWA

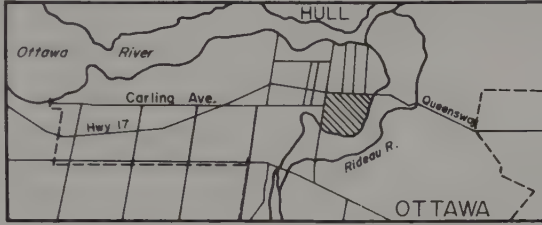


Fig.30

known to be lacking in children. For instance, children gangs may not form as a block (four streets without crossing a street). 'Going around the block' is a big spatial adventure to a child partly because the children on the other side are in a different gang. It seems more likely that first one side of one block and then both sides of one street form a gang which implies, at least for a certain age group, parks should be only along one street. The geographic hierarchy of children's territoriality, increasing in spatial size as they get older should establish location principles for a park.

Children Playing in Christie Pits.

It has already been noted that the streets are very likely to be used as play areas in Christie Pits. Planning for play must therefore include design of the whole neighborhood. A map adequately demonstrates that extant play areas are relatively underutilized: the park does not fulfil any major role for the children. While this is due in part to a predictable distance decay function since only the residents of the southern half of this neighborhood live within the quarter-mile walking distance specified in the City's Official Plan, it is also a reflection of the inadequacies of the park for children's play. Indeed the neighborhood lacks facilities to draw children into safe playspaces. Open space is virtually non-existent, and the asphalt playgrounds of the neighborhood schools do not encourage unsupervised play. There is no opportunity for creative play in a 'natural environment' and a lack of available material of any sort for children to manipulate. Children are often limited to small front yards (average 15 feet x 18 feet) where play is necessarily passive.

The map indicates the lack of use of the large park in the area, Christie Pits. It was calculated that the park provides a play site for an average of only 5 percent of the children engaged in outdoor play at any one time. One reason for this is that the park also serves interests outside the community. Official leagues operate baseball and soccer organizations on the playing field and the swimming pool attracts people from many areas. The problem is heightened by the geography of the park. The valley shape and distance from the houses makes it impossible for parents to see their children at play. Thus they go unsupervised and incidents such as the fatal knifing which took place in the park during the summer of 1973, only alienate the children more.

Field observers employed in our study had difficulty in mapping creative and dangerous features as separate entities. Often the sites they considered attractive to children were in fact the most dangerous. These include the railway lines, a collection of abandoned cars, and the streets themselves. The latter space was used by recognized 'street teams' of children for street games of road hockey, baseball, and soccer, as well as more impromptu games of tag and hide and seek. The streets are consistent

Child Distribution in Christie Pits: July 21/73 at 9:00 a.m.

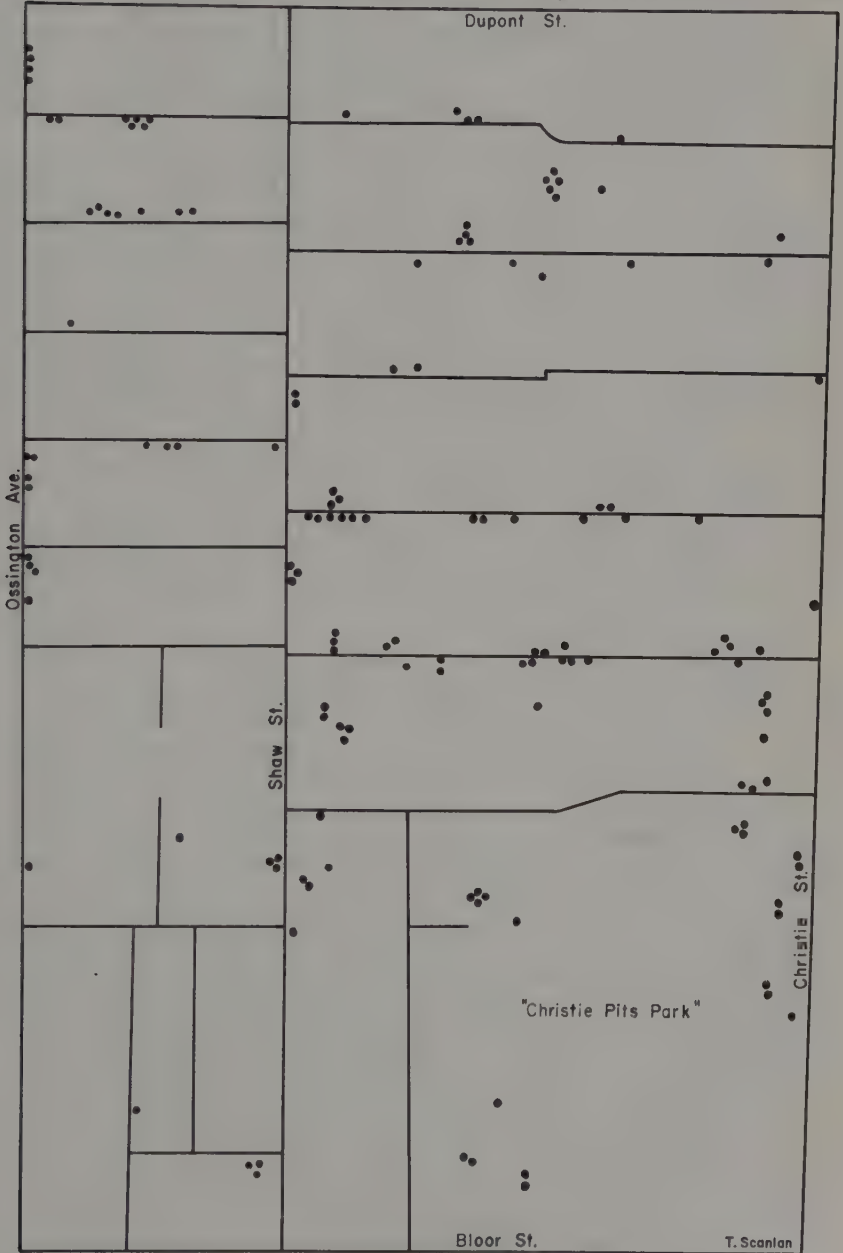


Fig. 31

● One Child

used as play sites in favor of the relatively safe laneways.

Restraints on Play.

The literature reports that, "....up to the age of 10, the majority of parents wish to have their children within sight and call although there is a marked decrease with age - the following data may be representative: age 3/87%; ages 4-6/76%; ages 7-8/53%; ages 9-10/42%; ages 11-12/26%; ages 13-14/7%." Pollowy (1973).

The large areas of machine space, combined with the tendency of mothers in this dominantly Italian area to keep their children in sight, tends to greatly restrict the Christie Pits' child's sense of territory. Generally, the child's conception of 'turf' is restricted to the home and a short stretch of street frontage. The size of the child's territory appears to be inversely proportional to the volume of traffic on that street. If the location of a child's 'best friend' is used as a surrogate for his range, this effect can be illustrated. Children living on Shaw St., the busiest street in the area, invariably reported that their friends lived on the same side of the street, and usually within one or two houses. On other streets of relatively low traffic, a child's best friends often lived on the opposite side of the street or a street away. Furthermore, when street teams were formed for various sports, Shaw St. was used as a barrier and any child living on Shaw St. was assigned to the east-west street closest to his house.

The difference between inner city environments and outer city is reflected in the literature. "In a study of . . . a "light street" (200 vehicles per hour peak-sidewalk width of 15') . . . and a "heavy street" (900 vehicles per hour - sidewalk width of 8.5') . . . the "light street" was a lively close-knit community whose residents made full use of their street. The street was seen as a whole and no part was out of bounds. This full use of the street was paralleled by an acute awareness of the environment. This was represented by the fact that children, in map drawing recalled many detailed elements obviously encountered during their play on the street.... The "heavy street" was solely used as a corridor between the individual homes and the outside world. It had little or no sidewalk activity. Generally, front porches and steps on the "light street" . . . were used for sitting, chatting with friends, and, by children, for play. Residents of the "heavy street" regretted their lack of porches." Pollowy (1973).

The majority of a child's time is spent in this limited space. In most cases, play in their own backyards is denied to children of the area as fully 70 percent of most yards are given over to vegetable gardens.

Gesell, quoted in Pollowy (1973) provides a table of spatial revolutions like that which comes the moment a child can ride its bike.

- 16 weeks - Moves to crib from bassinet.
- 28 weeks - Sitter; moves to chair; much time spent in active manipulation.
- 44 weeks - Creeps on hands and knees.
- 1 year - Stands momentarily alone; walks with one hand held.
- 1½ years - Runs stiffly; walks alone - seldom falls.
- 2 years - Rides 'kiddy kar'; runs without falling.
- 3 years - Rides tricycle.
- 5 years - Climbs with sureness.
- 5½ years - First 'bike' ride (two wheeler) for many.
- 7 years - Can ride 'bike' for some distance.

Intuitively, a graph relating age and average travel illustrates the problem.

Average Travel vs. Age-Theoretical

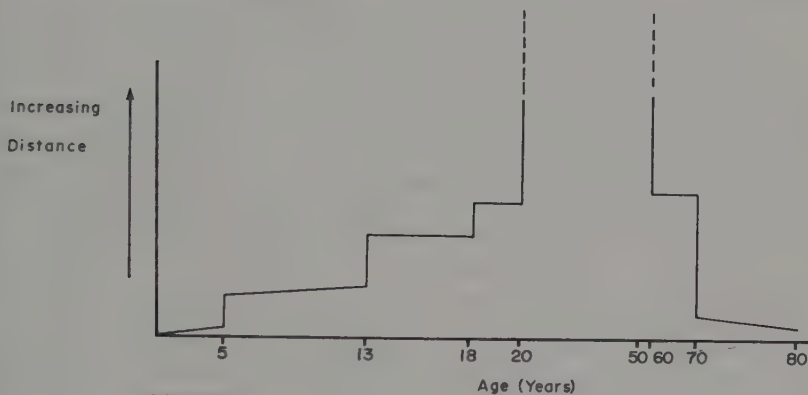


Fig. 32

The more mobile ages are capable of escaping from their immediate surroundings. The very young and the very old are physically immobile. Hence planning for parks should have as its priority the more spatially trapped in a neighborhood. This age group can be identified by comparing the range a child can physically cover with the range limits imposed on him by physical and social barriers.

The general literature also suggests the freedom allowed children by age. "The majority of children from the age of 4 upwards go out on their own. Although the number of children observed outside may seldom exceed half of the residents, more younger children play out during the summer vacation period, . . . The following data may provide an indication of outdoor play trends

by age grouping: age 3/42%; ages 4-6/79%; ages 9-10/92%; ages 11-12/45%; ages 13-14/91%." Pollowy (1973).

The data approximating the range of children in the Christie Pits area indicate that the age of 'maximum imprisonment' is 8 years old. Mothers restrict the child to an area within sight or calling distance. This allows for some measure of control over the child and an illusion of protection. Beyond this age, children are allowed to leave their street without supervision. The children's newly won freedom indicates the parents feel they can now cope with the dangers of the neighborhood, primarily the traffic dangers. While the children's range is increased significantly, the new play sites which become accessible to them are not necessarily an improvement. In fact they are often more dangerous. The significance of this release from the home street is reflected in the age breakdown of children's accidents. Note that a large proportion of the accidents occur as children begin to increase their range into newer, relatively unfamiliar areas.

Field Evidence on Deadly Games.

The range of children is however greatly increased if the mother or older siblings take the children to the park. By calculating the distance to the home of mothers interviewed in the park, the average distance a mother takes a child to the park was calculated to be 2,500 feet or approximately 5 blocks. This occurs frequently in the area, and mothers will travel as far as 4,000 feet, or approximately 8 blocks. With this restrictive range, the children turn to streets for play areas. It is not enough that children institute rules in their games to compensate for the interference of traffic, but worse, the children have instituted games which include the passing traffic. In a game known as 'angels and devils' children stand on the street as a car approaches, and compete to see who will stay in its path for the longest period of time. During the summer months, in particular, it is a common daily occurrence to see children playing one sport or another on residential streets. A forty-five minute count of children either playing, walking, or riding a bicycle on one of the streets, by five observers simply roaming the area, produced a total of 412 children engaged in one of these activities. Thus it is not only the 'trip to school' that poses a potential hazard to the children in the area.

Children in the Streets

Streets	No. children on foot	No. children on bicycles	Total
Melville & Yarmouth east of Shaw St.	70	23	93
Pendrith, Barton Ave., east of Shaw and Crawford	46	26	72

Table I.8 Continued

Streets	No. children on foot	No. children on bicycles	Total
Leeds, Carling and Roblock Ave.	57	32	89
Essex & Pendrith St. west of Shaw St.	72	21	93
Hallam & Manchester west of Shaw St.	45	20	65
	290	122	412
Time of Survey: July 19, 1973, 3:00 p.m. - 3:45 p.m.			

table I. 8.

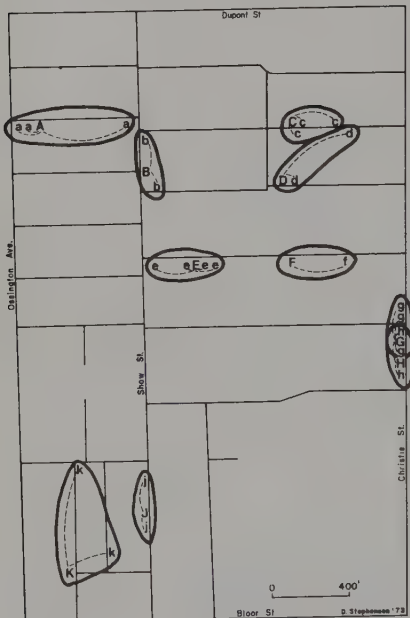
Mixing the Flows: Children and Automobiles.

The individual research on automobile traffic and children traffic led one to suspect that the survival chances of the children were, at best, being hampered. What happens when these two large volumes of traffic interact? The police records on children automobile accidents hold the answer. These records combined with interviews with the residents established that a total of 66 accidents between children and automobiles had occurred in the area, from January 1969 to the summer of 1973: that is approximately one accident every 25 days. The disruptive effect of accidents is shown by the fact that the parents of three of nine families in which children were involved in accidents not reported to the police, moved out of the community immediately following the accident. Word of mouth evidence is that these moves were directly related to the accidents.

An immediate change in the landscape is needed. It is a survival matter. Now the importance of the subject can be felt. There is a scene in the 'movie' version of a Tale of Two Cities which is unforgettable and justifies the revolutionary flavor of Paris. A nobleman's coach races down a narrow slum street and a small slum boy tries to outrun it, fleeing for his life. But instead of the coach slowing down the child is seen over the horses' bobbing heads as being slowly overtaken until he falls under the horses' hooves. Only then are the horses reigned in: but too late and the wheel of the coach is seen humping over the child's body with a sickening thump. The nobleman disdainfully appears in the coach's door and flings a gold coin at the dead boy's father and drives off. Do not the commuters' automobiles run over Toronto's children and do not their fathers get a little insurance money thrown at them?

The high frequency of child/automobile accidents will be eliminated only if children and automobiles cease to interact. A network must be developed that effectively allows children to travel one route while the automobiles travel another. The Christie Pits

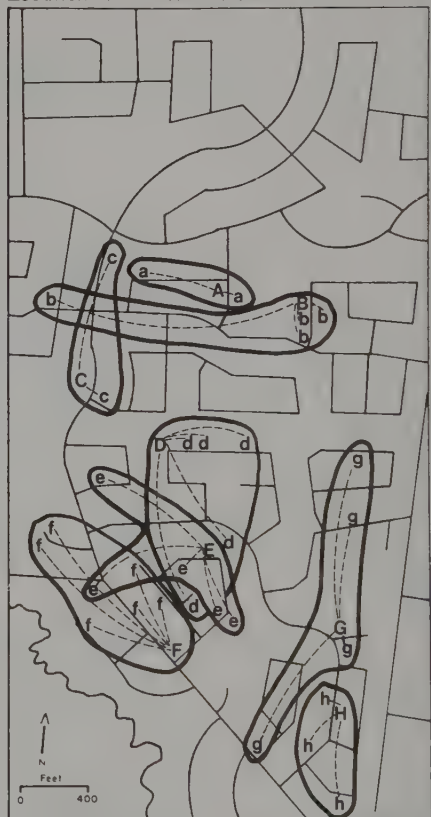
Location of Friends' Homes in Christie Pits



A-K Childs Home
 a-k Friends' Home
 Males 8-10 yrs of age

Fig. 33

Location of Friends' Homes in Don Mills



A-H Childs Home
 a-h Friends' Home
 Males 8 to 10

Fig. 34

Child Interviewees: Age, sex	Games played on the streets	Signals used for oncoming traffic	Reaction to intervening traffic	Rules and regulations of games to handle interrupting traffic
Males, 8-10	Hockey Football	First person who sees car, shouts to the others	Move to side of road	After car passes by, three possible rules are enforced: (1) last person who had the ball before the interruption, gets it again; (2) first person to retrieve the ball gets it; (3) captain counts to three and play re- sumes. Often the parked cars are used as 'markers'.
Males, 8-10	Soccer, Hockey Baseball, run- ning bases			Soccer: when a car comes the ball is kicked and children move to left side of road, they return to their places, and last person to kick ball receives it again.
Female, 8	Angels & Devils	Sees them and moves	Moves onto side- walk	In this game, they watch cars coming down street and they remain on road until car reaches a predetermined point then they move.
5 males, 7-12	Ball games			Last player having possession retains ball and after a count of three play resumes. The ball is left on the street when the car passes through
2 females, 7 & 9	Mickey Mouse hide & seek	Hear the car or a friend shouts	Move onto sidewalk	
male, 10	Hockey, football	(1) car honks (2) hear the car (3) friend shouts of the center of the road and sometimes touch car as it goes by		

Interviews: July 26, 1973

Children Hit by Automobiles in Christie Pits: 1969 to 1973

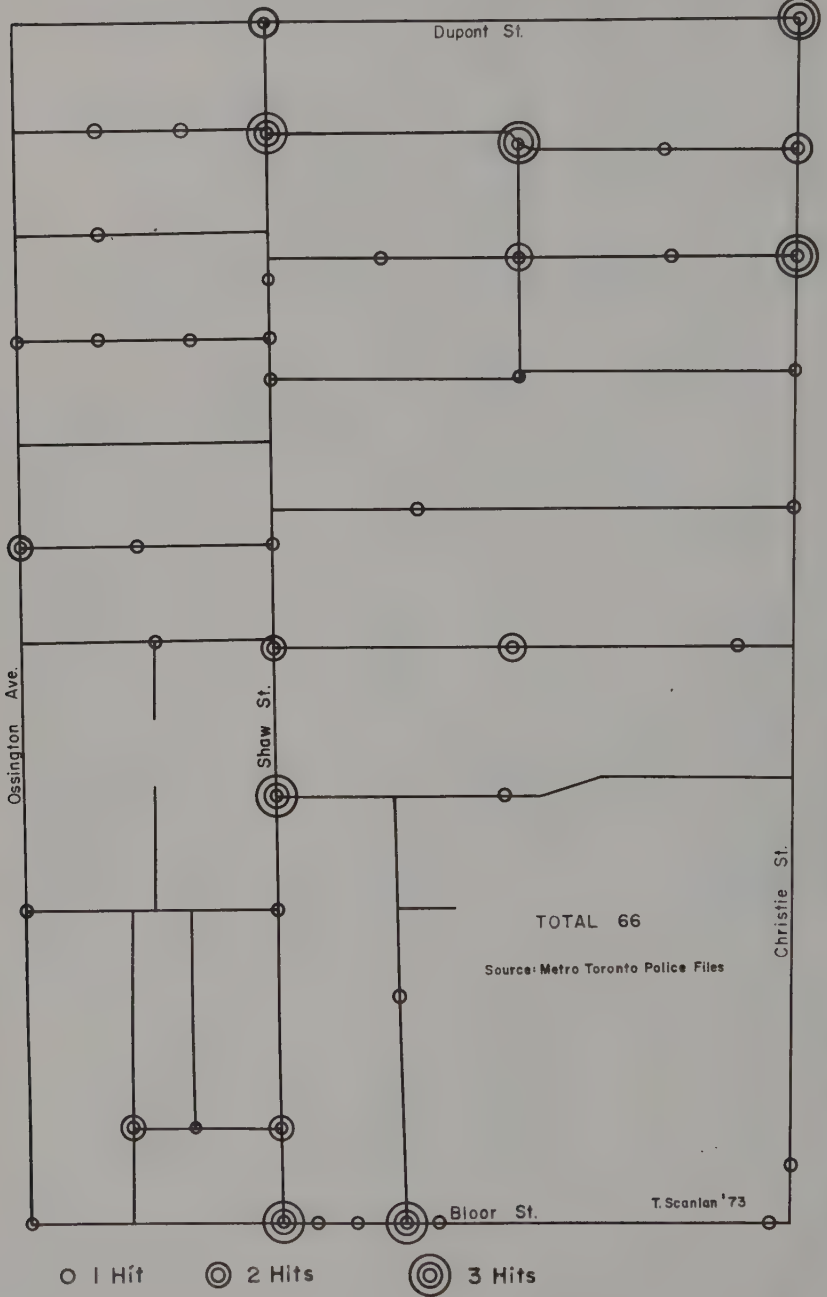


Fig. 35

area, with its deadly accident toll, needs such a system desperately. All points in the area must still be accessible by car and foot, but the routes taken to certain points will have to change.

Street Parks.

If the earlier suggestion of cutting the streets at strategic points with malls or parkettes were to be implemented, the benefits would be enormous: non-local traffic would be eliminated; children would have car-free routes to and from school; the distance traveled in the area by local automobile traffic would be minimized, as residents would be forced to take the shortest route when traveling in or out of the area; there would be accessible play spaces within sight of the houses. The exact choice of location for malls, however, would be crucial.

The data for Christie Pits indicate that a low estimate of non-local traffic varies from about one car out of five to one out of two, depending on the time of day. So if non-local traffic were to be eliminated, it would greatly reduce the quantity of traffic in the neighborhood. This goal should be of the highest priority. It is also one of the easier goals to satisfy in terms of where to place the malls. As long as a street is blocked, somewhere, non-local traffic will not use that street. One way of seeing how effective any plan is would be to study the effects on short cuts pointed out earlier.

Data on traffic show that 56 percent of accidents during school months happen during the times when children are going to and from school. They also show that the intersections with the highest automobile and the highest children counts, are adjacent to the three schools in the area, and that on the streets bordering the schools, automobiles have more traffic violations than elsewhere in the area. The location and use of crosswalks have not been very effective in the past, so it is obviously important where the malls are positioned. Not only must they give every child a vehicle-free route from home to his school but they must also be placed where children 'naturally' cross streets so that the children use them, and are not tempted to take short-cuts across the streets. To ensure that every child has a route to school is a fairly easy design matter: but to determine optimal locations for such malls is a thorny problem. At this time, there is insufficient data from Christie Pits on children's natural tendencies in choosing where to cross the streets, but a few particular places which are most heavily traveled by the children on their way to school have been established (i.e. the intersection of Garnet St., Hallam St. and Shaw St.). These will be taken into consideration in designing a system, but the significance of existing patterns of child movement cannot be fully established until more data on child movement are collected.

To make sure that local residents do not drive in the area unnecessarily (and hence cause accidents) the plan must force them to take the shortest route in and out of the area. To see if the plan

works in this respect, it has to be tested to ensure that the maximum distance a resident might have to travel in the area if the plan were in effect is less than that distance is now.

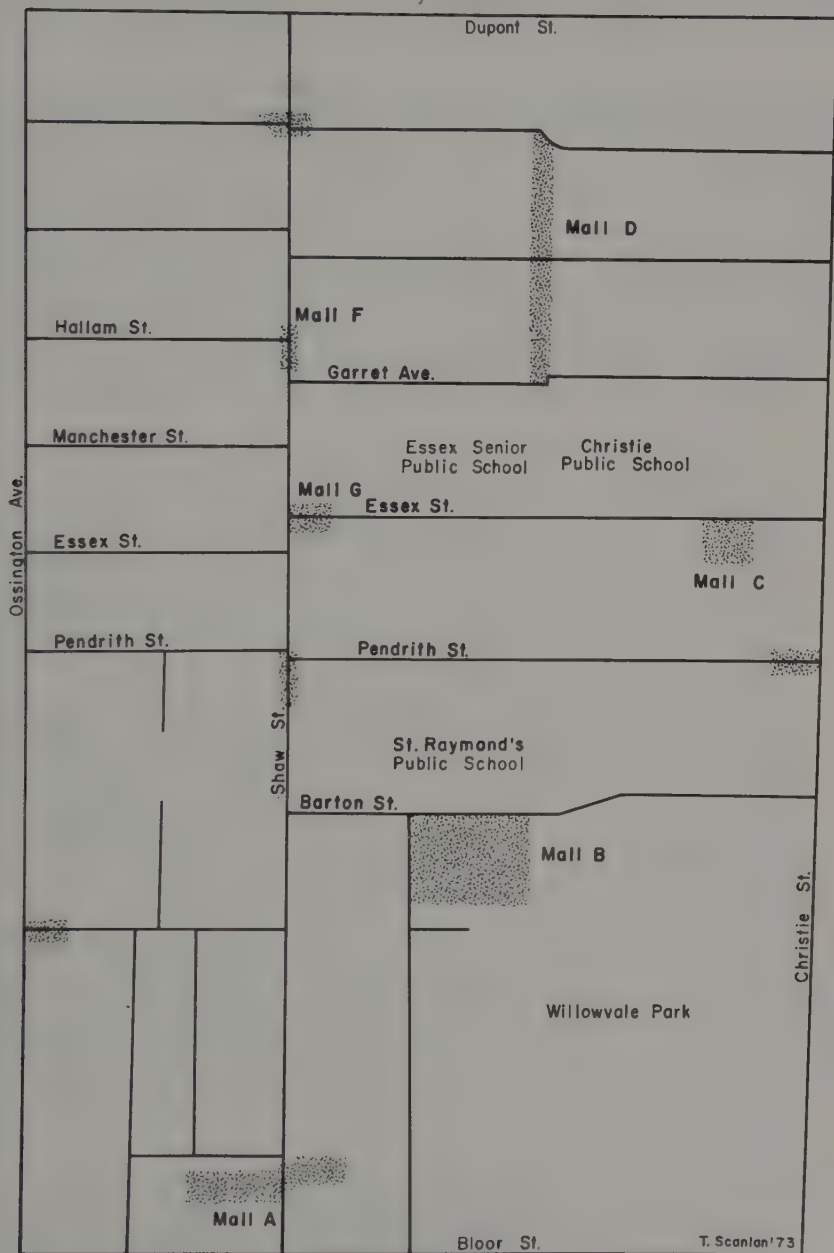
The last goal is to give the residents accessible play spaces. The data have shown that Christie Pits' park does not do this, because less than 5 percent of the children playing outdoors at a given time are in the park. It is not known, at present, exactly how far away from any home a mall can be and still be accessible, but it seems that the mothers in the area would be satisfied if they could see the children playing from their homes. One strategy might be that every street in the area should have one mall. When the positions of the malls have been established to satisfy the other goals it might be possible to adjust the location of the malls so that they are more equally distributed and, therefore, more accessible to everyone and still not upset the other goals.

In making a plan of the malls, it was decided not to consider the laneways as automobile routes cutting through the area. They are so narrow and crowded, and the surfaces are so rough that they are not likely to be used by drivers hoping to save time. The lanes are used by children, however, so they were included as possible children routes.

Taking all these points into consideration a final plan of malls was designed, after discarding earlier designs which did not reasonably satisfy the identified requirements. The plan completely eliminates non-local traffic cutting through the area as none of the short-cuts mentioned earlier would be possible. In fact it would be impossible to reach an arterial road from another arterial by cutting through the neighborhood. Also, every child can walk to and from school without coming into contact with vehicles. The malls are located so that they lie where the children's routes to schools are densest. For example, malls F and G serve the large numbers of children who cross Shaw St. at these points to get to one of the three schools. Crossings for the 2 schools in the north section are necessary because pupils enter both from the front of the schools, on Essex St., and from the rear, on Garnet Ave. Mall F is also needed for the large number of children who go to the store on the corner of Hallam St. and Shaw St. on their way to and from school, and then cross Shaw St. Mall D has been positioned to take into account the fact that nearly all pupils to the north use the exit provided in the school gates at this point, and then go up the laneway, crossing the streets to the north at the places where mall D is. Also, these three points, where the lane and the roads meet, have proven to be accident prone. This is partly due to the way that the three streets all take a sharp dip to the south at these points, so that drivers cannot see the children clearly, nor can the children see the oncoming cars.

Wherever possible, the malls have been placed to minimize the distance a resident can drive in the area, but always the other more important goals above, have been taken care of first. The

Proposed Parks in Christie, Pitts



Note: Only malls mentioned in the text are labeled.

 Parks

Fig. 36

plan does succeed in its aims and also most streets now have a parquette for residents to play in. It would not be possible to put malls on Manchester St. or Pendrith St. without making a part of Shaw St. inaccessible, and in any case there are malls fairly close to them.

There are certain places where the special circumstances in Christie Pits have been considered, so that the malls are not always where they might be expected, given the goals above. For example:

Site A: Blocking the street at this point joins two existing pieces of open space. They are part of the Toronto Transit Commission subway right of way, and are presently undeveloped. This opens a substantially large area of land to the community. It also effectively isolates an existing industrial laundry located at Shaw and Bloor which generates a great deal of truck traffic in this area.

Site B: The entire schoolyard of St. Raymond's Public School is paved, and the majority of it is given over to teacher parking. The School Board is presently buying up houses along the south side of Pendrith St. and tearing them down in order to expand its playground. By blocking off Barton Ave., the school could use this area and the north-west corner of Willowvale Park (presently undeveloped and unused) as a school playground. This serves the community best as no homes are destroyed.

Site C: This is another piece of open land which might be developed. The site is presently an annoyance to the community. It contains a great deal of rubbish and abandoned cars which have proved dangerous to children. Residents also fear it will be developed as an industrial or commercial site, which they hope to prevent by converting the lot to a children's park.

The plan is not perfect. The narrowness of certain roads in the area might make it difficult where cars have to turn around in front of the malls. Also it may prove undesirable that various malls are located directly in front of residences. These problems however, can in no way be as large as those that exist at present, where children are killed trying to get to school and in their play

Parks and Traffic.

When the problem of children and traffic in this area was first approached it was seen as an issue unconnected to one of the other main problems in the area: parks for children to play in. The two were perceived by the residents as separate issues and they were tackled as two distinct research problems. Field experience, particularly daily contact with children in the area, however, showed that traffic and parks could not be separate

They are part of the same system, a system with poles of life and death. The relative interaction of children with traffic or parks will define the frequency of 'accidental' deaths that will occur in any area.

Empirical Evidence on Traffic Maze Alternative.

Though the above plan would be the most effective in child protection, other alternative designs have been developed. In the neighborhood bounded by Bathurst, Bloor, Harbord and Spadina, an experimental traffic maze has been installed, consisting of alternating one way streets. This makes short cuts through the area difficult, but not impossible as the plan for Christie Pits does. The traffic has been reduced by 37 percent. Most important, children - automobile accidents have been reduced. During the 8 month testing period of the maze, no child has been involved in an accident whereas before, a child was hit on the average of one every 5 weeks. The negative aspect of the maze is that, 28 percent of the traffic in the area is still non-local.

E: Theory of High-Rises and Children.

Children are buried in the sky in high-rises. In comparison to children in Christie Pits, children in high-rise apartment buildings are more trapped. If apartments were dug fifteen floors deep into the ground, people would be horrified at the potential effects on children. The 'view' could be simulated with closed-circuit television to the outside greenery. Is the thought of being buried in the ground merely culturally repulsive, or a biological need for the species to interact with live things? The bold hypothesis put forward is that it is organically bad to separate children from surfaces containing other life, other children and greenery: further, that high-rises cage and have serious biological effects on children.

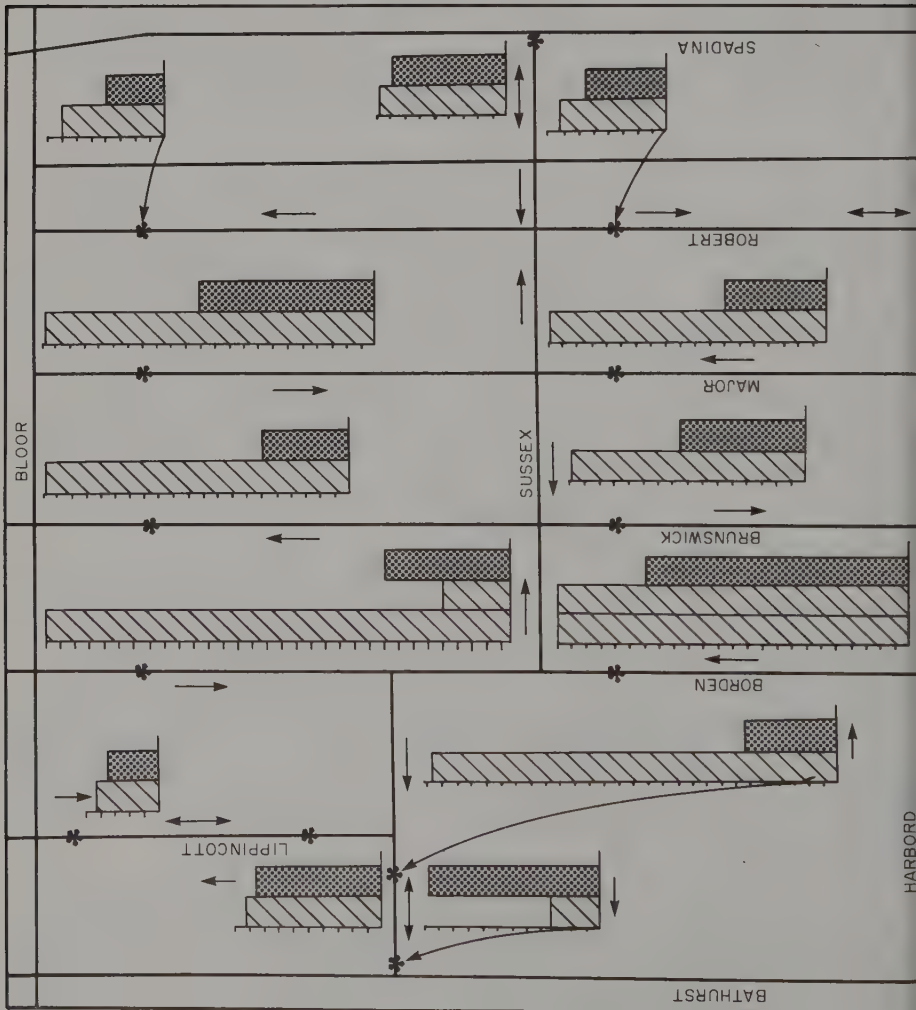
The role of play is central in this issue. Until recently, play was not considered a viable subject for study. Consequently, we have limited information on play patterns and the underlying factors that give structure to the patterns. While a child plays for the sake of playing, many would agree that play is a fundamental requirement in the child's emotional, social, mental and physical development. In play, a child seeks to explore the local environment, and at the same time is affected by the environment, especially the physical surroundings. From fieldwork conducted, it seems that children explore space because of learning motivation.

Understanding the caging effect of high-rises can be usefully approached by the concept of 'home range', some segment of space an individual child uses in playing. We can analyse the home range from a number of viewpoints:

**BATHURST-BLOOR
TRAFFIC MAZE**

MORNING
TRAFFIC COUNT
7:30-8:00 A.M.
14/02/74

- After the Maze
 - ▨ City of Toronto Count
 - ▧ Before the Maze
 - * Location of Count
- Each mark on the graph indicates five cars.



(1) the spatial nature of play can be described in the form of distinct zones of occupation and interaction, which spread out from the home;

(2) certain pathways tie together parts of the home range, probably linking distinct points or nodes of activity;

(3) definite boundaries exist which represent the actual extent of a home range in terms of most frequent use - i.e. there may be peripheral zones or nodes where activities occur less often.

The home range will change with age and experience: a three-year old is kept within eyesight or shouting distance, whilst a ten-year old will travel further and require less direct parental supervision. However, the effectiveness of any parental guidance is more curtailed in high-rise than in low-rise housing.

Activities: Comparison of Observed Activity Proportions of Low and High-Rise Children.

Activity	Low-Rise Children %	High-Rise Children %
Running and Walking	40	30
Bicycles and Wheeled Toys	15	9
Ball Games	6	8
Playground Equipment	3	8
Passive Play	19	30

Source: Based on Pollowy (1973).

table I.10

F: Data from the Annex Region.

To study these problems, a high-rise apartment building, 35 Walmer Rd., some ten blocks east of Christie Pits, was selected. The local residential area, known as the 'Annex' is situated immediately north of our base camp, and contains a mixture of housing types. Most apartment buildings, however, are 'adult' in nature: there were approximately 35 children aged 13 or under in the selected building, compared to an area average of less than ten. In fact, in 1965, when plans for the building were initiated, the present owner approached an architect to design an 'adult building'. Yet children live there today. Forces of urban land economics dictate that high-rise developments in the inner city

WALMER RD.-ANNEX: High and Low Rise Study Sites

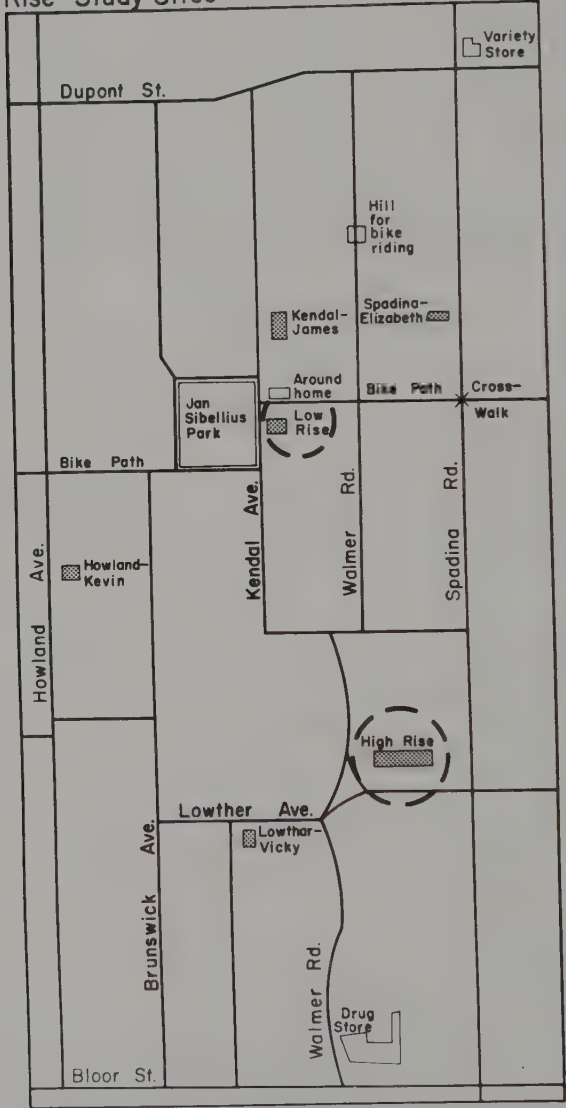


Fig. 38

are likely to be adult-oriented. Developers respond to these forces. Rather than providing accommodation geared for children's needs, they provide parking space for machines.

The Mental Map of a Low-Rise Child.

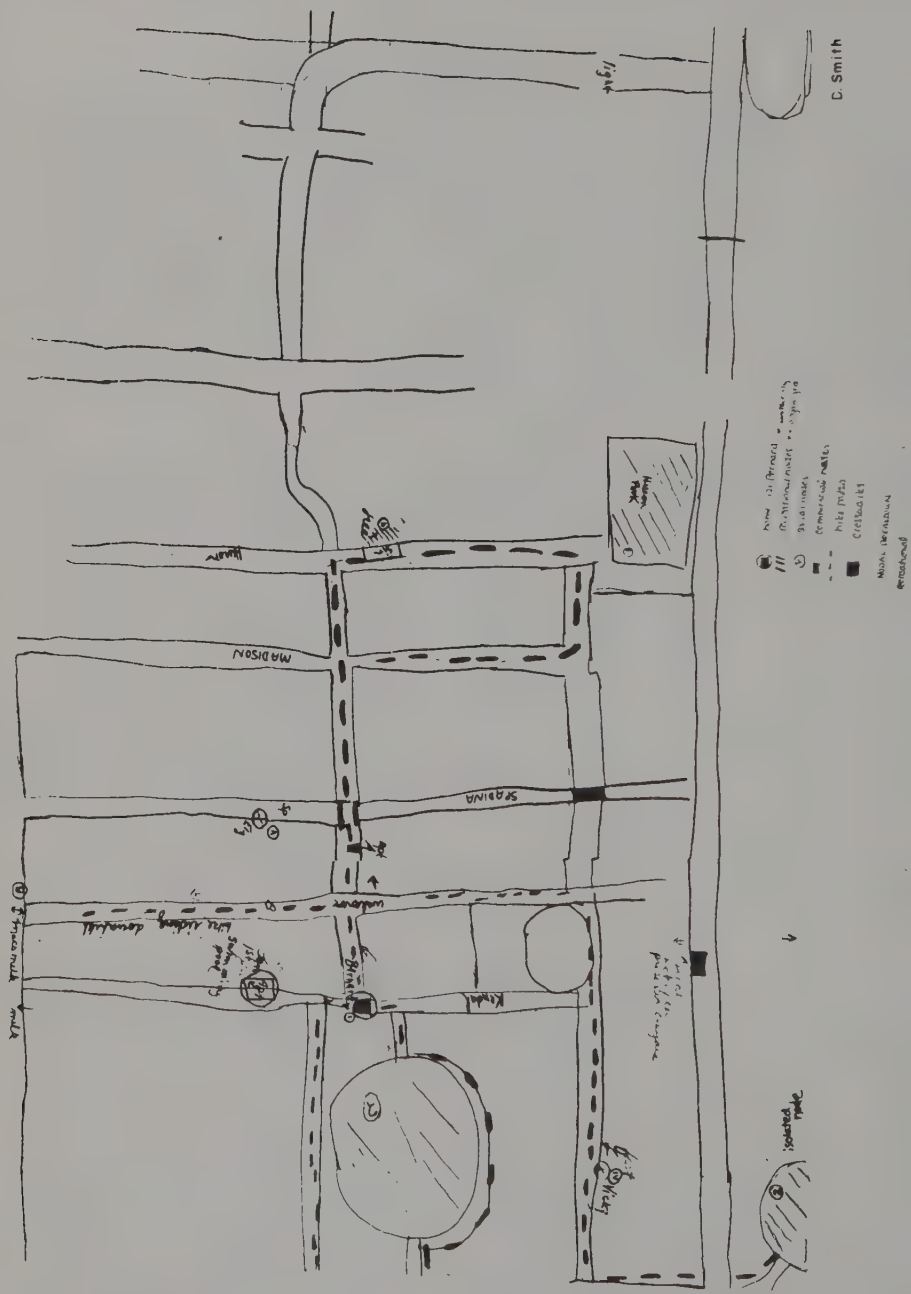
It is hypothesized that children in low-rise homes adjacent to the sample high-rise building have an advantage over apartment children, in terms of play and learning about their local environment. The micro-mapping studies we carried out sought to compare the two types of residential situations. The local environment of the Annex offers all children the same objective set of play opportunities, and with further controls on age and sex of children, some strong contrasts can be drawn. Play patterns depend in part on the way in which children perceive local opportunities, as well as on their past experiences. Actual play behavior can be studied by mapping the home range of children, helping to construct with them a 'mental map' of their play territory.

From several studies made, a typical example of the contrasted maps, can now be given. A map illustrates the Annex study area, and it can serve as an objective reference for the following descriptions of each mental map. The first such map was drawn by a nine-year old girl who has lived at 121 Bernard, a low-level house for two years. Significant characteristics of her map are as follows. It is composed of nodes, paths and edges. Lynch (1960) suggests that home range images can be analyzed spatially with respect to these three structural components. Paths are channels along which the child usually moves. These are the routes of 'child flow', the medium by which children observe and interact with their home turf. Along paths then, environmental elements are arranged and related. Frequent paths have been keyed. Edges are boundaries. They represent the furthest extent of home range because beyond these edges children say that they feel lost. The environment is unfamiliar to the child and the child is unable to associate with anything around him.

A child's structuring of space becomes implicit in the term home range. The child must orient himself successfully to implement decisions with respect to play behavior. The girl's mental map reflects this. Three boundaries, Dupont, Bathurst and Bloor are easily seen, while one boundary, Huron St. requires more interpretation. A discussion of nodes clarifies this.

Identified nodes are points of interaction for the child occurring upon frequented pathways. Mental reinforcement of nodes is a function of the degree of contact with these places which in turn depends again on 'child flow'. With reference to the map, play nodes can be categorized as follows: (1) recreational - Kendal Park, Huron Lot, Huron schoolyard; (2) social - Kevin's house, Jane's apartment; (3) commercial - Mac's Milk, Shopper's Drug Mart.

Mental Map of a Low Rise Child, Girl Nine Years Old



D. Smith

The map extends beyond Huron St. because of an isolated node: Varsity Arena, where the girl goes skating once a week in the winter. The area between Huron St. and the node is indeed mentally dim; streets run incomplete and are unnamed.

Spatial variation in scale and in detail and density of elements is evident from the map. Mentally bright areas are blown up out of proportion when compared to the map of objective reality. For example this girl spends most of her day in Kendal Park during the summer. She attaches great importance to this node. The real world distance between Brunswick and Kendal is equal to that distance between Howland and Brunswick, yet, it is perceived as two and one half times this distance in order to compensate for the importance of the park. Detail and density of elements decrease with distance from her home. Streets such as Dalton, Albany and Prince Arthur are not shown within her home range. This results from a diminution of interaction with increasing spatial separation.

Home Range of Nine Year Old Low-Rise Girl.

Distance	Activity	Frequency/Week
Around house - backyard sidewalk	general play	7
across street	Kendal Park -playground	7
Next block	Walmer Road -bicycle riding down hill	5
3 blocks	Magen's -social	1
4 blocks	Kevin's -social	2
5 blocks	schoolyard general play	1-2
6 blocks	Huron Lot -playground	1

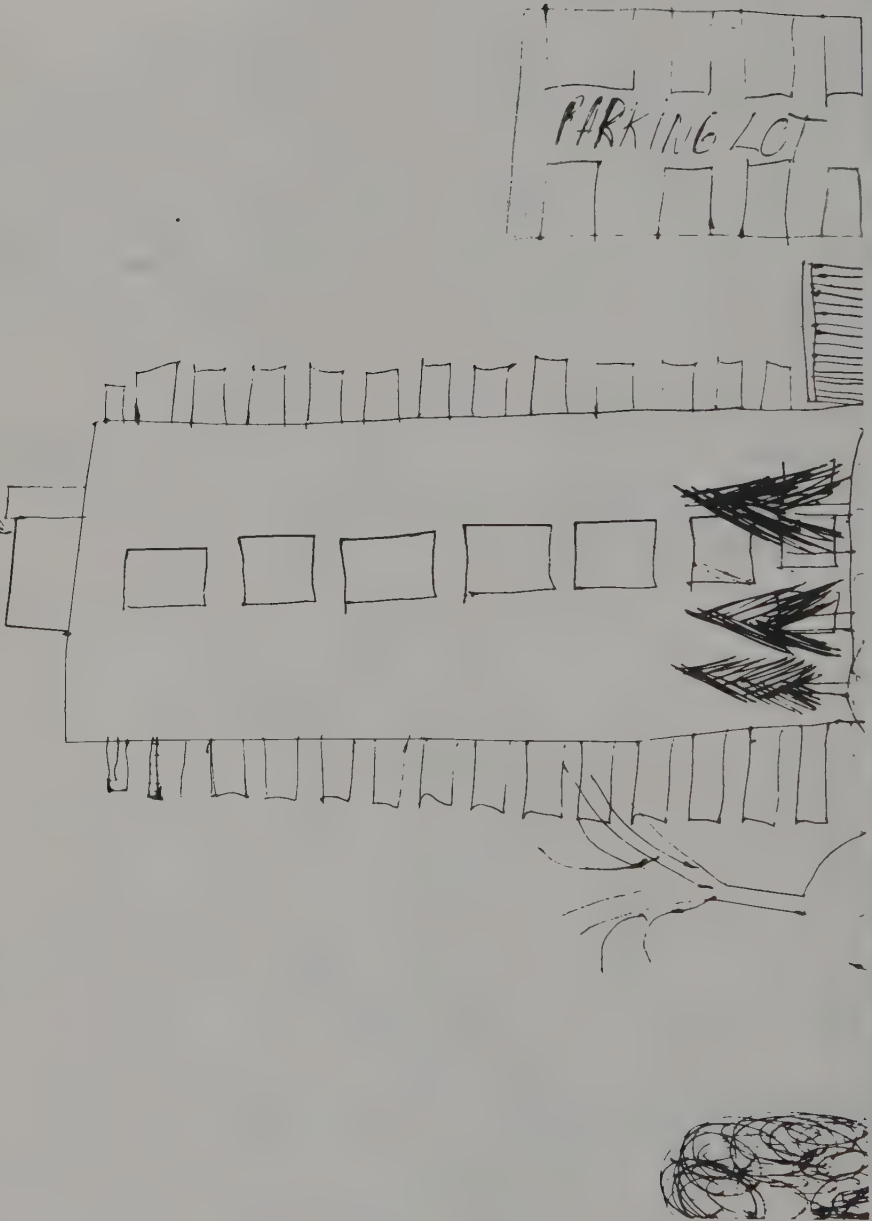
Outer boundaries of home range - Dupont, Bloor, Huron, Bathurst
Isolated node - Varsity Arena.

table I.11

The Mental Map of a High-Rise Child.

The next map is the mental map of a nine year old girl who has been living on the 4th floor of the study high-rise, also for

Mental Map of a High Rise Child, Girl Nine Years Old



D. Smith

two years. Her perception of her home range is more of a picture than a map. She has drawn a picture of her apartment as it appears from the eastern grass area of the lot. Apparently this is the mentally bright area of the environment which she knows and this is reflected in the great detail and density of elements within her drawing: (1) the apartment building with side windows, balconies, chimney and elevator shaft room; (2) the three trees in front of the building and the tree just to the left, all on mounds; (3) grass; (4) visitor's parking lot with individual parking spaces; (5) the stairway to and from the underground parking lot.

Such detail shows a high frequency of contact with the area. Most of her play takes place within the confines of the apartment lot, especially on this side of the building. She plays kickball here everyday as well as playing ball against the side of the building. The girl was also observed running through the sprinkler here. Ball play also takes place in the parking lot everyday and this is shown in detail in her picture. She also mentioned that she 'plays' much more inside her apartment watching television and playing with stuffed animals. When asked about play spaces inside the building she said that stairways and halls were not used because people complained.

The high-rise child also mentioned that she occasionally played with two friends, one on Howland Ave. and the other on Brunswick Ave., yet was not motivated to draw her map in such a way so as to include her two friends. Her picture is a vertical representation of space while the low-rise girl drew a strictly horizontal impression of home range.

By focusing upon the origin of the process underlying play patterns, possible reasons for this spatial difference may be realized. Most of her time is spent in her apartment unit and around the apartment lot. The large amount of contact with these places reinforces her image of this part of her home range. The building and its surrounding nodes which occur outside of this boundary seem to have less mental meaning because of a smaller degree of contact with these places. Movement is predominantly back and forth between the apartment unit and the outside grounds. Child flow then takes place along the vertical dimension within the elevator. This contrasts to the horizontal flow of the low-rise child who has many more nodal contacts that occur up to six blocks from home. Child flow ultimately affects the image, so in the case of the high-rise girl, there would be little means of accommodating her friends' houses within this up and down framework. This interpretation is reinforced in her representation of the parking lot: while in objective reality it is horizontal, it is depicted vertically in her picture.

The high-rise mental map shows a definite visual home orientation when compared to the map of the low-rise girl. The same opportunity surface exists in the real world for both children, yet looking at the mental maps it is clear that pathways

are minimal for the high-rise child. Her home range image reflects this thought as opportunities are not encountered to anywhere near the extent as those occurring along the low-rise child's horizontal flow. Repeated experimentation showed the same geographic results. Spatial restrictions are direct results of the high-rise environment.

The High-Rise Environment.

In the high-rise building physical restraints and human restraints cannot be separated. They are involved in a cyclical relationship and tend to reinforce each other over time, ultimately resulting in the polarization of play patterns seen in the mental maps. We must realize the implications when the girl leaves her apartment unit in order to journey to the ground. Distance separation from parental supervision becomes extreme, and the actions of a child several stories below cannot be followed from the apartment. The child is then told to stay within the boundaries of the apartment lot which lessens parents' worries yet at the same time restricts the child. Parental behavior is a function of the physical nature of the high-rise building, causing, and over time reinforcing, a human restraint, leaving the child with a dominant image of the apartment environs.

Such restrictions are not placed on the low-rise girl. Parental supervision was much easier from a house. Eyesight and shouting distance gave this girl a substantial area in which to play and become accustomed to being separated from the home. This has resulted in greater horizontal extent with increased frequency of nodal contact. Again this has strengthened the mental image of the home range. The high-rise environment prevents the child from expanding her home range.

The high-rise girl commented that she spends a great deal of time inside her apartment watching television. She expresses boredom sometimes because she plays in the same unimaginative space daily. Parents also express fear of many unsupervised and dangerous areas within the building: stairways, underground parking lot with cars coming and going; lobbies and corridors which may attract strangers, and elevators which have a long history of malfunctions. When a child becomes bored, it is safer to have her inside the apartment unit rather than meandering through the building. The inside of the apartment itself has not been designed for play. Lack of sufficient space discourages many activities while the noise factor has been drummed into every child within that apartment by both parents and management.

"... and you can't sort of play around because you can't yell in an apartment because it'll wake all the other people up and then they'll make a complaint and the janitor will come
 ...in a house you have more fully to run around, stomp, but not in an apartment because the people under you can

hear you stomp and you can't yell. In apartments, its for everybody."

(Casey, 8 years old - lived in study high-rise for 6 years - now living in a house).

"...we play tag up and down the stairs but there are special rules like no yelling or loud talking..."

(Dave, 12 years old - lived in study high-rise for 2 years - now living in a house).

"...kids are caged in, restricted. It's always "don't do that"; management checks to see if my son is running in the halls and making noise. In the lobby: no noise and no waiting for mothers in order to go back to the apartment, no sitting on chairs, can't touch windows and drapes and see if the mother is coming, no waiting for the ice-cream truck. Parents understand but kids can't - they're just kids."

(Mother of a 4 year old child on the 4th floor of the study high-rise).

In talking with other tenants in the building, many mentioned the fact that management tended to be strict and authoritarian when it came to curbing children's activities..."the kids in the building are artificially well behaved, (where they are visible), due to the landlord who is always in the lobby." Again the role of management in such circumstances is a function of the high-rise environment. The building, with no specific area given over for children's play, is not designed to provide for their needs. The environment is stiff and rigid against children's spatial needs.

The nine-year old from the low level home is not affected to the same degree by spatial and noise restraints. Sidewalk, back and front yards are popular and creative play areas where noise levels are not curbed. The child can be close to home and still have an areal quality to her play, whereas the high-rise child tends to stay within the apartment unit.

Children Time Distances in High-Rises.

Children at nine years are physically able to move a fair distance from home. The physical structure of the high-rise building, however, tends to confine the child to a very small part of her potential area: accessibility to the outside is limited in terms of actual physical distance and time distance. For example, one can calculate the distance from an apartment unit to the front doors and to the outside: (1) apartment door to elevator - approximately 48 feet; (2) 4th floor to ground floor - approximately 6 feet in elevator; (3) distance from elevator to front door -

approximately 28 feet; (4) distance from front door to Spadina Rd. grass area - approximately 130 feet: total approximately 232 feet.

Horizontal space has been thrust up vertically and the journey to the outdoors becomes complicated: (1) a long distance is involved just to get outside; (2) play things such as bicycles are too cumbersome to take along, the elevator is too small, distance is too great; (3) time distance is extreme in the high-rise especially during the wait for the elevator. This sometimes results in stairway use to reach the ground floor which involves even more exertion. The child must pass through numerous doors and in getting back inside the apartment must use the intercommunication system. For the high-rise child then, back and forth movement between her unit and the outside causes her to stay inside her apartment unit. Much effort is involved just to go outside. The problem becomes compounded due to loss of supervision once the child is outside the unit.

An isochrone map of the study high-rise apartment shows the time it takes to arrive at any point in the building from the main entrance. It is, then, also a measure of the time it takes to leave the building via the main entrance from any point in the building. Absolute terrestrial location is kept and relative location is illustrated by lines of equal time distance. We are again looking at the problem of accessibility within the high-rise in terms of relative space.

The space in which the children and their parents live in the high-rise is sometimes more psychological than it is absolute. If we are concerned with explaining spatial interaction in the high-rise environment what is important is first, how far the apartment unit and the outdoors are from each other and secondly, how far the people think they are apart. The first point when seen in terms of time gives a great deal of relevance to the second point. Time is a more powerful determinant of perceived space than absolute distance and so is a better explanatory variable of spatial behavior. The isochrone map is the result of man's restructuring of horizontal space in the vertical dimension. The isochrone map gives then another means of explaining the effect of the high-rise environment in the caging of children.

The isochrones can be described as concave down. The reason is simply this: being farthest from the elevator on any floor is the same as being closest to the elevator five floors up, if we look at this in terms of the time it takes to get out of the main entrance. More contact with the elevator, however, is inevitable on higher floors in the building.

The parents' behavior in the building suggests strongly that they also tend to see the factor of time as important. Once the child leaves the unit, supervision directly by eyesight or by shouting is lost. Time separation causes them to worry about things that come between the unit and the outside: elevators,

underground parking lot, roof, stairways and hallways. The high-rise building encourages parents to keep children inside the unit.

In the case of the low-rise child though, accessibility to the outside in terms of both physical and time distance is much better. A path of 232 feet which takes the high-rise child just beside the building gives the low-rise child a large area of potential interaction. By the time the high-rise girl has reached her front door, the low-rise girl can already be playing in Kendal Park with her friends. Accessibility then encourages this girl to interact with the outside environment and recognize her opportunities. This has resulted in a clear and well-organized mental map. Accessibility to the outside environment though seems to discourage the high-rise girl from recognizing these same opportunities and this is reflected in her small and confused picture of home range.

The movement of a low-rise child leaving his front door will now be discussed. The critical difference between the two spaces is that the low-rise child as soon as he steps out of his door is outside and immediately has an area to interact with and not a linear corridor. The child's pathway is not determined for him because he isn't moving in a confined space: he has his choice of direction. The graph attempts to illustrate the conceptual framework of such movement. The implications of this comparison are illustrated where quantity of space has been correlated with time. The important points here are first that the low-rise child is in the outside environment for the complete length of time. The high-rise child doesn't reach the outdoors until around 90 seconds, by which time the low-rise child has completed a considerable traverse of horizontal space. Secondly, the high-rise child's space expands to a large factor once he stepped outside but it is clear from the graph that he will never catch up with the low-rise child.

The Areal Differentiation of High and Low-Rise Spaces.

Looking at the caging effect of high-rises as compared to low-rises as a problem in theoretical geography, the high-rise child is placed into two different dimensional spaces. The corridor in the apartment is essentially a line - one-dimensional- and the elevator a point - zero-dimensional. No area at all is available in the theory of the line land and point land of high-rises. The low-rise is in a two dimensional space - area land. The area available is to the square of the distance which is a simple function of the time the child has to travel.

In the empirical world of reality, both theoretical extremes exaggerate the differences. The high-rise corridors do have some small areal extent. In the study high-rise the corridor was 100 feet 6 inches long and 10 feet wide. There is even some tiny area to the elevator car, 6 feet by 8 feet or 48 square feet. The low-rise child does not have a perfect 'to the square of the distance' area in front of him as if he had landed in a parachute in the middle of a larger grassy plain, a uniform plain. His essential

Actual & Theoretical Caging Effect of High-Rises

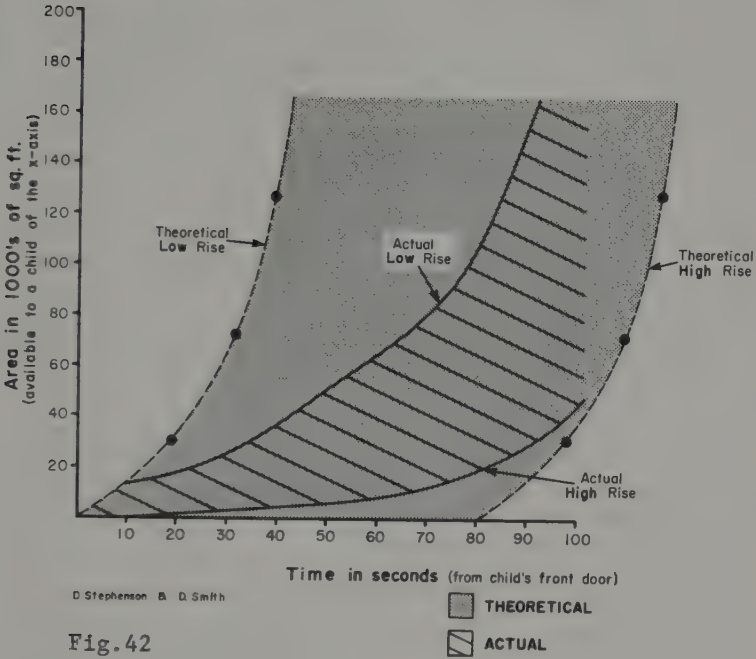


Fig. 42

Movement of a Child From His Front Door in a Low Rise Home

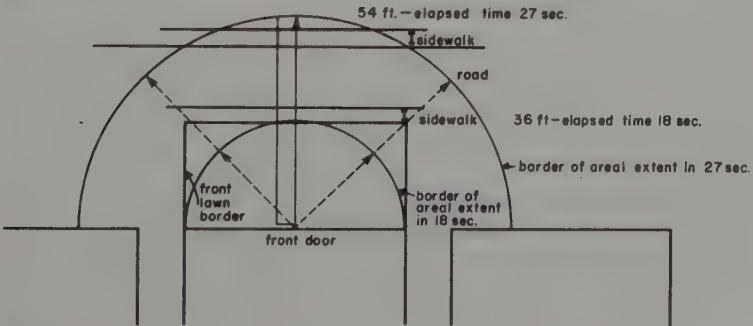


Fig. 43

two-dimensional world is full of unavailable areas, such as buildings. But the theoretical analysis provides the limits and clarifies the basic geography. Both the theoretical and the empirical actuality are shown on the accompanying graph.

The area available to a child in a high-rise was measured in ten second intervals by sweeping out in all possible directions from an apartment, with a field team of geographers. Measurements were started from an eighth floor apartment, and the area swept out was calculated using the architectural plans for the building. Essentially, the only area available to the child is the halls and stairways, until the child reaches the ground floor, at the eighty second mark.

The area available to a low-rise child was measured by walking a group of fifteen geographers in all possible directions from a single family dwelling adjacent to the high-rise. The distance covered by each person was marked in 10 second intervals, and the area was measured from a planning map of the area. Only the area available to the child was measured: that is minus buildings and fenced areas and so forth.

The graph is a measure of the spatial variations which exist between a high-rise child and a low-rise child. To put it in human terms "In an apartment, you feel sort of caged in more than a house. In a house it's your own". (Casey).

Machine Spaces versus Children Spaces.

Children in high-rises have been given no specific space for play. They live in a hostile environment which does not facilitate play at all. Space is required by law for automobiles. The study high-rise has a large visitor's parking lot and a huge underground parking lot for a total square footage of 70,933. Access to the underground parking lot, to the visitor's parking lot and to the front of the building has been provided.

Children lose in a competition for space inside the building. The physical and human restraints of high-rise living deny them an area in which to play. Children in the study high-rise attempt to seek out areas for play but this puts them in very dangerous and 'out of bounds' spaces: underground parking lot for hide and seek; visitor's parking lot for skipping; access driveway for bicycle riding; elevators and stairs for tag, and corridors and lobbies for general play. Parents express worry for their children in these places while management curtails all activity by imposing excessive noise restraints upon the children.

Spatial restraints result in different forms of traditional activities: tag is played with special rules about noise; bunting is allowed during baseball games and one mother allows her four year old son to play ball hockey in the hallway.

It is a general hypothesis that machine spaces have been encroaching on life spaces, especially those of children. Therefore the amount of space assigned to automobiles sheltered in high-rises is a crucial parameter. In the study high-rise, no floor space was designated specifically for children. It is recommended that developers provide as much floor space for the shelter of children as they do for automobiles. This could be accomplished even in existing structures with the following type of spatial allocation: the roofs of all high-rises could be converted to kindergartens complete with grass and potted trees and shrubs; children could have access through special elevator buttons at their level that would take them only to the supervised roof garden; on each floor one apartment could be converted for play space. But regardless of the details of the provision of play spaces for children it is the intent that should be written into the law: 'as much space for children as machines'.

The experience of the high-rise child is universal. "Observations indicate that the majority of children under 5 living above the 2nd floor rarely play with children their own age due to the lack of safe play opportunities; they have been remarked as being unusually quiet, reluctant talkers and uncurious about each other. They also appear to be short on general information. It has been further noted that some young children rarely go outside, and are in fact extremely isolated." Pollowy (1973). This suggests that the bottom two floors of all existing high-rises be reserved by law for families with children and above that level children be banned since a health menace to them exists. 'Childrenizing' high-rises with measures such as roof gardens with special elevators, play areas on each floor, play space to displace car space, seems a dubious and expensive half-measure but certainly an improvement on existing conditions.

Playless Playgrounds.

Is not provision for high-rise children made already? It is not. In addition to the fact that the child is imprisoned in the building not only by the physical architecture of the building but by such human restraints as mothers not wanting their children to be out of their control, or at least the control of supervised play; there are many 'playgrounds' constructed to discourage play. School playgrounds like high-rise playgrounds, are often anti-play playgrounds in fact. They are so constructed that adults can justify to each other that a certain amount of land has been set aside for the children but the children will not play on it unless forced into the space by forced attendance at the school. Children will 'play' no matter how pathologically anywhere with anything. They played in concentration camps. They 'play' in the slums of Detroit in toyless spaces with such pets as cockroaches, or 'toys' like a dirty white bean on the floor. If children are forced to stand in the yard outside the school they will play there no matter how hostile the playground is to play. Consciously, or worse, unconsciously, school officials want it that way. If children are

not on the playground after school, in the early evening or on week-ends and holidays, then neighborhood cranks surrounding the school (it takes only one) will not harass school administrators; a child cannot break his arm and parents cannot bring suit against the school system. So for many powerful, emotional reasons, 'playgrounds' are deliberately made playless.

Devices for achieving this are numerous, such as: crushed gravel surfaces which allows the glass from broken bottles to accumulate on the ground; deliberately using dull, playless equipment; failing to provide supervision to protect the young from bullies. In London, England, some schoolyards are protected from children by locked high fences; one can occasionally see where children have burrowed holes in the fences, like large rat holes, to get at the play space inside.

What is the defense from this subterfuge of appearing to provide space for children to play but in fact engineering them out of the space? It is to change zoning laws from engineering-architectural specifics to human specifics. The law should read so that children would be found playing in such spaces. In high-rises, developers should be required to provide facilities which assure that children use them more than at present. Since there are many ways to skin children out of play, there are ways to skin developers out of 'trying', 'failing', then 'blaming children' for not using anti-play playgrounds. This is not without precedent in law. We require that motorists be sober when they drive not that they drink so many drinks over such a time limit. We require them to be sober-behind-the-wheel. Similarly we can require that spaces set aside for play be used for play, no excuses accepted. If architectural counselling is needed because developers have learned how to make toilets flush in the bathrooms they build, but, have neglected to learn how to make children play in the spaces they build, so be it. If the law has teeth, developers will seek out the skill. If not, they will not.

Mass Application Without Experimentation.

High-rises, important in their own right to Toronto - they contain 36 percent of the total metropolitan population, are yet another example of how people require testing of small things, like pills, but not large things, like landscapes. The side effects of engineering marvels are never considered. It is time people built experimental regions so that environment shapers like high-rises and transportation systems, can be tried out in life, before committing whole nations to them. The disaster of trying to mix children and automobile machines in Christie Pits and children and the elevator machines in the Annex was both avoidable and unnecessary.

III: Upper Gerrard Ravine.

We can learn great things from small areas. Leakey's Olduvaiian Gorge is a small place relative to the search for more understanding of mankind's origins. The excavation of Troy was disproportionate in importance compared to the site's size. Geographers have not learned this simple truth. They seem to feel that to examine important geographic questions, of the relationship between man and his natural environment, large parts of the planet have to be studied. Climates of continental scope were assumed to pulsate causing civilizations to rise and fall and so forth. The scale of the evidence made it difficult to check in the field. Untestable hypotheses become metaphysics not science. Such was the fate of early environmental studies. The research design suggested here is at the opposite scale. At the world scale, to spatially separate out mankind, nature and machinekind (tools-weapons), is impossible. As mankind advanced so did his tools-weapons and 'The Death'. Much pessimism about the species' survival chances derives from this geographic evidence. At the micro-scale within the urban scale, the three basic spaces separate into nature, men and machine spaces.

A: Geographic Theory of Spatial Survival.

To further refine the spatial instruments, mankind is broken down into three subgroups: children, women, and men. Thus the three categories: nature, mankind and machinekind, become in field work, five: life (nature or biomass), children, women, men and machines. Detailed mapping of the five spatial categories tells which combinations are deadly to both children, and life, and which are not. The hypothesis is that there is a continuum of antagonism from life, to children to women, to men, to machines. Combinations in that order are not deadly, but 'miscombinations' cause deadliness. Children in high biomass spaces are safe. Children in high machinemass spaces are in danger and therefore, in an 'unnatural' spatial combination.

The most amazing biological group is the machines. Even now, it is barely recognized that machines fill biological roles; that they are not passive. They feed back dialectically on mankind. Often, their effects are hidden 'side effects' which, later, surprise us, such as, when automobiles choke us, high-rises 'bury' us, or 'defensive' weapons turn cities into deep lakes and bays of the sea. Machines have a geography of their own. They dominate certain spaces; this can be mapped. The machine spaces are taking over more and more of the city. Streets are widened (sidewalks narrowed), ravines filled, lakeshores turned into railway yards, airports and industrial sites. The aggression of machines seems endless.

The Five Biological Groups.

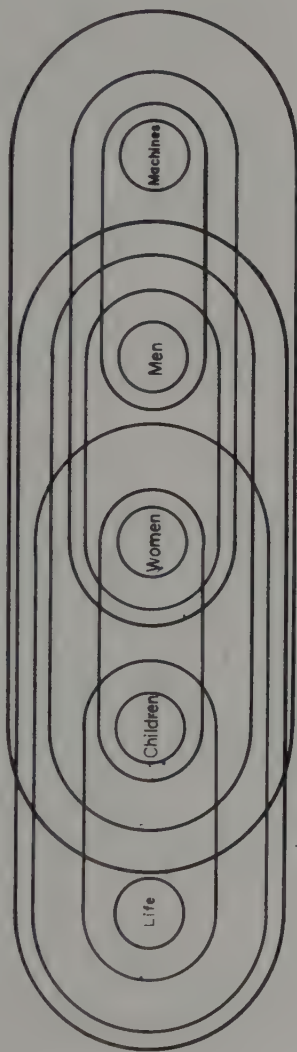
A fascinating property of the five elemental spaces: life,

children, women, men and machines, is that these spaces mix in pairs in the same order: life and children, children and women, women and men, men and machines. Along the continuum of the five, the pairs children and men, and women and machines are relatively rare and the most extreme pairing children and machines, the rarest. The triple combinations also enforce the continuum: spaces containing life-children-women, children-women-men and women-men-machines. The combinations of all four, life-women-children-machines and children-women-men-machines is also fairly common. The continuum of spaces from children at one end to machines at the other, appears to be the natural biological order of spaces in the sense that where this order is violated the space appears to be troubled or even deadly.

Take the unnatural combination of children-women-machines. This is a relatively rare spatial combination which seems to occur most frequently with mothers driving cars to school or on shopping trips. Mothers drive with care moving more slowly than the rest of the traffic as if they instinctively recognize the danger in the combination of children-women-machines. The unnatural triplet of placing children, men and machines together can be deadly to the children; it is such an antagonistic spatial arrangement. American bomber pilots with their machines in Cambodia raining down death on children is an extreme example. Unnaturalness can be measured both by the deadliness of the space, and by its rarity. To establish these points consider the unnatural pair of children-men. To see children with men mixed in one space is rare. One sees fathers with sons, as in boy scout outings or junior hockey leagues, but men with girls or men with boys and girls is more rare. Children with machines is a deadly space. It is not immediately apparent that this is so. When the factory system first appeared it was argued that child labor was good for the children's characters. Men considered to be serious men, still claim that mixing children and automobiles in the streets teaches them to cope with automobiles; that otherwise children would grow up vulnerable to automobiles. This minority position justifies high automobile 'accident' rates to urban children. The history of mixing children with machines has been to try it on a massive scale with child labor in factories, road hockey on roads, television in play rooms, until disaster removes the child from that particular machine space. No one has produced a general principle of the possible pernicious effects of mixing any machine with any child.

Life Like Properties of Machines.

Of the fundamental five spaces, the machines are generally thought to be dead, like rocks. How could they be considered as biological? Most simply, look at the spaces they occupy. They kill everything. It can be argued that men do the killing and simply direct the machines. It is claimed that mankind, not



Venn Diagram of Spaces of Life, Children, Women, Men and Machines

machinekind, is deadly. If so, then where mankind was heavily present, like at a trade union picnic, everything else should die. Except for some trampled grass this is untrue. But machines sitting by themselves, such as hundreds of empty automobiles in a parking lot, are in spaces sterile of life. It can be argued that man cleared off the parking lot for the machines. But the bulldozers did so; true, with men operators, but to satisfy machine needs. Automobiles cannot stand life around them, just concrete. Besides machines kill life around them without human instruction, even against human desire. The moon-like landscape caused by the nickel smelter in Sudbury is repeated in less dramatically visible landscapes around all sorts of machine vents. The species will not kill itself off with its bare hands, but with the help of machines.

What is essential to the reproduction of the species is men and women together - heterosexual spaces. Homosexual spaces, especially men alone with machines, are the most deadly spaces to children. Once heterosexual space is established, the children can prosper there.

Strategies to Test the Hypotheses.

The Upper Gerrard Ravine provides data for experimental confirmation of the theory. The following mappings have been made or are being considered: the amount of biomass in the ravine and the immediate surrounding area and the correlation with the presence of children. Children, especially boys, use the ravine heavily. Both men and women use the abutting gardens and edges. Where machines abutt or destroy the ravine, danger exists to children. Children play 'chicken' on the railroad tracks, even lie down between the tracks and let the trains pass over them. The sex ratios on the trains are being examined. Freight trains are all male. Commuter trains, with some females aboard might show a lesser 'accident' ratio with children. The 'machine mass' of the trains, as measured by their energy output, is compared to the biomass, as measured by energy on infra-red photographs of the space in which the train passes. Similar measures are being made of the factory next to the ravine and the automobile machine spaces on the streets. What is the sex ratio of drivers when children are hit? It seems that women with young children in automobiles drive more cautiously than young males, not fathers themselves. Such questions of the biological content of the space are being studied in detail.

Spaces can be classified by their biological use, the five elements mentioned in all their possible combinations. Then these various biological land-use categories can be tested as to their frequency because, if bad mixes cause serious injury or child killing, then one should expect their occurrence to be limited. Their deadliness should lead to mutual exclusion, fencing, and so forth. So all the pernicious effects to humans in the ravine

are carefully mapped and compared to the biological land-use map to see if the hypotheses are confirmed or not. For example, the most extremely incompatible, and therefore deadly, land-use mix should be between nature (life) and machines. Therefore, the railroad line in the ravine should represent a large drop in all life. It should be less antagonistic, but still extremely antagonistic, to children - still less antagonistic to women and still less yet to men. Similarly, the factory immediately adjacent to the ravine and a source of play material for the ravine children, should be a male space and the children should not be allowed there. Fences, angry shouts, signs and so forth should indicate this. The roads that surround the ravine and define its truncated ends should show similar geographies including more men in the cars than women and so forth. The wild ravine itself should teem with children, have perhaps some women, little or no men and no machines.

Combinations should similarly test the hypothesis. For instance, the combination of four that should be expected in the greenery is a family on a picnic: nature, children, women and men. Such combinations as life-children-men-machines should be rare.

B: Empirical Facts about Upper Gerrard Ravine.

Of the three major study areas (Christie Pits, the high-rise in The Annex, and the ravine), the best child environment is seen in the Upper Gerrard Ravine, due to the combination of low-rise houses and the ravine itself. This best of all children's environments is the most threatened. The ravine has already been decimated by roads, a factory and a railroad, and now faces the threat of total destruction by the Scarborough Expressway. It is a geographic irony that places where children most safely and creatively play are the places perceived to be 'empty' by the downtown planners. The 'open spaces' planners are constantly constructing are filled with grass but few children. The 'deserted' landscape, the empty fields not yet filled with houses, the undeveloped bluffs and lake-shores, and especially in Toronto, the ravines like the Upper Gerrard, are where the children have some of their best growing up adventures.

General Characteristics.

The research effort during the summer of 1973 was not able to test the hypotheses of space mixing to any great degree, but valuable insights on the way in which the ravine is seen by the community as an important life space were obtained. The Upper Gerrard Ravine is approximately $3\frac{1}{2}$ miles east of the main downtown intersection (at Yonge and Queen) - compared to Christie Pits, some $2\frac{1}{2}$ miles to the west of the same point. Well within the City of Toronto limits, the ravine is small (about 25 acres) - but is a highly concentrated biomass space, with much underbrush, trees, birds and small animals. The surrounding community is primarily residential with similar proportions (about two-thirds) of low-rise

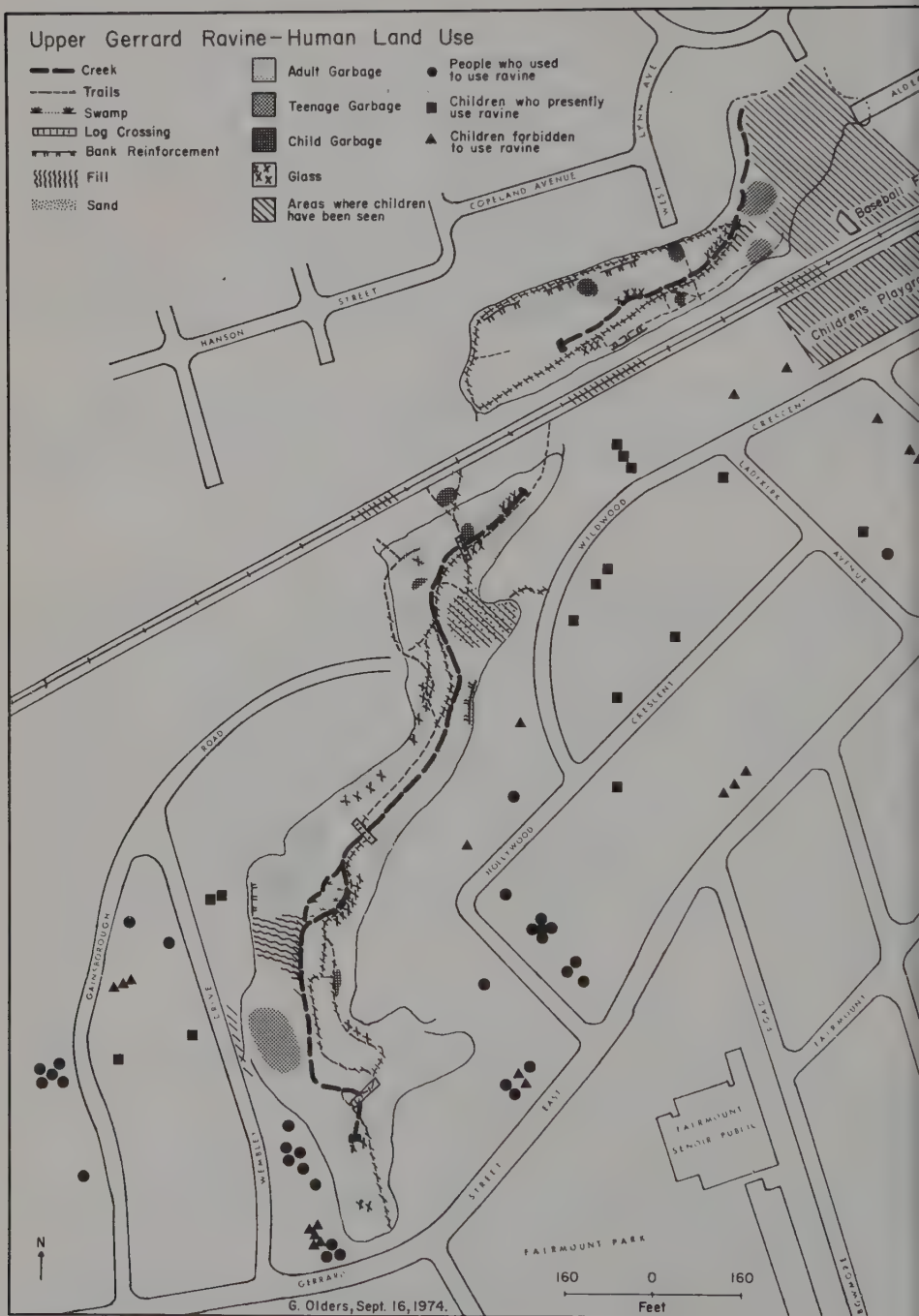


Fig. 45

home-owners as in Christie Pits. It is also relatively a low-income neighborhood. In this respect it is unlike many other residential districts close to ravines in Toronto - for example, the Glen Stewart area, just over one mile to the south-east. In common with many natural spaces in Toronto, however, the ravine is threatened by urban development, and especially increased machine mass space.

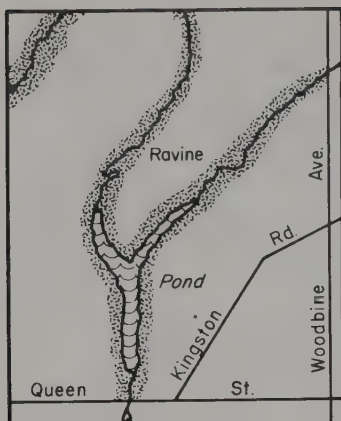
The ravine is divided into two parts by the Canadian National railroad tracks: the larger southern half is most often referred to by residents as the ravine, since the area north of the tracks has much less vegetation and is largely uninteresting in terms of relief. The southern part is 1550 feet in length, with an average width of 250 feet (ranging from 125 to 400 feet), compared to an area 850 feet by 175 feet (average width) north of the railroad. The ravine stream originates from a sewer pipe in the north-east corner of the northern section, trickles into a culvert under C.N. fill into the north-east corner of the ravine proper, meanders, through swampy patches and a pond across this area towards the southern boundary at Gerrard St., where it disappears into a sewer.

As with all urban exploration work, the nature of research endeavors in the area was determined by working with local residents. The Upper Gerrard Ravine Committee was formed to combat the threat of the Scarborough Expressway and to take whatever steps were necessary to preserve the ravine and restore it to its former natural state. In addition, members of the committee were extensively involved with the research effort, particularly in drawing up an interview guideline (rather than a formal schedule) for the informal discussions which we had with local residents. The interviews provide the basic data used in this section, as well as evidence on historical changes and attitudes towards preservation and restoration.

The ravine was used by people much more in the past than today. Recollections by long-time residents, (of 74 families interviewed, 14 had lived there for more than 12 years and another 30 more than 20 years), were substantiated by reference to old maps and photographs. Most of the older residents felt that the ravine had not changed much in the last twenty years, except for some areas of ash fill. It seems that several sets of steps existed down into the ravine, but these were used as fuel for heating in the 'Depression' years. Some parts of the ravine had been filled in by coal ash, dumped by the 'City' in response to requests by residents, over twenty years ago when coal heating was still common. In this way part of the ravine along the south-west portion of Wildwood Cres. was filled to make way for several houses. There was also a pond that was used by the railways for steam engines, located north of the tracks. Another pond used to exist south of Gerrard St., but by the 1970's it had become a swamp and was filled in.

There was some disagreement among residents as to changes in the wildlife population in the ravine, for example whether or not rabbits had greatly decreased. Most felt that birds had increased

GERRARD RAVINE, 1885.



Source: City Engineer

Fig.46

GERRARD RAVINE, 1912.



Source: City Engineer

Fig.47

over time. But there was no disagreement about the deteriorating quality of the ravine. People used to go there to picnic, children would stay all day: "...it was a hell of a good place to play." But there is little people-use today. 'The City' used to clean up the area, but has not done so for several years, with the result that dumping, especially of garbage, has become a major problem.

The present threat to the biomass space of the ravine is presented by the proposed 'Scarborough Expressway'. The C.N. tracks cut-back life space over 100 years ago, completely altering the contours of the ravine, especially in the southern section. Also there has been almost continual infilling of the ravine for fifty years and now the expressway would virtually demolish all life space. Only two of the 74 families interviewed were in favor of the expressway: one young woman said: "The ravine is what sold us on the house. But to tell you the truth, we knew the expressway was slated to go through here and we thought we would make a bundle on our house. But since we've lived here, we've grown to love the place - the birds, the trees, the raccoons - and wouldn't want to see it destroyed for the world."

Two other concerns expressed by the residents show how the cutting back of the ravine life space is regarded. The machine space of the C.N. tracks restricts the play areas in the ravine. The fill itself necessitated channelling the flow of the creek waters, but there is no bridge or tunnel to restrict the mixing of people and trains. Whilst mothers forbid their children to play near the tracks, and restrictive forces and daily police patrols add to their protection, many children still play there.

The second major obstruction of life flows in the ravine was created by machines for machine use - a parking lot. One of the area residents took it upon himself to extend his backyard so that

could create space for two cars. Hundreds of truckloads of fill were dumped at the top of the slope with a few steel rods for support. It subsequently slid down the slope, creating a huge lighted area of what was previously natural sloping ravine. The fill obstructed the ravine creek to create a large stagnant pond, another reason many mothers prevent their children from using the ravine.

Now 1½ years later, the pond, roughly 100 x 75 feet and of 4 feet depth is slimy, smelly and a garbage trap: ("it's too polluted" say the children). Mr. 'Anon.' was ordered by the city to have a tunnel built beneath his fill to allow the creek to flow again; however, the pond remains to the chagrin of all neighboring residents, who have socially ostracized Mr. 'Anon.' and his family: "...and now the neighbors' kids won't even play with his kids," reported a resident who has children).

The fill creates a number of dangers; during rainfall it turns into a mudbath - a small girl had to be pulled out by firemen in spring, 1973; the steep slope created prevents human traverse and the steel supports pose potential dangers. The swamp created poses more threat to small children of less than 4 feet.

A third example of restriction of life is the high machine mass space of the streets which restrict people flow and act as boundaries to residents. Of the 47 who replied to a question regarding their perceived boundaries, the railroad tracks were mentioned 13 times, Coxwell 23, Gerrard 18, and Woodbine 17. Smaller streets were mentioned, but the higher the machine mass - the last three are major streets, - the more they were mentioned. The ravine was mentioned 5 times, and then by older less mobile people.

Machine mass spaces pinch and restrict biomass spaces even in a small ravine. The ravine's garbage and glass also present restriction, although less deadly than those mentioned, to the wildlife and people. This type of space, because of its incompatibility with life, could be considered machine space. The garbage however creates a separate problem of its own.

Since it has not been removed in the last few years, the garbage has been increasing. By comparison, the Glen Stewart ravine has 2 full-time maintenance gardeners working everyday except during winter months when bank reinforcement is carried out. A gardener at that ravine spoke of the Upper Gerrard Ravine as being very bad and the area residents as being dirty. Yet, the Glen Stewart ravine would be in equally bad condition had it not been maintained for the last 10 years. He also felt that one phone call to the city could solve any problem. In such an influential area as the Glen Stewart area this may be possible.

But the Gerrard citizens have phoned City Hall constantly about the garbage, to no avail.

From residents' reports, the last regular clean-ups ended about 10 years ago. Since then, the city has sent men to clean for a day or so at a time maybe once every year or two.

The children are correct in calling the ravine the 'dump'; garbage exists in the order of tons. A distinction has been made between adult, teenage and child garbage because of quality and spatiality.

Adult garbage consists of bedsprings, furniture, household containers etc. and is found mainly on the ravine slopes in great quantities. Teenage garbage consists of beer bottles and cases and cigarette packages and is found in accessible but secluded spots. Child garbage such as pop cans, candy wrappers and small toys is strewn along trails and along the stream in small quantities.

By far the heaviest and most pernicious garbage is adult garbage. Many of the larger items such as bedsprings and car frames are very old and rusty with weeds growing through; but much of the smaller material is quite recent - dumping appears to be a continuing process. One lady interviewed had seen a woman on Wildwood give her son bags of garbage to throw down into the ravine. One house on Gerrard St. is infamous for throwing garbage down throughout the summer. The importance of discussing garbage becomes apparent when seen as the ravine's main land use. Because this land use is pernicious, it merits investigation.

Ravine Restoration.

"Clean it up!", "Remove the junk!", "Get rid of the pollution!" came ringing through loud and clear every time adults and children were approached on the subject of the ravine. Out of 74 adults, 52 wanted a clean-up and most were willing to help. The importance of this problem, in the mind of the community, can be seen since 40 to 45 people came, despite rain, for a 'clean-up' on September 22, 1973. Although only two areas were cleared of garbage more concern and awareness of the necessity for further clean-ups was engendered. Removing the garbage supplies the first step toward the restoration of the ravine to a totally biomass space.

The garbage and glass prevent people use of the ravine. Twenty-two adults said they would use the ravine if it were cleaned up. Eight felt that the glass in the ravine was dangerous and four talked of the garbage as dangerous. Almost all residents

acknowledged the garbage while many said it is definitely on the increase.

The ravine could be a child's wonder world - full of bugs, salamanders, birds, plants and other fascinating things. One older lady use to bring her 5 children (now in their 30's and 40's) down for nature study and hikes every week. But it is virtually unused by children. Jane Jacobs' "eyes on the street" theory indicates that children like to play where they can be seen by adults and thus not get bullied or hurt. The children are cut off from adult eye protection because no adults are interested in going down into the ravine. Many parents prevent children from using it and many children will not use it through fear. The most used portion is the open sand hill close to the street, and for the rest, not even the 'gangs' of boys have been seen to stay down longer than 20 minutes.

The Gerrard-Glen Stewart comparison is interesting. In the Glen Stewart ravine, not only were 51 people found on spot checks as opposed to 10 in the Upper Gerrard, but the mix was healthy and viable. Nineteen adults were counted in various mixes as well as children of both sexes. In the Gerrard Ravine, other than 4 children seen on the sand hill, only one group of 6 boys used the ravine. The Glen Stewart Ravine is a place where families go on picnics, where children spend the whole afternoon and where elderly couples sit and talk. The Gerrard Ravine on the other hand does not entice children to linger. Several people recalled spending the whole day there in the past and some talked of having picnics there. A few years ago, Fairmount Senior Public School, just south-east of the Ravine filmed a movie about Indians there and a few science teachers have taken students down for nature study, but from all reports, that is fast becoming a rare use because of the garbage and swamps. Three adults interviewed felt that nature study should be a prime use of the ravine.

Attitudes to the Ravine.

Through interviewing, it was discovered that although adults do not actively relate to the ravine, they love living near it. "It still looks beautiful to me...I like the trees, I love the wilds" explained a resident of 49 years. Of the people interviewed 37 talked fondly of the naturalness, the wildlife and the trees. Nine enjoyed the quietness and the cooling effect the ravine offered. "No matter how hot it is, the ravine is like a refrigerator for the homes." Only one spoke of actually going into it. Seventeen were completely indifferent and of these, 9 lived north of the tracks while 4 lived south of Gerrard St. on Brinmore. There was a tendency for those living on the ravine or owner occupiers to be most concerned. Many people who had lived there a short time were also very concerned and length of stay didn't seem to affect attitudes.

There is a steep distance decay function with a range of concern of no more than 1000 feet from any access point to the ravine. Beyond the predefined 'true' ravine community boundaries, all 14 save one were completely indifferent to the affairs of the ravine. North of the tracks, all interviewed were within 700 feet of the northern portion but there was little feeling at all for the 'bush' an area greatly cleared of underbrush, which shared the problem of garbage with the 'true' ravine. The 'bush' has little of the natural and wildlife attributes enjoyed by the ravine.

Machine Spaces.

An examination of accidents from January 1969 to January 1973 shows a total of only 24 injuries and deaths due to traffic in approximately the same area as the Bloor-Christie area also being studied. The density of Christie-Bloor is higher than the Gerrard area, but on a comparable basis the Gerrard area is much safer for children.

A simple experiment of counting cars and their drivers was conducted on July 24th, 1973 between 10:00 and 10:30 a.m. on a sunny warm day, with the following results. How this table should be interpreted is not clear but it does enforce the hypothesis that groups mix in the way specified earlier.

Space Mixing: People and Machine

<u>The Groups:</u>			
Men and Machines (driving cars)	161	Women and Machines (driving cars)	19
Men driving and a women passenger	24	Woman driving and man passenger	1
Men driving children passenger(s)	3	Women driving children	0
Families in machines	8	Street cars - mixed passengers	14

table I.12

Biomass Spaces.

If women and mothers are more aware of the dangers of machines being further removed from them biologically, then by the same token perhaps men are more appreciative of nature, being more removed from it biologically. In our interviews we asked who gardened in the family to try to get at this a little more. If a person spent 3 or more hours gardening weekly they were considered to garden frequently. If they did not garden at all or just gardened to keep up appearances (0-2 hours) then it was considered seldom. Of 25 men and 34 women who indicated their gardening habits, 19 men and 17

Upper Gerrard Ravine - Bio. Study 16/08/73

- ♂ Men
- ♀ Women
- ⊙ Children
- 3 Number



G. Olders

Fig. 48

women gardened frequently. Only 6 men but 17 women gardened seldom. Thus 76% of the men and 50% of the women spent a lot of time in the garden.

In the Glen Stewart Ravine we saw 10 men as compared with 6 women (3 of whom were with children); not including the family group. Women in nature, are often found there with children - so that natural spaces are utilized by women for the sake of their children perhaps much in the same way men utilize machines.

Trends.

Which way will the ravine go, toward life, with its compatibility for children, or toward machines with its preference for men? The forces of machines have already badly butchered the ravine. The Scarborough Expressway is attempting to claim the land out of the need of automobiles. Again, the automobiles will run over the children's space, banishing them. Yet there are forces for restoration. The vegetation itself keeps fighting for space. The children are in league with the life. Children tend to plant things. Children plant things in the ravine and they make holes in the fences designed to protect the machines from them. The children tend to dam and undam the creek but their undamming abilities dominate. They keep the water flowing unlike the train or road which force it into a sewer. The machines belong in the ground, not the life flows: more tunnels for trains, less for streams. The association designed to protect the ravine from the expressway has leadership from women. The engineers, city land purchasing agents, planners for the expressway, all from outside the community, are mainly male. It is as if the machines let the men tinker with them in return for the men's unswerving disloyalty to the women, children and life.

Evidence Supporting or Rejecting Biological Hypotheses.

That more men garden than women in the Upper Gerrard Ravine tends to disprove the hypothesis of the continuum of space: life, children, women, men and machines. But all other evidence from the ravine is reinforcing. Bits and pieces from other regions also mostly are reinforcing.

In Christie Pits it was found that 23 male drivers hit children for every female driver. The ratio of men to women drivers is only ten to one so male drivers are two hundred and thirty percent more likely to hit a child than the much maligned 'woman driver'. Also in Christie Pits a count was made of the various biological groupings. It was discovered that children were overwhelmingly alone and heterosexual groups - just men and women by themselves occurred surprisingly infrequently.

The Brunswick Tavern on Bloor St. near Bathurst was investigated for its various sex ratios which vary greatly from room to room as does the level of violence. The building itself is divided into five distinct drinking areas, and each area draws a uniquely

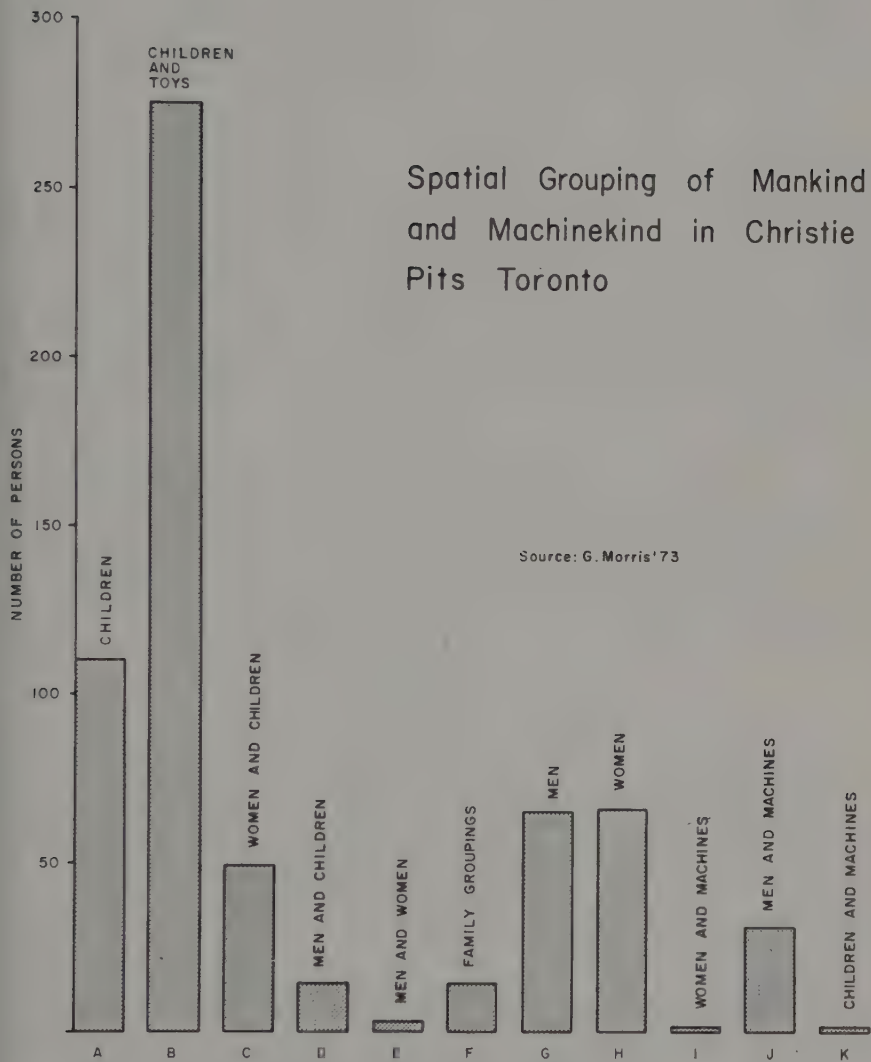


Fig. 49

characteristic group of drinkers. "Pickle Alley", the main room, draws a mix of both sex and age. Generally the room is rowdy; most fights are the result of overly exuberant drinkers who try the patience of their relatively sober neighbors. A count of sex ratios one evening in September, 1974, revealed 24 percent females. The "Book Room" is used primarily by patrons who wish to watch T.V., especially sports programs. Here, are usually few females. The atmosphere is usually low key unless a game is in progress. Then, noise levels rise quickly, and fights between fans are common. On the sample night, 25 percent of the patrons were female. The most sombre room is the aptly named all-male "Mental Ward", domain of the hard-core drinkers. This space is notoriously violent. The customers tend to be sullen; other patrons and most of the employees avoid this area. Another room downstairs is unnamed. The overflow from "Pickle Alley" and small groups of working-class men, of several ethnic groups use this area. Fighting is also common in this room. "Alberts Hall", the upstairs room, is completely different. The crowd is characterized by couples who come to enjoy the band, and are generally well-behaved. Women outnumbered men here on the sample evening: 60% were female.

As an experiment a baby was introduced into an antagonistic, but non-violent space in a field geography classroom. The series of three maps shows the baby geography as the baby was moved. Notice the movement down toward the front of the room by adult males in the spatial vacuum of the departed infant. The biological content of the spaces affects behavior.

Practical Applications.

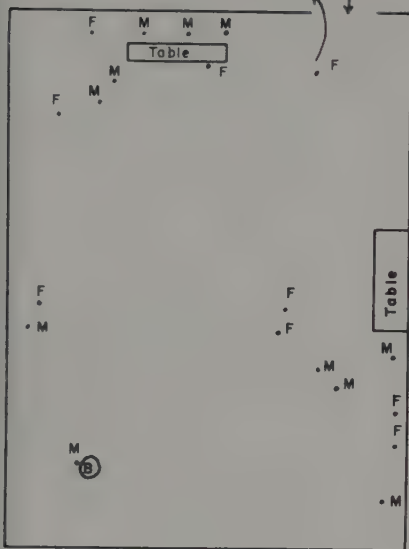
What would be the planning effect of discovering and mapping the biological landscapes in neighborhoods? It would be to shift emphasis from property land use maps to direct human land use. Can urban spaces be zoned biologically? Certainly. Ban "for men only" spaces. Pinch back machine spaces. Let the children roam more freely in urban landscapes that are more natural and therefore survival prone.

The immediate spatial implication is a new type of zoning law, that zones the human effects directly rather than merely property, thereby allowing property arrangements to order humans. It is a spatial paradox that the cities of the U.S.A. have so neatly arranged the property and badly arranged the humans. Zoning laws which insist that almost all spaces be made heterosexual, on the evidence that heterosexual micro spaces are more protective of children, therefore, of the species existence, would directly change human response. Human response is breaking down in the growing barbarism of American cities.

MICRO — BIOLOGICAL GEOGRAPHY

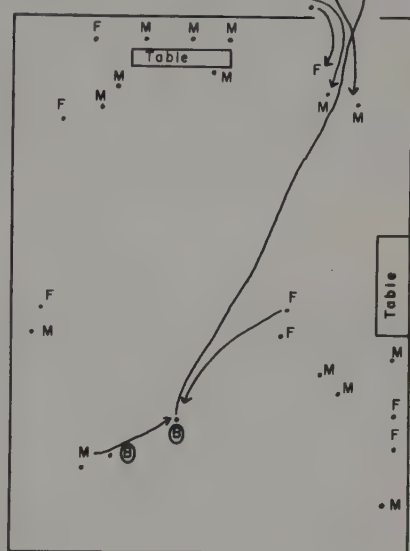
Aug. 3, 1973
9:55 p.m.

A



Aug. 3, 1973
9:57 p.m.

B



F. FEMALE
M. MALE
B. BABY

Aug. 3, 1973
10:00 p.m.

C

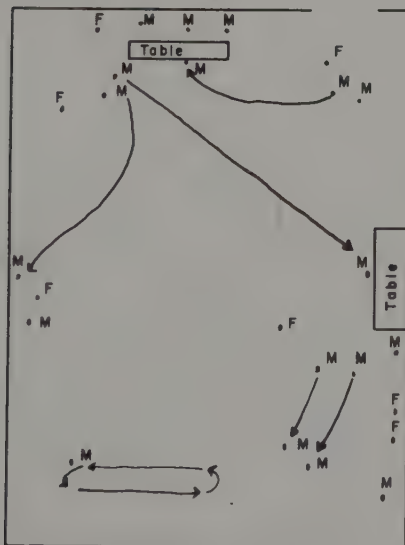


Fig. 50

In Detroit, for every woman charged with murder, 7.2 men are charged. Children should not be mixed with machines. This means that biomass spaces in cities should be expanded at the expense of machine mass spaces. The Upper Gerrard Ravine should be restored; the railroad at least tunnelled under, perhaps bridged, to better separate children from trains, as children take short cuts from one part of the ravine to another by crossing the dangerous tracks. By restoring and increasing vegetation in the ravine, perhaps even fish in the stream, the biomass is increased. By trails and adventure playgrounds in the ravine, children's increased presence is assured; important biomass increases.

C: Man Between Nature and Machines.

Considering the grandeur and importance of the theme, the evidence gathered to date is pathetic. Why? To find experimental geographers with a passion for proving-disproving theoretical matters is difficult. Concretely, is a scientist to sit idly by and let an accident to a child occur so that the biological-machine quality of the space can be examined? No. So only accidents to children that have already occurred, the crucial measure of an 'unnatural space', can be examined. This required hot pursuit. But evidence of accidents to children is a well kept secret. Children falling out of high-rises (four in the summer of 1974 in Metropolitan Toronto) is not monitored as such. Accidents to children at emergency departments in hospitals are classified information. If the accident is not hotly pursued, who will remember if men or machines were at the site and, if so, where precisely? Even cold pursuit is difficult and the data withheld. Data on automobile "accidents" to children in Toronto was nearly impossible to obtain. Death due to malnutrition in Detroit is classified as "child neglect" and in Toronto as "miscellaneous".

Some biological spaces are fixed in time and others like the groups walking down the street, are ephemeral. This implies a large sample size and budgets. In a time when milk and food for hungry babies is under increasing pressure, funds for massive humanist research are hardly available. It would appear hopeless. But is it? Consider the possibility of sensitive sample design to drastically reduce sample size. With a proper calculus it might be possible to use meager data with power because the hypothesis claims that the five spaces occur in pairs, triples and fours in a given order. Which humanist geographer, especially an activist who insists on doing things for the sake of changing things, can find the time to develop the abstract sample design necessary?

The Upper Gerrard Ravine, or a similar space, will have to be examined again and with more sophistication and purpose. The general philosophical question still to be answered there is: "Is man capable of achieving a balance between nature and machines to assure his survival?" The geographic version is: "What are

the proper mixes of spaces in the balance of nature and machines to assure mankind's long term presence on this planet?"

CHAPTER II

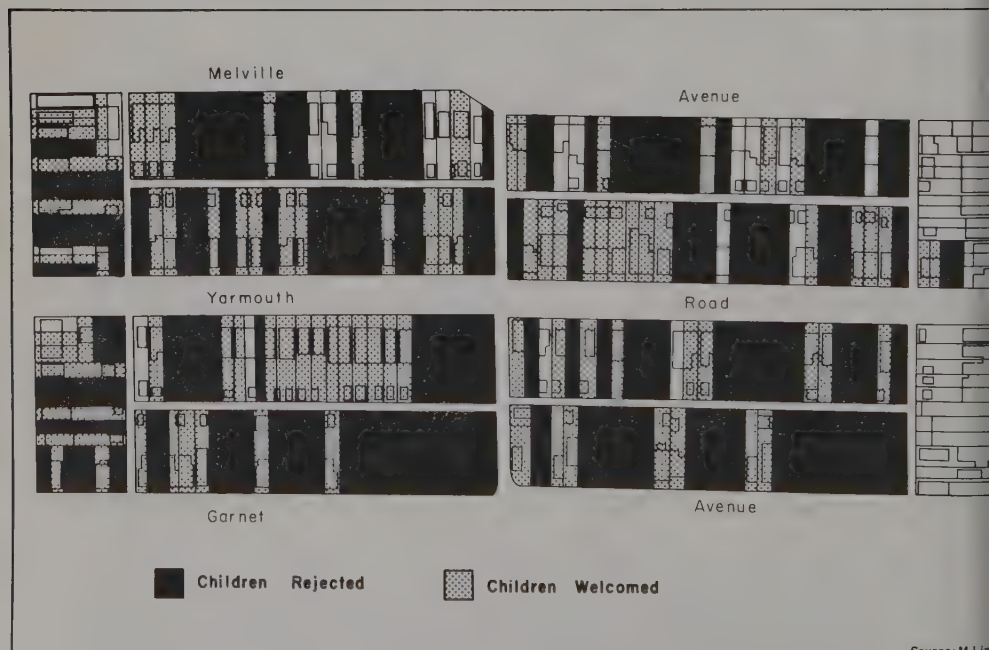
TORONTO.

Individual ties, the fabric of communities, should not be torn asunder. If Toronto needs more downtown do inner city residential areas have to be torn down? Not necessarily. The downtown can go up and has, rather than out. High-rises are bad for children not for business men. The lake front swamps can be filled and have. The railroad switching yards can be moved to the country and have been.

What about expanding manufacturing and commerce downtown? Place them in new industrial plazas at the city's edge as is already being done rather than allow them to expand into residential areas. What of university campuses? Form student quarters blending into the community as the better European universities do. Campuses merely separate thought from life.

But to begin in detail, where the discussion starts: how can living communities be saved? Who are 'the neighbors'? Perhaps a good measure is openness to children at Halloween: good neighbors to children are shown on the map. How can maps such as this be saved. . . what threatens them?

CHRISTIE PITS: Friendliness to Children at Halloween :1973



Source: M. Lin

Fig.51

I: Rents, Income Flows and People Defined Regions.

Why do inner city communities in Toronto seem to get no-
 here? One reason is that 'urban renewal' of inner city areas
 exacerbates existing difficulties. 'Urban renewal' is a
 euphemism for citizen removal and property replacement. In human
 terms the children, among others, get uprooted and crowded into
 ever already crowded neighborhoods. In terms of property, it is
 clear from the Thünen rent model that the rich cannot afford to
 live downtown since they insist on much less crowding so that even
 their higher individual rents cannot match the poor on a square
 mile basis. Why would the most powerful, the rich, be the greatest
 distance from the center? If the rich are so powerful, why do they
 have to spend so much of their lives commuting? Reversing it, how
 does it happen that the poorest people are frequently located on the
 most convenient land, often within walking distance of downtown?

A: The Urban Rent Model -

Why do the Rich and the Poor Live Where They Do?

Essentially, the solution to the question has to do with
 crowding. Slum dwellers spend the least money per person but the
 greatest per impacted-square-mile for rent. Similarly, slum dwell-
 ers pay the least transportation costs individually but the most per
 square mile's worth. The geographic formula is as follows:

$$R = A(P-C) - ATD30$$

re,

R = rent (ground rent) per square mile.

A = number of people per square mile.

P = price (individual rent) of average dwelling unit per month.

C = cost of upkeep of average dwelling unit per month.

T = transport cost per mile.

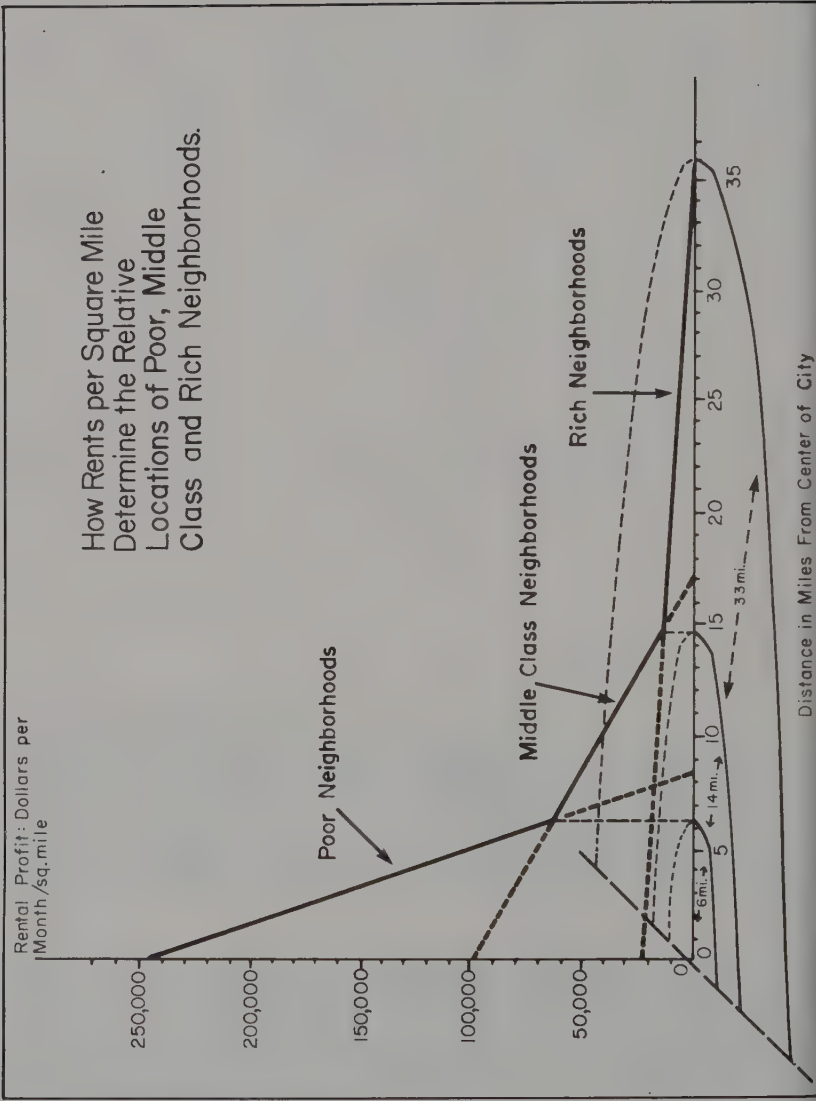
D = distance (round trip) from downtown and back to dwelling
 unit.

The multiplication by 30 is to take care of the fact that trips
 are computed on a daily basis, while rents are on a monthly basis.
 Harvey (1972) points out that: "It is important, however, to recog-
 nize that different results can be obtained from this style of an-
 alysis by changing certain key features in the model." He then ex-
 amines theoretical land-use patterns using a time criterion and a
 traveling time criterion in place of cost. While all three criteria
 probably contribute to any actual pattern it is argued here that the
 time criterion has the most important impact.

Urban Renewal.

The locations at which the city changes from rich to middle

How Rents per Square Mile Determine the Relative Locations of Poor, Middle Class and Rich Neighborhoods.



Distance in Miles From Center of City

class to poor are the distances from the center at which bid-rent curves intersect. All three districts tend to be as near as possible to downtown and pay zero transport costs there. The highest paying geographic unit, the slums, dominates at the center and forces the other people out. But the transport costs per square mile for slums are heavier than for any other group. So the slums are replaced by the middle class away from downtown, the latter being replaced farther out by the rich. Swinging about the radii of the three cities produces the 'basic' circular pattern of Toronto. Disruption of the theoretical circular patterns must be achieved by some other mechanisms. Criteria other than cost (discussed above) are partly responsible, but other influences are also apparent. Redistribution of incomes by various mechanisms explains the actual pattern of the spatial distribution of the 'three cities' of Toronto. Such redistribution is achieved by both private and governmental means some of which are examined by Harvey (1973). In blunt terms, for the rich to have 'in-town' living, the government subsidizes the rich by making up the difference for the rich, through urban renewal.

Urban renewal does nothing for the poor, except uproot them. The poor understand this but the middle class does not. It is a confidence game. Many middle class people see the slight inroads of the rich in quaint and precious neighborhoods as infinitely expandable, as a method of renewing the entire city. Nonsense. Just as downtown cannot expand into the 'zone of transition' that surrounds it to the point of demolishing all the slums, so lateral expansion of downtown merely pushes the slums farther out. 'In-town' living by 'white painters' or 'sand-blasters' is not feasible on a large enough scale for the rich to replace all the poor. Slums cannot be replaced unless their dwellers are given a 'sand-blasters' income.

The Latinization of Toronto.

To repeat, the inconvenient location of the rich is explained by their insistence on low densities, on spacious living so commodious that their ability to pay individually higher rents than the poor is overwhelmed by the close crowding of the poor. The poor pay more rent per square mile than the rich. Backwards as it sounds and is, a square mile of slums is worth much more than a square mile of suburbs. Human misery pays handsomely. In Latin American cities the slums reverse their position and instead of being in the inner city, they appear in the suburbs. This indicates that the poor are so poor in Latin America that they can afford neither spaciousness nor good location. They are packed in at the edges of the cities, while the rich are so rich relative to the poor that they can afford both the good location (low transport cost) and the spaciousness simultaneously. This Latin speculation puts an entirely different light on 'in-town' living in Toronto.

The American real estate adage that cynically sloganizes, "A



Possible Future Homes For Lower Income Children

■ Existing Apartments (1973)

▨ High Rise Concentrations

Adapted from Metro Toronto Planning Board

Fig. 53

neighborhood starts going down hill the minute it is built", is not so inevitably true in Toronto. The inner city is being restored. At first glance this seems like an unmitigated good especially compared to the slum-rot of American cities; but matters are not so rosy. An article in the Toronto Star in the spring of 1974 attracted some attention especially because of its sloganized title "Key to a Miracle City: You Can Live Downtown". Mayor Crombie dismissed the miraculous part at a 'Learned Societies' meeting arranged by geographers soon after the article appeared. But the interesting aspect of the title was the word "You". "You" must have meant the upper class people who run the Toronto Star and their friends. Inner cities are never empty of people. Detroit's Paradise Valley or Toronto's Cabbagetown is densely populated, not with "Yous" but with "Thems". Considering the extreme class bias accidentally reflected in the newspaper title, if the "Yous" of the city want the housing of the "Thems" they will feel no guilt about displacing the "Thems". Affluent aggression, including spatial aggression, is never considered an invasion by the rich, but rather an upgrading, a bringing of manners and even civilization and culture - to India, to Africa or to Cabbagetown. Restoring and preserving the heritage of the past, the rich are infinitely sorry for themselves and are self-righteously arrogant. Appealing to their 'better side' so that they will not take for themselves all the remaining single family dwellings in metropolitan Toronto, is doomed to failure. The upper class home owners in Toronto neighborhoods from the Beaches to the Annex to Sussex; the 'improvers', the "Yous" are on the march. If the rich become rich enough relative to the poor, then they can both have their geographic cake and eat it too, have spacious housing and superior locations. This seems to be happening in Toronto.

How can this theory of the growth of both bad housing and bad location for the bad housing of the poor be tested? A good sample exists in Trefann Court. Here the original slum housing is being improved and at the same time, with the aid of governmental subsidy being turned over to the rich, fashionable, 'in-town' livers. What is the average improvement of location of the new 'white painters' or, as they are called by the neighbors, 'sand blasters'? How many miles closer to downtown, the point of average greatest convenience, have they moved? For the poor, how much worse is their average location? Multiplying the two gives the combined effect, 'the latinization index'. Comparing the index to a complete latinization index, the total spatial exchange that would have to take place to put the poor in suburban high-rises and the rich in the inner city single family units, gives how far Toronto has come towards complete spatial injustice. It could be that the 'Ratepayers Associations' and the potentially more militant working class 'Residents Associations' are merely improving the inner city for the rich. Once they have broken their backs getting the streets free of speeding cars, the sky cleared of pollution, their homes all 'fixed up'; then the rich will force them out of places that are 'too good for them'. It is a typical inner city experience that if a renter 'fixes up' his home, the landlord will raise the rent since he now has a more rentable property. Collectively if the inner city 'fixes itself

up' it may then be too good for 'plain ordinary people' and they will be displaced to high-rise chicken coops at the inconvenient edge of the city. In Cabbagetown (Trefann Court) where the community supposedly won its fight to save its homes values have so soared that the community is rapidly being displaced by higher income groups. In September 1974 a field survey between Queen, Gerrard and Parliament and River Streets revealed 47 'sandblasters' out of 177 homes (27 percent). 'Fixing things up' without having the underlying raw power to protect their increased value is always dangerous. Only increased inner city power of the urban nationalism sort, can secure economic gains. To separate the geography of politics from the geography of economics is to court disaster.

B: Berry versus Reality.

The conservative geographer Berry and his co-author Bednarz (1974) write with respect to Chicago:

". . . by 1971, blacks and other minorities were paying less than the white majority for housing systematically controlled in the models for quality, improvements, incomes, and other neighborhood factors."

If the blacks are paying less for housing than the whites, social justice demands that this racial privilege be removed, since the blacks have an unjust advantage over the whites. Anyone committed to the principle of combating racism is compelled to come to this conclusion.

Values, Ethics and Polemics.

The time has arrived in geography when it is considered acceptable, even imperative, to enquire into the moral philosophy underlying research (see Buttner (1974)). Polemics such as that engaged in by Berry and Harvey (1974) arise from basic differences in ways of looking at the world. In another context Harvey (1974) has claimed that, "Vaunting personal ambition is probably the most significant of all motivating factors in explaining individual behavior". For example Berry and Bednarz describe Garrison's report The Benefits of Rural Roads to Rural Property, to which Berry was a major contributor, as ". . . the first major substantive contribution to geography's quantitative revolution" - ignoring such giants as von Thünen and Christaller who published prior to Berry's birth. Nor is this an aberration since in the heat of their discussion they dismiss von Thünen by not even mentioning him except in derived form as "Muth-Alonso", and then they blithely dismantle von Thünen. It is more scientifically conservative and simpler to stay with a proven scientist and classic scientific theory, than to introduce a new, obfuscating, complicated theory of land values. Berry and Bednarz want to immodestly 'reconstruct' von Thünen. "It is possible to reconstruct the classic Muth-Alonso (sic, von Thunen) type of model to achieve the desired

result of simultaneously including distance-related locational and amenity values as housing determinants." (emphasis added) How about reconstructing American racist society instead?

Harvey (1974) also claims that, ". . . academic research becomes subservient to the state and is used to preserve and strengthen the status quo." Berry and Bednarz do not disguise their state ambition. They say of the earlier Garrison work which their paper seeks to emulate: ". . . it was policy-oriented in that it sought to answer questions central to the then-developing national highway program..." What is the now developing national program comparable to the 'Highway Program' of the 1950's? One candidate is to 'clean-up' America's inner-cities, and one geographic program suggested is that of former President Dwight D. Eisenhower who in the heat of the 1968 'Martin Luther King Assassination War', put forward the thought that blacks be moved to peripheral locations outside the white cities. This is the urban geography of the Union of South Africa. It is also the original geography of Detroit's blacks according to Deskins (1971). At first blacks were so poor relative to the whites in Detroit that they occupied suburban slums. The black slum of Inkster, created by the elder Henry Ford by the device of placing all the taxable income on his factories in all white Dearborn, would respond perfectly to Berry's model which would conveniently overlook Ford, who artificially put all the taxable income into Dearborn.

If the 'Eisenhower Plan' for total black removal is to go into effect in the 1970's all the inner city ghetto must be bought at the lowest possible price, one way or another. Berry and Bednarz pave the way. They do the classic racist upside down and claim in the context of black slums, the entire context of their article, that one has, "The right to benefit or harm others and its complement, to be benefitted or harmed by others, . . ." What does this bring to mind: drunken black people slashing each other in a 43rd Street bar on Saturday night? Berry is a highly intelligent man. He never says "two and two are four", merely "two and two are what?"

Berry and Bednarz write of the "amenity value" of the suburbs, compared to the "disbenefits" of the slum. What are the "disbenefits" of the black ghetto, the presence of fellow blacks? Who runs the neighborhood down, the black occupants?

It would cost hundreds of millions of dollars to relocate blacks in "townships" at the edges of cities. Considering the difficulty the federal government has to sustain its military financing, saving hundreds of millions of dollars out of the black community would appear to be necessary, if relocation were to be carried out. The racist relocation of the Japanese in the early 1940's was in large part financed by the total seizure of their properties without, to this day, any compensation. America never compensates those racial groups it relocates such as the Cherokee and their 'Trail of Tears' relocation 'death march' to Oklahoma.

In a recent review article Berry (1974) attacks fellow geographer Harvey, for painting such a gloomy geography of the ghetto.

Berry says of the book of collected papers in which Harvey is singled out as contributing ". . .the most important and challenging paper . . ." that it is ". . .selectively biased, a product of the atmosphere of student activism accompanying the war in Vietnam. . ." It should be noted that Berry wrote this harsh typification during Nixon Watergate era and his pandering to the southern racist strategy.

Berry and Bednarz even have the audacity to wrap themselves in the legitimacy of science. They complain: ". . .newer revolutionaries within geography now complain about how revolting the quantifiers have become with the intensity that quantifiers once complained about areal differentiation."

With quantifiers like Berry and Bednarz, where debits become assets and where racism is omitted from a rent model, even older revolutionaries like Schaefer, Christaller and Latimore would be forced to protest. Racism's penalty to blacks is that it cheats them out of true resale values with benefits accruing to whites.

Berry and Bednarz's work is in the context of a dedication of their paper to William Garrison. Garrison, the most important of the American 1960's quantifiers, the man who allowed Berry and many others to obtain their doctorates, has a vulnerable southern white background but does not deserve to be implicated in the paper, totally without his knowledge or consent, (Garrison, in conversation, January 1975).

Moynihan was the first of the major American intellectuals to defect to the forces of racism in the 1960's. Moynihan observed that the black family structure was in disarray and instead of blaming racism with such practices of not providing enough money to the children if the father remained with them he blamed the victim. Know a man into the gutter and then complain that he is lying there. Moynihan intellectually, the worst way, even blamed the black mother, the most stable and normal relationship in the black ghetto. In the streets, talking about someone's mother is called "playing the dozen" and is a deadly insult. Moynihan was paid off for his intellectual treason, the highest kind, with an ambassadorship to India. Other disciplines have followed Moynihan's lead, producing professors who are ". . .subservient to the state. . .", Jensen, Banfield and Kissinger, rewarded with everything from prestigious professorships to ambassadorships to Secretary of Stateships.

Scientists can best serve humanity through science as Einstein, Fermi and Bohr served in the defeat of Hitler and his racist professors. The mentality of anti-fascist German geographers "Lösch, Schaefer and Christaller in the end defeated the mentality of the fascist geographer Haushofer.

In the Streets.

Even if prominent academicians such as Harvey and Berry had not engaged in a polemic in the literature, science's duty is still to 'sight' the real world.

Berry has no understanding of the ghetto, in which his campus sits. He claims in his 1974 paper that blacks are both absolutely and relative to whites improving their position. He cites census data on income, poverty households, home ownership and occupancy of substandard housing units to support his case that, ". . . Black-White differentials are narrowing rapidly as discrimination is being eliminated. . ." As far as income is concerned Berry points out, "Briefly, 1970 census figures show that Black family incomes increased between 1960 and 1970 by 99.6 percent, compared to sixty-nine percent for Whites, so that the ratio of Black-to-White income grew from fifty-three percent in 1960 to sixty-three percent in 1970."

Everyone in the ghetto knows that with the election of the Nixon administration in 1968, the gains made under Kennedy-Johnson were destroyed: that the Office of Economic Opportunity was dismantled, that funds for health programs were illegally impounded and that the landscape of the ghetto could be seen to be decaying simply by looking at it. The knots of unemployed young men 'hanging on corners', the physical hunger in the children, the accumulation of 'hulks', burned out abandoned buildings, the filth, the inflation in food prices, the people eating dog food, the soaring increase in male suicide rates from the ages of 18 to 35, on and on: these are significant in the landscape not in the census volumes. The difficulties continue: "Government officials said 105,000 people in Detroit, a city of 2 million, are suffering from malnutrition. A government-sponsored food program, called Project Focus Hope, provided food for 21,000 meals a day in December." (Toronto Star, February 1, 1975.)

All this occurred under Nixon starting in 1968 and continuing thereafter. If Berry had used data reflecting the obvious fact of the political shift to the far right in 1968, data on health of children in the ghetto, for instance, the figures would have shown such a shift. The fact that the census dates did not coincide with the political dates would not have been missed by one black folk geographer in the streets in a million. Here is a superb illustration of the dangers of armchair geography.

Berry's (1974) focus on ". . . Black progress. . ." serves to divert the attention of his readers away from the increased racism under Nixon, the most anti-black president of this century. Berry and Bednarz intensify the theme with a claim of black advantage over whites in Chicago's housing (ownership) market. The traditional real estate industry's "block busting" adage for a changing neighborhood has been, "buy low from whites, sell high to blacks". Berry and Bednarz's conclusion that ". . . blacks pay less . . ." differs from previous research as they point out, and also from the common sense experience of the real world.

Statistical Incompetence.

Berry and Bednarz point out that one of the features that stood out in Garrison's research report was that ". . . it was meticulous in its research design, asking carefully-formulated questions and

specifying the strength with which one could believe in the answers in carefully - couched probabilistic terms." It is therefore particularly unfortunate that Berry and Bednarz provide a counter-example to that of Garrison. They do have a carefully formulated question, "What are the determinants of the soaring prices of single-family homes in the city of Chicago?" Furthermore, the regression model per se is appropriate, but not in the way they use it. Their declared intention is to examine the research question through "A series of regression analyses . . . that successively accounts for selling prices of a sample of single family homes in Chicago in 1971 in terms of property characteristics and improvements, neighborhood factors, effects of race and ethnicity, the toll taken by environmental pollution, and the effects of distance from Chicago's CBD." Beyond these two points the paper loses any claims to rigor.

One cannot ". . . believe in the answers . . ." provided to the research question at all because one cannot evaluate the research procedures. That is the paper is not self contained; it does not allow the reader to check the reasoning or statistics of the writers. It is impossible to replicate the study since the reader has no way of knowing what the study actually does.

Berry and Bednarz do not say what the number of house sales constituting their sample is or the total population from which this sample is drawn. In their discussion of independent variables, specifically housing characteristics and improvements, they say they used the Chicagoland Residential Sales Data as a source for their sample of 275 single family homes in the City of Chicago in 1971. They go on to say that this source also contains data on the terms of sale including price. One must infer that the sample of 275 was also used to supply the sales data. But it must be noted that their original statement was that the sales data referred to a sample of single family homes in Chicago, not in the City of Chicago to which the inference would apply. To confuse the issue further, they introduce new terminology in the discussion of their findings. In attempting to explain why blacks pay less they argue that the ". . . explanation is to be found in the dynamics of Chicago's housing market". They then introduce tables on housing stock changes 1960-1970 for the Central City and the Suburbs. Nowhere is the relationship between Chicago, the City of Chicago, the Central City and the Suburbs made clear.

If we allow that their sample of sales is in fact 275 and that it is a random sample of sales (again sampling procedure is not specified by Berry and Bednarz); and if we assume Chicago or the City of Chicago to be co-terminus with the Central City, then we can work out an estimate of the number of sales to blacks and whites.

Central City 1970 Housing Stock and 1971 Sample Sales
in Chicago or the City of Chicago

Owner Occupied Houses in 1970	Estimated Distribution of Sales in Sample*
Whites	318,592 223
Blacks	74,279 52
Total	392,871 275

table II.1.

The ecological correlation trap is one familiar to geographers, yet, still capable of snaring the unwary. In the discussion of their results, tucked away in the middle of their paper, Berry and Bednarz are very careful to avoid the ecological correlation pitfall; but, in both the introduction and conclusion to the paper they throw caution to the wind, thereby committing a serious error. Examining their regressions Berry and Bednarz cautiously state; "Some researchers in the past (see the summary in Kain 1973) have estimated that holding housing quality and income levels constant (as is done in our model) blacks pay more for housing in the ghetto than non-blacks outside the ghetto. The results from this study show the opposite relationship between a neighborhood's blackness and housing prices, and reiterate the parameter for Spanish Americans and Irish Catholics in the city. Each of our racial variables measure the percent of the housing unit's census tract population that is found in each subgroup." This conclusion is a reasonable interpretation of their regression equations. Now compare this statement to those in the introduction and conclusion to the paper, locations where one might reasonably assume statements reflect the understanding arrived at in the text. In the introduction we find; "Results are consistent with previous research with two important exceptions: a negative sign for minority groups (blacks pay less). . ." In the conclusion their classic statement occurs: ". . . by 1971, blacks and other minorities were paying less than the white majority for housing systematically controlled in the models for quality, improvements, incomes, and other neighborhood factors."

The error committed by Berry and Bednarz turns on whether one makes statements about the relationship between sale prices and census tract population characteristics (say percentage of blacks per tract), or the relationship between sale prices and black buyers.

Note: This approximation is worked out under the assumption of sales being made to blacks and whites in the same proportion as the 1970 owner-occupation break-down shows. Berry and Bednarz may object that in 1971 the flight of the whites to the suburbs and the replacements by blacks makes this assumption unrealistic. Nevertheless, since they show no data on the matter the table is presented as an example of the difficulties involved in assessing this paper. The point is that the paper does not tell the reader, or supply data permitting him to work out, how many sample sales were to blacks and how many to whites.

Since Berry and Bednarz clearly state that their models examine a former sort of relationship they have no evidence upon which to make statements about the latter. In short, census tracts with heavy black percentages in them could contain lower priced houses (controlling for the specified factors) some or all of which were sold to white purchasers. No evidence is presented on this point. It is interesting to note that Berry and Bednarz show tables with number of black owners - thus data are available to look directly at the relationship of sale price and race of purchaser.

Berry and Bednarz's claims to measure amenity are unfounded. To measure neighborhood characteristics the paper uses ". . . neighborhood socio-economic status and mobility characteristics, racial and ethnic characteristics of the residents, and environmental pollution

Neighborhood Variables: Berry and Bednarz.

Neighborhood Characteristics	Med. Family Income	MFI	median family income of census tract which property is located
	Multiple Family Dwellings	APTS	percentage multiple family dwellings in the census tract
	Migration	MIGRTN	percent of families in property's tract living in a different tract five years before
Racial and Ethnic Variables	% Blacks	BLACK	percent black in census tract
	% Cubans/Mexicans	CUB-MEX	percent Cuban and Mexican in census tract
	% Irish	IRISH	percent Irish in census tract
Environmental Pollution	Sulfur Dioxide	SO ₂	average yearly sulfur dioxide intake (micrograms per meter)
	Particulates	PARTIC	average yearly suspended particulate measurement (micrograms per cubic meter)

table II.2.

The difficulty with the variables chosen to represent neighborhood characteristics is that they are probably significantly correlated with racial and ethnic status. Thus median family income, multiple family dwellings and in-migration by census tract are likely to be significantly associated with, say, percentage of blacks by census tract.

Since the data are not presented to allow examination of the actual correlations these statements are subjective but very likely would be validated by the data. Thus the neighborhood characteristics can be interpreted simply as surrogates for the blackness of a neighborhood. The significance of the concentration on blackness of neighborhoods is seen when one looks at the general conclusions. ". . . as one proceeds into the central city there is a progressive increase in neighborhood and environmental disamenities whose toll on property values is far greater than the positive contribution to value of inner city location."

Consider the disamenities that underlie this argument. Apart from the environmental pollution variables the disamenities are simply high degrees of blackness and black related socio-economic characteristics in census tracts. If this is the case then the quality of amenities provided by various neighborhoods has not been examined at all, as one would be led to expect by Berry and Bednarz.

A paper with conclusions of tremendous importance ought to allow careful assessment of the validity of the same conclusions. Berry and Bednarz's paper fails this test. Their research design is unclear, sampling procedure, total population and sampling fraction are not specified, insufficient data are provided to allow the validity of statements to be checked, inappropriate variables are used to measure concepts, such as amenities or benefits, terminology is changed so that the spatial units to which data refer are not clear and outright errors such as the ecological correlation error are committed. Finally, obscure techniques are introduced where they need not be, ". . . adding one or two technical tricks . . ." such as the Lagrangian multipliers. These obfuscate the issue. All this is particularly disturbing when it seems apparent that one could tackle the question simply by first specifying sale prices and race of purchaser on a transaction by transaction basis.

The Geography of Urban Amenities.

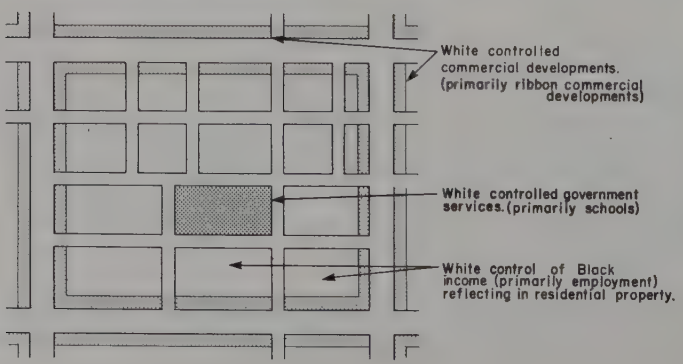
There is no doubt that neighborhood amenities do in fact vary spatially (though this is not dealt with by Berry and Bednarz as they claim). Moreover the quality of amenities is tied up with sale prices of property. This is why to manipulate property sale prices one first runs down or improves neighborhood amenities. Neighborhood amenities have been run-down in black neighborhoods by a number of mechanisms.

The spatial amenities of neighborhoods derive from four sources: government community services, private community services, income of

occupants and centrality. Reconsider the four sources of spatial amenity identified in the context of the black ghetto. They translate into: white control of government community services, white control of private community services, white control of black income (employment) and centrality (seizure).

Each of these sources of economic value have a specific geographic manifestation in a typical square mile of inner city slum. The white controlled governmental services appear especially in the geography of the school located typically in the center of the square mile, but also in the condition of the streets, alleys, sidewalks, parks and streetlights. In the early 1960's during the liberal Kennedy-King era and the liberal Cavanaugh administration in Detroit public facilities, especially the schools which stood out as a startling amenity feature in the middle of a slum, did have funds allocated to them. In north-west Detroit, especially after the rebellion of 1967 a spatial anomaly appeared related to the second factor, white controlled private community services. The housing stock was owned by blacks and the third factor, white control of black income, was at that time liberal (low unemployment), so that the housing stock was not only good but rapidly being upgraded from the conditions during the previous white ownership phase. Houses were reroofed, lawns and gardens planted and so forth. During the A.A.G. tour of Fitzgerald associated with the Ann Arbor meeting in 1968 the white delegates expressed surprise at the well kept residential landscape, never having seen large numbers of blacks living in superior residences. However the white controlled private community services were in overwhelmingly racist hands which made the commercial ribbon development in Fitzgerald look like a fort. This was not true of the small minority of white businesses which made an effort to get along with the black community, for example, Harry Rothenberg's rapidly expanding grocery store and the Painter's Union proving that blacks were not attacking all white property in a nationalist fashion. It is conceivable to imagine other combinations of local upgrading and deteriorating practices. To put the results into terms of the classic literature the real world strongly supports Robinson's early complaint about ecological correlation.

Robinson's Ecological Correlation Fallacy In Space
(Hypothetical Inner-City Square Mile)



The channelling of government (federal, state and municipal) funds into neighborhoods by various mechanisms varies considerably. Funding of education, particularly the school system, accounts for high proportions of the budgets of municipalities. Yet, spatially the support is not equitable. Thus some schools offer better education than others. In Detroit no black high school is accredited meaning that a straight A black student will not be admitted to higher education in Michigan, whereas a C white student from any white school will. Such a school system has a clear-cut impact on neighborhood property values.

Public policy with respect to the location of job opportunities also influences the value of neighborhoods. The suburbanization of jobs in N. American cities has had the effect of discriminating against the poor, both black and white, of the inner cities. They do not have private transportation and public transportation systems are rarely designed to serve their commuting needs. Even where public transit does operate it fails usually to do so on Sunday when some workers are required to work. Thus by locating job opportunities away from the inner city the value of property there is reduced.

Other governmental services to communities can be manipulated directly by white supervisors. An example came to light recently in Buffalo. The system is called "no show" and operates in the garbage collection sector of governmental services. White suburban Buffalo recently sent several of its members to swell the prisons. They had placed non-existent garbage men on the payroll and assigned them to areas of black Buffalo, collecting real paycheques for themselves. Consider the impact of such thievery. White commuters seeing the garbage and broken glass in black Buffalo will assume that the neighborhoods are in decline because the blacks are filthy, rather than because the whites are thieves. They will not realise the disamenity has been manipulated by white suburban homeowners who appropriate the taxes paid by blacks instead of allowing them to revert back through garbage pick-up.

The private sector of the economy has many ways to manipulate the 'amenity value' of neighborhoods. The landscape of the black ghetto is spotted with many missing components: fire damaged or destroyed buildings, abandoned or boarded-up stores and theaters, inadequately equipped parks and so forth.

In Fitzgerald, Detroit (Bunge 1971) all the burned out businesses except one were insurance fires deliberately set by white businessmen wanting to relocate in the white suburbs on the proceeds from the insurance companies. Court records provide their addresses. Whites assume that the blacks burned down their own neighborhoods causing low amenity values and reduced property values. Abandonment of stores, theaters and other services, by whites unwilling to serve black customers is common as is the landscape blight so caused. The net effect of business adjustments to the black presence is a reduction of local landuse in the commercial sector and an increase in

impersonal non-local land use, usually located outside but within shopping range of the black districts. Thus blacks are forced to forgo the advantages of local black stores with easy credit and substitute impersonal large white stores without credit possibilities. The classic example is the Wolpert et. al. (1972) study in Nashville.

Mortgages are more difficult to obtain for areas with deteriorated property, as are loans to improve property. Saving and loan companies and other financial institutions are happy to take the deposits of black investors in black neighborhoods but ban or allocate few home improvement loans for black neighborhoods. Payoffs to the police have a serious effect on the quality and value of black neighborhoods. The locations of dope houses are well known to all in black neighborhoods, all that is except the police! Why is it that the police allow such activities to continue to operate, reducing neighborhood amenity values? Because they are paid-off.

Wayne State University wanted to expand its campus over the primarily located Trumbull Community. (see Cozzens 1971 and Colenu 1972). The strategy to obtain properties in the proposed expansion area was quite simple. First they had to be reduced in value so that Wayne could minimize its procurement costs. Thus 'City Hall' declared the land to be an "urban renewal area", this in spite of the historic value of the homes constructed of beautiful sound brick. The surest way to produce a slum is to officially declare it to be one. The homeowners resisted and insisted that their homes were sound. But the city refused to make any civic repairs to the streets or the sidewalks, or the trees along the berm, or to the local schools. Why fix up a neighborhood slated to be torn down? The homeowners were paying taxes for city services they did not receive. These taxes were directly tied to their ownership of property. They paid millage for the local school that was allowed to tumble down. The city acquired one or two houses on a block, which they then defaced by signs on the former homes proclaiming the houses to be in the process, with the neighborhood, of being 'renewed', which translates in the real world as being 'torn down'. Large unpainted plywood sheets were put over all the windows. After ten years or more when most purchases were finally forced, what had the resale value been? The resale value was deliberately and cynically manipulated as a subsidy to Wayne State University, a middle class overwhelmingly white commuter institution, in the middle of Detroit's slum. With the exception of Hobart St., ferociously defended by the black and white church in the Martin Luther King years through its Detroit secular instrument, The West Central Organization, the community was mostly Southern Appalachian (British Isles) stock.

The third mechanism by which the value of black neighborhoods can be reduced is by manipulation of black income from employment. Federal government economic policy can clearly manipulate the rate of unemployment; to allow high rates effectively means to ensure that the poor are the first to suffer; many of the black people are therefore the first to suffer. Location of employment policies similarly affect black incomes. The effect of a reduction of black incomes

the upkeep of their houses is clear. Repainting and external repair work are delayed, improvements and additions are forgone; the neighborhood thereby deteriorates in quality and value.

Finally, centrality is a major control on the amenity value of neighborhood. To reduce the value of a neighborhood even further since it has been starved of inflows of money to maintain it, one needs to find a way of denying the existence of value of centrality of downplaying its value as an amenity in itself.

Important to the argument of Berry and Bednarz is the idea that two attributes of space are significant in understanding the values home buyers place on residential vacancies; first amenities and disbenefits, and second distance to the central business district (location or centrality). This way of looking at space takes the reader away from the fact that location in space is itself an amenity. Setting the location in space question in a different category to the amenities in space question confuses the issue. A supporting argument, which seeks to downplay the significance of location is also made by Berry and Bednarz; setting aside the fact that the classical formulations assume only a single center - the CBD - in an increasingly multi-centered pattern of urbanization in which access to peripheral locations seems as meaningful as access to the city center. . . ." Both arguments prepare an intellectual sophistication for further super-exploitation of homeowners in black central city neighborhoods through denying them the value of their good location. This 'triumph' of the suburbs over their peripheral location is illusionary, a reaction to the key location of the inner city poor. This prepares the way for seizure without just compensation to blacks.

On the face of it, a square mile in a convenient central location is worth more than a peripheral suburban square mile. Berry and Bednarz's sources are suspect with respect to the problem investigated; the space of the central city would have been a better starting point than the 'System's' census volumes. They could use the Mafia's books to prove the Mafia innocent. Berry and Bednarz have been led to the astounding conclusion, that blacks pay less. They examined the wrong set of books.

Blacks Pay More.

Blacks pay more for what they get. This can be seen by considering the value of central city locations after stripping away confusions. To assess the black ghetto's true resale value, consider the resale value once the rats, hulks, fires, police fatalities and Eisenhower plans, have driven off the blacks; the "Negro Removal" is complete and deliberately deflated resale values are safely back in rich white hands. What is the land's

value when luxury townhouses and apartment buildings arise on it in the near east side of Detroit? What is the value when Wayne State or the University of Chicago finally get it? Suddenly the locations become convenient and valued: ". . .within easy walking distance to work and play. . ." independently of the structures built on the sites. Is one to assume that the locations were less valuable for blacks or that 'centrality' reemerges as a value only for affluent whites?

Obviously, poor schools, police encouraged crimes, establishment encouraged dope houses, the whole apparatus of American racism affects resale values. "Do Blacks Pay More?" Berry and Bednarz say they pay less, even after controlling for ". . .quality, improvements, incomes, and other neighborhood factors". Is the world flat? For what they get, blacks pay much more, but Berry and Bednarz made little attempt to measure what they get. In real life blacks pay more for everything from wars to aspirin. Why would housing be the exception? If blacks have a price advantage, what prevents the academic community of the University of Chicago from buying these bargains and moving their families in? The "amenities" of white suburbs are often provided by the super-profit of racist super-exploitation. The "disbenefits" in the black ghetto are suburban thefts. Berry and Bednarz forget to add the cost of racism to the price paid by blacks and to subtract it from the price paid by white suburbanites.

To make a compelling argument about the true value of inner city housing, beside the suggested strategy of examining values after recontrol by rich whites which allows a less manipulated price to surface, look at Toronto, a city with no geographic manifestation of racism. Without a racist ghetto, it is impossible to manipulate a lower-than-value resale price. If no ghetto exists, then everyone's garbage has to be collected. In Toronto, with open housing and blacks scattered, typically at ratios of 1 per 1000 whites, how would garbage men know which houses to neglect? How could one discriminate against a school containing only a handful of black children, or locate factories out of reach of black workers scattered everywhere? Examination of black resale values in Toronto, to see if blacks, by their presence, run down property values, would find no such effect. Since Toronto's blacks do not run down values, the American racist environment, especially the artificially maintained black slum, is the cause of depressed resale values. For another comparison, what happened to resale values of Jewish ghetto homes in Warsaw under Hitler's occupation?

How close is Chicago to the 'final solution' of the Warsaw ghetto? To get into this discussion in a technical fashion, Berry and Bednarz's model has to be improved. They literally have values increasing without limit away from the city center: ". . .

the absence of amenity values, housing prices should decrease because of the toll taken by transport costs; however, with significant amenity values that increase with distance, housing prices will vary in a manner determined by the relative influence of the negative and positive components." If, according to Berry and Bednarz, the amenity values are strong enough, (and the major amenity is spatial separation from blacks) then they outweigh location's influence on resale values. They flirt with throwing out centrality as an inevitable factor; but then, no geography of cities, just random locations. The world is more spatially organized than suburbanite apologists imply. If not, a square mile in the middle of Greenland, hundreds of miles from the nearest black Chicagoan, could theoretically be of more value than a square mile of Chicago's suburbs. The 'Greenland Development Corporation of Outer Chicago' could be created to take advantage of Berry and Bednarz's illusion with a 'flim flam'. Surely they must admit to the dominance of centrality at some point in space. But assuming that minor concession to reality, their model of resale values is extremely complicated: high downtown, low in the ghetto, high in the suburbs and low again in the farm land. This complicated up-down-up-down "theory" requires a sine curve to fit and violates a basic tenet of science, simplicity. If scientific simplicity can be preserved, the weight of the history of scientific success, would incline a realist toward it.

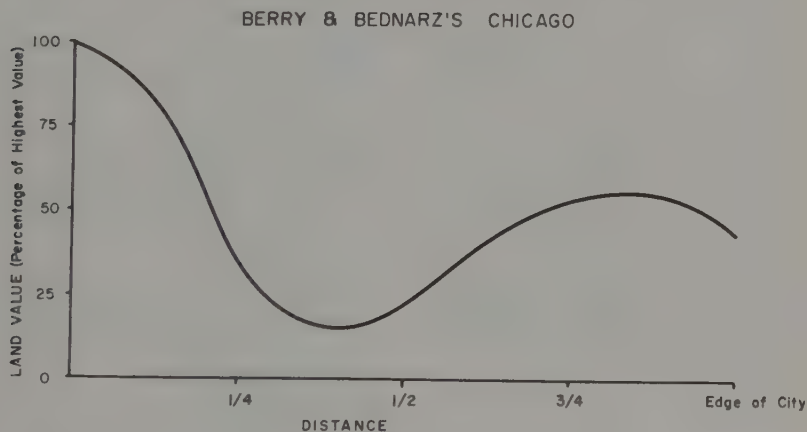


Fig. 55

This does not mean that the above curve has no real effect. It might be the curve that the white power structure in Mayor Daly's Chicago is willing to pay blacks. In this sense the curve is realistic. However in the sense of the real value of property it is necessary to look at a city without a racial slum - Toronto.

Toronto controls for a racial slum, nothing else. Toronto is a classic N. American city with a downtown, older inner city housing, suburbs, expressways, shopping centers, industrial districts

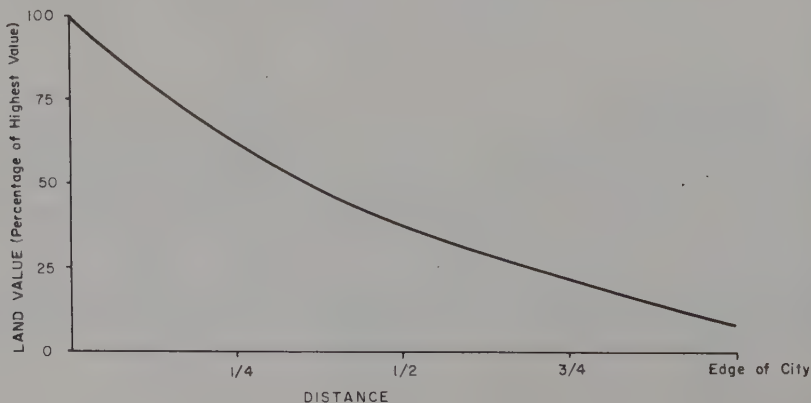
and a large black population - just like Chicago or Detroit - except that it has no racial slum ghetto. Resale values better reflect property's true value. Chicago data reflect the racial cheating of blacks. What do Toronto data show in a geography controlled for racism?

The gold-mine in Christie Pits, inner city Toronto, can be seen from the map and accompanying statistics. A considerable amount of property is turned-over rapidly. Residential property, it continues in residential use. If turn-over occurs within six months it is defined as 'speculation' property. In Christie Pits turn-over is often associated with high profits of more than five thousand dollars. The actors are investment companies. Their highest profit in a six month period in Christie Pits was 24,000 dollars and their lowest a 'mere' 7,000 dollars. Their highest profit for one month was 21,000 dollars. Also the value of housing is constantly rising. Between October 1958 and 1963 the average property purchase price was 14,240 dollars; between 1963 and 1968, 19,967 dollars; between 1968 and 1972, 26,344 dollars; between 1972 and 1973, 31,098 dollars. The 1974 average was 54,000 dollars. There is no dip in the Thunen rent model in the inner city of Toronto. There is no racial slum.

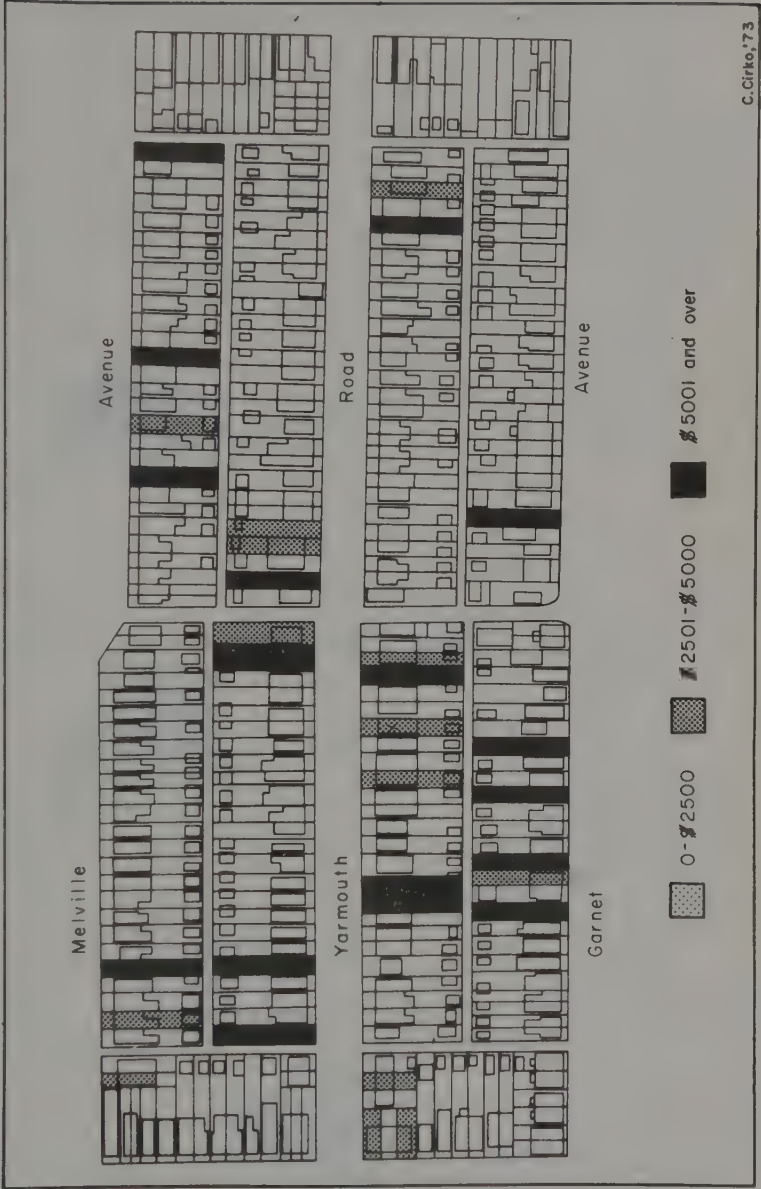
When the purchase of property is accompanied by a land use change, especially a switch from local residential use to non-local commercial use, then the increase in value of property can be amazing. In the micro-geography of Brunswick Ave., the Hungarian Castle Restaurant on Bloor St., the commercial cross street, has been seeking to purchase homes for a parking lot for its customers. For a modest two storey home on Brunswick Ave., not unlike the homes in Christie Pits, the owner of the Hungarian Castle offered 93,000 dollars. Berry and Bednarz need field work, their misconceptions are so staggering that only the profoundest withdrawal from the real world could account for them.

The Toronto data prove the continued reality of the classic Thunen rent model with its simply decreasing value over distance from downtown.

VON THÜNEN'S TORONTO



CHRISTIE PITS: Sample of Profits from Properties Bought and Sold within Six Months, from 1966-1972.



C. Cirko, '73

Fig. 57

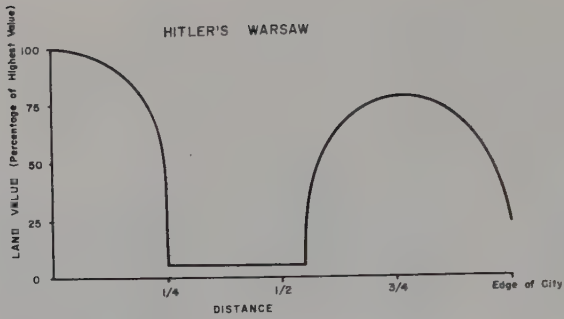


Fig. 58

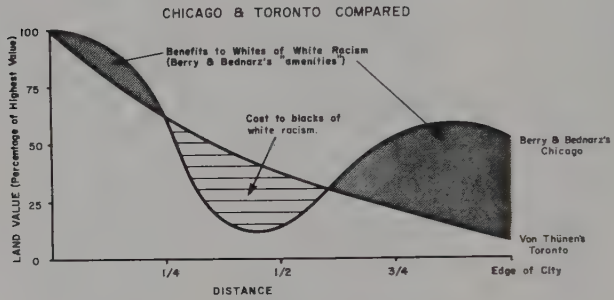


Fig. 59

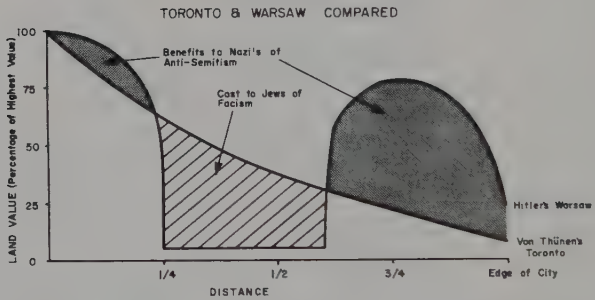


Fig. 60

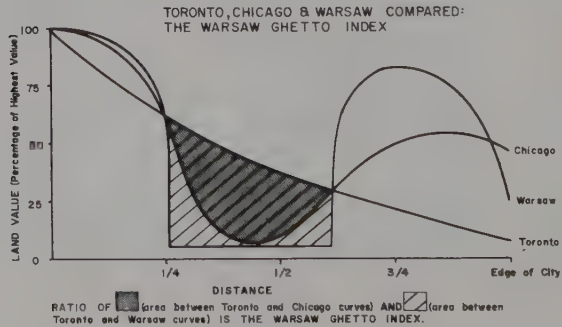


Fig. 61

If the two models of Berry and Bednarz's Chicago and Thünen's Toronto are compared the undervaluing of black property is the cost to the blacks of racism and the overvaluing of the white property, both downtown and in the suburbs, is the benefit to whites of that same racism.

The extreme case of the urban geography of racism was achieved in the Warsaw ghetto under Hitler's occupation of that city. The Jews received no government services, no private commercial services, no employment and the value of their central location was ignored too. The Nazi's simply seized their neighborhood. This model, Hitler's Warsaw, reduces the price paid for the inner city ghetto to zero. Comparing Hitler's Warsaw to Thünen's Toronto establishes the cost to Jews of racism and the benefits to Nazi's of racism.

To answer the question - how close is Chicago to Warsaw, compare the three curves of values. The ratio of the area between the curve for Toronto and Chicago compared to the area between the curves of Toronto and Warsaw is a geographic index of how close America is to a racist facism - 'the Warsaw Ghetto Index'.

Urban Imperialism.

Kay Hallohan of the Anglo-American Appalachian slum in Detroit, the Trumbull Community said at the 'Second Conference on the Geography of the Future' held in Montreal in February of 1971, "We know we are sitting on a gold mine." Folk geographer Hallohan is right. Academic geographers Berry and Bednarz are wrong.

The humanist geographer Blaut (1974) points out that ". . .all ghettos are slums, but all slums are not ghettos". He argues there are ". . .two kinds of slums. One (slums) is clearly an economic phenomenon, an expression of poverty pure and simple. But there is a certain kind of slum (slum-ghettos) in which the inhabitants are not only poor, but also different. Most ghetto-dwellers (in the U.S.A.) are Afro-American or Latin, and the special problems of ghetto-type slums are thought of as a combination of poverty. . . and cultural discrimination, or racism. . ." (brackets added). Blaut also argues that, "Ghetto-slums are unlike other modern slums. Their conditions are qualitatively worse. Their people are not merely exploited, but superexploited. Thus we need a model to explain these super-slums; these ghettos".

Blaut proposes that slum-ghettos are the urban manifestation of imperialism which is normally considered a third world phenomenon. "Two years ago I moved from Puerto Rico to the barrio in Chicago. It was as though I had not moved at all. When I left Puerto Rico, I carried with me, as a form of baggage, a cognitive model of Puerto Rican space, set within a larger model: the theory of imperialism. When I arrived, I sensed at once that barrio space is Puerto Rican space, transplanted. Is barrio space therefore a produce of imperialism?" Blaut goes on to argue so in his conclusion". . .the ghetto functions as an internal neo-colony."

If Blaut is right and the slum-ghettos of inner city Chicago are part of the third world then a more general question than why the blacks are underpaid for land is raised. 'Why do poor people, who suffer from poor housing, sit on rich land?' At the global scale, the Arabian Middle East produces great wealth through oil that traditionally has benefited the purchasers, Western Europe, North America and Japan, not the producers. The same can be said of Black Africa. People have poor houses of low value on top of extremely valuable land because they are cheated just as poor nations are cheated by more powerful nations. The trivial 'legal' details include such devices as 'buying' at vastly deflated prices, mineral rights under the land, or signing treaties with 'natives' at the fort.

At the continental scale, a traverse from Seattle to Dallas by train shows the same pattern. The relatively poor land of the Kalamath Mountains has good housing stock. As the Central Valley of California is entered and the land improves into a fertile vegetable garden, the value of the housing dramatically declines to miserable shacks. Climbing out of the Los Angeles basin and onto the inhospitable desert shows a dramatic increase in the standard of living as reflected in good housing. As the irrigated Texas cotton black belt is entered and the productivity and value of the land leaps, again the quality of housing plummets. That Chicanos live in the Great Valley of California and blacks in the Texas cotton black belt, is a diversion. White Appalachians sitting on valuable land, the coal fields of eastern America, have miserable shacks in which to try to raise their children. The Appalachian wealth is hauled off to "Wall Street". The pillage of the third world has its counterpart in the pillage of poor regions at all scales.

The fact that inner city blacks in America live in hovels with low resale value does not mean that the land is not valuable. It means that the occupiers will no more realize that value than the grape pickers of California, or the share-croppers of Texas. These people are cheated out of the value of their land.

If this cheating is transparently clear in the ghetto, why do people there tolerate the robbery? Because America's ghettos are a police state's "concentration camps" as Rev. Jessie Jackson, Director of P.U.S.H. (Chicago) aptly typifies them. The effects of police state tactics on neighborhood quality of life were documented in Fitzgerald, Detroit (Bunge 1971). Blacks are "robbed blind" by guns.

Geographers are fascinated by the economic geography of rents since it determines the urban geography of social class. But geographers over-emphasize the question of land values. Land values determine location but are less important in regards to

the geography of urban income flows. Rents partly determine the geography of money flow, since they establish in which parts of town rich and poor live; they do not determine the amount of these flows. We now turn to this question.

C: Money Flows.

How does money flow around the city? The answer is simple. Money flows from the poor to the rich at the points where the poor work. The rich steal from the poor by underpaying them. On one level people know this truth but their minds are beclouded by a constant stream of propaganda and confidences to confuse them. Let us begin the discussion at the popular level of confusion.

The Suburban View.

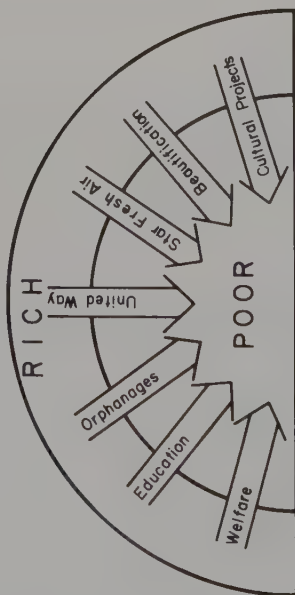
The official map of income flows, the one hammered at in the newspapers daily with stories about charities, 'United Way', walkathons, adoptions, advertisements for 'CARE' and other items such as welfare 'chiselers', 'abuses' of unemployment insurance, endless crime reportage, coupled with still other items about the awesome responsibilities of 'the Leader of the Free World', or epidemic heart attacks and high blood pressure among businessmen, shows the rich giving money away 'hand over fist' to the poor. "The poor steal from the rich."

The Inner City View.

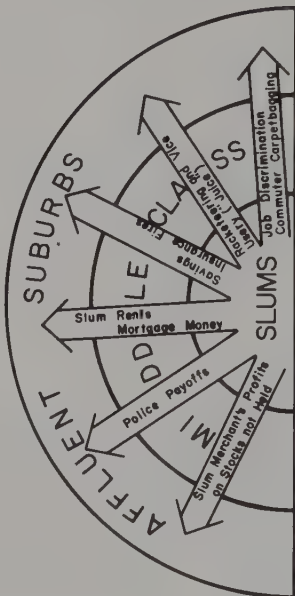
This is the dominant map in most people's minds including the minds of some among the self-depreciating, apologetic poor. But it is obvious nonsense because if the net flow of wealth is from rich to poor then the poor would soon have all the money and the rich would become poor. The money must be flowing the other way, out from the inner city poor, to the suburban rich. Though a minority view among the poor, at least it has the arrows on the flow map going the right way but with the wrong categories. Most people feel they are overcharged and that is why they have no money. Two big items that take their money are food and housing. True, in Detroit, one gets more for one's money for identical items in rich stores than in poor stores. Since the rich run everything they make sure they give themselves the bargains. This can easily be tested and mapped by shopping for a basketful of standard items from Black Bottom in a traverse to Grosse Pointe. But the differential in food prices does not begin to explain the huge differences in inner city wealth compared to suburban wealth. Rents are another popular target of indignation especially for the poor. Rents are exorbitant in Toronto perhaps the highest in the world. The city's rents explain much of the geography and, as previously developed, explain the mystery of why the rich have to travel so far to work.

INCOME FLOWS: FOUR VIEWS

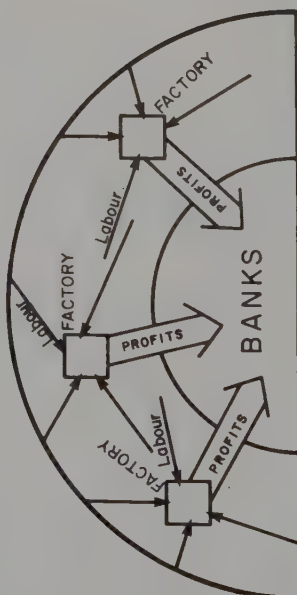
1 SUBURBAN VIEW OF TORONTO'S INCOME FLOWS



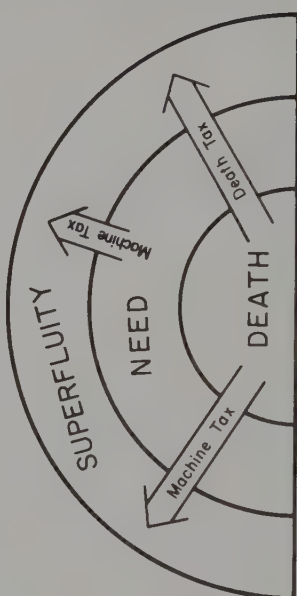
2 INNER CITY VIEW OF TORONTO'S INCOME FLOWS



3 TRADE UNION VIEW OF TORONTO'S INCOME FLOWS



4 SURVIVAL VIEW OF TORONTO'S INCOME FLOWS



The housing question is also interesting, not only because it determines the geography of all local or community landuse, but because it is relatively easy to map ownership. If a sample map of ownership is made it turns out that the inner city is underowned. That is, it has far fewer owners than property, while the outer city is over owned. The suburbs own themselves plus owning the property in the inner city. It is true that suburban ownership is often of a mortgage type but then who are the owners of the mortgages but the suburbanites. The 'rents' paid in the suburbs stay in the suburbs while the rents paid in the inner city flow out to the suburbs. Still the flow of rent money and the differentiation in food prices combined are not of the magnitude that could possibly explain the difference in wealth between the inner city and the suburbs.

This suggests a strategy of trying to add up all the little flows of money associated with spending to see if the aggregate total would explain the income flows. Finding these flows is difficult because they are disguised so that people can be cheated with less resistance. If one can fool a man out of his money he is less troubled than if one has to seize his money by armed methods. Likewise if a community can be confided out of money it is as likely to blame itself for being collectively stupid or foolish, as it is to blame the neighborhood that 'bilked' it. Some of these geographic aggressions are subtle. For instance, inner city home-owners are never home-owners but mortgage-holders. The individual illusion is that in twenty-five years one will own one's own house, but people are extremely mobile, die, need money to eke out insufficient retirement 'golden years' -- and so almost no one in the inner city owns their own homes outright. The mortgages, nominally twenty-five years in length are forever, since the homes are re-mortgaged and re-mortgaged. A map of sample mortgages in the inner city would show that it is 'in hock' forever, just as mortgaged in 1974 as 1874. Only parts of the suburbs are home-owned, or an even better tax dodge, company owned, like private cars often are in the suburbs. Inner city neighborhoods manage to retire church mortgages and feel accomplishment. But then 'invasion' of neighborhoods brings in a new group of people with different religious affiliations. Then the old group sells its church building and re-establishes further away on the proceeds. The new group now begins the mortgaging cycle again. Occasionally a suburban man will burn down his inner city store. This is a form of arson called 'an insurance fire'. The old neighborhood is then designated as a high insurance risk neighborhood. The list seems endless and complicated and can be extremely seductive because the geographer can keep adding flow lines to his map hoping to approximate the difference in wealth between the inner city and the suburb - but never make it.

The Trade Union View.

The reason for the gap between explained income flows and total differences in wealth is not because many are hidden, yet undiscovered

but rather, people are not overcharged into poverty. They are underpaid into poverty. Nobody will hire another unless he can make a profit from doing so. How this fools people could be seen in the Confederacy. Blacks felt they were paid nothing for their labor. This made them a sabotage threat. Slave masters, however, knew that they had to pay for food, shelter, breeding, rearing. As share-croppers, blacks clearly perceived the rate of exploitation. They did all the work and kept only a fraction of the returns. They knew how much they worked for themselves and how much for 'Mr. Charlie', because the landowner got a share, minimally around fifty percent. As blacks move into industrial cities, like everyone else in the factory, they thought the boss was paying them for their work, rather than underpaying them. If the blacks had a difficult time understanding the income flows, who has not?

Some people get to a third map. From the 'Charity' map to the 'Rip Off Map' is difficult. The third map is more difficult to perceive. It shows the flow of profits, produced in the factories, moving through the banks, to the owners in the suburbs. The few who reach this geography have arrived at flow patterns large enough to explain the difference in income between very rich and very poor. Still, the map of money flows is too complicated for geography to clarify. It confuses the simplicity of the statement: "The rich steal from the poor." The map is unclear, since different workers work in different factories and profits are 'laundered' through different banks; so that, flow lines go in all directions.

The Survival View.

This leads to the fourth, simple, therefore, sophisticated map. It shows the money flows from working class to owner class neighborhoods. The reasoning is as follows: all men are created equal; so, if equally raised, they remain equal for life.¹ If a fully educated man (all mammals have to be fully educated to make a living or they perish) works for nobody and, has nobody working for him, he should make a natural income, the income all should be making. A dentist, for example, is such a man. We can calculate a dentist's income and calculate the difference, below this income, which people make, as a measure of how they are cheated. If given just enough to raise up healthy children

¹The section on Detroit Humanly Viewed provides the logical underpinning for the concept of natural income.

with no reserves, they live in the 'city of need', if less than this, in the 'city of death', explaining Toronto's infant mortality map differentials just as in Detroit. The 'death tax' is a side tax. It is not the profits taken at the factory since people from all over the city work side by side in the factory, it is the extra tax for all the little flows that the inner city has to pay; the extra money for bad food, the high rents, the insurance fires. These extra flows are what kill off a neighborhood over and above the typical profits every one but the profiteers pay. So the folk wisdom that the poor are overcharged has teeth in it. It is the straw that breaks the neighborhood's back though the rock on its back is profits; underpayment rather than overcharging. This extra death tax produces the urban misery; it is the misery tax, the child killing tax so a special hatred of it develops. Why do the profiteers have this 'city of death'? Why would they kill off so many children who could otherwise work for them? In order to intimidate and divide-and-conquer the 'city of need'. If some 'middle class' 'city of need' neighborhood starts rising up against the money flowing out to the rich; the 'city of superfluity' can say: "Watch out, we can be worse." And seeing the 'bums', the drunks, the broken men, the 'human derelicts' on the streets in skid row, has a sobering effect on middle class people. Also, pitting the poor and very poor against the merely quietly desperate middle class, makes them fight each other over the scraps of life rather than turn on the inherited rich, the main kind of rich.

The Human Effects.

What are the effects of money flowing out of the inner city? If enough flows out, the children begin to die, from high infant mortality, from diseases highly concentrated in unhealthy environments. A survey by the University of Toronto School of Hygiene in 1972 revealed that 30 percent of inner city residents had no doctor. (Toronto Star, April 6, 1974). Salmonella poisoning, tuberculosis, cockroaches, all manner of environmental health problems to the children, begin as inner city working class geographies.

A map of smiles seems innocent enough, but it need not be. Historians have counted the number of smiles in mass scenes in newspapers and have found that during economic depressions people smile much less than during periods of prosperity. Depressions depress people. It is hypothesized that the geography of smiles is even more telling than the history of smiles. Depressions are normally depicted as events - either a country is prosperous or depressed - but this is often untrue. In cities there are 'depressed areas'. By any measure from unemployment to infant mortality, these depressed areas are in a depression as deep as that of the early 1930's. A geographic, as opposed to a temporal, look at depression would be one of the expansion or contraction of depressed areas. The expansion never includes all the map; the rich always eat well in their parts of town and the prosperity never reaches the heart of the slums. A depression defined as a period of economic stagnation is merely a geographic expansion of slum conditions into middle class areas.

Infant Mortality Rate by Corresponding Countries

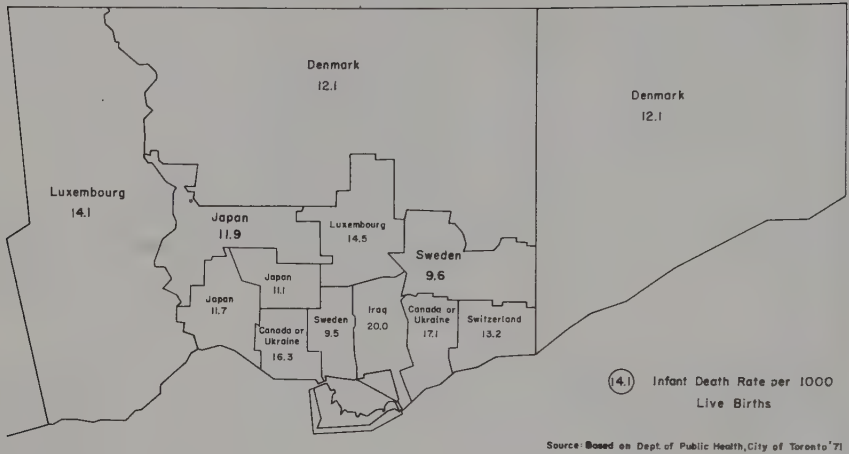


Fig.63

High and Low Infant Survival Areas in the City of Toronto

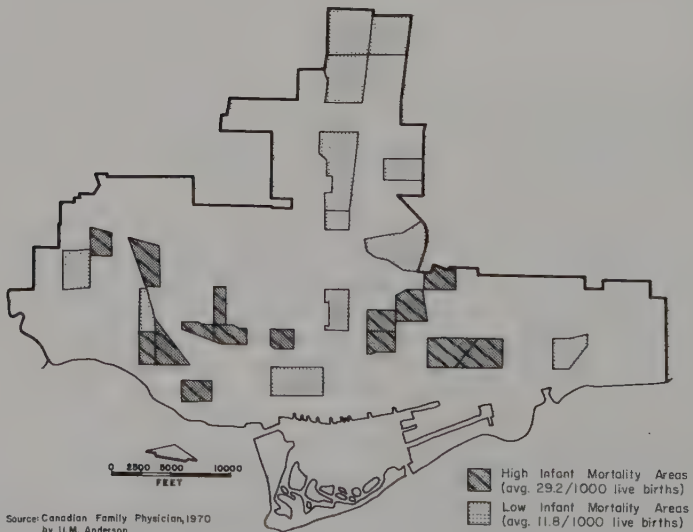


Fig.64

Concentration of Low Quality Housing in Metro. Toronto, 1971

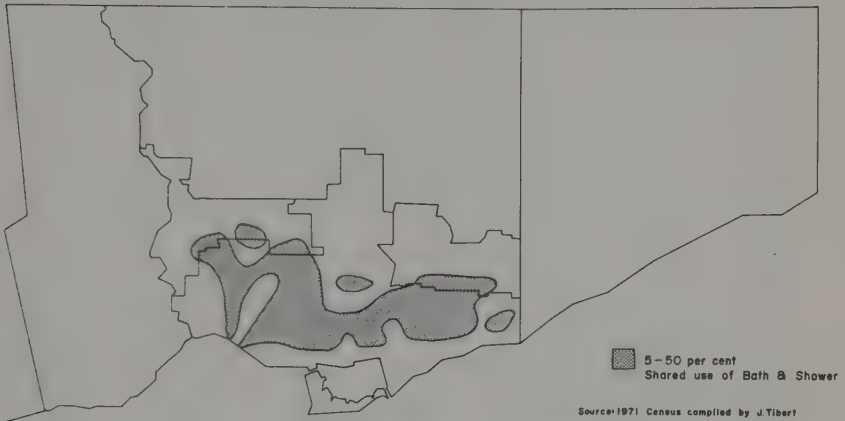


Fig. 65

Salmonella Poisoning in Children Five Years Of Age And Under In Metro. For 1971

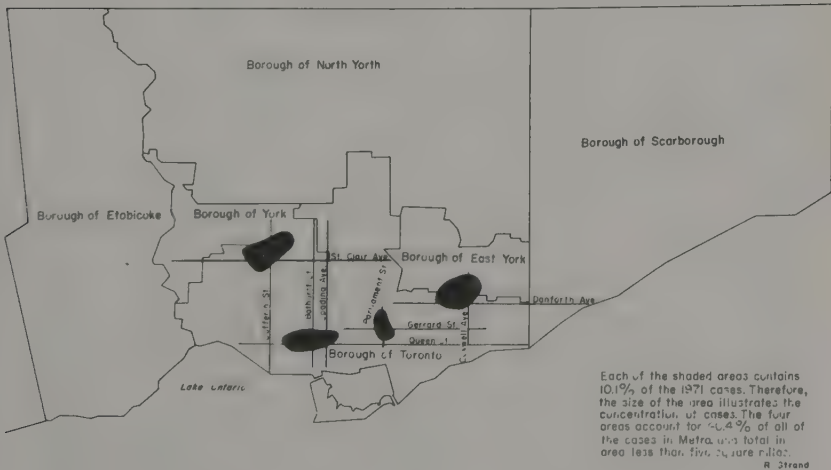


Fig. 66



NEW ACTIVE CASES OF TUBERCULOSIS FOR THE BOROUGHS OF TORONTO, 1972.

● ONE ACTIVE CASE OF T.B.

Fig. 67

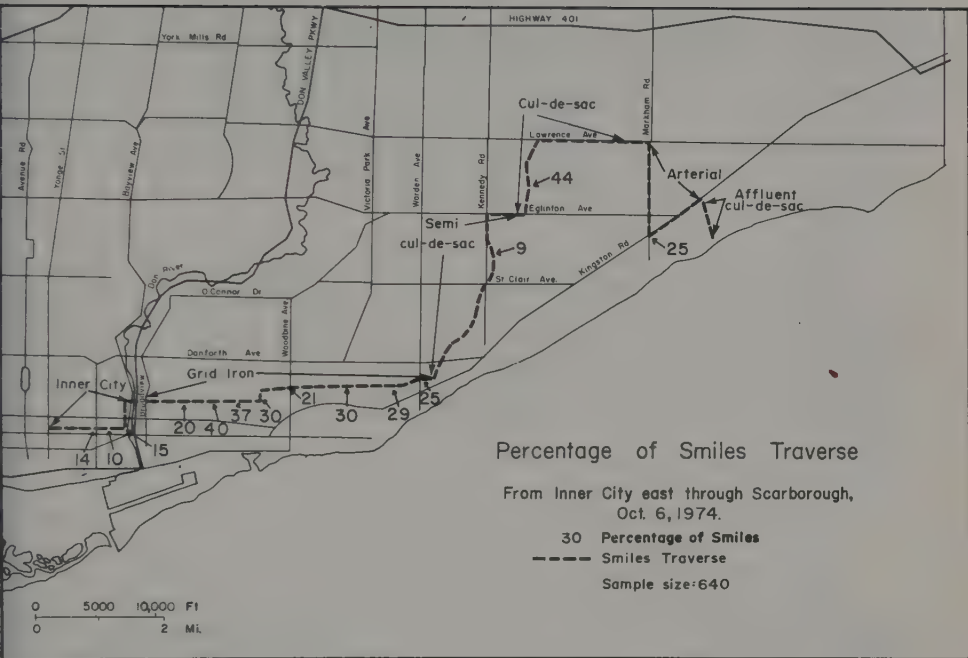


Fig. 68

Traverse of Smiles: Downtown eastward to Guildwood Village Suburb

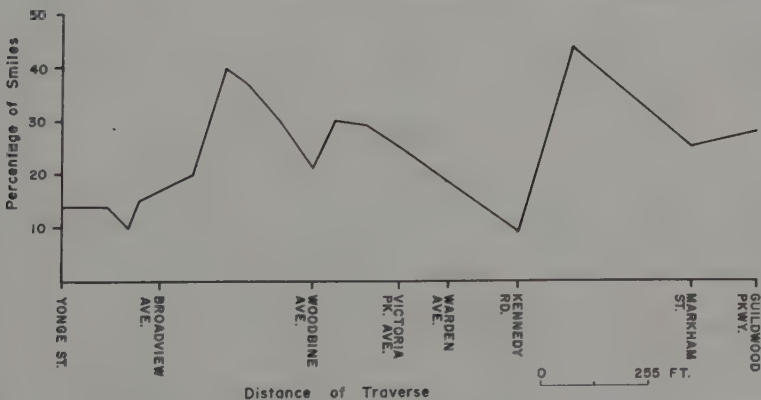


Fig. 69

Driving along a traverse in Toronto counting percentages of smiles while moving up and down income gradients produced the accompanying map. The results are difficult to interpret. To overcome the high variance obviously a large sample size would be required. But potentially this technique is superior to classic unemployment statistics as indicators of depressions since the latter can be manipulated. In the U.S.A. careful studies have shown that official unemployment statistics underestimate actual unemployment by half. Doubling the rate approaches the true figure. The device used to underestimate unemployment is to count only those constantly looking for work.

Obviously people get discouraged after long unemployment, and are statistically treated like 'the idle rich'. That is, they are not counted as unemployed. But just a driver and one observer can keep the government honest with the smile map technique assuming the hypothesis of geographic depression proves true. The smiles map is not intended as a surrogate for depression; the unemployment statistics and stock market averages are the surrogate for the smile map.

D: Old Neighborhoods.

It is not true that housing simply deteriorates and by architectural exhaustion produces slums of worn out structures. The comparison between cities of the U.S.A. and Sweden finds that in Sweden the age of buildings has nothing to do with the social tone of neighborhoods. In Lund, Sweden, the center of the city with a cathedral, restaurant and other buildings over 400 years old, has a crime rate no higher than that in the newer suburbs. One can walk on a traverse from the heart of the city to its edge and note the lack of spatial segregation by social class; the buildings are well maintained whatever their age. By contrast, in American cities, in which housing also varies from old at the center to new at the edge there is a striking differential in deterioration levels and spatial distribution of social classes. If income is distributed without the cruel N. American extremes, then cities show a uniform social geography, though of various age of building.

Crucial Urban Landscapes.

Not all regions of cities, even though vividly defined, are of equal importance. 'Folksy, artsy' regions, like Kensington Market or the Islands in Toronto, have a 'National Geographic' quaintness to them. It is primarily because they are precious, unique. While they provide much of the flavor of cities, give them their 'sport' and even much of their joy; and while they are humanly important for these reasons, they lack scale. They pose no threat to established power since one cannot turn all inner city Toronto into a series of Kensington Markets. Toronto's harbor islands and their dwellers are similarly no threat. Their fight to save their homes is worthy but unique. They might well be allowed a victory in not having their homes torn down just as Kensington Market a few years

back was allowed to continue.

In contrast, Cabbagetown, a pariah neighborhood, a 'bad address', is assumed to contain all sorts of terrible characteristics: violence, prostitution, alcoholism, criminality, filth and neglected children. Such 'regions of hell' are not nationally unique. Cabbagetown is a national battlefield. A concession in Cabbagetown could establish a repeatable national precedent.

Tourist Regions and Typical Ones.

Other urban regions are important though not at the extremes, because they are typical and lie relatively close to one extreme or the other. They too have the potential to tip the balance of power. Geographic precedents established in these neighborhoods could be adopted by many other similar neighborhoods. Thus a precedent of even one neighborhood succeeding against the power structure is resisted tooth and nail.

Why not let the Christie-Essex region in Toronto Italianize its landscape? Because it would mean implementing a national policy of a multi-cultural state. If the cultures of Canada cannot even be seen in Toronto; if the landscape tone of the city is forever Anglo-Saxon, then what does the policy of multi-cultural state mean? Is it just a political slogan? If the landscapes of Toronto actually became differentiated; Italian shrubery, street names, wine making festivals and so forth, it could spread like wildfire across the nation. The people who verbally put forth the slogan might not want it to be adopted. They might feel that if anyone began to do something about it, took their slogans seriously, that political backlash would be swift. The outcry from some 'just plain' Canadians is predictable. Suddenly everyone would be an ethnic, including the English-American-Canadian. Such a view would be counter to the self-image of Canadians of English-American origin.

What would the reaction be if Christie Pits 'painted its streets' Italian? A map of house front colors in certain parts of Toronto would indicate a definite geography to color. It is a hidden landscape trying to emerge from hiding. If a neighborhood were allowed to express itself not only would house fronts be painted but also the public property, streets and sidewalks. If the Portuguese paint sidewalks in their former colonial city, Rio de Janeiro and visiting Englishmen admire them, then why cannot Anglo-Canadians enjoy similar sidewalks in Toronto?

E: The Subtleties of Hidden Landscapes.

Hidden landscapes is not a straight forward subject. At first it appears that the rich have the power to articulate themselves outside their homes as well as inside. It can be

seen as a childhood geography of consistency. The rich child finds the same world as he moves from his bedroom to the living room to the front yard: all is one culture and fits together. If a person is powerful enough, say a ruling monarch in the 19th century, the entire empire is turned into an extension of the royal nursery. The ruling monarch never comes into a landscape other than his own. Poor children, the children of the powerless, have no nursery reflective of their culture. They start out in a foreign space from birth.

The logic of this discussion would seem to be that the poor child lives in a landscape of the rich and powerful group's culture. The ethnic origin of the powerful is imposed on the landscape of the entire city and anyone who does not like it can "go back where he came from". But 'hidden landscapes' is a more complicated question than that. The complexity is partly a matter of scale. An 'exclusive neighborhood' is internally articulated. In Toronto the powerful are of Anglo-American stock, and their neighborhoods, such as the 'Bridle Path', are exclusive in the sense that outsiders, non-locals are excluded. No one commutes through a commuter's neighborhood. Not only are the individual streets cul-de-saced, but the neighborhood itself is set aside geographically; for example the 'Bridle Path' is nestled in the branches of the Don River.

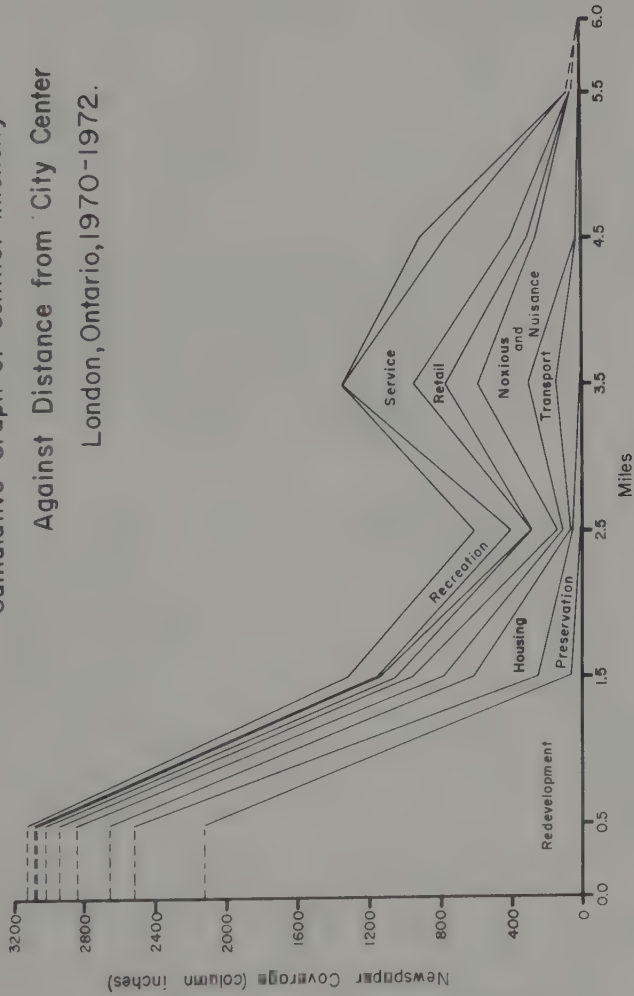
Nonexclusive neighborhoods, such as Christie-Essex, are available to exclusive people, who can take short cuts through them to speed to work. In wealthier neighborhoods, private clubs abound, but in the inner city everything good is public. A private yacht club can be found on the 'Toronto Islands' which are largely public parkland. If the rich want part of the public park made private, they have the power to accomplish such a re-zoning. In addition to scale and location of hidden landscapes, what is hidden differs. In rich neighborhoods the ugly and antagonistic is hidden. In poor neighborhoods, the beauty and culture of those who live there is hidden.

Class Trouble.

Class bias in the perception of trouble, of what constitutes an urban problem, can be seen from the work of Janelle and Millward (1974) who plot the geography of conflict in London, Ontario on the basis of newspaper coverage. Problems to be solved lay almost exclusively where the wealthy lay, downtown or in the affluent suburbs. The troubles of the poor receive no newspaper coverage perhaps for fear of 'stirring them up', as if they did not realize their own reality. A radical newspaper would reverse the graph. The working class would have all the trouble and the rich none.

Why is drinking so public among the poor? Because the misery of being poor drives people to drink? Partly, but also because of the geography of the poor compared to that of the rich. The rich

Cumulative Graph of Conflict Intensity
Against Distance from City Center
London, Ontario, 1970-1972.



Janelle B Millward 1973

Fig. 70

have no hidden landscape for all that is beautiful in them, only for all that is ugly. The ugliness of rich neighborhoods is carefully screened. Ontario has governmental beer and liquor stores. But the very rich need not send their servants to these, because they have a discrete method of ordering liquor directly from distillers. They can be private drunkards: rarely is their drunkenness, or any other form of ugliness, publicly displayed. It is part of their privileged landscape to have hidden garbage with disposals and compressors, hidden police and hidden drunkards.

Urban crime constantly is suggested as a fit subject for geographic analysis. Two maps attract crowds for study when publicly posted: maps of income in street by street detail and maps of rape. Crime mapping has major difficulties. One difficulty is related to the class nature of the definition of crime. Consider the map of public intoxication. This 'stoner spaces' map is of Ottawa, not Toronto, but is close enough to any North America city to make the point. At first the map induces humor. Notice the circulation of intoxication around the National Arts Center. Imagine the prime minister of Canada hosting the president of the U.S.S.R. at a performance of the ballet. As the splendidly attired party strolls toward the center, the first wave of dignitaries stumbles over three or four intoxicated Canadians, almost Chaplinesque.

But consider the map more. Why do we publicly display human wrecks? Could they serve a social purpose? 'Skid row' in Ottawa is a typical 'skid row' complete with cheap wine, 'flop houses', and day labor. The mortality rate is great, literally dying men. But the social effect of this display? "There but for the grace of God go I." No matter how dreary the drudgery of day to day living for the quietly desperate, it could be much worse. It can be argued that drunks do not represent the system since not everyone is a public drunk. It can be argued that tornado victims are not stricken by accident since some people get killed and others do not. It must, therefore, be the individual tornado victim's fault. How absurd!

In times of oppression a hue and cry goes up over 'juvenile delinquency.' There are no teenage generals. How many men kill young children as compared to children killing adults? Not once has an infant killed a general. The victims of shootings become branded the guilty ones, the criminals, reversing the geography of guilt. Alcoholism and buying and consuming liquor publicly are a small part of the total system, visibly articulated in poor neighborhoods, buried in rich ones.

Historic Restoration.

Nowhere is more class, ethnic, racial and personal bias shown than in the urban landscape than with respect to preservation and restoration of the past. Whatever the device used to etch on the

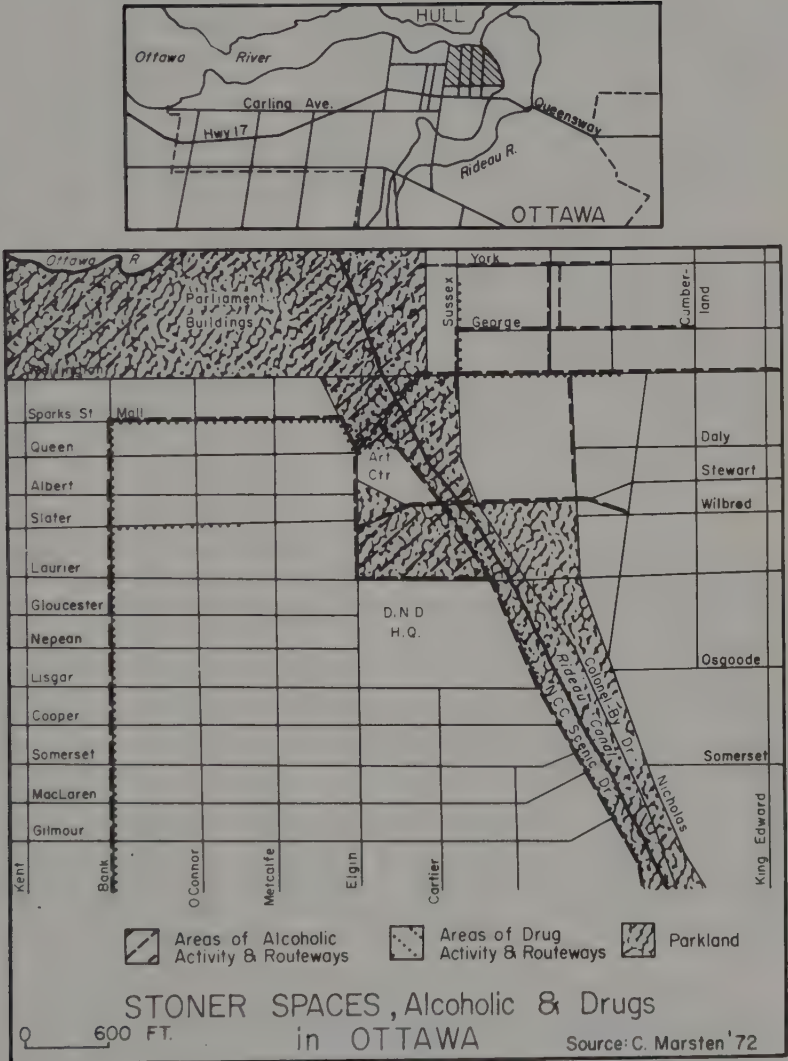


Fig. 71

landscape - historic plaques, restoration of old buildings and neighborhoods, displays of historic-geographic maps, books, television education programs, professional lectures - the obviously biased selectivity of the material presented is not overcome by 'nit picking' detail attempting 'historic accuracy'. Toronto's restoration program partly consists of historic plaques only two of which are devoted to the French. Both are written in impeccable English. There is one Jewish plaque. Three 'ethnic' plaques and thirty Anglo-Saxon plaques is hardly a fair reflection of Toronto's history. Other buildings might have historical interest for other groups: for example, where did early Italian families live in old Toronto? Finding the roots of Italian culture is important since the prejudiced describe them as being "just off the boat".

The bias of restoration is clear from the lack of markings of the native peoples' landscape. With native peoples rising up all over the continent, asserting illegally overthrown treaty rights and self pride, the dangers in giving Toronto's current native peoples (all 40,000 of them) historic-geographic markers are evident. The first white settlement in Toronto was French and the 3.5 percent Quebecois living in Toronto might demand restoration of their three forts to counter-pose to Fort York, the United Empire Loyalist display. Where were the first Chinese or the first blacks in old Toronto?

William Eccles, (University of Toronto, History Department, in conversation, 1974) reinforces the speculated probability that the first black man to view Toronto accompanied the French, long before the British settlers. In the 'who-is-first-off-the-boat' argument blacks, among others, likely beat Anglo-Saxons. Specific documentation would require a search of archives in Montreal which Eccles suggests would take ten years. The search would likely show early black visitors to Toronto. As Eccles explains, the French colony began importing black slaves as domestics, an expensive luxury item, from the West Indies, in the 1700's. Officers at the old French forts, such as in Toronto, may have had such servants. The French explorers may have had black slaves, though Indian slaves were more typical. The French settlement in Detroit had black slaves and, may have passed through Toronto, as did a number of settlers at that time, on their way to Detroit.

Eccles also points out that the French had a policy of ransoming those English and blacks slaved by native peoples. The Indians charged twice the amount for release of the blacks compared to the whites, valuing them more.

In summary it seems that historical geographies are hidden by prejudicial restoration of the landscape.

F: The Naming of Urban Communities.

Native Peoples' Sites: An Unmarked Landscape Feature

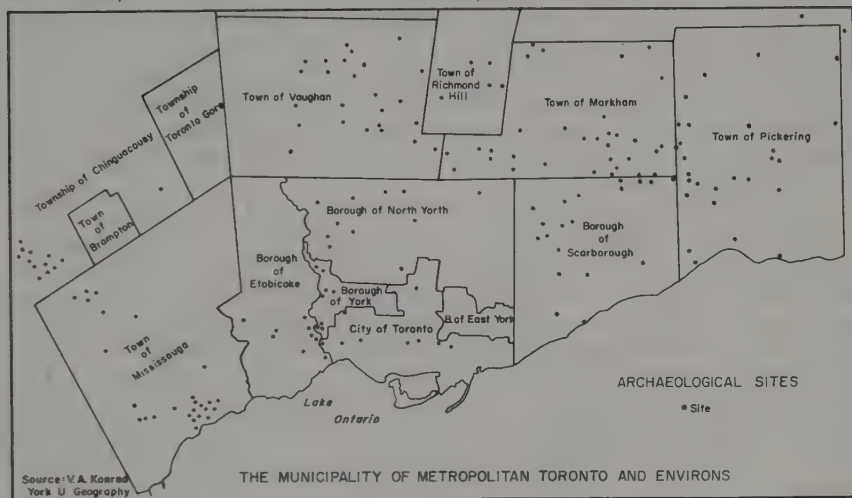


Fig.72

Concentration of Native Indians and Eskimos In Metro. Toronto, 1971



Note: Only areas in the upper tenth percentile of Native Indians & Eskimos are mapped. Almost totally dispersed

Fig.73

Regions defined by the people who live in them are the most legitimate regions. It is recognized as a studied insult to deliberately mispronounce a person's name. It is also recognized as an aggression to think so little of a person as to not know who he is. Likewise, an aggressive insult against a group is to not recognize their own name for their homeland. There is no Germany, only Deutschland. There is no Rome, only Roma. Besides aggressions of mispronunciation of place names there is the geographic aggression of not delimiting territory, but merely placing the name of the region on the map at the approximate core of the region and leaving the boundaries undelimited. Indian nations just seem to float on the map. Their names appear in the middle of a base map as if they had no national boundaries.

Not even the treaty boundaries, specifically delineated in documents, appear. It can be argued that the native peoples were nomadic and therefore had to be shown as not attached to the soil. But it can equally be argued that modern Canadians are just as mobile and therefore their name 'Canadians' should just appear at Ottawa and the boundary with the United States should be erased! This last point makes the point. By not putting the boundary lines on the map, though such lines existed on the earth's surface, territorial aggression against the Indians could be committed without anyone noticing.

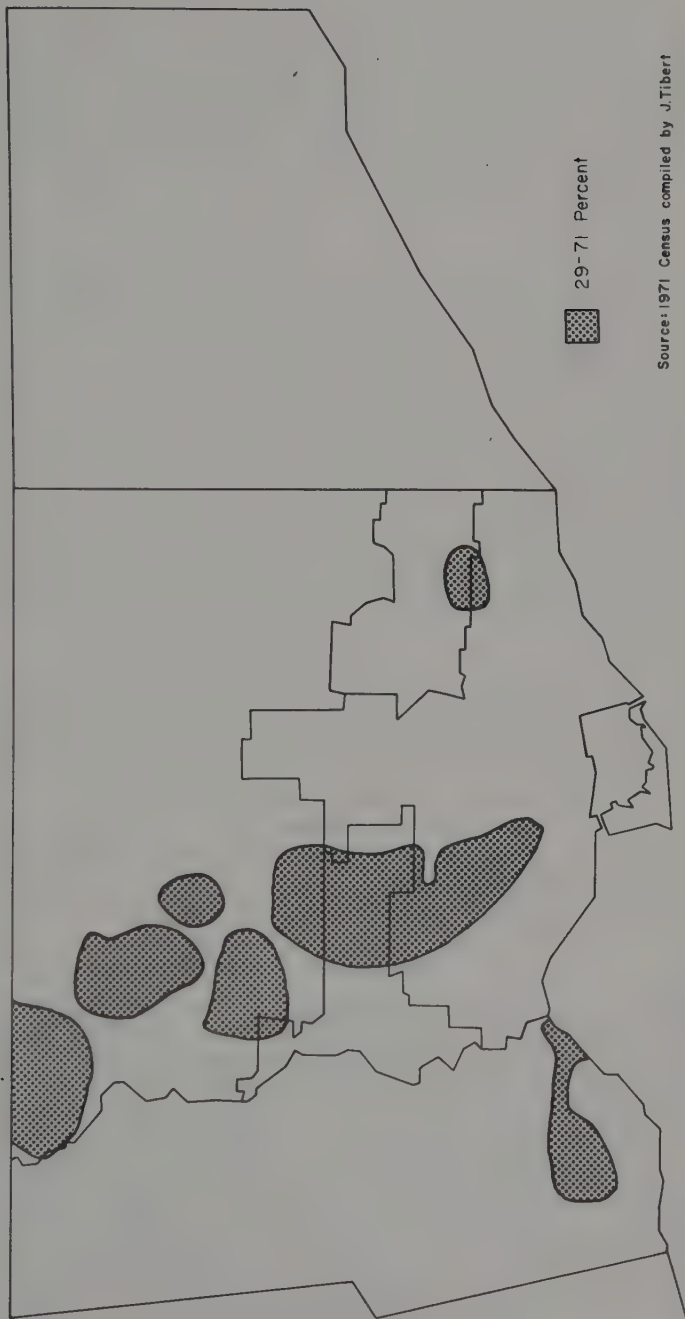
Nationality in an Urban Geography.

Similar aggressions are committed against urban nations, typically reduced in rhetoric, but not fact, to mere 'ethnic communities' or neighborhoods. On the office walls of city planners the city is often subdivided into 'planning districts' with 'official' names bureaucratically assigned, not those used by the residents themselves. Are these urban neighborhoods, with their relatively small geographic dimensions really comparable to vast Indian nations? Almost. In terms of the number of 'square people' rather than square kilometers, the two regions are the same. "If a nation moves to the cities then the nation has moved to the cities" - a truism. But just add a word to the sentence and the sentence becomes a controversy. "If a nation's people moves to the cities then the nation has moved to the cities". A nation is its people and an energy source not its land.

Italian Toronto.

The wealthy have devices for expressing their pride. They put their mark on places. This is not necessarily expensive, not necessarily a function of money, but rather of boldness of presence. Take the matter of 'good taste' in colors. The English version is to restore buildings to the original brick: this is fine and has been accomplished in several Toronto neighborhoods. Many southern European groups consider it 'good taste' to paint their houses in vivid colors, brick by brick. Most Anglo-Canadians consider this practice amounts almost to defacement. Certainly no public building in Toronto reflects this colorful standard of 'good taste'; they are

Concentration of Italians in Metro, Toronto, 1971



Note: Only areas in the upper tenth percentile of Italian concentration are mapped.

Fig. 74

consistent with English taste.

The character of streets in Italy is not entirely replicated in Toronto's Italian districts. Why is even the Italian street conversation, the wonderful loud play of conversation that goes on between the front porch and sidewalk promenades muted in Italian Toronto? Why is this street theater missing even on exclusively Italian residential streets?

Part of the answer lies in the use of the streets by other people. 'Foreign' travelers should be diverted from these streets. The traffic and parks study of the Christie Pits region opens up precisely this possibility. Cul-de-sacing the streets mechanically excludes 'foreigners'. At the same time the schools and churches are made more central and more accessible to the walking population by the construction of children's malls. Circulation of community people is improved while foreign circulation is eliminated. From this alone the Italian culture might spring forth. For example, the existing central church might sponsor a carnival. Tucked away inside its exclusively Italian streets the carnival would not be overrun with too many non-Italians who would not be able to enter into the true spirit of the event. A wine festival might be arranged. Such events would be the Italian equivalent of exclusive garden parties and charity events in exclusive neighborhoods.

Landscapes can also come out of hiding by using various other devices, such as placing the community name at its entrance, or at the entrance to the streets themselves; by installing special street lights, by narrowing the entrance or by flying flags and pennants. It is worth pausing over street names. Local streets should be locally named, thus in Christie Pits the local community might re-name all the local streets to suit themselves. If the Italian community eventually moved away there is no reason why they should not also move their street names and permit the new occupants to re-name

The Non-Ethnic Canadians.

Most furtive human environments are 'underground' involuntarily. In spite of a bi-national and multi-cultural Canadian Federal policy ethnic groups other than Anglo-Canadians find themselves making uncomfortable adjustments as individuals and cultures to fit into a modified Anglo-Canadian environment. The practicality of learning English as a common means of communication in Toronto is undeniable. But it does not follow that learning English makes one an Englishman. Much of culture is not language. Almost none of the geography of culture, the culture as reflected in the landscape, is language. A trained eye can almost identify cities of the world from pictures of their streets. Geographers find language overrated as a cultural ingredient. 'Feeling at home' in a neighborhood is as much the look to the place, the feel of the region, as its language.

One step in liberating hidden landscapes, in bringing them out of hiding, in articulating them; is to recognize some unrecognized

ethnics'. Many Anglo-Canadians make the claim that they are Canadians. What North American geographers refer to as "Anglo-America" (N. America north of Mexico) consists of 20 percent of the U.S.A. population, 42 million Anglo-Americans, and 49 percent of the Canadian population, 8 million Anglo-Canadians, for a grand total of 50 million Anglos in 'Anglo-America' compared to 184 million non-Anglos. Anglo-Canadians often resent being told of their ethnicity since it reduces them to equality. If the hyphenated Canadian is clearly an 'ethnic', the non-hyphenated Canadian is also an 'ethnic'.

Geographically Scattered Communities of Interest.

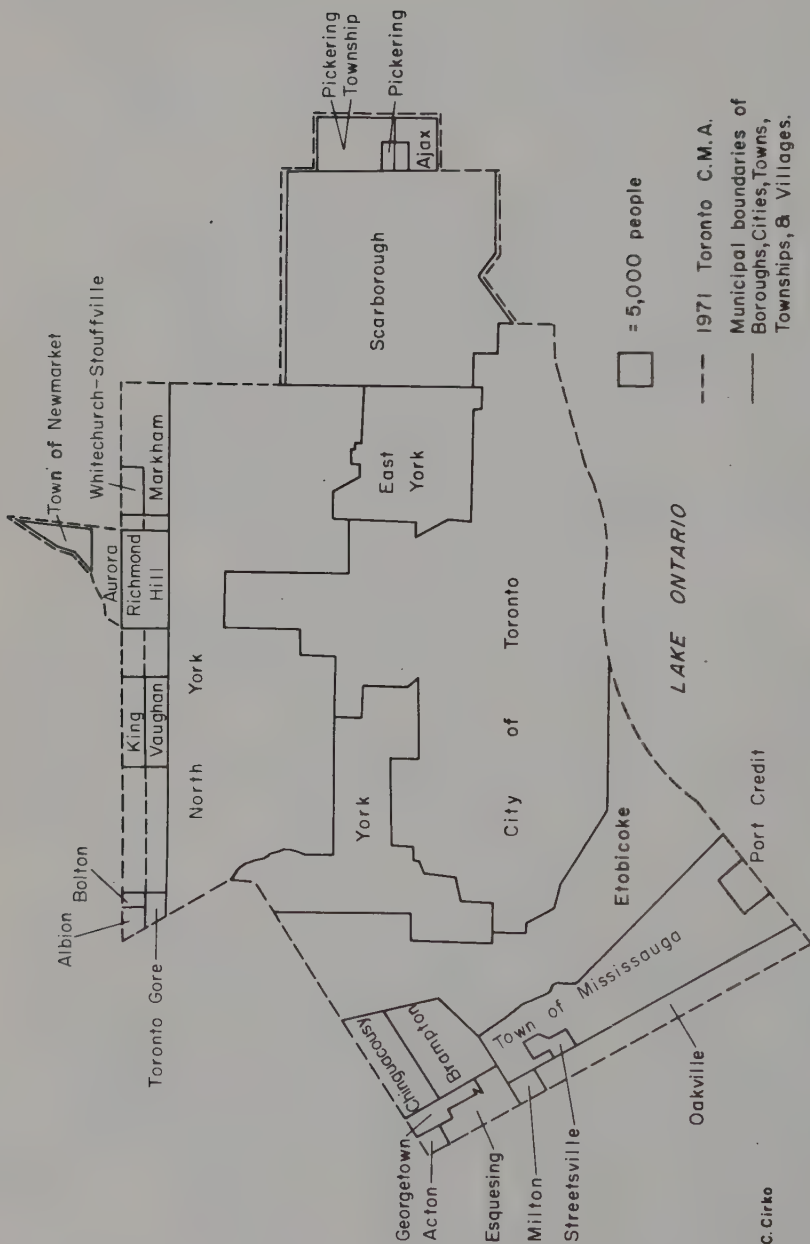
If cultures are to express themselves in the landscape of Toronto, the geography of the cultures must be discovered. Then the question shifts. If the group is scattered, like the Quebecois and black communities in Toronto, how can one build a landscape for them? If there is no street block in Toronto dominantly of the black or Quebec culture. By what right does one force the people on any street to reflect a culture not theirs, on their own street? Scattered cultures have to remain more invisible than those, (like the Italians, the English, the Jews and the Chinese,) who have a geographic concentration. The scattered groups assemble in buildings, such as the blacks in various nightclubs and enterprises. The blacks also have a somewhat concentrated in-migration center around Bathurst and Bloor. But the Quebecois have none of these so they can not even establish mini-landscapes of their own culture. Rather than turning to these more scattered groups, those cultures more concentrated should be examined to see if their concentration can be more fully utilized.

G: Gerrymandering: Depriving People of Just Power Through Geographic Trickery.

As people have moved to cities from farms the government's geography has not. The provinces are at war with the cities and Ottawa. The Province of Ontario is a rural form designed to serve pioneer farmers whose descendents now populate Toronto. Too much political power resides in the countryside as represented for instance by the number of people per member of parliament, but even more geographically, by a cartogram whose units of local government are in proportion to the population, not square miles. There is no local government in Toronto. But the little rural political units surrounding Toronto do have local governments. From the point of view of the individual citizen, a move from the countryside of Ontario to the city is disenfranchisement of all local government decision making.

Rotten Boroughs.

The Ontario New Democratic Party caucus in a brief to the Ontario Electoral Boundaries Commission (1974), illustrates the nature of rotten boroughs.



CARTOGRAM OF BOROUGHS, CITIES, TOWNS, TOWNSHIPS, VILLAGES IN PART OF SOUTHERN ONTARIO WITH AREAS OF GOVERNMENT IN PROPORTION TO POPULATION

Fig 175

"The provincial riding population works out at an average of 62,600. The average urban riding will have about 71,500 people while the average rural riding will contain 53,500. It seems to us to be a perversion of logic that the Commission should so consistently set rural ridings significantly below the population of urban ridings, particularly since it was using 1971 population statistics, which are already seriously out of date!

The situation can be summed up in another way. The Commission has set the average rural riding 14% below the provincial riding quota, while setting the urban average at about 14% above. Moreover, the urban 14% will double by 1975."

"But these figures deal with averages. Specific instances reveal the imbalance even more strikingly. Sault Ste. Marie is a case in point. It will have over 80,000 voters, while the two adjacent ridings are left at Algoma with 30,000, and Algoma Manitoulin with 31,500. So the two of them together have little more than 75% of their urban neighbor."

Too Few Voting Districts.

Gerrymandering is most safely policed by comparing the percentage of vote to the percentage of elected representation. There are many ways in which geography can gerrymander. Only the most transparent methods include strangely shaped regions, rotten boroughs or voting the dead. Representative democracy itself distorts. If every voter voted for himself in a large town-hall fashion, there would be no under-representation of the voters. If the size of the election district is increased from one for each voter to just one district, then a simple plurality would get all the elected power. Intermediate sizes to the voting districts would have intermediate gerrymandering effects. Assume twenty political parties, a condition approached in France and Italy. Assume the party with the largest vote obtains only a tiny amount over five percent; this five percent would elect the representative, a gerrymandering of ninety five percent. To show the effect on Toronto of this form of gerrymandering, the urban based New Democratic Party (N.D.P.) is less gerrymandered in provincial elections than federal. There are more ridings in the provincial elections than the federal. In the 1971 provincial elections, the N.D.P. obtained 21 percent of the vote, but only 16 percent of the seats for a gerrymandering of 24 percent. In the federal elections of 1974 the N.D.P. obtained 19 percent of the vote, but only 9 percent of the seats for a gerrymandering of 53 percent. The worse gerrymandering in the federal elections as opposed to the provincial correlates with the fact that there are fewer federal ridings than provincial, 88 as opposed to 117.

But gerrymandering is not what people normally think about when they think of community control. Is not the subject of the "quality

Gerrymandering as a Function of the Number of Electoral Districts

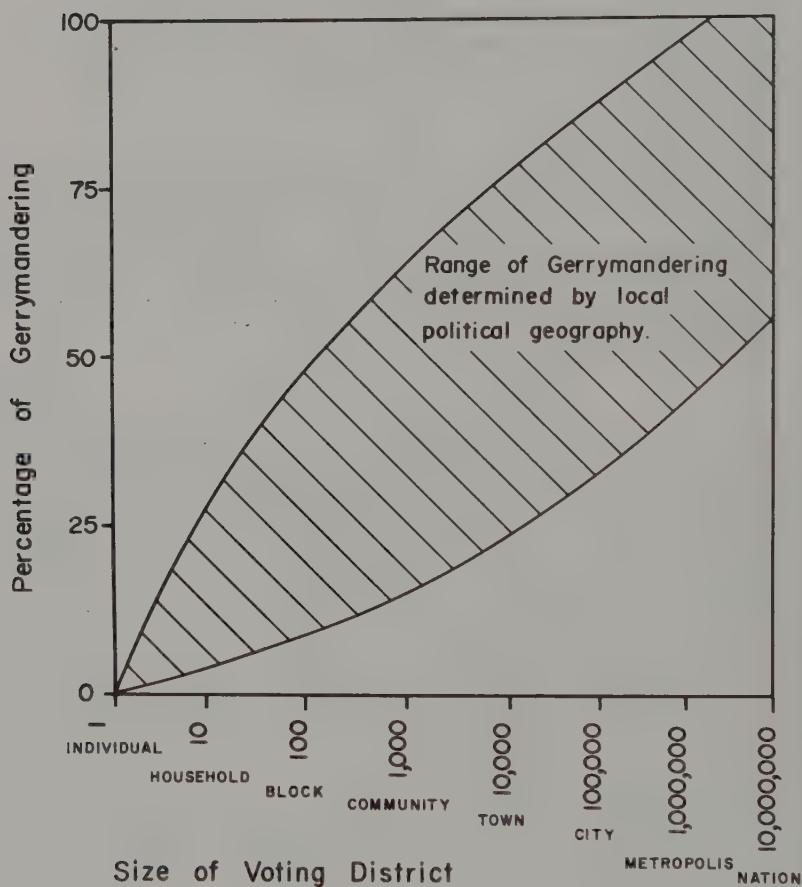


Fig.76

of life" the real urban issue for Toronto which has no urban national problem? Not at all. The issue in cities is not the "quality of life" but the "quality of life and death". People move to cities to make a living often literally under the pressure of starvation in the rural countryside, like the Sicilian farmers who move to Downsview in northwest Toronto. The problem of cities is not beautification or ornamentation. Cities are terribly serious places, even generating urban fun is a serious industry.

Geographically Concentrated National Communities.

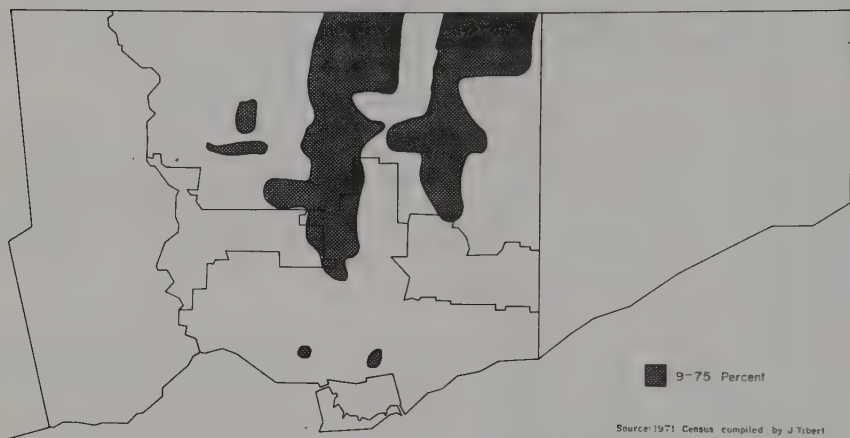
Where is the raw material, the national people, for urban national expression in Toronto? Among the existing population there is potential urban nationalism among several groups. European groups, Greeks, Italians, Portuguese and Ukrainians fall into this category. But so do other groups that have received less attention, blacks, Jews, Chinese and Quebecois.

The tens of thousands of blacks in Toronto have not coalesced into an exclusive ghetto; they are integrated geographically, but the integration is not total throughout the city. The neighborhood of commercial concentration is centered on Bathurst and Bloor. The black newspaper is published one block immediately south of that intersection. The greatest residential concentration is in the Vaughan Rd. area. What is the mood of this community - West Indian black, American black and Canadian black? Is it for geographic concentration "like the Jews" or geographic assimilation? It is definitely, at this time, (and these things swing back and forth,) for geographic assimilation. The one racial ghetto in Toronto is the Chinese, this being a voluntary ghetto. But an urban nation already exists. The Jewish community. The Jewish community has moved up the income ladder and out of Toronto's continuing immigrant reception area. Toronto's Jewish community can still be traced through Polish and Russian national origins, but the more revealing map is not of that dying citizenry but of the new citizenry, Israel. The Jewish community has potential citizenship in Israel. It is a true urban national group already formed in Toronto but not normally thought to be of potential Israeli citizenship.

In addition to these two national neighborhoods in Toronto, the Chinese and potential Israeli, other possibilities exist. If the other national groups feel threatened enough they can all potentially move out of assimilation and back to concentration and duality of citizenship. During times of economic hardship, cultural unity might reflect political-economic discrimination against those who are not "really Canadian" - a thinly disguised potential use of false historic-geography for the preferential treatment of groups that have power. These forces might ghettoise national groups such as West and East Indians.

A most interesting potential national neighborhood in Toronto is the Quebecois. For generations the Quebecois have moved to the U.S.A. rather than Ontario. Higher wages in the U.S.A. than in

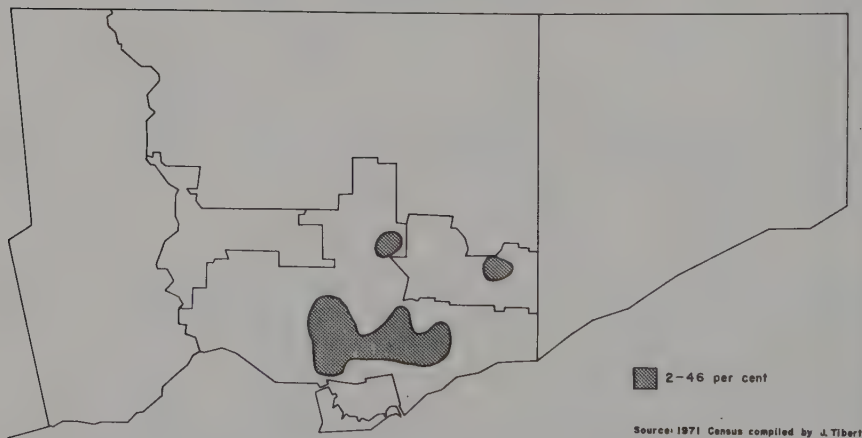
Concentration of potential Israeli citizens in Metro. Toronto, 1971



Note: Only areas in the upper tenth percentile of Jewish concentration are mapped.

Fig. 77

Concentration of Chinese in Metro. Toronto, 1971



Note: Only areas in the upper tenth percentile of Chinese concentration are mapped.
Younger Chinese are scattering.

Fig. 78

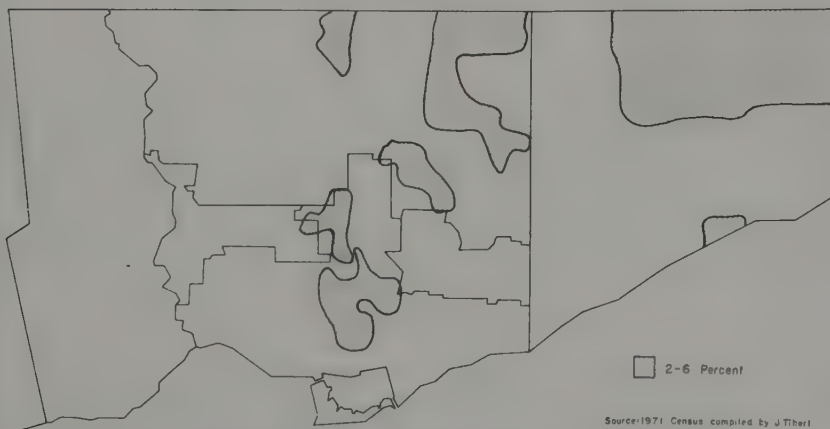
Concentration of Quebecois in Metro. Toronto, 1971



Note: Only areas in the upper tenth percentile of Quebecois concentration are mapped.

Fig. 79

Concentration of Americans in Metro. Toronto, 1971



Note: Only areas in the upper tenth percentile of American concentration are mapped.
There are two antagonistic American communities

Fig. 80

English Canada and an old pride against surrendering to English Canada have moved approximately three million French Canadians, especially to the New England area and now in great numbers, even to regions like California. With the U.S.A. in trouble, the Quebecois might be forced either to submit to unemployment in their cities or move to Toronto where English capital has been flowing from Montreal under the threat of separation.

What if the French Canadians moved in mass numbers to Toronto as an alternative to Boston or Los Angeles? The national geography of Quebecois in Toronto is interesting. Until some ten years ago there was a French concentration in Sacred Heart Parish with its French grade school. According to the priest, the automobile has scattered the parishioners and the concentration showing in the 1961 census does not appear in the 1971. According to the same priest, the Quebecois come to Toronto for a while and then return to Montreal with the money they have made: a transhumance. What if the government, national and city, encouraged a Torontonians French answer to Westmount? What would that do to national politics? From these questions alone the deadly seriousness of urban nationalism can be seen.

The Effects of Provinces on Urban National Groups.

What of centralization? A national tendency exists toward urban regional government, (including the celebrated Winnipeg Plan,) forced by provinces. Is it not more efficient to have larger units of government? Alternatively, were not small cities better and both more governable and more pleasant? What about new towns especially around Toronto and the new national policy to stop urban sprawl?

There is no "Ontario" there is only a "Toronto Centered Region" The Ontario countryside has been abandoned by the farmers and is in the process of being re-occupied by the Torontonians. The slogan "Toronto is where Torontonians are", eliminates Ontario. To properly govern the cities, the regions surrounding them should be put under their geographic jurisdiction, not the other way around. This requires a revolution in the internal political geography of Canada since it means the domination of the country by the city.

Bureaucratic Geography.

The urbanization of government is more than a principled concession to democracy, it is a move toward governability of the cities. The cities are geographically ungovernable. The geographic mesh, the scale of the government, is so out of alignment with the scale of the city that the machinery of government cannot be brought to geographic focus at a given place in the city. Assume a local government totally committed to preserving neighborhoods or community control of local government. Assume an invigorated citizenry. Imagine the need for a neighborhood park on a local school ground in Christie Pits. It would seem an easy matter to accomplish

simply get the local parks and recreation man together with the local school man and the citizens, find the funding and go ahead with construction. But the bureaucratic arrangement of the city does not have a geography at the local scale. Immediately the problem arises as to whether or not the citizen group is legitimate, is it representative of all the community or just a special interest group? If a park were to be placed on the school grounds would not other groups surface and object? There is no machinery for officially electing neighborhood groups governmentally. Then too, the school system does not have a playground man at that particular school site. It must be dealt with from a central bureau of the school. The local school head knows the neighborhood, but does not know about playground equipment while the playground man is locally lost. The same goes for the machinery in the parks system. In order to untangle the mess the very highest levels of the school system and the parks system must be contacted. They obviously cannot make individual parks at individual schools too big an item on their time budgets. In other words, the large geographic scale of local government in cities makes it impossible to reach into the fine scale of neighborhoods like Christie Pits, even where the political climate is eager for it. There is no geographic apparatus at a scale tuned finely enough to do the job. It is like trying to use an elephant's foot to repair a transistorized colored TV set.

'Integrated' Political Regions.

Lorimer (1970) comments on the geography of city electoral districts in Toronto. One plan was to run 'long lot' districts down to the lake, mixing income groups - an 'integration plan'. Another plan was to form compact units that were socially more homogeneous - the block plan. "The city clerk's proposal (strip plan) continued the practice of joining upper-middle-class areas north of Bloor St. in central Toronto, Forest Hill, and Rosedale, with low-income working class areas south of Bloor St. The practical effect of this arrangement has always been that people from north of Bloor St. control whatever constituency political organizations exist; and these often provide the crucial votes which determine an election" (brackets added) Lorimer (1970). Alderman Rotenberg, supporting the strip plan said, ". . .I think I can better represent the entire citizens of Toronto on this council by having a heterogeneous ward to represent rather than a homogeneous block." But as Lorimer points out, "He (Rotenberg) was implying that aldermen from the east, the west and the north go to council to represent their wards which are more or less homogeneous. Aldermen from the central city wards, however, represent not their wards but "the entire citizens of Toronto". This is another way of saying that they do whatever they think they should, since their constituents are generally divided among themselves on many important issues." (brackets added).

The integrationists were wrong. If one mixes rich and poor neighborhoods, the rich will always dominate the poor. Politically Rosedale, for example, is experienced, well organized and well financed so the 'theoretical' possibility of a New Democratic Party man or a reformist alderman being installed over Rosedale by an

Proposed Electoral Districts in the City of Toronto

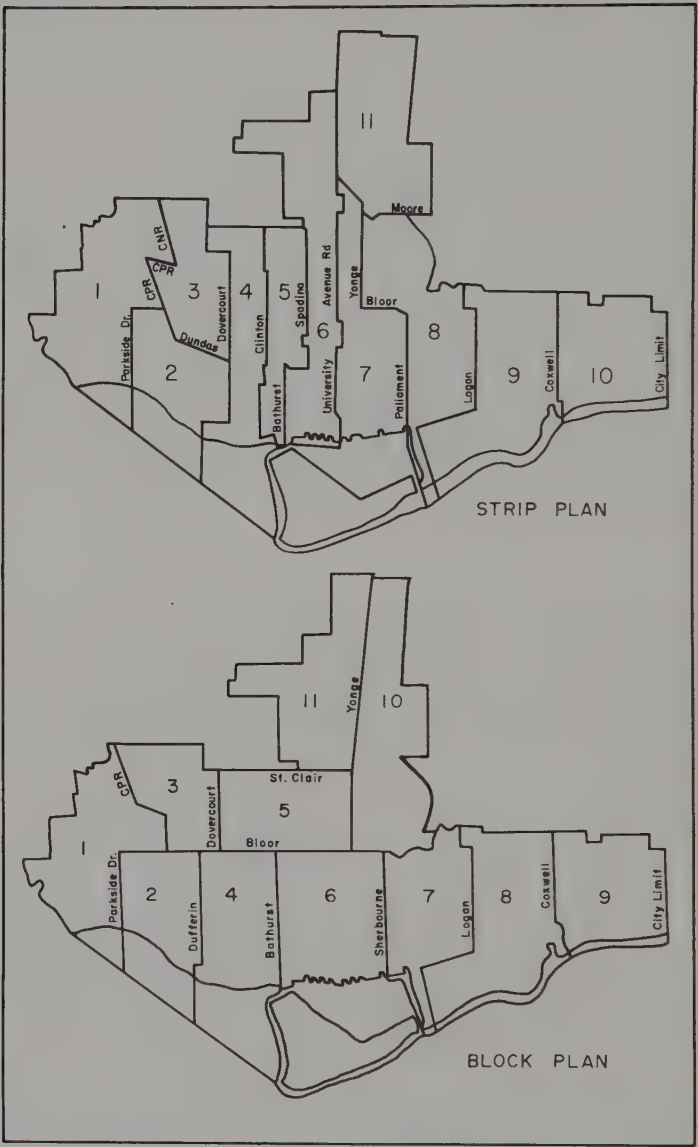


Fig. 81

aroused citizenry in Cabbagetown approaches zero. It is almost impossible and should not be represented as a 'theoretical' possibility. If one mixes lions and zebras do the zebras have a 'theoretical' possibility of eating the lions? But the poor do lose the possibility of banding together politically. Mixing the rich and poor is gerrymandering the poor.

In a small town like St. Marys, Ontario, (approximately 5,000 people), the citizens run everything, almost, that cities do. If units of five-thousand people in the city of Toronto, approximately one quarter of a square mile, were given the same powers as St. Marys possesses then there would be local government in Toronto. Put in another perspective. If five thousand people in the southwest quadrant of the intersection of Bathurst and Bloor were picked up and placed down in the middle of Ontario, then they would have their own police department, fire department and so on. How can granting community control inside Toronto be perceived as "class warfare"? The reason it is a class question is that in the small town of St. Marys, the poor Italian immigrants are dominated by the old Anglos who run the town. Small towns have small slums and small suburbs but the two are mixed, even in as small a unit as five thousand citizens. St. Marys is 'integrated' and therefore firmly under rich control. If five thousand were given community control at Bathurst and Bloor, the rich would not be mixed with the poor, which would give the poor a power base from which to articulate class questions. That is, community control in the cities, unlike in small towns of Ontario, shifts power toward the powerless, upsetting the present balance of power.

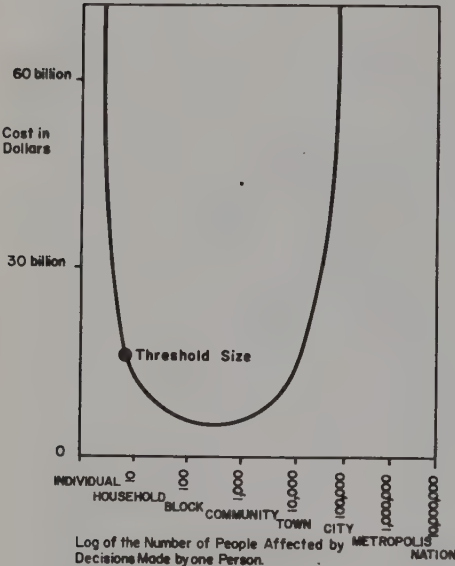
Efficient Sizes of Urban Political Units.

But what of efficiency in government? Certainly some issues, like regional airports, need overall regional planning. The difficulty with arguments of efficiency is surprisingly academic. Geographers know what to do and economists do not but since economics has more status than geography the 'logic' of the economists, has the ear of government. The economists argue for marginality to optimality. The average unit cost curve is crucial to the calculation, so a small army of practical economists has spent at least one generation doing mostly regression studies of the actual unit cost of governmental functions; cost versus number of people served by sewage districts, by primary school units, police precincts and so forth. Such laboriously gathered field data are then used to generate guesses as to an overall most efficient size.

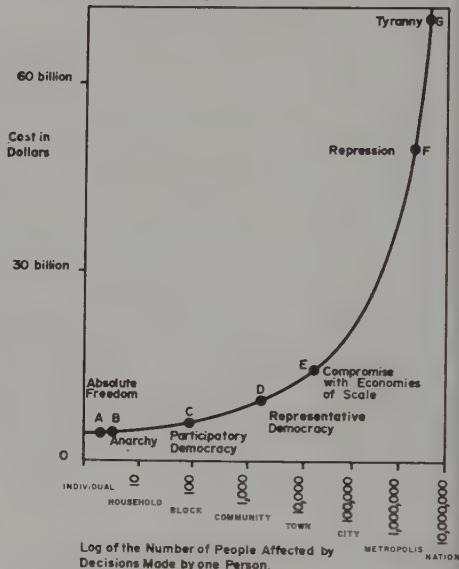
What is wrong is at least two major logical disasters. First, only the cost of the physical plant is considered, the engineering cost of developing the property. The cost of local control, the size of unit most responsive to citizen control is never considered. The engineers' 'objective', 'noncontroversial', 'we-all-can-agree-that-as-practical-realistic-men-we-need-answers' view of the city, never calculates in actual economic costs of revolutions, urban guerrilla warfare and so forth. The thought of a U-shaped cost curve of the

COST CURVES AND ECONOMIES OF SCALE

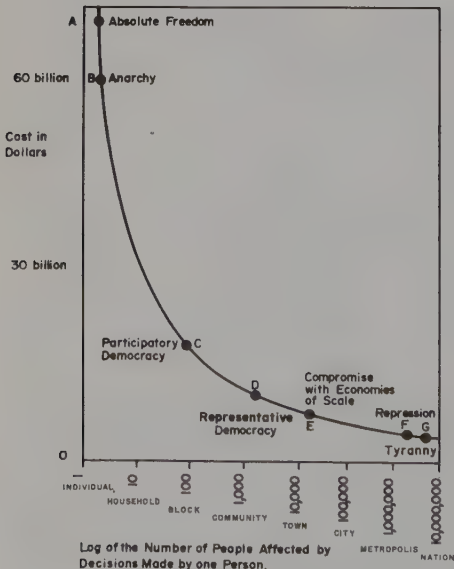
U-Shaped Cost Curve



Graph of Cost vs. Geographic Size of unit for which decisions are made for a Particular Purpose, e.g. Toothbrushing



Graph of Cost vs. Geographic Size of unit for which decisions are made for a Particular Purpose e.g. War Leadership



Graph of Cost vs. Geographic Size of unit for which decisions are made for a Particular Purpose, e.g. Street dances

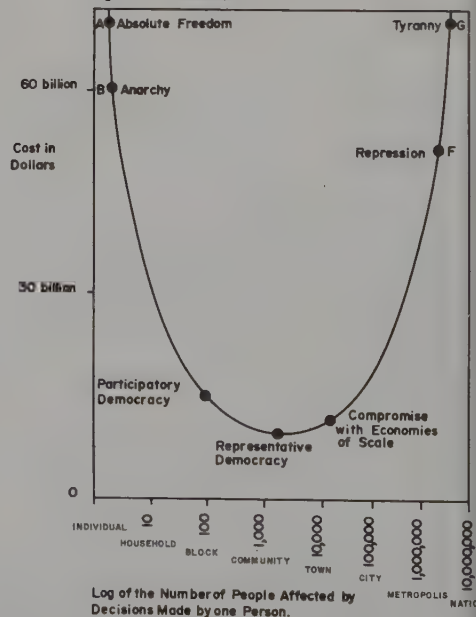


Fig. 82

size of unit, number of people in the decision-making unit, of democracy, stuns engineers. The U-shaped cost curve of democracy shows economies of scale just as the U-shaped cost curve of property does. If decisions are made by each individual, a god unto himself, one has anarchy, which does not work except for very personal decisions like brushing one's teeth. The space of the nation is being arranged by each citizen for every other citizen. On the other end of the scale, if one individual makes the decisions for all others and demands obedience, one has tyranny which also does not work except for extremely disciplined needs like leading a nation at time of war. The space of the nation is being arranged for all citizens by one citizen. In between are the workable scales of government for example to arrange street dances. Nor is the U-shaped cost curve of democracy a figure of speech compared to the concrete economic reality of the 'engineered city'; it is perfectly observable.

The second major difficulty with economic theory, besides its commodity fetish, is its search for a simple-minded optimal size. In the literature of the economics of cities, this becomes the optimal city size, often approximated at one hundred thousand people: new towns. The more sophisticated geographic theory is that of hierarchy. Different political functions are performed best at different levels of threshold populations. Since a new level of government cannot exist for each function, the functions cluster, and thus the hierarchy. The theory is not a simple-minded single best size, but a nesting. Some functions should be centralized, just as occurred in the countryside. Local government, intermediate government and regional government all must be intensified in the city. And most of this would be at the expense of the power of the provinces which must become subservient to cities.

H: Detecting Gerrymandering.

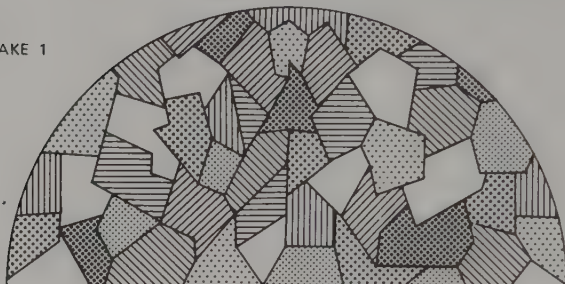
Geographers traditionally delight in graphics. Sometimes a visual 'proof' is the most convincing. Just look at the accompanying map of Toronto. Political personalities leap into mind for all three of the mistakes; those who turn community control into almost a sovereignty for the urban neighborhood, those who would use a metropolitan-suburban-provincial power base to eliminate the first group and those who would escape the mess of the first two groups' war by fleeing. But who leaps to mind for the solution drawn from an urban application of Christaller at a theoretical level and from the simple urbanization of rural political geography at the practical level? The three mistakes graphically appear to be mistakes - simplistic, lopsided, imbalanced. A victory for anyone of the first three is sure to breed even explosive resentment in the others. The fourth alternative, looks as if it makes sense, and it does.

Defining Urban Governmental Boundaries.

In addition to the identification of the levels of the hierarchy and an approximation of which governmental functions should be ascribed to which level, Toronto's human geography must be studied. What is also crucial are the 'people defined regions'. But now it

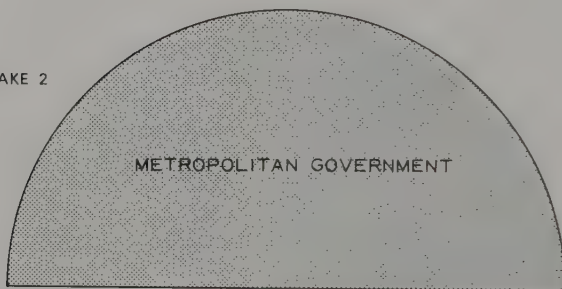
CONCEPTUAL MODELS OF THE POLITICAL GEOGRAPHY OF CITIES:
THREE MISTAKES AND A SOLUTION FOR TORONTO.

MISTAKE 1



"Anarchy" – total community control

MISTAKE 2



"Tyranny" – no community control

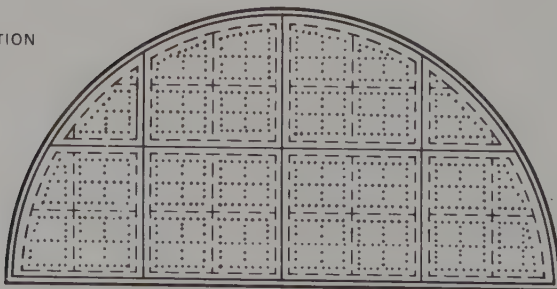
MISTAKE 3



NEW TOWN

"Escapism" – optimal community size

SOLUTION



"Democracy" – hierarchical communities control

Fig.83

can be seen just how nationally important is the subject. The democratic defense of Toronto and a handful of other cities, is the democratic defense of the nation. All urban governmental boundaries should be drawn between urban communities, never through them. It is possible to geographically "divide and conquer" the poor as well as psychologically to pit one against another. In American cities, such as Detroit, no government agencies have coincidental boundaries. The school districts are one set, the police another and so forth. In addition to this confusion, the boundaries never coincide with 'the-sense-of-community' the community itself has developed. Expressways tend to go around rich suburbs, re-enforcing their cohesion, and through the heart of poor communities, physically splitting them.

Non-Local Land Use and Boundaries.

A concrete short-cut planning technique to the actual discovery of people defined regions, is local-non-local land use (see discussion in Chapter I). The linearity of non-local use is startling. The neighborhoods are truly bounded. The great extent of non-local use when lumped together is also startling. Small regions of local land use emerge. These are called 'isolates' and they are of interest in and of themselves because they seem to attract communities which cannot survive in larger communities. Artistic groups, Bohemians, all sorts of rather marginal groups seek out the protection of places so small that they do not generate the threshold sizes necessary for normal social control. They have no ratepayers groups, for instance, to harass them. These are romantic places for minority groups and individuals though they can also display pernicious social features, such as destructive crime. The map also runs several land uses together which are thought to be different. For instance, if a cemetery is next to an airport which runs into an industrial park, habits of mind might not see that together the three form a barrier to community organization across them. These barriers should be political boundaries since political boundaries that run through local land use might split existing communities.

People Defined Regions.

If non-local land use reveals the 'natural barriers' and if governmental boundaries, both electoral and administrative, were to be drawn simply coincidental with them, why bother with exploring for Toronto's people defined regions? Is not the technical problem solved with the much easier to make local-non-local land use map?

There are two major deficiencies with the local non-local land use map for defining the neighborhoods, including the powerful national neighborhoods of Toronto. The first problem is that not all the local space is in one neighborhood. Even if there are no 'natural barriers' to community boundaries as represented by non-local land use, the regions will break up into smaller units of human organization because of their sheer size in numbers and miles. Within solid regions of local land use there are neighborhood boundaries. To find these boundaries, people defined regions must be discovered. The second deficiency of local non-local land use

Hypothetical City Divided-Suburb United

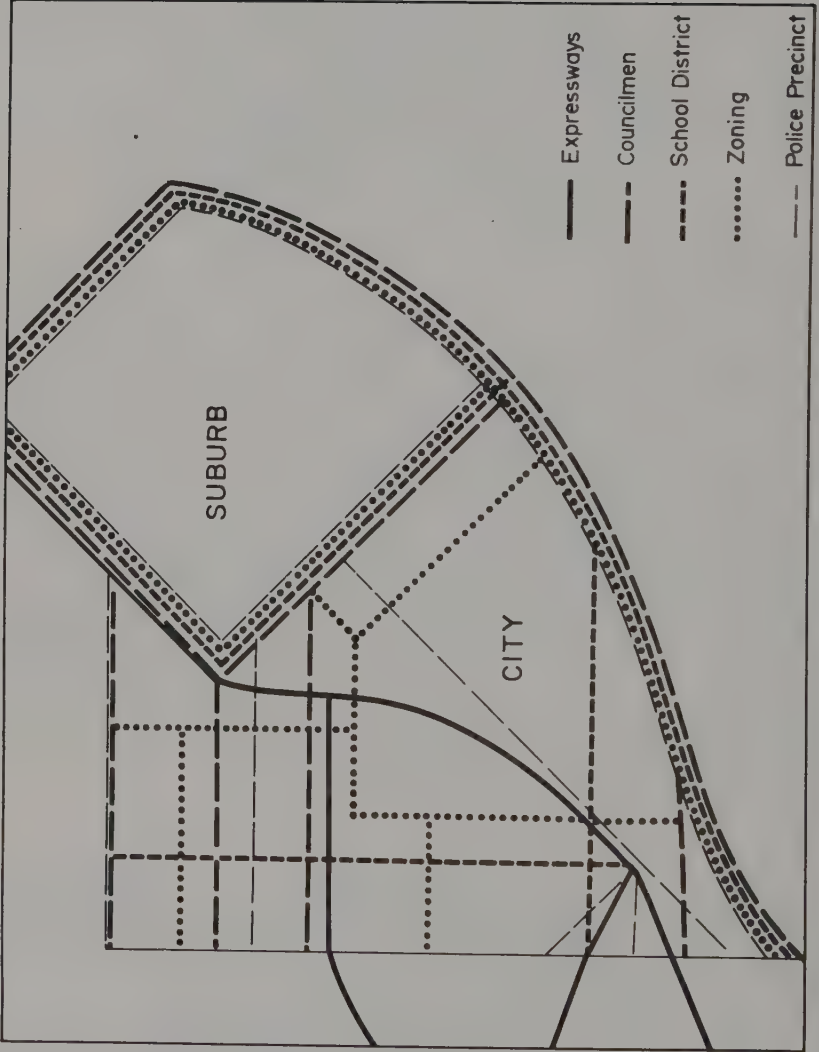


Fig. 84

maps for drawing governmental boundaries is the lack of hierarchy to local-non-local land use maps. It is known that people form groups of different sizes for different purposes, block clubs for local street-child safety, ratepayer groups to monitor high-rise developments and so forth. The extent to which these groups are geographically stable is not known. How much of their geography is set by planners, such as drawing school boundaries; how much out of internal forces, such as ethnic ties? The very first and crucial step is not to find the fine grained scale of the neighborhoods across all Toronto. The investigation of the fine grained people defined regions is being undertaken in the study of hidden landscapes. It is being done for a sample area since it would take immense resources, to do a complete mapping of Toronto. So the higher levels of the hierarchy must be found. It is not clear that these levels are more important than the lower but it is clear that these levels are more feasible to study initially than the lower.

Unlike the local non-local land use study which can be done largely using arm chair geography methods, the people defined regions require great amounts of field work. Techniques concentrate on interviewing 'folk geographers', especially people whose work requires that they know a great deal about the humanly perceived geography of the city. Taxi cab drivers are indispensable. Cab driving is a job where one continuously moves over the earth's surface and carries on a conversation with people about it simultaneously. The accompanying map shows the first crude approximation of Toronto's people defined regions.

What is the degree of common perception of urban regions? How much agreement is there? It is considerable. In a study of two people defined regions in Toronto - 'the Beaches' and 'Don Vale' - while agreement as to the boundaries of the regions was not complete, it was substantial. The cores of the regions clearly emerge. The accompanying map of Toronto's people defined regions suggests that the inner city generates such regions to a greater extent than do suburban areas. Two hypotheses are suggested for this apparent differential. First the inner city neighborhoods need a clear geographic demarcation as a political unit. Wealthy neighborhoods have enough power so that they do not need a clear geographic suburb, though they sometimes have one. But the less affluent need the 'community control' that is possible within a distinctly bounded political unit. Secondly the map of Toronto's people defined regions may simply reflect a bias in data collection. Since most of our resources and information were concentrated in the inner city it may well be that our sources have an information bias in favor of the inner city and therefore had relatively less information about the suburbs. If the latter is the case further work could establish suburban people defined regions. Such would then tend to argue against the first hypothesis and in favor of the idea that people of all levels of social status tend to identify neighborhoods or regions to which they 'belong'.

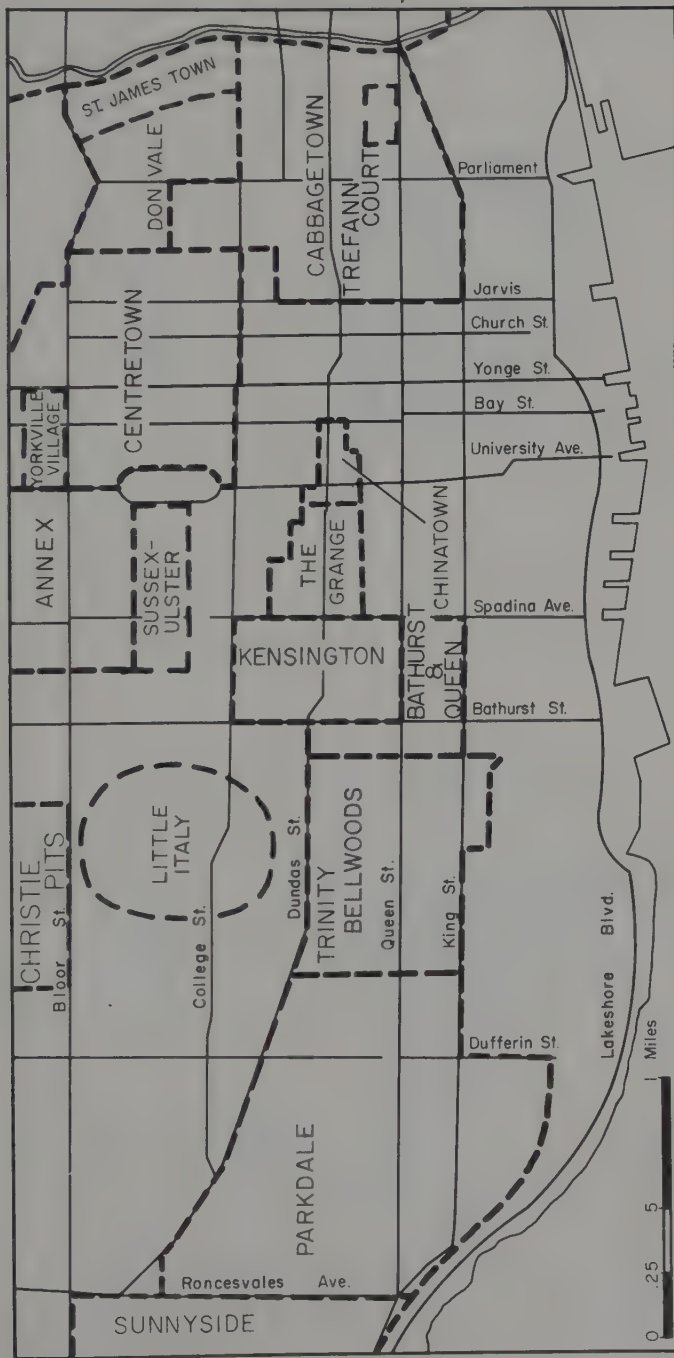
The final overall objection to this type of work is that people really do not have neighborhoods, that Toronto is too mobile, too



Source: M. Nelson

People Defined Regions of Toronto

Fig. 85



Inner City People Defined Regions

Fig. 86

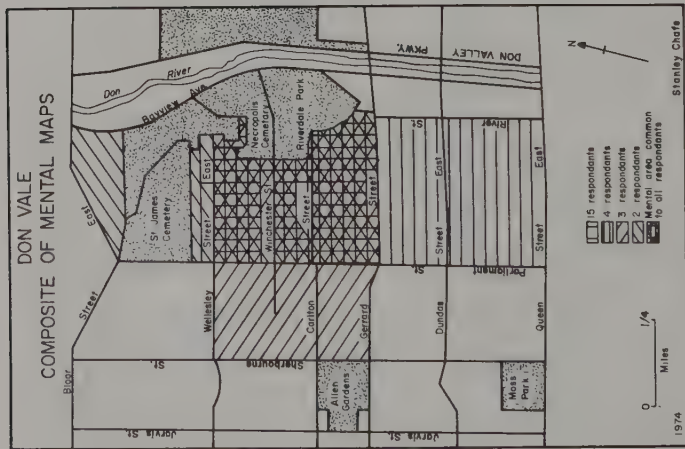


Fig. 87

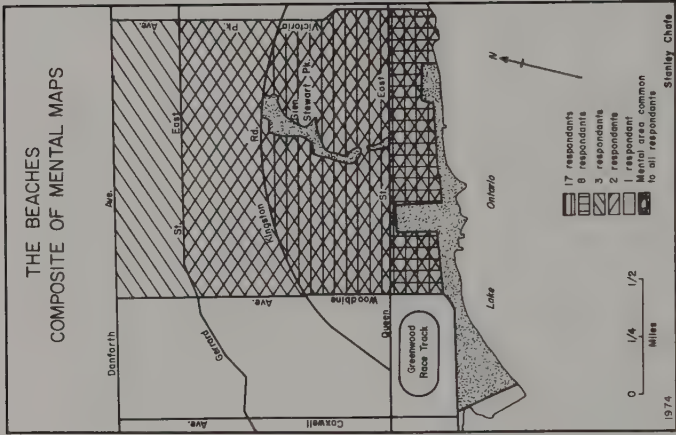


Fig. 88

impersonal to generate group feelings especially those based on space. That is, farmers are attached to the land, city folks to their television sets. The answer must be a strong refutation. The argument implies that urban people are too fragmented to have political parties or other group expressions. It is patent nonsense that people do not have anything to do with their neighbors. The children play together mixing the parents. In thousands of ways space mixes people together. Not a government in the world operates without a highly developed geographic political system in duality with power blocks. If nothing else, geographic specific disasters, like the proposed Pickering airport site outside Toronto, overnight develop a geographic community of self interest.

Regional Geography as an Instrument of Accountability.

Perhaps the most marvelous quality of regional geography in general and political regional geography in particular is that it puts mankind back into the whole landscape. It is easy to 'pass the buck' from one agent to another if a child is killed on the street. The mother is blamed, the highway engineers, the motorist, the schools for lack of playgrounds. All individuals and all governmental agencies can pass 'the buck' of guilt from one to the other. "It's not my fault", is the great loud cry. But a region of people integrates their entire life. All the government agencies, acting in concert or out of concert collectively can see the results of their collective effort in an urban region. Did they produce a slum or not? A slum has an integrative wholistic integrity to it. The system', all of it, failed. This is why the cities need articulated urban government and this, in a large part, is why they do not have it.

II: Recreation Geography: Two Views.

At a meeting on recreation geography at York University during the summer of 1973 a professor held up a pencil and announced "Children will play with anything, even this pencil, therefore there is no such thing as a toyless region." By the same logic one could hold up soil and announce that children will eat anything including soil so therefore soil is food and there is no such thing as a starving child.

A: Classic versus Needful Recreation Geography.

In Detroit, by Federal admission, three percent of its poor children suffer from rickets, thirty percent from bone damage and forty percent from brain damage due to lack of protein. (A series of reports have been published by the government, most notably, "Ten State Nutrition Survey, 1968-1970", Center for Disease Control, Health Services and Mental Health Administration, United States Department of Health, Education and Welfare, Atlanta, Georgia, 1971). Poor children often do not eat adequately in Detroit which has a large toyless region.

It is not true that the outside of slum dwellings are worse

1.

than the inside. The toyless region perception of slum children's reality came about from an attempt to find inside toys. While in Selma, Alabama, at the great rally (1965) under Dr. Martin Luther King's moral leadership, a geographer attempted to borrow a crayon from a child to construct a sign "Selma Wall" to protest the imprisonment of residents of the government housing project around Brown's Chapel. The first child the geographer went to was Joe, the oldest grandson of Ms. Anna Lee Smith, at whose house the geographer and others were staying. He said, "No, sur", to the request for a crayon. The geographer thought the child was being greedy and felt annoyance. He continued down the row of houses and asked other children and met with the same refusal. Finally as he was about to give up, a little girl responded with enthusiasm and rushed inside her home. She ran back and held up a pathetic 'blob' of melted-down green crayon that looked as if it had been on a radiator. The geographer thanked her and made the "Selma Wall" sign with a magic marker borrowed from a television crew. The only crayon that baby had was a precious melted down "hunk of junk". The children had refused not out of selfishness but because none owned any crayons.

On the drive back to Detroit from Selma it came to the geographer that in this government housing project swarming with children he had seen no toys: no bicycles, no coaster wagons - nothing. The families in Selma, Alabama in 1965 in that government housing project had an average income of eight hundred dollars a year. Toys were evidently never within the budget. Back in Detroit he was able to send a truck load of toys to Selma that 'went down' with a truck caravan of food and clothing. The truck load did no permanent good and the need for toys in toyless regions of Detroit was even more massive. Children in the city of death, learn to steal food and toys. Piaget (1954) pointed out that to learn how to manipulate their environments children need to play with toys and other environmental materials. He argues that such is essential to the growing child's construction of reality.

The truth is not a rapier-like thrust. The truth, is blunt, a sledge hammer blow, not haggling over dictionary definitions. It is often easier to see the meaning of the larger, coarser concept, than the technically polished one. Instead of mapping toyless regions in Detroit and the regions of malnutrition (starvation) of children, it is clearer to map the gross slums. Instead of trying to identify every aspect of the environment that must be changed to make it fit for children, simply assert, "Give them everything they need!"

Recreation Geography as a Dalliance.

Most recreation geographers are concerned with leisure, which

they affix to modern affluence. Mankind the world around has developed such an aversion to the concept "human nature", especially due to its abuse by the most backward and inhumane philosophies such as Adolph Hitler's, that anything that might be the biological nature of man has been distributed to something else. All mammals must teach their young how to make a living, from the lion to the beaver. If a young mammal is not taught these skills the young mammal will not survive. Yet among mankind teaching the young to make a living is relegated to a cultural sounding process called pedagogy. "Education" appears as a construction of civilization. If a slum child is given a bad education, is not truly taught how to make a living, the biological disaster for the child is just as great as it is for a baby beaver raised in captivity and then turned loose in adulthood unequipped through "education" to construct a beaver dam. Mammalian "play" with "toys" is crucial, a playing at growing up, a biologically necessary activity. So, for recreation geographers to reduce a survival subject to mere leisure associated with affluent times, is truly dangerous.

Canada's foremost recreation geographer Wolfe (1952) points out that there has been during the last 50 years, a vast increase in leisure time and in the choice ranges of the majority of people. Wolfe also points out that with choice ". . .has entered an ecological problem of the greatest magnitude". Wolfe contends that there ". . .is a problem that each one of us faces. It is never verbalized, but if it were, it would be stated something like this: "What relation with my environment do I choose to assume during my leisure hours?" It is not too much to say that upon the answer to this question depends the fate of a civilization." Certainly factory workers under compulsory overtime in Detroit today work eighty hours a week and are not part of the leisure society. Workers are strained, today, to make both ends meet in the midst of galloping inflation.

Is there ever absolute freedom? Does a future utopia promise that state? Assume free electricity and therefore infinite wealth, the complete abolition of drudgery which is still the overwhelming condition of the majority of North American citizens. Assume the end of the day-in-day-out grind, the Monday blues when one wishes it were happy Friday night, and assume free resources; what then? For Darwinian reasons the children must be raised up. This survival mechanism is beyond debate. Creatures that have no nervous systems perpetuate their species. There is no value judgment here whatsoever. Mankind is no freer of Darwin's laws than of Newton's. So even in paradise, there is the necessity to raise up the children. Utopia is not an absolute freedom. It is the raising up of children that must be carried out want to or not. In this sense, Utopia is the dictatorship of the children.

The Physical Environment in the City.

Wolfe (1952) says that ". . .writers on recreational problems take it as axiomatic that there is latent in all urbanized men an impulse to escape back to nature. . ." We must go forward to nature,

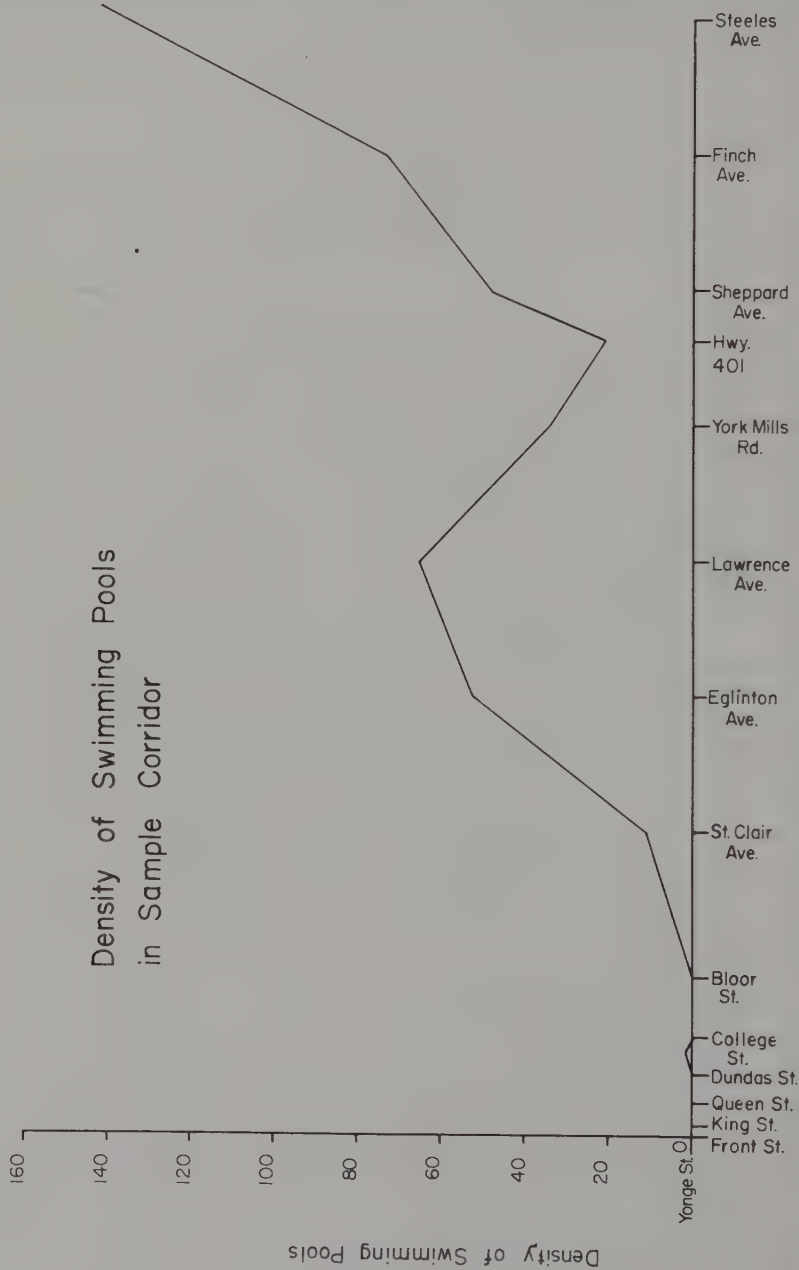
not backwards to a pre-human condition. Mankind must be for a balance with nature, man-in-nature as opposed to man-against-nature. But recreation geographers have traditionally almost ignored the city, the industrial base of the nation. They have fled to the affluent resort areas. They have neglected to examine the question of recreation for the urban poor.

Toronto's geographic tradition deals with the development of recreation for the rich. Yet all data on Toronto point to a opposite need. It is the poor children in the inner city, where recreation is most desperately needed, who are denied its benefits. Consider for example the variation in access to sunshine, grass and water.

It is well known, though undermeasured, that the dust dome in the center of town casts a shadow which greatly reduces sunshine on working class children. In Toronto the radiation at a suburban location, (close to the intersection of highways 400 and 401), shows a mean average February sky radiation of 140 langleys as opposed to only 99 downtown. (Atmospheric Environment Service, Toronto, in conversation 1974). This 'urban shadow' can be measured much more meaningfully by monitoring the sunlight that falls directly on children. Film strips, similar to clips worn by x-ray technicians or those who work with radioactive materials, attached directly to children might show the 'urban shadow' to be more intense than is thought from monitoring the sunlight falling on the ground. Work in a Torontonion high-rise shows that the children are 'buried' in the sky. No matter how much sunshine falls outside a high-rise, children are rarely exposed to it. A film clip on privileged adults those who take vacations in mid-winter in the 'Islands', would show that more sunshine falls on them than falls on the ground in the affluent suburbs. Sunshine is imported from Florida and the West Indies. The number of blades of grass surrounding a child in the inner city as compared to a child in the suburbs would show the same importation. Adults at the city's affluent edge go further into the countryside to cottages. This extra grass should be projected on their suburban homes to get the true greenery of their environment.

The aridity of the soils caused by the karst of the city sewers which overdrain the environment is only counteracted where massive irrigation, trivialized as "sprinkling", takes place. The working poor cannot afford to sprinkle. The direct measure of the aridity of the 'urban desert' in the soils of the inner city, a parched and shadowed region, is not as humane as a measure of the parchedness of children themselves. In the suburbs there exists an abundance of swimming pools so that the suburbanite is in water much more than when it rains outside. How often is a child's body wet? The fact that the physical environment of the urban child varies so much between classes of children, is not the fault of the children. Rich children are not to blame and the general geographic strategy is to use the higher standards of the environment of the wealthier adults to raise the standards of the poor children, not to punish the children who through no fault of their own, happen to have been born rich by

Density of Swimming Pools
in Sample Corridor



(See Accompanying Map)

Distance from Downtown

inherited accident.

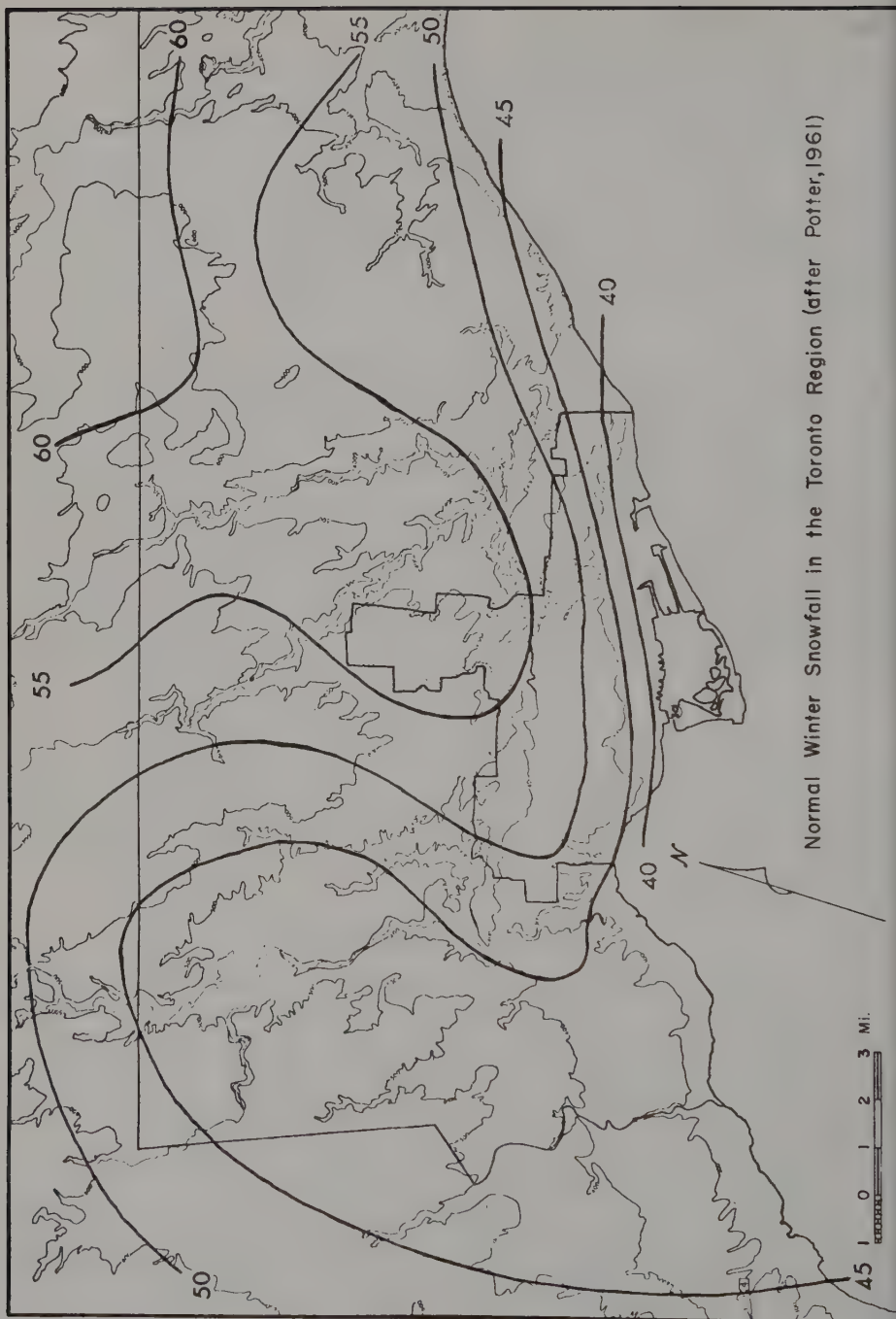
The map of snowfall in Toronto is ironic. It is not possible to blame the capitalists for the lack of snowfall on inner city working class children! Lake Ontario must get credit for the relative lack of snowfall downtown as compared to the affluent suburbs. The length of time snowfall remains on the ground is more a class master. The heat island in the inner city, the dustfall darkening the snow and therefore increasing the melt rate, the density of roadways using salt and snowplowing, these man made destroyers of the snow are class matters. Man did it so man can stop doing it.

One of the distinct differences between Detroit and Toronto is the ruling class attitude toward the physical environment of inner city, working class children. In the U.S.A. the ruling class attitude is "why expose them to something they never can have". The American ruling class considers it a "kindness" to crush hope even of a few days in the countryside in childhood. Evidently hopeless children are free from illusions in the U.S.A. and therefore happy! This reasoning does not prevail in Toronto among the rich and powerful: but they do not carry their own logic far enough. In the case of snowfall, why do they not fund snow making machines in the inner city? These devices are used in outer city ski slopes but could be used in the parks, ravines and perhaps just open spaces in the inner city.

The inner cities need to be reforested, irrigated, to be given zoo sites, to have ravines restored, to have free lake front swimming facilities and to be made as machine free as possible. Nature must return to the cities in that it can and inner city children are the ones who need to go to cottages in southern Ontario, more so than rich adults.

The Poor as Badly Behaved Despoilers.

Recreation geographers perpetuate class biased myths. "In an intensive study of a large urbanized resort in Ontario, I found that two distinct classes of people lived here, the cottagers and the transients. The cottagers had one set of values, the transients a diametrically opposed set. These values had little to do with the economic status of those who held them; the choice was usually free. Typically, the geographical environment played a meaningful part in the life of the cottager; he built his home in natural surroundings; he beautified his plot of ground; he indulged freely in water sports. This was not always true, of course, nor was it always true that the transient disregarded his geographical environment, by travelling hundreds of miles from his city home to immerse himself once more in a summer city, there to play cards or go dancing or try his luck at the slot machines, while snubbing the invitations that nature, rather than man, extended to him. But these two patterns recurred frequently enough in the two groups to make the cleavage between cottagers and transient distinct. Much more universally true was the difference in



Normal Winter Snowfall in the Toronto Region (after Potter, 1961)

the social relations of the two groups, particularly the relations to the family. We may state the difference epigrammatically as follows: typically, the cottager escaped with the family, the transient from the family.

Significantly, a much larger proportion of transients than of cottagers came from the rooming-house districts of the city. The rooming-house district in a city is a zone of social disorganization, of transience, a zone of the rootless, as opposed to the stable, rooted character of the population in areas of single-family dwellings. The commercial heart of the urbanized resort under investigation was strikingly similar, with all the characters of the transience heightened. To it came those who felt the need to lose themselves, rather than to find themselves again; to escape from normal restraints; and to indulge, however mildly, in the anonymous and unregulated activities of the rootless." Wolfe (1952).

The class prejudice is apparent with rooming house districts of Toronto producing decadent people, while the family houses, the more expensive kind, produce wonderful family loving people seeking natural restoration. Wolfe disguises the inherent class bias in his argument with a cover sentence, "These values had little to do with the economic status of those who held them. . ." (above). Since when do rooming houses in inner city Toronto (or elsewhere), not have an economic status different from those in the single family structures of Rosedale?

Does the Inner City Have an Outdoors?

Recreation geographers get away from any commitment to the children of the inner city by an emphasis on outdoor recreation. Does not the inner city have an outdoors? Outdoors means outside buildings not outside the city, as it is commonly understood by recreation geographers.

There is enough open space around high-rises so that if a crane could lift each floor off one floor at a time and place it on the ground, there would be ample space to house the layers. Unfortunately the storeys of buildings are stuck together like a layer cake. They should not have been built in the first place. Architects are poor geographers. Geographers, with their commitment to environment, would more readily see that children should be raised on the ground, in contact with nature. Architects got the idea that if one looked at open space one got more benefit from it than if one stood in it. It will take decades to undo the damage of the elevator mentality. All over Toronto the high-rises have arisen. They crowd to the urban edge and even dominate the view coming in from the rural areas north of the city. Downtown skyscrapers are not too unexpected but suburban ones are incredible. Haggart (1974) draws attention to preferences for high-rise living cited in a report sponsored by the 'Institute of Environmental Research Inc.'. The consultants found that ". . .10 percent of married couples with one child, and 3.8 percent with two or more children, expressed a preference for high-rise

living." High-rises are hardly the ideal of today's young families and their presence can be explained only by market supply forces.

In addition to getting children outdoors within the city, they need to get outdoors outside the city. But consider a recreation geographers statement; Wolfe (1967). "Of all the ways to enjoy yourself in this world I have hit on that of being a geographer, interested in recreation, outdoor recreation, with emphasis on the summer cottage, or better, movement to and from the summer cottage, by car, in Ontario." Consider just the class bias of "by car". A large area of inner city Toronto has more than fifty percent of the families without cars. When public officials in the spring time release maps of green belts to the local newspapers they invariably highlight parks "within easy driving distance". They too assume that everyone has access to a car.

Summary of Traditional versus Needed Recreation Geography.

Subject	Traditional Recreational Geography	Needed Recreational Geography
Philosophy	leisure	survival
Income	wealthy	poor
Location of Work	exurbia	inner city
Age of Clients	adult	children

table II.3

B: Spatial Freedom for Children.

Why is a child not free to roam. . .where and at what age is he most caged. . .what is imprisoning the child? To review the process of child caging, a baby in a crib is not caged but merely protected by the bars and blankets and arms that hold her. As the baby develops the ability to move about, then if the bars, blankets and arms are not loosened, the child becomes imprisoned.

The Home Range of Children.

The home range of the child is crucial in understanding the degree of freedom lost. What is the natural range of a child? To deal with children, for these liberating purposes, as animals, is surely not demeaning the children. The cultural effects on the home range around the world must be considerable as the child gets older. But at first, the new born baby is free of culture. His geography is universal, a child of the planet. But gradually the traditions of its group and even the idiosyncrasies of individual parents must reflect in the spatial range. To establish the home range of the natural unbounded child would require careful study, child watching in various cultures of the world and then whichever cultures showed

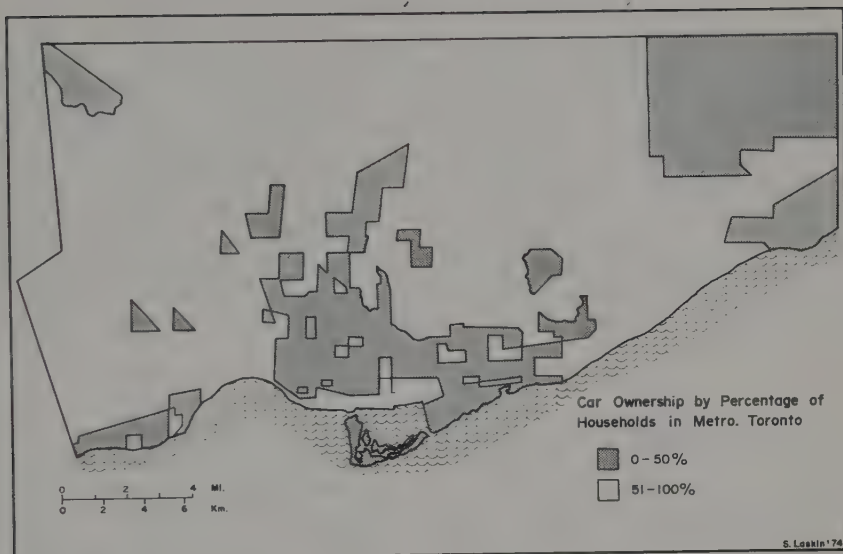


Fig. 92

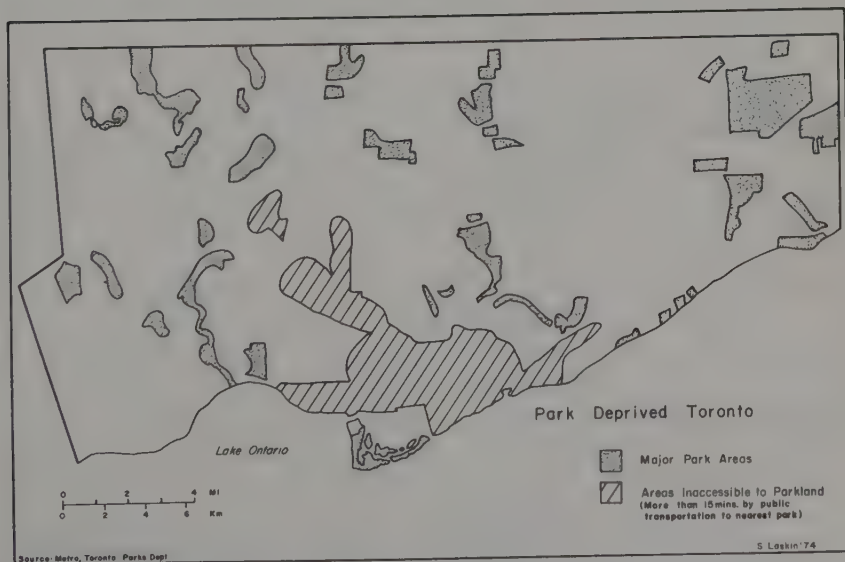


Fig. 93

the greatest range, would define the upper limit, the natural home range. Home ranges below the natural home range will demonstrate varying degrees of a 'universal caging effect' - an index of spatial imprisonment.

In Toronto, machine spaces in the inner city take up a large percentage of space; but worse, they cut through the play spaces of children. The caging effect automobile spaces have on children is greater in the inner city compared to the suburbs. Even more restrictive for children are high-rise apartments. The elevator as a 'transportation' machine is imprisonment, worse than the automobile. Only in Toronto's 'islands', virtually free of machines, are children able to approach their natural range. A comparative empirical study of four neighborhoods in Toronto revealed that the range of children in each varies greatly. Table II.4 shows the variations. The operational definition of home range is that used by Anderson and Tindall (1972).

The home range of a child is considered to be the sum of the distances to the set of activity nodes which the child frequents alone, or with siblings or peers. These nodes include the child's school, his friends' homes, any commercial establishments he frequents, and his play areas. The locations of these nodes were identified by interviewing children in the four sample areas and mapping each node. The non-redundant distances (no path is counted more than once although it may link several different nodes) from the child's home to each node was then measured, and these distances summed.

Children between the ages of 5 and 13 were interviewed in the four sample areas and the average home range of children in each area is shown in table II.4 .

Home Ranges in Sampled Neighborhoods.

Location	Characteristics	Home Range	Caging Eff
Toronto Islands	low-rise, vehicle free	24,065 feet	0% (natural home range)
Don Mills	low-rise, cul-de-saced suburbia	8,368 feet	65%
Christie Pits	low-rise, grid-iron inner city	4,856 feet	80%
Thorncliffe Park	high-rise, arterials and mixed inner streets	3,741 feet	84%

table II.4.

¹The caging effect is calculated as $100 - \frac{\text{home range of area}}{\text{home range in Toronto Islands}} \times 100$, expressed as a percentage. Thus for Don Mills 8,368 is in a ratio of $1/2.876$ with 24,065 feet, that is, it is 34.77 percent. The caging effect is then $100 - 35$ (rounded), to give 65 percent

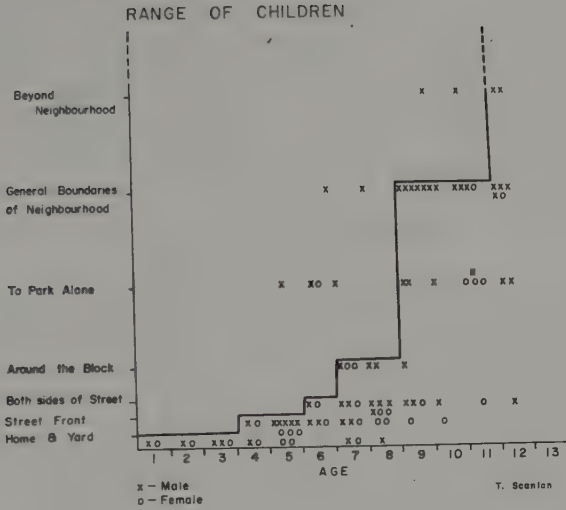


Fig. 94

Mean Home Range of Males and Females

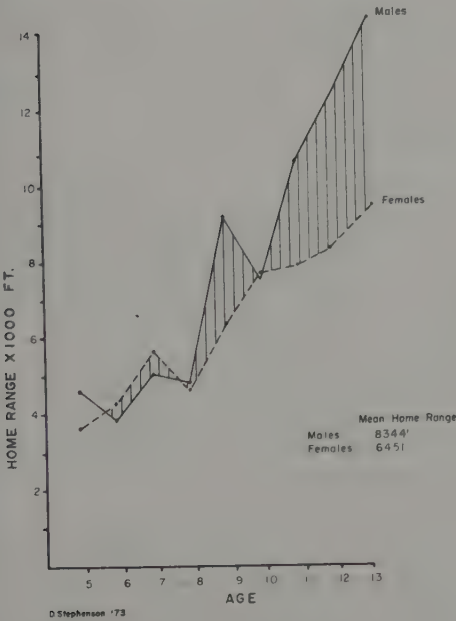


Fig. 95

Functional Structure of Activity Nodes

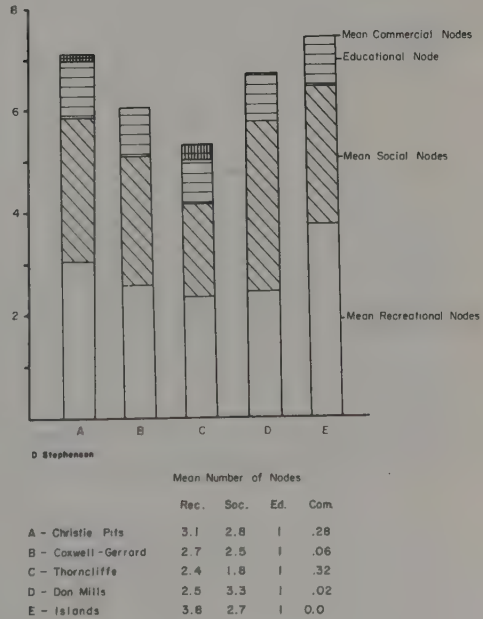


Fig. 96

Results from the empirical studies have been extrapolated for the metropolitan area making broad judgments about the general nature of its constituent parts. Perhaps the accompanying map sums up the urban quality of life for children and offers some explanations for other sciences of child behavior; for example the social and educational behavior of children may show marked correlations with the degree of spatial freedom they enjoy. It might be advanced that a five year old on Toronto Islands has the spatial maturity of a fifteen year old suburban child.

Are High-Rises Necessary for Mass Transit Systems?

The rapid transit system and high-rise construction seem to be related. The reasoning is that it takes large volumes of traffic to support subways and other mass transit systems, so high-rises develop the necessary densities. The only alternative seems to be the private automobile with its single family unit. This does not consider the possibility of collecting transportation systems at intermediate levels of the transportation hierarchy. Toronto alderman Vaughan advocates parking lots at the end of subways to collect commuters. Better would be multi-level parking lots with elevators to the subway. High-rise the cars, not the people. Bloor St. needs a bus line even though it has a subway; people cannot shop along the street. Lack of the concept of a 'traffic hierarchy' causes the envisioned choice of cars-houses or subways-high-rises around the world. Detroit and Los Angeles are examples of the homes and cars. Toronto and Moscow, examples of the latter. The subway-homes pattern might be developing in San Francisco. If one problem clearly plagues Toronto, it is its development industry with their high rising of the children. One does not have to walk from one's home to a subway. Semi-mass transit or private cars can collect people from low-rise spaces.

Lonely or Overcrowded Children.

Assume the 'island community' home range is extended across the map of Toronto. Once the child is free to move about somewhat, what will he encounter in his home range, what will be the quality of his environment? Notice, this is a secondary question. If he cannot reach an environment he obviously does not have any quality problems. It is a question similar to that raised by those who worry about the quality of life before assuring life itself. No one, outside supernatural circles, ever raises thought about the quality of death. But first, having established the geographic liberation of the child, then second, what will the child encounter? For example, will he find too many or too few children?

If children are too widely spaced, they cannot find each other even if they are given their full natural home range. Geography has provided no careful data on how many children have to assemble to form a "gang"; but simply recalling childhood, combined with the literature on the subject, a rough guess would be that at the age of around five, a full gang would consist of about four children. Then

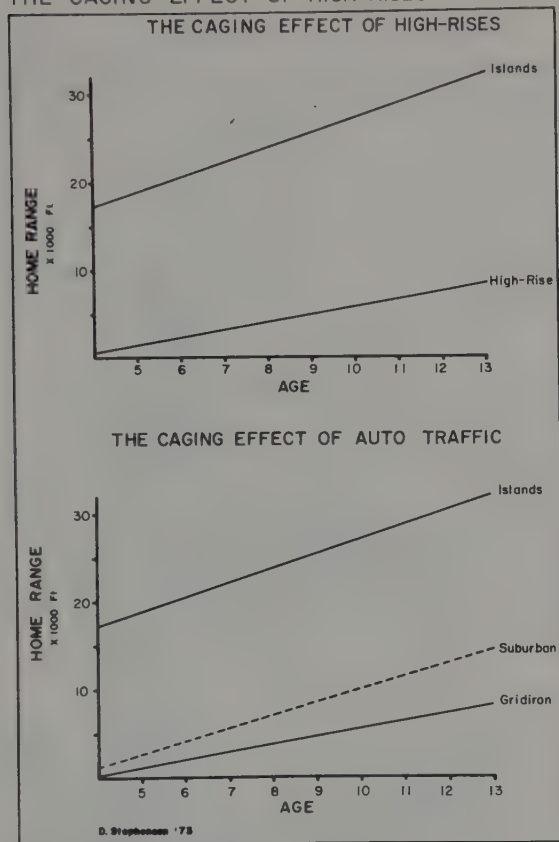


Fig. 98

Note: All transportation machines are restrictive prisoners of human travel at some range. An airport which brings cities of the planet close together is, at the scale of human travel around the airport, a barrier. Not even highways can cut through it. Automobiles imprison pedestrians severely. The caging effect of all transportation devices should be studied and treated as a simple engineering question not in the crusading tone of today with pro and anti automobile, airplane groups and so forth. With the precise range of when an automobile imprisons, in hand, say a trip of less than two hundred meters, then simply measure the average trip origin-destination distance in a given area and if it is less than two hundred meters, as it well might be in downtown Toronto, ban the automobile within that space since it impedes rather than aids human movement.



Note: Categories 1, 2, 4, 5, are those shown in table II. Category 3 is a theoretical estimate.

if space contains less than four children in the range of a five year old child, that child will be lonely; and if the child can find no one to play with, then that child will be extremely lonely. Even with a full home range, there is little incentive to go outside because there is not much out there. Rich children are often in this condition. While the thought of "poor little rich children" is self serving, rich children should not be lonely merely because their parents show off their wealth through conspicuous estates, which makes it impossible for their children to assemble. Rural children in dispersed farms, often quite poor, also suffer from loneliness.

Regions of potential loneliness or overcrowding in metropolitan Toronto are mapped, simply as a children per square mile map, using the Canadian census as a source. In any given region the average distance to the 1st, 2nd, . . . 4th nearest neighboring point (child), assuming a random distribution, can be established from the work of Dacey (undated). If one then has information on the home-range of children (see above) and an operational definition of loneliness or overcrowding (in terms of peers at distance and gang threshold levels) one can readily calculate the probability of any child in a given region being either lonely or overcrowded. These calculations have not been made here.

The 'empty-of-children' quality of the home range can be altered by zoning regulations designed to outlaw subdivision into individual scattered units. This is fairly well accomplished in Toronto already. But outlawing lots that are too big is not and might outrage the very wealthy, even though their children would most benefit from an upper limit on lot sizes. If the extremely rich insist on palatial estates, and during their child rearing years they should be required to live in less lonely spaces for their children's sake. Scattering children may be as bad as battering children. The poor have no monopoly on child abuse.

The geographic opposite of too few children is overcrowding the children. Most of the work on the effects of overcrowding has been done on animals, particularly rats (see Calhoun (1962, Baldassare (1974)). Under extreme conditions of overcrowding of rats, for example, sexual deviation and cannibalization occur. Such extreme overcrowding is approached in some Detroit schools. At one junior high school in that city, the density of teenagers became so great that lunch had to be served from 10:30 a.m. onwards. The pressure of many shifts of lunchers made the lunch room putrid, each meal, since the place was impossible to keep clean. A convention of royalty would have left the same garbage mess. The teenagers began to throw the food at each other, fitting into the environment. The overcrowding meant there could be no recess, no noon-hour break and instead a requirement that the pupils sit in silence at their home room desks. The fire exits were chained shut to prevent escape and intrusion. The riots that resulted

Percentage of Children in Metro. Toronto, 1971



Fig. 100

Potential Regions of Child Loneliness or Overcrowding in Metro. Toronto, 1971



Fig. 101

were never examined as a possible biological problem in spatial overcrowding. At less dramatic levels: at what density does bullying develop, if at all? Are gangs and gang fights more likely in overcrowded environments? While child loneliness is relatively easy to get a grasp on, child overcrowding is more difficult and will require child watching to establish thresholds of behavior deviations. If unclear whether certain sections of Toronto have too high child densities, at least where to look for possible bad effects is clear. The accompanying map of regions of highest densities pinpoints potential problem regions.

Imprisoning Effects of the Physical Environment.

Besides the direct effect of children on each other, the broader environment should be considered - such as, what sort of surface material induces what sort of activity? On what is a child standing when he does something, like jumping, sitting, or running?

No map has been made of the direct use of soil by humans. Even the excellent book on urban physical geography by Detwyler and Marcus (1972), treats urban soils as purely material upon which buildings and other property rest. While better than viewing them exclusively as a base for growing crops, this ignores the direct use of soils: mankind interacting in the most direct way with his environment. Children up to a certain age put everything in their mouths. Does this age limit the child's geography? When and why does the mother take the child outside? Is this age determined by the fact that the child puts everything in his mouth and what is outside is dangerous, for example glass? If so, if there were no glass, then would the child be placed outside on the ground earlier? What do children sit upon? Do they seek out grass, or sand or do they prefer, say, mud or water? If maps are made of where the children are on the ground, it might prove that grass is a bad surface material for parks: that grass is just a cultural nicety that adults impose out of some pastoral view of landscape beauty: that grass has nothing to do with anything about which children care. If concrete roads are what children prefer to play upon, without provision of other areas of concrete, how can one keep children off the streets? We may be luring them there.

Once these environmental correlations have been established, then planners have more material for zoning manuals. But there is a limit to what mankind can do for his children. Removing the pernicious features mankind introduced into the environment is theoretically easy, though it introduces problems of practical implementation due to perceived self-interest of 'threatened' groups like powerful developers, automobile manufacturers, landlords and so forth. So the practical problems of decaging, then providing good spaces for children, are large, at least in the short run.

Even more serious is the theoretical problem of freeing children when imprisonment is not the result of mankind or machine kind but of nature, Newtonian and Darwinian laws. Nowhere can men leap thirty feet in the air unaided. Enthusiasts for man conquering nature are the mirrored equivalent of those who see man totally entrapped. "There have always been the poor," . . . "Man is a wolf to man;" these slogans force reaction of "man can do anything he sets his mind to," . . . "Man must conquer nature."

The Limits on Freeing Children.

To bring the discussion down from philosophical heights to practical realities, consider again the caging effects on children. In reality, the real, observable world of geography, the question, "What cages a child?" gets an answer that includes both machines and nature, normally considered separately by academic sciences. In Christie Pits a child can be caged by automobiles ripping through his natural home range - the machines effect. He is also caged by the Italian culture of keeping the child both within voice and eye control - the human effect. Then he is caged by nature itself.

If we observe when children are inside or outside over a considerable period of time, a welter of causes has many effects. The rhythms of family life, the temporal cycle of school, all have spatial effect. But mixed in are such natural factors as the caging effects of climate. What kind of weather forces the child indoors? Answering this question alone will require huge amounts of observational material, since the number of variables is so large, at least until some simplifying principle can be discovered. To start in a more complicated way and then move toward simplicity, assume a standard time of day is selected to minimize school and home rhythms, say after school on week days, or Saturdays. With enough child observation, the maximum amount of outdoor activity should be easy to establish over a relatively short observation period. Techniques for child observation are borrowed from bird watching; blinds, patience, recording devices, patience, mapping and still more patience. In that children fall below this upper limit of being outdoors it could then be attributed to the weather. If rainy and cold, the effect might be to cage, while rainy and hot might induce children to play in the rain. If rainy and hot but also accompanied by thunder and lightening or hail and/or high winds, then children might be forced indoors. If too hot, too cold, or too dark, then children must go home. Correlations with climatological data could be run. These environmental effects seem almost endless in complication. Consider the children of the world. Do Innuite children go indoors when it is dark north of the Arctic circle, where it is dark for

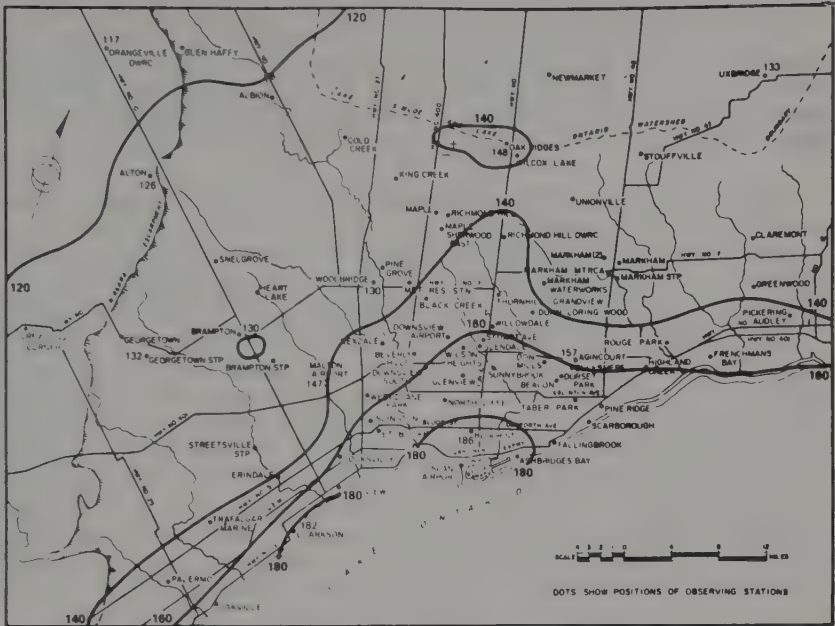
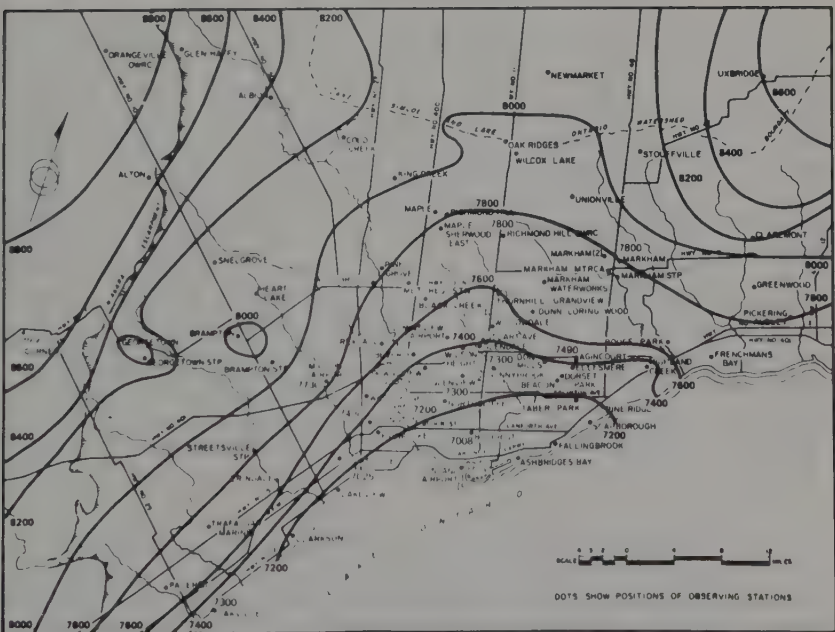


Fig. 101

AVERAGE LENGTH OF FROST-FREE SEASON



REGIONAL HEATING DEGREE-DAYS

Source: A Climatological Study of Toronto by R.J. Smith, 1972

Fig. 102

months? How cold is too cold for West Indian children, compared to Torontonians, compared to Yellowknife children? How could a world map of the caging effects of climate be produced with this welter of considerations? There is no literature on children climatic environments except the Soviet literature on 'Climatic Zones of Children' (Adamenko 1972).

Some possible simplifications come to mind. Perhaps the extremes of climate cage, whereas constant climates, like tropical highlands or oceanic, excluding rare tropical storms, have the children outside independently of the climate. Two simplifying assumptions might be made: first there is no climatic caging effect in constant climates; and second, that climates which differ markedly from the climate where man evolved in eastern or southern Africa, are caging in general: thus only where the climate deviates towards the primal climate do the children come out. An average caging effect might be considered as the average deviation from the east or south African climate: specially caging and freeing climates might then be the extremes around that mean average condition. Obviously much work is needed. Environmental determinism need not be philosophical speculation, but, an observational science. We know that the weather affects children's utilization of their home ranges. After that the field is virtually unexplored - terra incognita.

Where can we find the manpower for such a tremendous observational effort? How can the material be organized from city to city? It would seem an ideal project for older school children who, in addition to gathering the data necessary, could protect, with their brains, younger children. It would give high school teachers something to do on a serious and practical level. Stamp, a British geographer, mobilized British school children more than a generation ago to map the rural land use of that island: a similar effort is suggested here.

New towns are being considered for the region around Toronto: micro-climates vary greatly. Which sites will give the children most freedom? For man to much modify existing urban climates is still difficult; he can at least build new cities in better locations. Tropical administrators from the United Kingdom moved to cooler highland locations during the hot season, in many places, in the old Empire: a transhumance.

Physical Geography has Class Implications.

Class differences in the physical environment vary with the seasons. Summer in Toronto shows the inner city to be parched, polluted, dusty, sweltering and greenless; whereas, the suburb/cottage milieu is watered, clean-aired and green. The children of the rich live very differently to those of the poor in

contemporary Toronto. In winter, particularly after a heavy snow storm, the inner-city and suburban environments coincide. These seasonal differences reflect in the activities children engage in. There are few inner city swimmers or sail-boaters compared to suburban. But snowball fighters and revellers show a geographic democracy. Summer magnifies class differences in the environment.

Can Collegiate Students do Geography?

High school children, might study the seemingly more 'political' geography of mapping children going to and from school, or playing with automobiles in the streets. To most geographers, examination of the frequency with which lightning strikes children is a valid study: it is 'non-political'. Few geographers are prepared to examine the frequency with which children are hit by automobiles, since this has 'political' overtones. This dichotomy is a peculiar one that does not occur in the space of the events; it leads one to question whether politicians are usurping the geographer's grade. At one time the church claimed astronomy was theology. But if current prejudices make some child watching impossible for school geography, at least the noncontroversial work could be taken up.

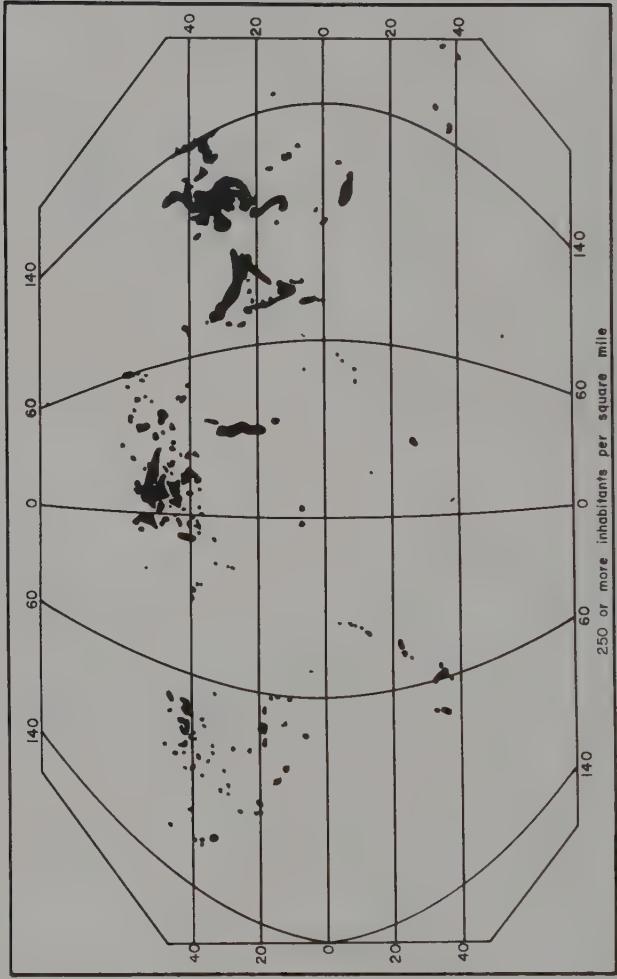
III: Restoration of the Urban Environment.

The base map is the 'basic' map. It colors all the geography drawn upon it. The most difficult geographic prejudices to discover are those that appear to be the least prejudicial. What could be more objective, more neutral, more value free than the base map? At the world scale, base maps always include latitude and longitude and the continental outlines. We seldom ask if another set of coordinates could be used; if continents other than those of land and water could be used. For instance, if the continents and islands of the world's people were used, then a new globe emerges, a globe concentrating on people rather than on property. Important places are those with concentrations of people not mere dry surface material. The Sahara is as deserted as the North Atlantic, perhaps more so. This commonality emerges.

A: Prejudice in Urban Base Maps.

The 'basic' map of the city has the power of bias with the appearance of neutrality. Examining a set of base maps for Toronto reveals almost complete emphasis on machine space. Major roads are always shown. Subways are usually included, as are airports. Lake Ontario is one physical feature always included. Rivers appear on some maps but with increasingly less frequency as time goes by. Examining a sample of base maps historically shows that machine spaces are gaining representation at the expense of life and biomass spaces.

Islands and Continents of World's Children



Source: Geography of Human Survival - W. Bunge '73

Fig. 103

What are the practical effects of this increasing bias in base maps of Toronto? Consider the planning process, indeed, the whole conceptualization of the landscape that is Toronto. If the 'basic' map consists almost exclusively of machine space material, then if a planner or even a private citizen starts imagining the expansion of the city his first unconscious, and therefore extreme bias, is to extend the lines that represent the roads, expressways, rail lines, Go trains and subways. Expanding the city means extending the transportation net. The city appears absolutely devoid of physical terrain, absolutely flat. It appears to have no rivers and accompanying ravines worth preserving.

To be highly specific at a micro-geographical level, consider the strange kink in Lawrence Ave. Simple neatness cries out that Lawrence Ave. be turned into a straight line: the kink is caused by the Don River, not shown on the more modern base maps. The construction of roads across the ravines in Toronto has been a disaster to the life circulations along the rivers. That is, a roadway across the ravine is a barrier to circulations up and down the ravine. This blockage effect of simply straightening roads is fundamental to the quality of man's relationship to nature in Toronto. Similarly, expansion of the city seems to be no more than an extension of the lines of the base map, highways and so forth just continued into the seemingly featureless countryside. The man-in-nature necessary relationship is the very marrow of the construction of base maps which underly plans.

Cartograms as Base Maps.

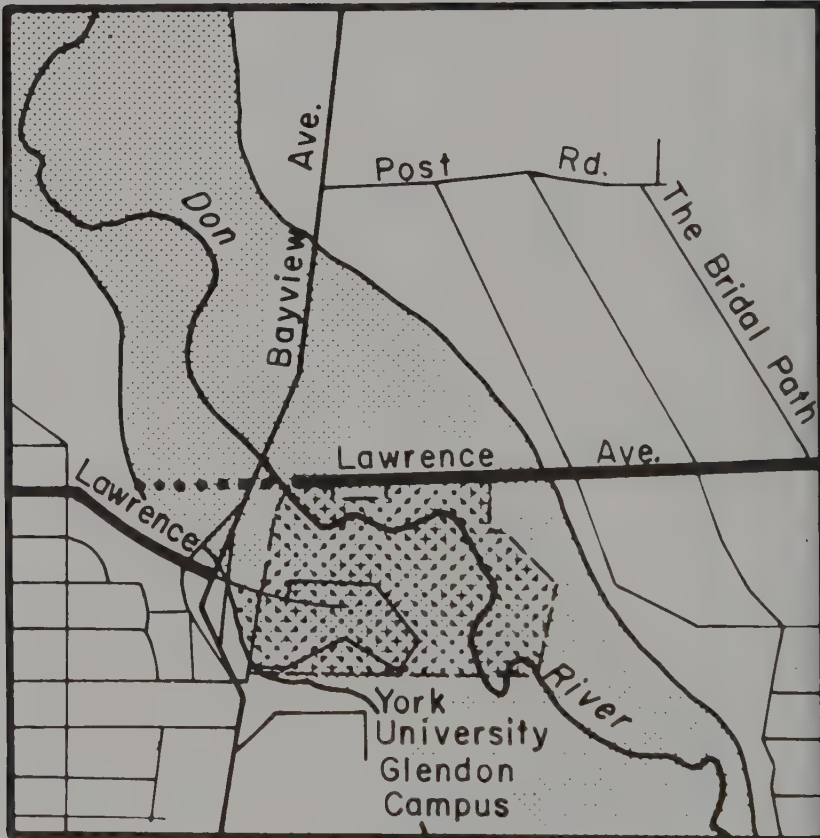
If we view Canada as the geography of its people rather than the geography of its land, then a cartogram can be drawn which weighs space by the number of people within it rather than the number of square kilometers. A similar set of cartograms has been prepared for the major cities of Canada including, of course, Toronto. The cartogram of Toronto could make an interesting base map of the city, but is not used in that fashion, because it gives the citizens of Toronto an equal democratic weight; it reveals uneven distributions of good and bad qualities of Torontonian life much more than the usually constructed base map.

For planning, this implies that the physical geography within the city tends to be ignored, or considered over priced, relative to the physical geography surrounding the city.

Natural Features as Base Maps.

Rivers consist of more than just the line of the stream flow; they represent also an area of the ravines in which they lie. If the ravines are shown on the Toronto base map, they present a technical cartographic problem since sufficient space must be left uncluttered so that the thematic material of the map itself can be

Lawrence Ave. Gap

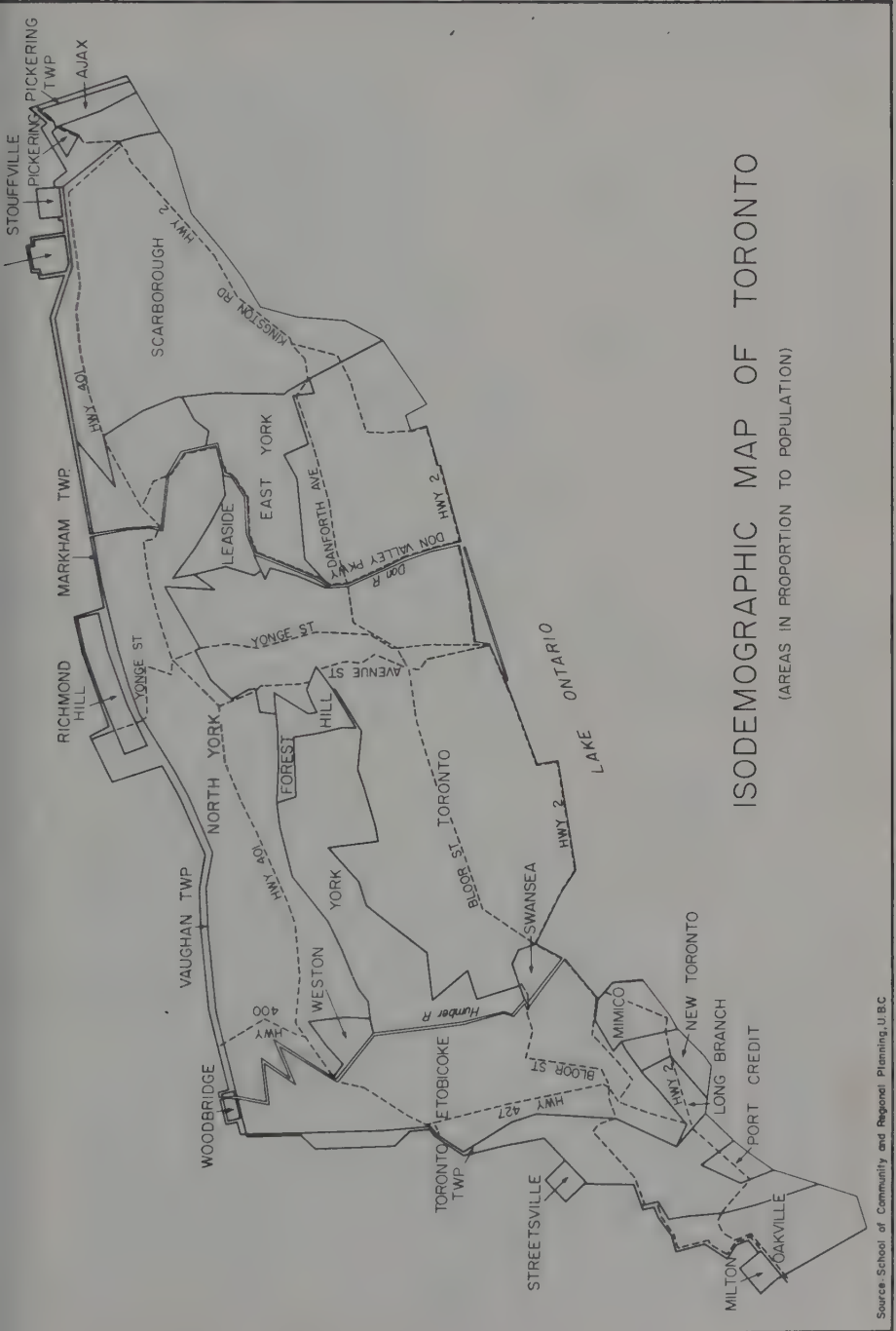


HEAVY GREENERY



LAWRENCE "COMPLETION"

Fig. 104



ISODEMOGRAPHIC MAP OF TORONTO

(AREAS IN PROPORTION TO POPULATION)

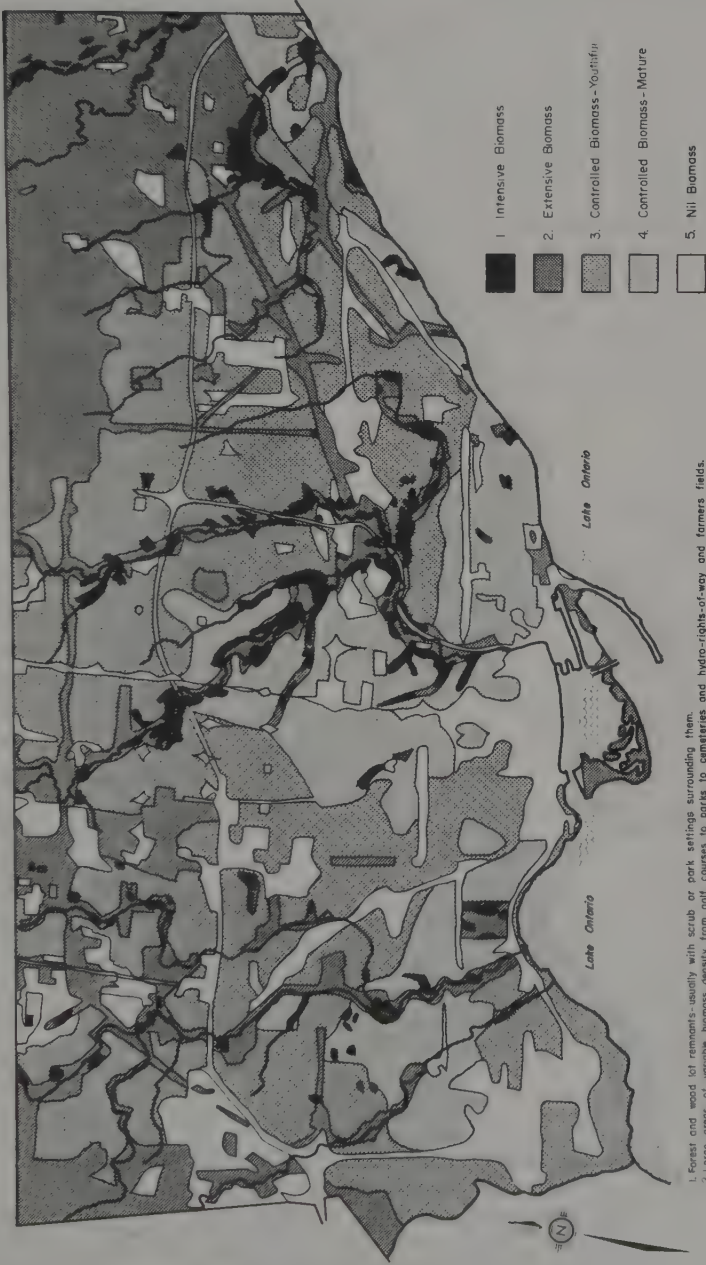
Source: School of Community and Regional Planning, U.B.C.

Fig. 105

depicted. The base map cannot take up all the room on the map. This suggests a linear symbol for the edge of the ravines and suggests a similar symbol for the lake Iroquois shoreline cliff and the cliff along the lakeshore at Scarborough. These steep slopes are important in several ways. They represent engineering difficulties to the machines. The lake Iroquois escarpment is difficult for automobiles and buses to climb during snowstorms and the ravines have been viewed as 'the enemy;' by city engineers and others, to city expansion. For instance, the 'obstacle' that the Don River represented to eastward expansion of the city was for years viewed as a war by man against nature and bridging was hailed as a 'victory'. These negative aspects of steep slopes in the city's midst have been overemphasized. The positive aspects have been less thoroughly examined. It is vaguely understood that the tops of these steep slopes permit views and sweeping panoramas. Though high-rises and downtown skyscrapers and airplanes offer alternative methods of obtaining views these days, still the roll of the natural terrain is a special sort of view even today. "View property" usually brings higher prices in real estate values. An outstanding example of a Torontonion realization of this value is seen in the site of Casa Loma along the lake Iroquois shoreline.

Beyond the possibility of representing escarpments as a linear pattern on a base map, is the general one of classifying landforms for direct human urban use. Work on the physical geography of the city in terms of terrain is exclusively the consideration of its effects on property; such as the cost of building houses on steep unstable slopes that tend to slump into valleys during periods of heavy rain. The general aesthetic quality of the terrain, the pitch and roll of it, are as yet barely considered. For instance, motorists in the night traffic on the expressway, comment on the flow of lights, white headlights towards one and red tail lights with one, as they snake up and down and left and right along the vista of the road. Some years ago it was found that the extreme straightness of roads put motorists to sleep causing accidents: curves were reintroduced in more modern highways to overcome the problem. Some day up and down elevations might be reintroduced as well. Machine spaces flatten the terrain, destroy its texture except for the large wave patterns miles across such as represented by the general valley system of the Don or the Humber. How could at least these major landform sweeps be preserved on the base map? So far all landform classifications have been based on rural significances, often agricultural. The difficult conceptual problems of the direct effect of urban terrain on urban dwellers probably makes this aspect of base map representation beyond the resources of this study. We can only comment about its serious lack of consideration. A large program of observing citizens in the landscape would have to precede any urbanized terrain mapping. Even then the material might not be usable as a base map but as only a special map that planners, especially highway and other machine space engineers, should be trained to respect.

BIOMASS MAP OF METROPOLITAN TORONTO, 1970.



1. Forest and wood lot remnants—usually with scrub or park settings surrounding them.
2. Large areas of variable biomass density from cemeteries to parks to cemeteries and hydro-rights-of-way and former fields.
3. Vegetation in suburban areas, usually less than 30 years old.
4. Vegetation in rural areas, usually less than 30 years old.
5. Industrial/Commercial/Transportation zones of little or no vegetation.

The adventure, the surprise, the pure fun of a differentiated terrain, is not the only physical feature that should be considered a candidate for return to the urban base map. Even more important is the return of life, life in two forms, the total biomass of all living things including mankind and the differentiation of humans from other living things. The whole space of the city is not included since property is not life. Buildings, highways, telephone poles are most obviously devoid of life-like properties. Machines seem more life-like and perhaps therefore more dangerous. Machines are animated, especially transportation equipment; machines are thinking, especially computers; machines are dangerous to humans, especially weapons; and machines are semi-self reproducing, especially automated factories assembling automated equipment for automated factories. This suggests that the essential dichotomy of urban space is not between physical and human but even more sharply, between life, or biomass spaces, and machinery or machine mass spaces. Some land, such as land used by automobiles, must be 'dead' Cannot this land be concentrated, such as multiple storied parking lots, rather than areally sprawled? Children need to be on the ground; automobiles do not. High-rises are for automobiles; not for children.

The intensity of the life in the life spaces is varied. Why is the biomass so low even where it exists? Could not the biomass be encouraged even, if necessary, by zoning regulations? 'Open space' is not necessarily high biomass space. Denuded ravines are not as natural as wooded ones even if not filled in. A mixed nature-machine base map causes the map user to think differently about the city, to perceive it as a problem of balance, not mere expansion, and certainly not conquest.

A Uniquely Canadian Urban Feature.

The general strategy of Canadian cities, especially Toronto, is to 'pinch back' machine spaces relative to life spaces.

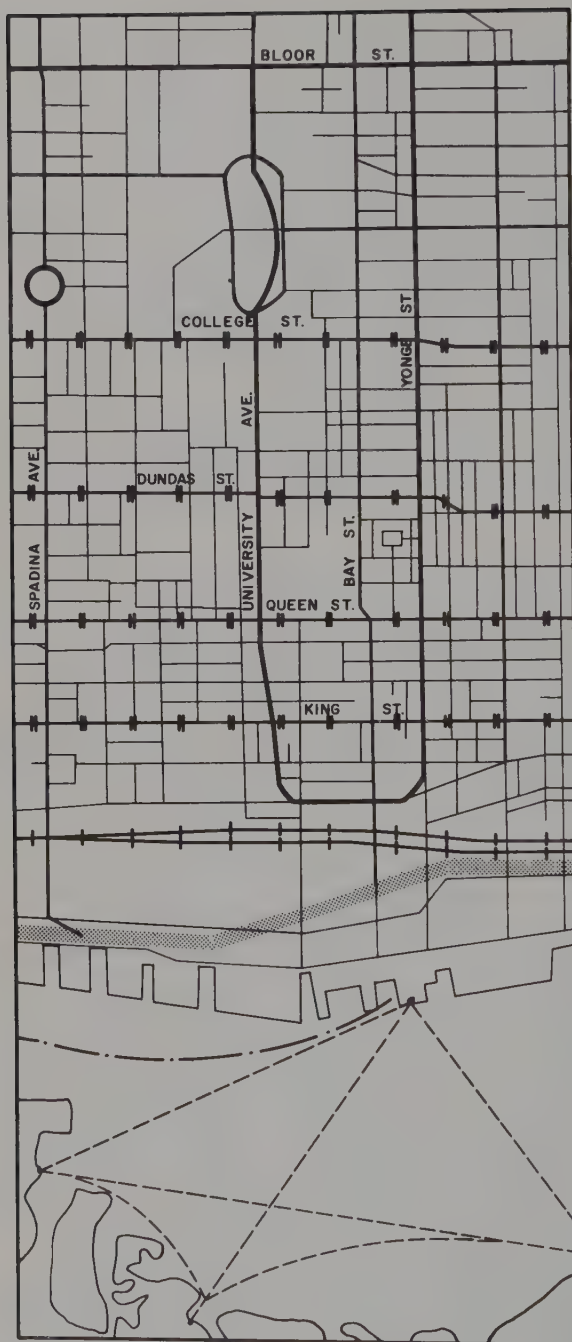
Some concrete examples. The Rideau Canal in Ottawa has been turned into a winter ice skating rink increasing the biomass of the space. Again in Ottawa, Sparks St. has been turned into a mall filled with people, trees and flowers. Banks St. in Ottawa has 'pinched back' the machines to half their space to increase the space for life. In London, Ontario at least one street has a four way cross walk at a corner, so people can legally and safely walk 'kitty-corner,' a pleasing freedom.

Not just the automobile is too spatially free, but all freely roaming transportation machines. The bus is also spatially unpredictable, too free to move where it wants to go. Tramcars were more spatially confined and, at least in Toronto, their value is still recognized. Subway systems cage their transportation

machines excellently and are tending to be substituted for expressways in Toronto. Even expressways can be luxurious or parsimonious in their use of space; the recently re-designed proposed Scarborough expressway on the east side of Toronto shows spatial parsimony. The proposed expressway is sunken, has numerous pathways over it, is covered over in major portions and uses spatially confined exit and entrance systems. The 'decapitated' Spadina expressway, perhaps the only expressway in the world to be halted in midconstruction was more spatially consumptive than the proposed Scarborough, but again, nothing beats the subway. The subway almost never runs over a human being. The imprisonment of the machines is directly proportional to the freeing of the humans so that they can roam at will. Spatially confining the machines, spatially releases the people.

Toronto is a fascinating hive of humans. It is unique along with other Canadian cities, compared to the cities of the U.S.A., in that it is fighting a consistent, if not consciously recognized, battle to expand biomass spaces at the expense of machine mass spaces.

The west coasts of both Canada and the U.S.A. have a tradition of pedestrian right-of-way over automobiles no matter where the human steps off the curb. In the eastern half of the continent no such courtesy exists; but in Toronto pedestrian crosswalks permit people to cross streets after bringing traffic to a halt by a thrust of the hand. In time this might extend the pedestrian-right-of-way habit to the entire urban space. Sidewalks are being widened, rather than roadways. Larger set-backs are now demanded on downtown Yonge St. in the heart of the city. A proposed huge airport, the Pickering, may well be 'stopped in its flight path' saving the entire northeast edge of the city from a huge machine-noise and fume blight. Traffic mazes and traffic blockades are being tried on an experimental basis in various city districts. Subways extend an inordinate distance into the near countryside and with talked about construction of parking garages at these near-suburban end stations, a commuter-subway run appears to be developing. Dial-a-bus pick up service for commuters using a 'Go-Train' suburban system is experimentally established and being improved upon. A temporary mall converts Yonge St., the main commercial thoroughfare, into a park in the summer. Switching yards and waterfront industry are to be moved from downtown to build an expensive park. A waterfront walkway is practically completed. Island residential dwellers are waging a campaign to maintain their homes on the islands in the harbor, maintaining high biomass on space almost free of motor vehicles. The islanders arrive and depart by a ferry to which they walk or bicycle. Street parades, street carnivals, all sorts of usurptions of machine space by biomasses, especially that most precious of biomass, humans. All add up to what might be an actual diminution of the space available to machines and an absolute increase in the spaces available to humans. The possibility of an absolute decline of machine spaces ought to be measured. It could be a global first. Compared to American cities, such as Detroit and Los Angeles, Toronto



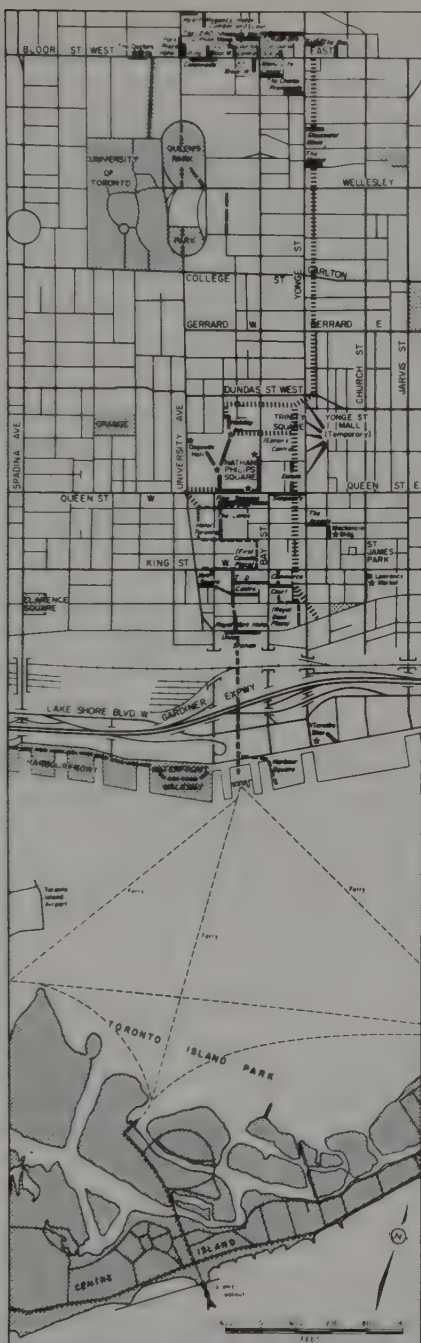
Variety of Transportation Forms in Downtown Toronto

- SUBWAY SYSTEM
- +— STREETCAR ROUTE
- +— COMMUTER TRAIN
- AUTOMOBILE ROUTE
- ▨ MAJOR HIGHWAYS
- BUS ROUTES
- - - FERRY
- - - HOVERCRAFT

Source: Toronto Transit Commission

Fig. 107

Pedestrian Dominated Spaces



- Existing Malls
- Outdoor Malls
- - - Proposed Mall Routes within 5 Years
- · - · Proposed Mall Routes within 5-10 Years
- Pedestrian Walkways
- · · · · Bicycle Paths
- Parks

Fig. 108

is moving very differently, a point of justifiable Canadian pride.

While geography uses the map, the actual space of various land-uses, as perhaps the best index of what a city wants, the city votes with its space. There are other geographic indicators of the machine-man environment, such as people 'honking' their car horns. A 'honk' map of Toronto is another kind of measure of the generally submissive role of the machine in that city. Drivers rarely 'honk'. They actually help push each other out of snow drifts. The level of driving courtesy is a marvel.

Another transportation machine to have wrecked havoc with urban humans is the elevator. Machines do seem to have, if not a will of their own, a way of forcing humans to respond to them in inhumane ways quite unanticipated by the original human intent. The automobile is not necessarily the clearest example of the pernicious effects of machineism, of an open-ended faith that if one can build machine one should. The elevator enables mankind to build structure into the sky, so he does. In Toronto the high-rise boom has done much more than "alter the sky line"; it has buried 46 percent of the inner city (City of Toronto) people in the sky.

In general though, the Toronto evidence is encouraging. The separate advances enumerated above; these 'arts' attributed to a particular individual administrator here, an important innovator there, a fighting citizen's group there, can now be put together into a science. The pieces all fit into an overall pattern which is to cage the machines relative to life. It is not required to attack or eliminate the machines but rather to put them in their place literally, after a few centuries of just worshipping them. Machines take up too much space in cities.

B: A New Base Map for Toronto.

The potential world first that Toronto's bio-machine mass relationship shows, ought to be reflected in the planning of the city. The balance between machine and biomass spaces has swung too far in favor of the former in Toronto. But the encouraging factor is that it appears now to be swinging somewhat in the other direction. This is part of what distinguishes Toronto from large cities in the U.S.A. Urban base maps reflect the way relationships in cities are perceived. Machine spaces dominate biomass spaces on the ground and in the thinking of the map designer and the planner.

In order that the machine orientated governmental planning agencies, such as 'Transportation and Communications' do not draw plans rough-shod over the 'nature' of Toronto, they should be required to use the mixed machine-nature base map. Likewise the nature orientated agencies, such as 'Parks and Recreation,' should be forced to use the mixed base map. Engineers too often use totally machine orientated maps, while the opposite is true of the "nature lovers." By compelling everyone to worry about the balance of

NATURE-MACHINE BASE MAP



Fig. 109

spaces, self-evident conflicts that are obviously going to spill over into the headlines and make a lot of political trouble, can be avoided. At least some of the seemingly endless blunders that government agencies make can be attributed to the imbalances in their base maps. "Sewers for their own sake" becomes the logic of prejudiced maps.

C: The Inner City Child's Environment.

The inner city child is three times more likely, than the suburban child, to die in his first year, seven times more likely to be hit by an automobile. The inner city child's home range is one seventh that of a child from Toronto islands, reducing his number of friends to one half. All diseases from tuberculosis to salmonella poisoning are likely to be his and virtually the only rats left in Toronto are in his environment. His physical environment receive only half the snow of ex-urban areas and it is destroyed almost immediately. There are almost no swimming pools and on the infra-red space satellite photographs of Toronto where high biomass is a deep purple, his neighborhood is the ashy gray of death. Over half the families have no cars with which to refresh themselves in the countryside.

We estimate that approximately 1,000,000 Canadian children are trapped in these ugly environments set in the middle of one of the most naturally beautiful countries in the world. The space of the inner city Canadian child is less comparable to Canada than to white working class sections of Jersey City, N.J. The restoration of the natural environment in inner city Canada would re-Canadianize inner city children.

CHAPTER III

CANADA.

Canada's cities are hardly totally alike. Vancouver sports its climate and its relatively new socialist government, Winnipeg its two-tiered system of urban government. Some cities are racist towards native peoples, such as the 'drunken Indian' environment of Kenora. Montreal, in the grips of serious political oppression since the most recent uprising of the Quebecois in 1970, has sections that remind an observer of almost American slums. Halifax is clearly a Canadian failure in that it has a full blown American style black ghetto with all the attendant geographic flavor of racism. But still, exception and individual differences recognized, there is a Canadian city. So, to make generalization we need not examine every city in detail, as we did Toronto.

As a summary typification, urban Canada is rather civilized. A certain pride in good sense, being a bit behind some of the latest trends and wishing to remain behind the 'flashy' forefront of all urban innovations: perhaps being unable to afford the costs of being vanguard urban, has blended the past urban geography into the modern. Two quotations from Lemon's (1973) discussion of citizen participation in Toronto reflect the way in which many Torontonians perceive Canadian-American urban differences.

"Nearly all American visitors to Toronto are impressed with the city: most of all with safety on the downtown streets, cleanliness, transportation, and entertainment, probably in that order. I suspect that few reflect on why they feel more at ease in downtown Toronto than in Buffalo, Cleveland or Detroit. Little do they realize that these good qualities are the legacy of a relatively incorruptible city government, a paternalistic province overseeing urban life, and a history of citizen involvement."

"The American visitors will continue to come and some may wonder why homicides run at only one-tenth of Detroit's rate. I suspect Toronto's acceptance of leadership and of law and order has, paradoxically, resulted in a more open city than most American metropolises, whose higher status residents might in theory believe more fervently that direct involvement is good (through referenda and polls, that is!), but in practice suppress action, or tolerate suppression by a power elite..... Last summer we understood why the Queen was here, at the time we were watching the Watergate hearings. Symbolic leadership, at least now, may allow more participation by others, since the symbol can absorb much of

the emotion, leaving the functional leaders and the rest freer to act."

The fact that Lemon is writing about Toronto rather than another Canadian city is incidental to the thrust of the argument. The striking differentials are between Canadian cities as opposed to American cities: thus the two sets show relatively minor internal variations. So the areal differentiation between Canadian cities is largely ignored because it is largely ignorable. Therefore, the discussion goes from Toronto directly to the nation as a whole - to Canada.

I: Urban Nationalism.

Sometimes issues that should not be dichotomized are; for example, the false dichotomization of national philosophies which typify Canada as believing in a 'mosaic' and the U.S.A. in a 'melting pot'. This dichotomy of assimilation and purity, the geographic version of which is spatial integration and segregation, is unworkable. Urban nationalism solves the problem. Since it is sometimes advantageous for urban groups to group and sometimes advantageous for them to disperse, both mixed and homogeneous communities are encouraged. The difference between Canada and the U.S.A. is not really a Canadian urban mosaic and an American melting pot. Canada, especially on the crucial racial issue, is much more mixed than America, is defacto the melting pot and America, the self-advertised melting pot is in fact ghettoized. Therefore the rhetoric of the two countries can be challenged as reversed. More important, the real difference is the volunteerism of the Canadian urban community and the forced quality of the segregation in America. Through time, groups mix and disperse, leading eventually to 'who knows what' sort of world culture. The mixing and dispersing is not what is crucial. The dichotomy that contains the antagonisms is the conditions of the mixing or scattering, namely, 'forced' or 'voluntary'. 'Forced' includes armed force in rounding up people, racial rules on home buying, slumming of particular neighborhoods in order to make them repulsive spaces in which to mix.

'Forced integration' is the cry of racists both in Canada and the U.S.A. 'Forced segregation' is the implied counter-cry. How can freedom be assured if one group wants to mix with another that rejects it? Pride makes such a condition temporary. Rejection leads to counter-rejection. Where conflicts between groups are economic, only an equal distribution of income can break down the wall. But where the problem is one of cultural identity, cultural nationalism versus cultural assimilation, cultural submergence, and the groups involved undergo pulls, tugs and shifts of emphasis over time, then a solution is at hand. Out of the internal dynamics of groups who want both to maintain their cultural history, yet enter the larger world at the same time, urban anguish and instability arises. This dilemma of joining yet remaining apart is solveable.

A: Canadian Urbanization in a Global Context.

The species is hiving. This biological event is world-wide and irresistible. This hiving means that problems are becoming urban. Thus, national problems become the problems of a handful of the nation's cities: Montreal, Toronto and Vancouver. The land is abandoned or reoccupied by city dwellers. The most startling national problem now urbanized is the problem of nationalism itself. If a nation has urbanized and national groups do not receive power inside cities, they are powerless. How can national neighborhoods express themselves politically inside cities?

At present cities do not allow urban national political expression because the government is not urbanized. To establish both the lack of urbanization of government and to suggest the outlines of such an urbanization three strategies are examined. It turns out that the economic sector of Canada has no administrative units at the second level (provincial); that the lower levels of their administrative geography divide the metropolises into smaller units than the government does. The second strategy is to examine the geographic hierarchy of grass root organizations. This strategy also suggests the articulation of government inside the core of huge cities. The third strategy is to apply Christaller's theoretical concepts to government; this suggests both urbanization of the second level of government, (regional), and urbanization of the lower levels of the hierarchy. All three strategies tend to agree with each other and disagree with the present geography of the government. Therefore, we conclude that government, not the people (as with 'new towns') should be geographically distributed.

Until such time as the government distributes itself inside cities, no policy is possible toward national neighborhoods since the scale of the national neighborhoods is so much smaller than the scale of existing government. The government cannot focus itself inside the city.

The daily news is full of reference to urban political disaster; bombings in Belfast, hijackings in Tel-Aviv, political kidnappings and executions in San Francisco. The political climate of many world urban centers ranges from alienation, mass political indifference and cynicism, to urban guerrilla warfare. Yet textbooks on urban geography largely omit references to these events. Events are lifted out of the geography in which they occur, the earth's cities, and given a setting, often of some form of nationalism. Is separatism a question in Quebec or in Montreal and a few other major cities? In what sense does Canada have 'national problems'? With a few minor exceptions national problems turn out to be the problems of a handful of Canadian cities, even of regions within cities.

Why not allow Toronto's Cabbagetown a victory? Why have the

rich systematically displace Cabbagetown's poor to a large extent? The primary problem is one of scale. If a geographic precedent is allowed in Cabbagetown then its political personage, John Sewell, will have many national imitators. Sewell, a 'mere' alderman from a downtrodden district in Toronto, is a figure of national importance: a repeatable figure. Many Cabbagetowns could breed many Sewells.

Many conceive Canada's regional geography as being rural. Important national regions exist in major Canadian cities. Canadian children, overwhelmingly urban, should be taught about urban-national neighborhoods, such as Westmount (Montreal). Westmount is the opposite of a Cabbagetown. Westmount is the affluent English ruling class neighborhood in Montreal. Quebecois view it as a dagger in Quebec's heart.

If Sewell and Cabbagetown win, then what of other pariah regions in Toronto such as Regents Park. The other side of the coin is the 'regions of heaven' in major cities. Rosedale and Forest Hill in Toronto have the reverse public images of Cabbagetown. Therein reside Toronto's power elite. Heaven and hell regions of these major cities are of great significance; these are pivotal regions, national swing regions. These are the geographic manifestation of the poles of class warfare, the powerful and the powerless.

Hull is a hell neighborhood according to affluent residents of Ottawa immediately across the river. A map of the perception of Hull by people on the English side of town shows Hull shrunken compared to overblown Ottawa. Does this reflect the true feelings of English toward French Canadians? A national map of estimated differences between places might prove that Quebec, in English eyes is no bigger than Prince Edward Island. Heaven regions offset hell regions

The magnitude of problems of urban nationalism depends on the degree of urbanization achieved. By 1971, 76.1 percent of Canada's citizens lived in urban regions. On a world scale, few countries are as urbanized.

Degree of Urbanization of Canada
and Illustrative Countries

<u>Country</u>	<u>Percentage of Urbanization</u>
Australia	83.3
Canada	76.1
France	70.1
United States and America	69.9
Union of the Soviet Socialist Republics	56.3

table III.1 Continued

Table III.1 Continued

<u>Country</u>	<u>Percentage of Urbanization</u>
India	19.8
China	14.2
Indonesia	11.6

Table III.1

Source: United Nations Demographic Yearbook, 1970, Table 5, pp. 136 to 165.

What degree of urbanization will it take before governments realize they are not governing a vast expanse of land, but a handful of cities?

The Land.

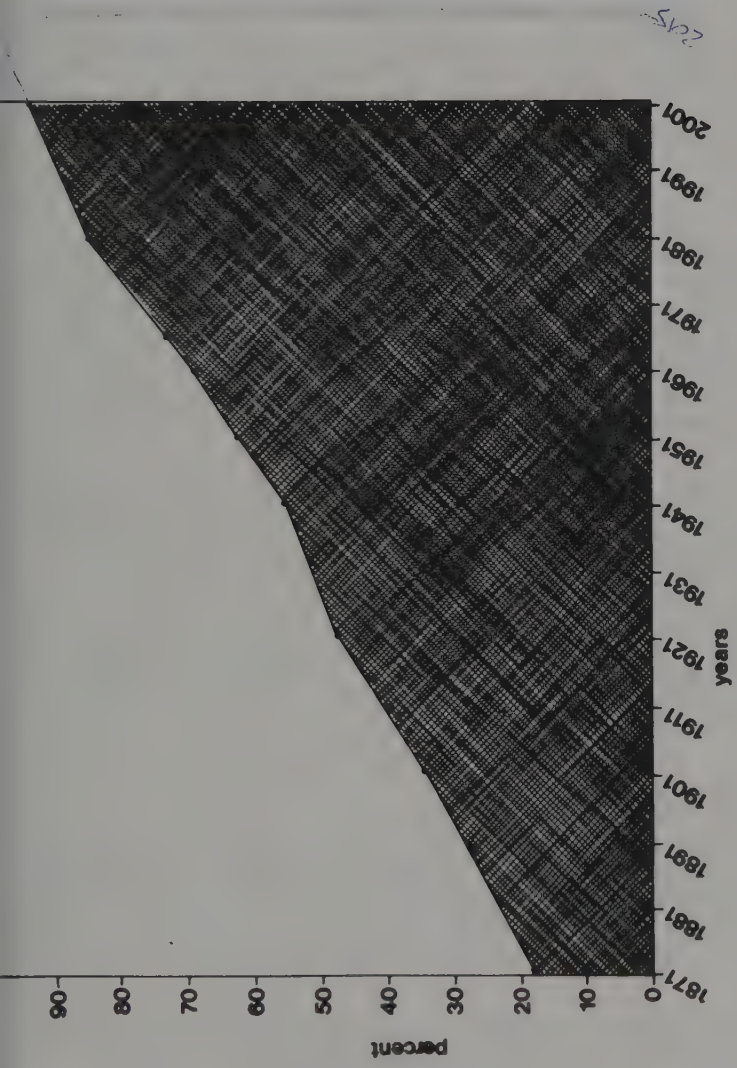
The first step towards perception of the actual problems of today's nationalism, urban nationalism, is to lose the old ingrained fascination with 'the land' of the nation. Land itself has no value to mankind. Mankind spread out over the earth's surface; the dispersed energy of sunlight in the form of food required dispersion. With discovery of concentrated energies in the form of mineral fuels (coal, oil, and gas) and nuclear energy, mankind began to assemble in industrial human hives called cities. Though the land was merely a surface upon which to harvest sunlight, millennia of hunters, gatherers and farmers associated the production of food with 'the land' rather than sunlight as the source of life. Thus land rather than the source of energy took on supreme value.

Mankind, like any other species, consumes energy; food, not land. The species was originally distributed in fair correlation with terrestrial biomass, which in turn correlates with the total insolation falling on the earth's surface. As energy became punctiform, (coal, oil, gas and nuclear), men formed into cities for the same biological survival reasons as red ants in a kitchen will spread out if sugar is scattered on the floor and concentrate if sugar is in a bowl. Nations, collections of people seeking energy as any life form does, should be characterized as a people and their energy source, rather than as a people and their land. Then if the energy source is spatially concentrated, the people necessarily concentrate there.

Nation states have repeatedly made the error of associating land and itself rather than energy, with national strength. Empty land seems to many nation states to represent an opportunity for colonization. Several states have set up their governments to encourage filling empty spaces rather than in response to where

How English Ottawa Perceives French Hull





Graph of Percent of Urbanization in Canada

Fig. 111

the existing population resides. Not only are empty lands remaining empty but former agricultural lands are being abandoned; around the industrial world more and more food is grown on factory farms, using less and less land and, less and less labor. Therefore even the land associated with rural agricultural population as opposed to empty land itself is a shrinking base for the geography of government. The population of advanced countries is urban and becoming more urban. Thus of the three geographic bases for governmental administration; empty land, agricultural land and urban units; only urban units reflect the real sources of political power.

Urban Nationalism Defined.

Nations scattered among a number of cities which they share with other nations cannot achieve independent sovereignty because they cannot militarily defend themselves. But they could have national expression short of sovereignty. The difficulty is not the friction of distance represented by relatively empty, therefore, powerless land that separates urban national groups. The difficulty is the city surrounding national groups. What would keep a division of French troops from Winnipeg apart from a division of French troops in Toronto? Not the scattered farmers between those two cities, but the solidly filled English ring of both Winnipeg and Toronto at the peripheries of those cities. Quebec's cities having no substantial English sides of town, have the possibility of old fashioned national independence. Whether they exercise that right is their affair. The French in Winnipeg or Toronto, or the English in Montreal, do not meet the conditions of classical nationalism. They do meet the conditions of urban nationalism. This, then, is the definition of urban nationalism, all degrees of power short of sovereignty.

Urban Misgovernment.

Typically when nations move to cities they share with other nations; they do not distribute themselves uniformly throughout the city but settle in specific national neighborhoods. When government begins to malfunction this becomes apparent in cities rather than in rural areas, because most of those governed reside in cities.

Why are nations of people who have moved to the city more dissatisfied with their national status than those who remain in the countryside? Why does urbanization exaggerate national problems when people generally find higher income and cultural levels in their new city regions than in the countryside? Why, around the world, when nations move to the city, does the level of antagonism between nations rise? The answer is that large cities are misgoverned, not surprising considering how recently large cities have developed.

What is Local Government?

When people, as individuals or as national groups, move to cities they lose political control over intimate aspects of their lives. A sensible upper limit to the threshold size of true local government might be only two or three hundred people.

Dahl (1967) makes the case:

. . .The City of New York, for example, has about the same population as Sweden or Chile. It is twice as large as Norway, three times the size of New Zealand. To regard the government of New York as a local government is to make nonsense of the term. . . . For purely historical and what to me seem rather irrational reasons, we continue to regard the government of the giant metropolis as if it were a local government when we might more properly consider it as the equivalent of a state or a provincial government--and hence badly in need of being broken up into smaller units for purposes of local government.

Put in another way: when a man moves from a rural area to the city he loses a tremendous amount of his political power. The entire lower half of his political power drops away and he is left only with power of voter participation on the level of international politics: whether to increase investment and influence of the U.S.A. in Canada, whether to counter balance American influence by increased trade with socialist powers and other such matters. Of course, with only international solutions at hand urban nationalism is forced to the level of international politics since that level is the only serious political level of expression left to urban dwellers. Less drastic possibilities cannot be politically articulated within cities since cities are misgoverned by a lack of political articulation. What form of expression is left the Soviet urbanized Jewish population other than the international solution of migration to Israel? What serious solution can Belfast Catholics put forth other than the international solution of unification with the Irish Republic? The de-internationalization of urban politics is necessary for local solutions to surface.

B: Solution Approach I: The Administration of the Canadian Economy as compared to the Administration of the Canadian Government.

It is instructive to compare the administration of Canadian international politics to the administration of the Canadian national economy.

Economic Responsiveness.

Since non-monopolistic large national private corporations must efficiently administer to the economic needs of the citizens of Canada or go bankrupt under competition, there is reason to feel that the economic sector of the national life of Canada is more efficiently administered than the political. If data on internal economies of scale for various governmental functions are difficult to obtain, such economies are worked out in the economic sector with its hierarchies of administration and are more rationally based than in the political sector which does not have to stand the day-to-day test of competition. Put in another fashion, are urban national neighborhoods more dissatisfied with their ability to cause the economic sector to respond to their needs or the governmental sector? It would seem that the service section of the economy is more responsive to the needs of urban national neighborhoods, while governmental response is much less efficient; therefore the administration of the service sector of the economy might serve as a model for the administration of the government.

The Urban Hierarchy of Metropolitan Life.

The basic geographic cause of this discrepancy of response, so finely tuned for economic services, so insensitive for political, is the hierarchical misorganization of the political administration. To clearly see this compare the national administrative organization of the economic and political sectors.

For an economic example consider the Canadian organization of the Metropolitan Life Insurance Company. Metropolitan Life is organized in a five-step hierarchy.

Geographic Organization of Metropolitan Life Insurance Company

<u>Hierarchical Level</u>	<u>Number</u>	<u>Ratio Between Levels</u>	<u>Base Population per Unit</u>
Nation (Head Office)	1		20,000,000
Region (Regional Office)	3	3	7,000,000
District	59	20	400,000
Local Area (Sales Managers)	238	4	100,000
Community (Sales Representatives)	1,600	8	12,500
Citizen	20,000,000	12,500	

table III.2.

(Source of these data and all subsequent statements pertaining to Metropolitan Life is Robert Sequin, Market and Research Supervisor of Metropolitan Life, Ottawa, conversation, 1972.)

Mapping the first three levels of the hierarchy reveals an interesting geography of administration. The national headquarters of Metropolitan Life is in Ottawa. The three regional cities are based on urban districts (Montreal, Toronto and Vancouver). They are not in the center of rural population nor are they rural in outlook. They serve the remaining rural Canadians quite secondarily. On the basis of rural population, Toronto is much too close to Montreal to be efficient. To make the point more clearly, a map of the population of Canada was drawn. This map was gridded into squares and a game was played to try and find the three centers that minimized the total aggregate travel between three optimally located centers and the population. To further simplify the problem only north-south and east-west distances were considered; that is, it was assumed that people never travelled in any direction but those two and made right angle turns. This travel assumption was made to make the mathematics possible while not being too far from reality to make the main point.

It is obvious from the map that Metropolitan Life is serving the urban population by the distribution of its regional centers, since the computer calculation places the three centers in Calgary, rather than Vancouver, and immediately west of Toronto. Using exactly Metropolitan Life's three centers (Vancouver, Toronto and Montreal) results in a modest 12.6 percent loss in efficiency.

Metropolitan Life is quite self-conscious about this policy. For years the company was organized on strictly rural lines as the bulk of its customers were rural. The shift of the Canadian population to the city has caused the reorganization of Metropolitan Life with a massive urban administrative shift occurring in 1970. Why would Metropolitan Life wait so long to shift over from a rural customer administrative geography to an urban customer administrative geography? Canada was fifty percent urban before 1941. The lag in response comes from following a strategy of serving existing customers and expanding out from them. Since the rural past had a heavy representation of Metropolitan Life customers, the rural base continued to get the administrative attention as reflected in the geographic hierarchy of Metropolitan Life's national administration. In 1950 twelve percent of insurance policies were held in Canada by Metropolitan Life while in 1970 the percentage had dropped to six percent. This growing failure forced the change.

It can be seen even more clearly from the list of towns dropped as district offices in the 1970 reorganization that the firm was reorganized with an eye towards existing rural policy holders rather than the potential market. Almost all the towns dropped were small and served rural areas. The dropped towns are as follows: Saskatoon, Timmins, Guelph, Sarnia, Brantford, Niagara Falls, Valleyfield,

Canadian Districts for Metropolitan Life

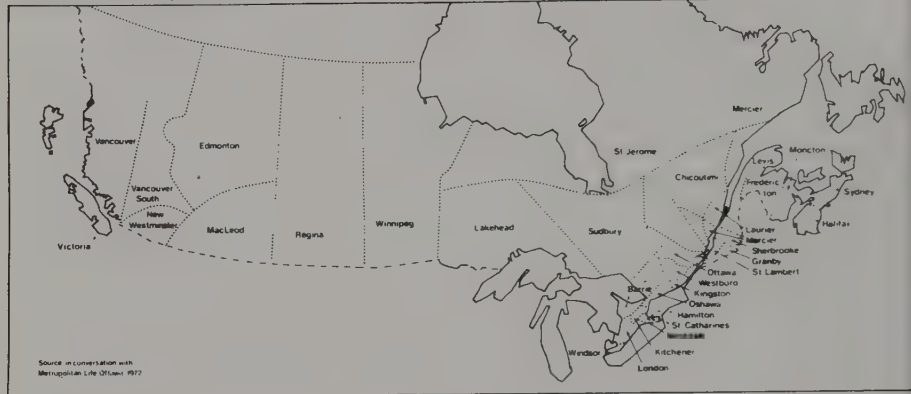


Fig. 112

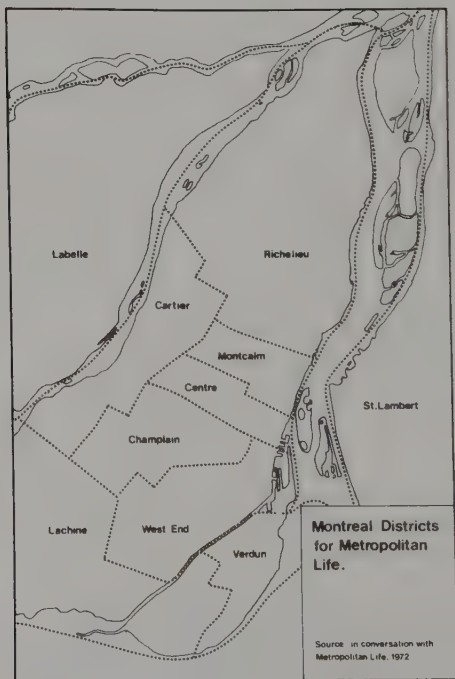
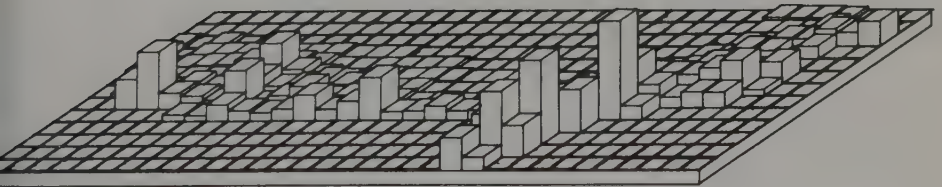
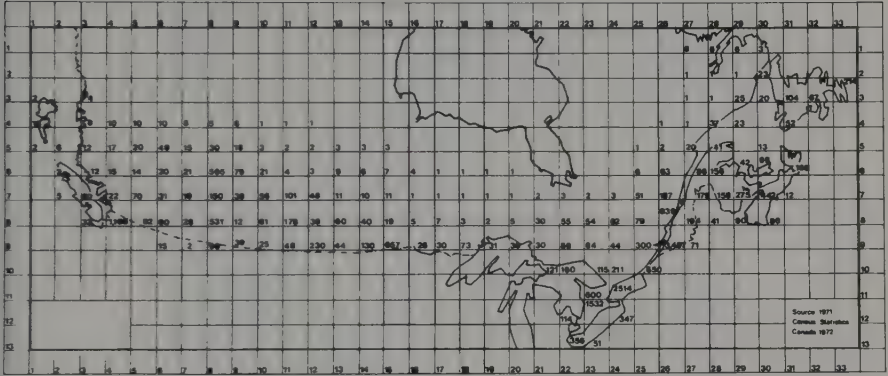


Fig. 113

Population of Canada in A 13 x 33 Matrix Form



Computation of Geographic Population Centers on the Matrix Form

Graphic Representation of Canadian Population

Fig. 115

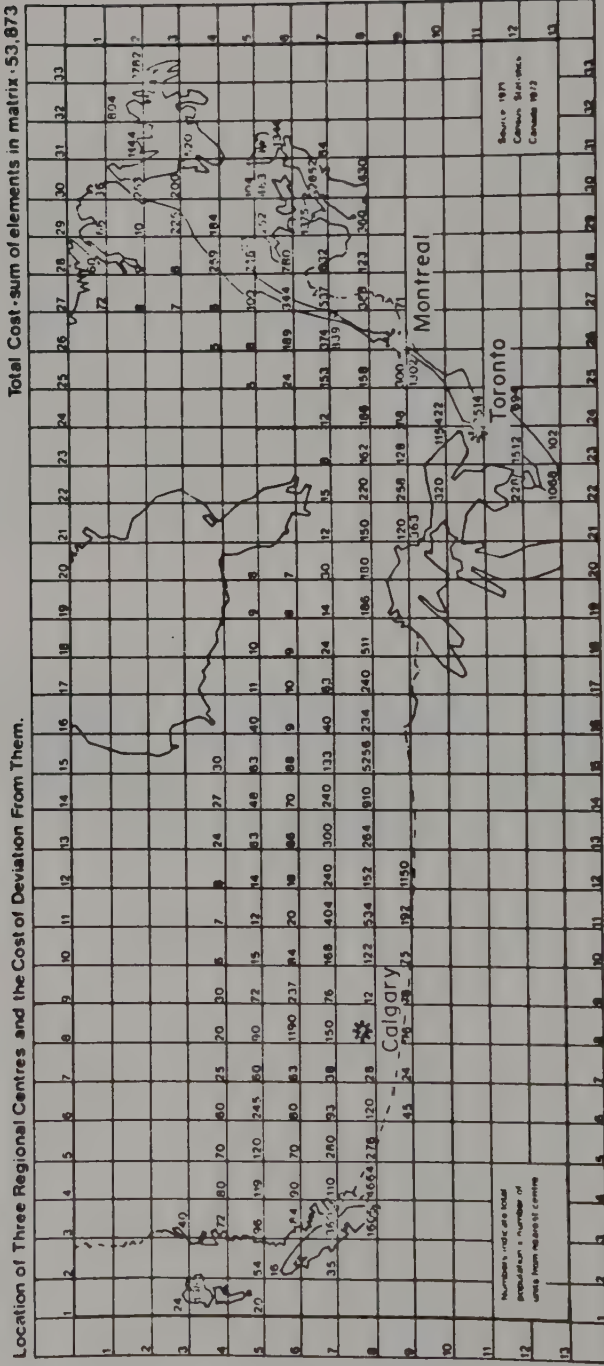


Fig. 116

Hull, Drummondville, Shawinigan, Jonquiere, Saint John, Campbellton and Dartmouth. In the reorganization of 1970 the potential market was used as the basis for company organization rather than the existing pattern of customers. This required that the rural base of Metropolitan Life be shrunk and the urban be expanded. In addition to moving the regional office districts, the number of districts was reduced in the rural areas by expanding them geographically. The district map is interesting because the size of the districts varies from the entire province of Saskatchewan to a few square miles of Montreal City. The areas of the districts show extreme variety, but the number of people in each district shows extreme consistency. This is how Metropolitan Life 'governs' Canada.

The specific problem of urban nationalism is well taken care of in that Montreal serves all Quebec while more-distant-in-miles-but-closer-in-culture Toronto serves all the Maritimes. So national differences are recognized at the second-from-the-top level of the hierarchy. The lower levels of the hierarchy intensify sensitivity to national expression with distinctions between rural and urban, suburban and city center districts. This identification with the particular cultural nuances of the Canadian citizen continues right on down to the level of the individual national citizen through personal contact face-to-face with the life insurance agent; for example, French speaking insurance agents.

One way to see that this is an even-handed system is to look at a map of Canada with areas not drawn in proportion to the number of square miles within each governmental region but in proportion to the number of people living there. Then the regional cities, Montreal, Toronto and Vancouver are not unbalanced with Montreal 'too close' to Toronto and Vancouver 'too far' to the west. The spreading out on the map of the crowded places and the shrinking of the empty places puts Metropolitan Life's regional centers more in the center of the projected map.

Another way to see that this is an even-handed system is to recognize the need to serve the customer to which Metropolitan Life must respond or face bankruptcy. Most Canadian insurance companies have the same essential features of the Metropolitan Life plan. Indeed Metropolitan Life reorganized itself after studying the urban-oriented organization of two other life insurance companies, (Prudential and London). It is not only a common organizational pattern for Canadian insurance companies, but for all Canadian commercial enterprises on the national scale. What do such different enterprises have in common?-the need to efficiently serve the Canadian people or face bankruptcy.

The Economic Structure Compared to the Governmental Structure.

The contrast between the way the urban nations of Canada are served by the economic sector of Canada as compared to the political sector of Canada is startlingly different. According to the

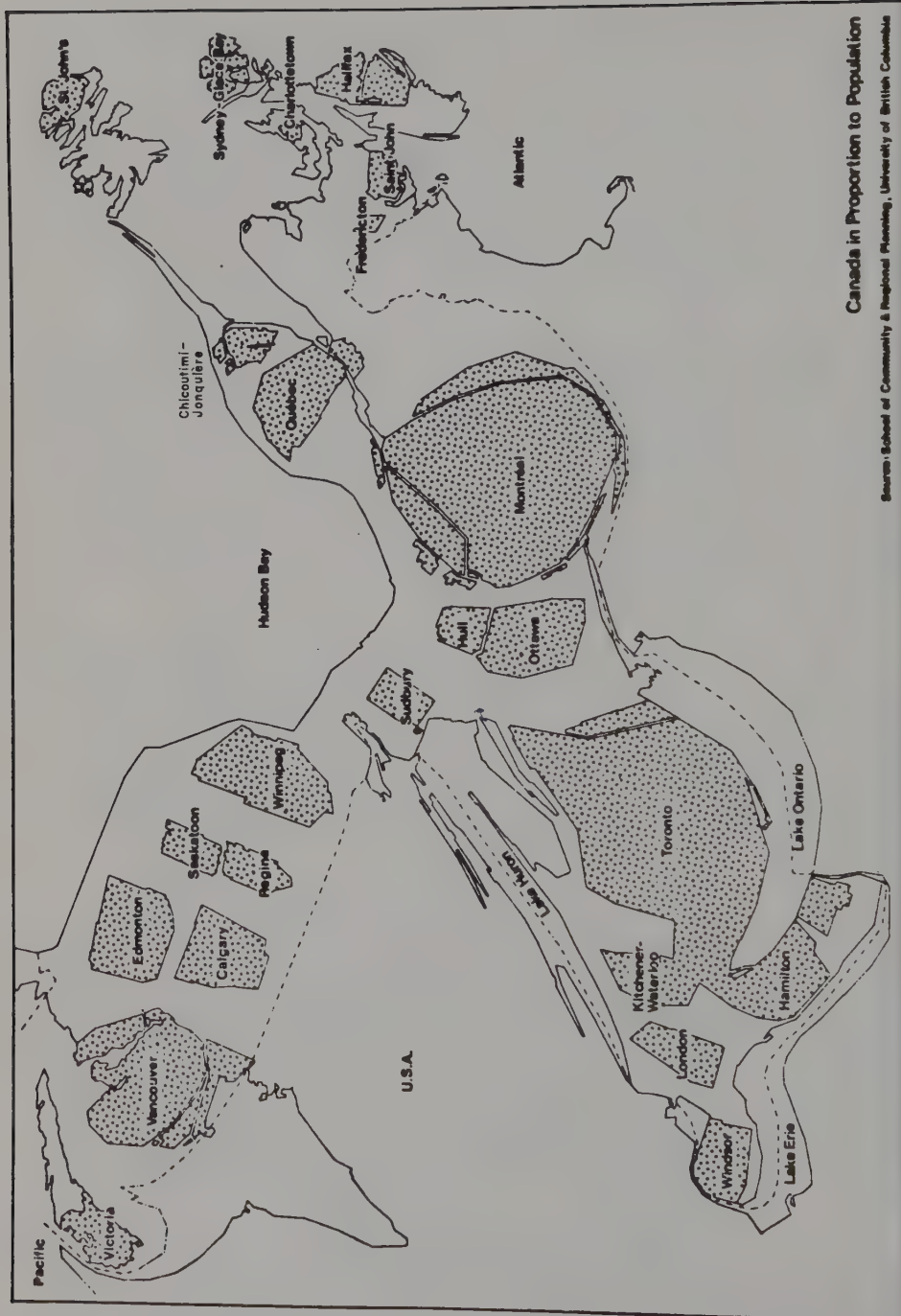




Fig. 118 CANADA BY COUNTIES 1971

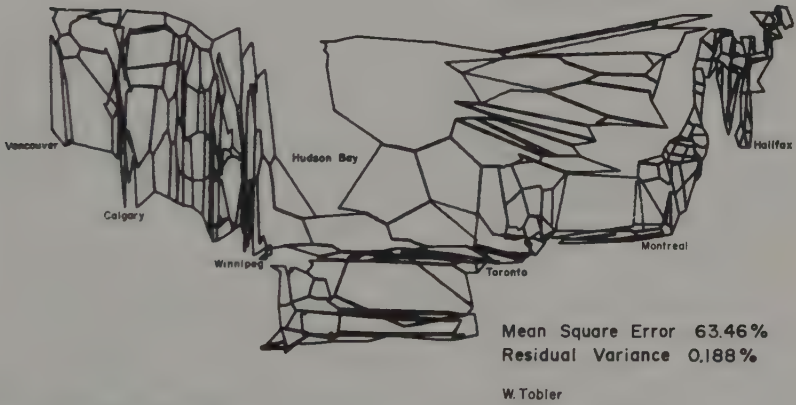


Fig. 119 ISODEMOGRAPHIC CANADA BY COUNTIES 1961

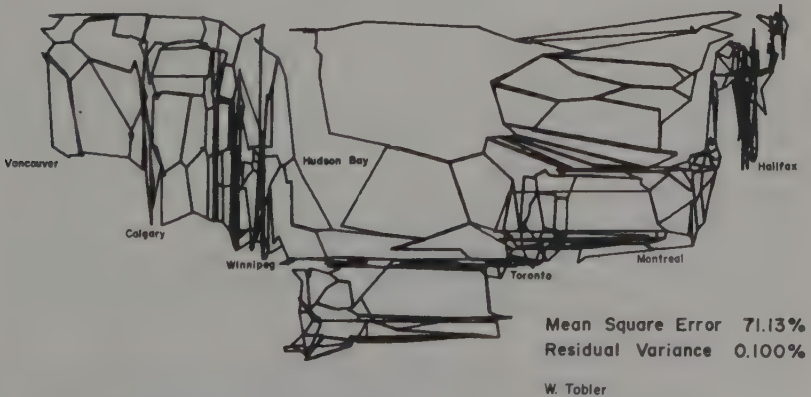


Fig. 120 ISODEMOGRAPHIC CANADA BY COUNTIES 1971

commercial sector of the Canadian way of life, the nation is divided into three urban regions, the West Coast, on Vancouver; the English east on Toronto and the French east on Montreal. A glance at the map of the location of twelve existing governmental regional capitals proves that they are based much too heavily on the rural population or even on empty land.

Geographic Organization of Canadian Government.

<u>Hierarchical Level</u>	<u>Number</u>	<u>Ratio between Levels</u>	<u>Base Population per Unit</u>
Nation	1		20,000,000
Region (Province and Territory)	12	12	1,700,000
District (County)	193*	17	100,000
Local Area (Municipal)	4,633**	24	4,350
Citizen	20,000,000	4,350	1

table III.3.

*Census counties and regional districts with administrative power. F. Ricour-Singh, Geographic Section, Census Division, Statistics Canada, in conversation, 1972.

**Canada Yearbook, 1970-71, Ottawa, 1971, pp. 129-130.

So the first weakness of governmental administration as opposed to the economic sector is that there exist too many regional centers at the second level from the top of the hierarchy. The centers are misdirected and mislocated toward the empty countryside as opposed to the crowded cities. A second and startling difficulty is that the fourth governmental level from the top, (local area or municipal) is urban; yet the second regional level of the hierarchy, (regional or provincial and territorial) is rural and imposed over the fourth level of the urban hierarchy. Metropolitan life is organized at its top two steps, national-urban. For the political administration the steps are national-rural. This is an inefficient situation since Canada is an urban nation with a rural past. But the past rural administration sits on top of the present urban situation. This inversion of the spatial hierarchy is in great contrast with the economic sector. In the economic sector of administration the remaining minority Canadian rural population is subordinated administratively to the urban in a 'city-state' system. The efficient economic sector reflects the reality of modern day Canadian life.

The rural areas are assigned as subordinate to the urban at the first two levels of government, just as rural economic interests in modern day Canada are served through urban attachment at the higher levels of the hierarchy. Of the fifty-nine districts

of Metropolitan Life twenty-eight are located within cities themselves, ten are mixed large city and rural, while the remaining twenty-one are mixed between smaller urban places and rural population. But at this third level at least some of the districts are removed from the centers of major metropolitan cities. At the fourth level of the hierarchy, local area, then rurally dominated units begin to appear in the mixture of urban, urban and rural, and rural units. The guiding principle is to keep constant population sizes within the step of the hierarchy and let the rural-urban nature of the population fall where it may. This contrasts with the great population size of urban governmental units of today, the third major weakness of present governmental organization, such as seen in the Ottawa-Hull 'local' government cartogram. It is impossible to focus the government on any specific neighborhood within these areas for any purpose. In a real sense, the cores of cities have no governments at the local level, just a tyranny.

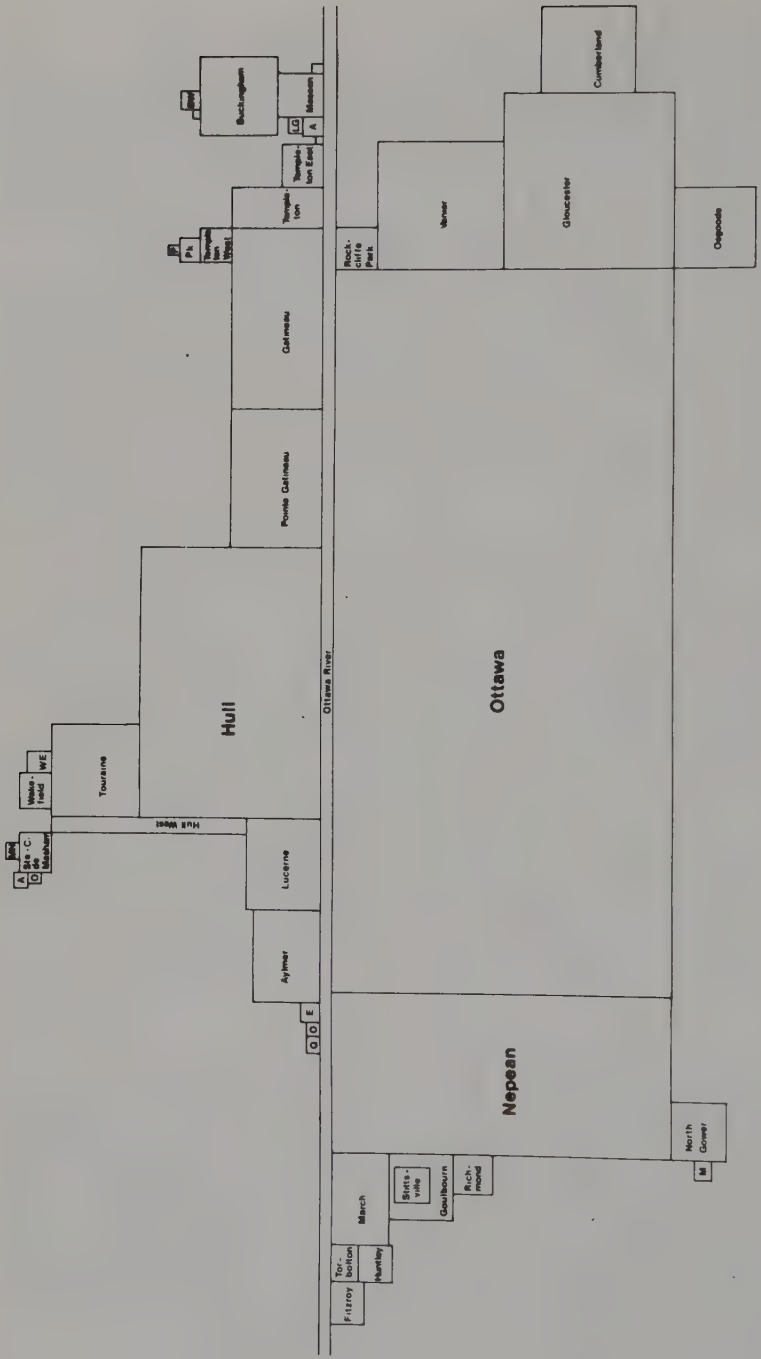
C: Solution Approach II: Self-Forming Urban Governments.

All national states were originally self-declared. A group of citizens announced that they were a nation. In rural days rural groups of people made the declarations of independence, usually in an urban assembly point. Since nations have moved to cities, now city groups of people announce their sovereignty. The question is, how do citizens form themselves into groups in cities to exercise their intent short of sovereignty? Does not a continuum exist of citizen self-assertion within cities; if so, could citizen groups that form in cities for a variety of issues shed light on implementation of urban nationalism? What is the smallest number of citizens that can sustain a neighborhood organization? Is there an urban hierarchy of political population sizes? Can existing community groups be used to form local governmental units?

Grass-Root Hierarchies.

The entire metropolitan region can be mapped into neighborhoods. If on top of this map is imposed another of the boundaries of local government it will be found that the suburban neighborhoods tend to be bounded by suburban government but the neighborhoods in the interior of the city have no 'suburb' re-enforcing them at their boundaries. The various administrative districts inside the city run at random over the neighborhoods. Why not give these neighborhoods government? As Press (1963) asserts: "...Within many cities there are natural units already identified by name; these appear as the most promising bases for such decentralization."

Jacobs (1962) insists that the smallest local area ("districts" in her terminology) has a population minimum of 30,000 and more typically one of 50,000. Her upper limit is 100,000 with a extreme of 200,000. Her experience was mostly from New York. Jacobs (1962) writes with clarity on what she considers the urban political



Political Units in the Ottawa Region in Proportion to Their Populations

Fig. 121

geographic hierarchy to be.

"Looking at city neighborhoods as organs of self-government I can see evidence that only three kinds of neighborhoods are useful:

- (1) the city as a whole;
- (2) street neighborhoods;
- (3) districts of large, sub-city size, composed of 100,000 people or more in the case of the largest cities.

... other neighborhoods than these three kinds just get in the way, and make successful self-government difficult or impossible."

The brevity of these remarks belies their importance since it represents hard-won field experience. It also tends to confirm, quite independently, the field experience of Bunge. Bunge's experience in Detroit is at two levels. Local areas ('community councils') in Detroit are around 20,000 people and are co-terminus with grade school districts so that homeowner and educational interests are combined. In addition, a much smaller unit of organization is prevalent at the block level of hierarchy, the block club, which contains around two hundred people, (see Bunge (1971)).

The hierarchy in Detroit based on field experience is shown below:

Suggested Hierarchy of Local Government Units in Detroit

<u>Hierarchical Level</u>	<u>Number</u>	<u>Ratio Between Levels</u>	<u>Base Population per Unit</u>
Community	1		20,000
Block	100	100	200
Citizen	20,000	200	1

table III.4

The discrepancy between the New York and the Detroit experience, that is, agreement on the block level but disagreement on the size of the next higher level, might be due to the existence of two hierarchical levels, one at 20,000 people and a second at 100,000. This would bring the two field established hierarchies into focus with Metropolitan Life's experience.

Results regarding citizen participation are unclear after Winnipeg's recent redistricting. Certainly the city was not politically redivided on the basis of community groups. The province of Manitoba decided to centralize decision-making into a single metropolitan unit, while decentralizing citizen advisory groups

called 'community committees'. The latter lack decision-making power.

The plan is extremely confusing due to complicated responsibilities and is also confused in its hierarchical structure. Since all decision-making power lies at the top level, the lower levels of the hierarchy are not comparable to the highest: but allowing for that difference, the hierarchy of Winnipeg is shown below.

Local Government Organization in Winnipeg.

<u>Hierarchical Level</u>	<u>Number</u>	<u>Ratio between Levels</u>	<u>Base Population per Unit</u>
District (Greater Winnipeg)	1		517,000
Local Area (community committee)	10	10	52,000
Community (ward)	48	5	11,000
Citizen	517,000	11,000	1

table III.5.

Source:...Local Government Boundaries Commission, Provisional Plan for Local Government. Units in the Greater Winnipeg Area, 1970.

The community committees were assembled using the older municipal boundaries and so do not reflect a democratic upsurge from below for the size and boundaries of units adopted. The size of the community committees varies from 25,000 to 93,000 while wards are all close to 11,000 citizens. The wards have no decision-making power in that they are used merely as election districts. Also the wards do not reflect grass-root organizations.

Supporters of the Winnipeg plan might not appreciate a typification that claims the plan has been imposed from the provincial level; but this is certainly the history of the plan. In spite of the plan's claim to reinforce local government, it has removed decision-making power from the suburbs. The Winnipeg experiment therefore, is hardly an experiment in self-forming urban government

Suburbs.

One clear urban created unit of local government is the suburb. The difficulty with using existing suburbs as a model for local government is that the tax structures are local and should not be. Harvey (1970) hits on the main points of geographic redistribution of the wealth. He typifies the problem of present day suburbs: "Locally financed local government is clearly a disastrous proposition--it will simply result in the poor controlling their own poverty while the rich grow more affluent from the fruits of their riches."

This is clearly confirmed in the work of Hawley (1952) in the U.S.A. who points out that suburbs (satellites) use the city center without paying for it.

". . . the size of the metropolitan population not included in the corporate limits of the metropolitan center represents a cost factor to the residents of the center. . . . an increase of one person in the central city population is accompanied by an increase of \$1.30 in government costs, whereas an increase of one person in the satellite area is accompanied by an increment of \$2.77 in the cost of government in the central city. The (center is) carrying the financial burden of an elaborate and costly service installation, i.e. the central city, which is used daily by a non-contribution population in some instances more than twice the size of the contribution population."

D: Solution Approach III: Theoretical and Technical Urban Hierarchy.

Assume that continued urban political disruption persuades politicians to re-examine urban government with an eye to allowing expression within urban units for the general purpose of improving the governing of cities and thereby the country. Assume further a specific purpose of allowing national urban expression; for example, Winnipeg might have a French government, an English one, a mixed French-English one, an overall city hall, plus many neighborhood sub-governments.

Democracy versus Economy.

The world of technical experts is consumed with seeking after competency. There exists a severe underestimation of the political force of ordinary people. The figure of a twenty percent cost to democracy used here to modify the cost curve of economies of scale is purely a preliminary guess in lieu of hard data. To even suggest that democracy has an economically measurable quality is startling. This, perhaps, is why 'economies of scale' excluding democratic considerations so dominate the discussion of urban government among the technicians.

Kochen and Deutsch (1969) state well the problem of trade-off between democratic participation and economies of scale:

"Much of the well-known political and social theory on centralization and decentralization implies that centralization is preferable on the grounds of efficiency, and that modern technology, with its jet aircraft and electronic communication, has increased the pressures toward centralization. Some theories also assert, however, that decentralization is better suited to protect the values of democracy, liberty, and popular participation in decision-making. Some theorists point out that these

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different views balance to some extent, and that the optimal point on some more or less continuous centralization-decentralization scale must be discovered in each case; but they give little further indication as to how these discoveries are to be made."

Little has been done to measure the tradeoff between democracy and economic costs. One such effort is reported in a series of studies on community control under (Ostrom et. al., 1970). ". . . if the police are insulated from the needs of the citizens served, their increased presence may be perceived as a force imposed from outside. Thus, some commentators have viewed urban police in many neighborhoods of our largest cities as occupying armies rather than public servants."

Optimal City Size.

Much of the technical literature is an attempt to arrive at an optimal city size. The strategy is to objectively determine an optimal size and then construct cities of approximately that size.

The strategy of trying to prevent urban growth by setting a limit on size of cities seems full of dangers. Why cities are growing is unclear. It might be that cities are fascinating but misgovernment is turning them into battlefields. Demko (1972), studying attitudes toward cities in southern Ontario, came to the following conclusions:

". . . people generally do not favor living in a huge urban complex because of the poor "social climate" which they associate with such cities.

. . . Many people perceive the cities similarly, and basing their preferences upon these mental images, prefer cities such as Kitchener and London . . . it would then be reasonable to examine the economies of an urban policy aimed at slowing the growth of our largest cities and at the same time stimulating the growth of smaller centers located within some 200 miles of Toronto."

Demko goes on to say that cities might be economic necessities for individual citizens and that this might constitute duress. But if cities are merely misgoverned then to suggest their restriction even dismantlement, might truly interfere with free choice. Are cities growing because the lure of the city lights is irresistible or because small farmers are being pressed to city life, squeezed off their homesteads? If it is unclear whether cities are preferred, huge cities might be preferred to small towns; therefore, it might be a human cost to curtail urban growth.

Also, cities might be dispersing themselves in unimagined ways. What is the difference between weekday and weekend population of summer time Ottawa? The 'tourist trade' represents a weekly transhumance. Longer trips, such as to the West Indies in the

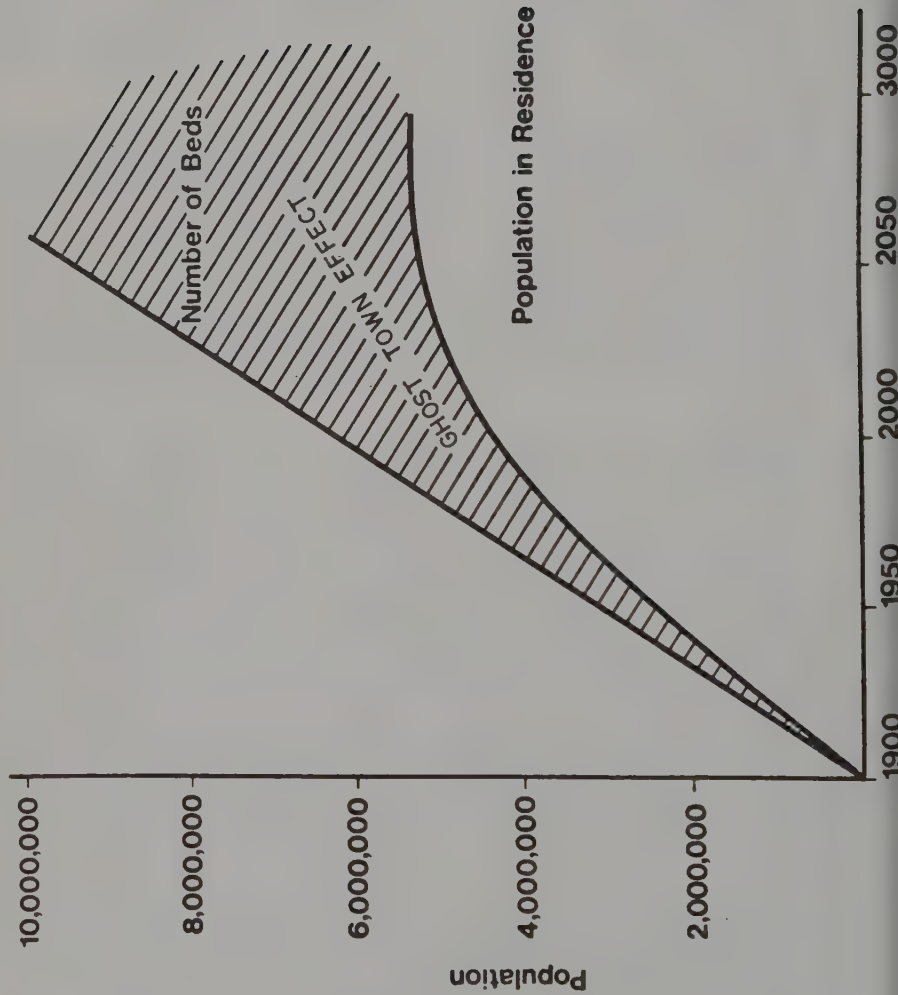
Winter, are an extreme displacement of the city of Ottawa, defined as its citizens as opposed to its property. Cities might disperse themselves by their people's movement, rather than by movement of their property. From commuter, to weekend tourist, to winter vacationist is simply a matter of degree. Since dispersal-through-travel is accelerating, who know if this might be the ultimate control on city size? To get an empirical purchase on the ghost town effect in Toronto, the average summer weekend net exodus of citizens to the countryside was researched. Approximately 315,000 Torontonians leave, vacating 15 percent of the housing stock. Over time this trend is growing and an empirical levelling off of residences fully occupied save for 'annual' holidays might be approaching. (Source: Glen Pincombe, Min. of Ind. and Tourism, Toronto, in conversation 1974).

Currently, the metropolis so dominates the landscape for miles into the 'countryside' that the term 'urban field' has come into existence to describe the phenomenon; only a score or so years ago 'rural-urban fringe' would do. The city is decentralizing, returning to the countryside; not as farmers in search of the old way of life, but as mundane weekend tourists, commuters, nature loving ecologists. To accompany the projected size of urban agglomerations by 2000, we need a map that shows the dispersal of people from large cities. The countryside is being populated by city dwellers.

Ullman (1954) was the first to point out that people are now moving to amenities this being one of the greatest mass movements of all times. The relatively mild climate of Vancouver might increase its growth even above the projected figures presented here. Not only does Ullman suggest a new force in locating people based on the increase of industry that can practically ignore costs ('footloose industries'), he also argues from a conservative strategy. Ullman does not advocate amenity urban growth; he merely analyses it. Unlike strategies that set an optimal sized city, when insist on dispersal, amenity dispersal is a natural phenomenon. People vote with their feet for retirement in relatively warm Victoria. Thus, while the projection of population size for Montreal in the year 2000 might be correct, where will Montrealers, on the average, be during that year? Voluntary dispersal, when the forces of urban agglomeration and dispersal are badly understood, seems superior to 'induced' or 'forced' dispersal.

Yet, the world around, cities are increasingly ungovernable, 'urban guerilla warfare', urban nationalism, being the extreme example. The temptation is to seek to curb city size. Optimal city sizes are put forward in terms of efficient government. Often rationalized data are used to place an upper limit on city sizes; as if governments can govern small cities, instead of learning to govern larger cities; it is suggested that cities should be reduced

Expansion of 'Property vs. People in a Major Metropolis'



kept at the size at which government is skilled. To assist determining this size, the economies of scales of various governmental functions are examined.

The same data on economies of scale can be used in a different strategy. Rather than blaming cities, for being 'too big' the strategy of this discussion is to blame the government for not having learned the science of governing large cities, especially when the cities contain national neighborhoods as does Montreal. Other than a dispersal of people, a strategy of the dispersal of government is followed here. The government, not the people, is distributed.

Careful work on costs of government breaks down government to a variety of political functions and examines each one for its optimal size, relative to its cost, at a high level of quality service. It turns out that some governmental functions operate best with relatively small numbers of citizens in the population and other governmental functions require much larger aggregates of people to achieve efficiency. The conclusion of this literature is that cities are most efficient for most political functions at a level of between 50,000 to 100,000 people (see Hirsch 1970).

Hierarchy.

The question can be shifted from, "Are our cities too big?" "What is the best size for a city?" and "Is democracy impossible in huge cities?" to "Why is a metropolis so politically unsatisfactory?" This question is much more approachable. Rather than finding the technical data to establish an optimal single city, setting up sub-cities, or suburbs, are sought in a hierarchy of governmental units. If most governmental functions show peak performance at a level of 50,000 to 100,000 citizens, then instead of artificial building new towns of such a size in the countryside at astronomical cost, merely divide the cities into smaller administrative units of approximately that size for most functions. This thrust, besides being practical, is subtle. It does not have a single best-sized unit, but several units in a hierarchy. Harvey (1970) sees the role of a hierarchy as central to urban government:

"There are powerful arguments for metropolitan-wide government. Doubtless we could make out arguments for intermediate-size units or even broader 'magalopolis-wide' government. These arguments are not irreconcilable, since it should be possible to devise a territorial organization which is hierarchical in nature and which allows maximum local participation while at the same time ensuring a closer to optimal provision of general urban services."

Using Christaller's theoretical hierarchy and the literature

on technical efficiencies of governmental functions, it is possible to divide the functions among the hierarchy. Christaller's theoretical work on the problem, contained a specific consideration of political hierarchy, (see Baskin 1966). The ratio of the number of units at each step in the hierarchy, the fixed k , is seven.

Since Christaller has a specific hierarchical principle in mind such that each level of political administration has seven more units than the level of hierarchy one step higher, Christaller's hierarchy will be honored. The lowest order of viable municipality in Canada contains around 200 people, so this is assumed to be the threshold size at which political functions can begin to come into existence. Willis suggests 150 as the smallest functioning unit so that 200 is a solid size slightly above the threshold. (In conversation with Jack Willis, Acting Director, Information Services, Canadian Federation of Mayors and Municipalities, 1972).

Central Place Structure of Seven Parts

Hierarchical Level	Number	Ratio between Levels	Base Population per Unit
Nation	1		20,000,000
Region	6	6	3,200,000
District	42	7	480,000
Local Area	294	7	69,000
Community	2,058	7	9,800
Neighborhood	14,406	7	1,400
Block	100,842	7	200
Citizen	20,000,000	200	1

table III.6.

Christaller's work implies a national capital plus six regional capitals, that is a total of seven centers at the regional level in the hierarchy. Using the matrix of Canadian population and stratification developed in testing three regional centers in the discussion of Metropolitan Life's hierarchy, the computer was set to work to locate seven regional centers and the boundaries between. As can be seen on the map the seven regional centers are Vancouver, Calgary, Winnipeg, Sudbury, Toronto, Montreal and Halifax. Assuming that Sudbury represents the national capital moving it to Ottawa increases the cost by only 3.8 percent. The other results are not too startling. Saskatchewan is distributed between Calgary and Winnipeg and the Maritime provinces are reduced to one centered on Halifax.

Thresholds.

In order to assign political functions to the various steps

Location of Seven Regional Centers & Cost of Deviation From Them

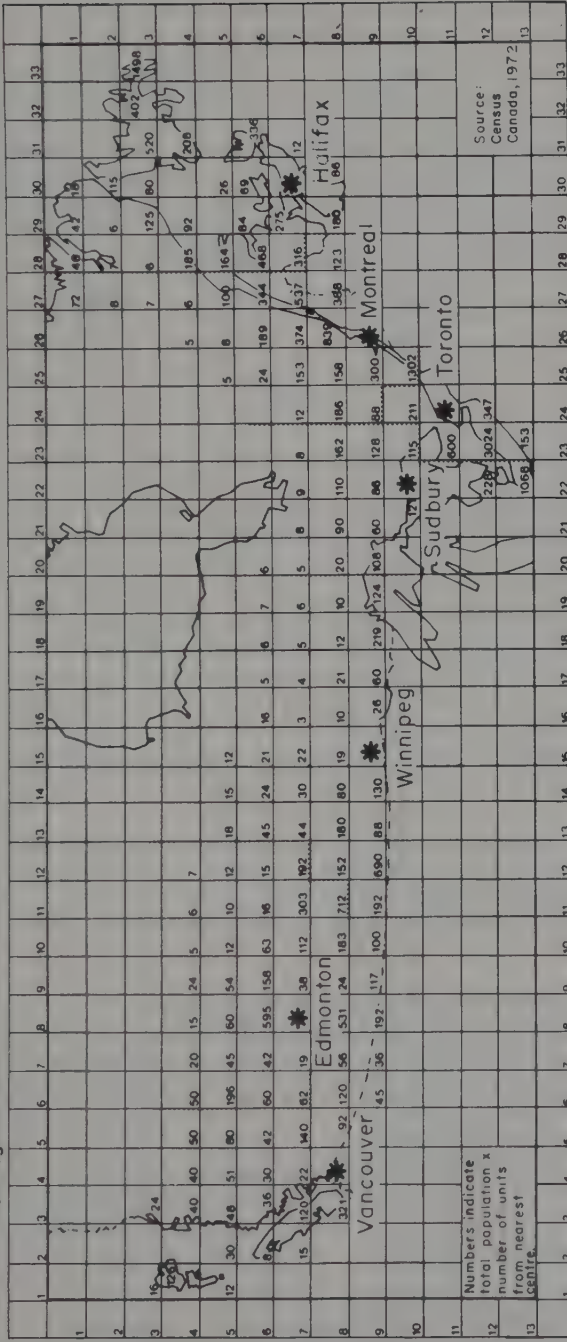


Fig. 123

the hierarchy it is necessary to determine the threshold size of population of a political function. So the next task, after agreeing upon a hierarchical structure, is to assign governmental functions to the proper level of hierarchy.

To make the best use of what literature is available, the U-shaped cost curve of classical economies of scale is converted to the more simple notion of a threshold size. Berry and Garrison (1970) (reprinted in Berry and Horton 1970) following Christaller, define the threshold as: "some minimum size of market (government) below which a place will be unable to supply a central good (government service). . . This minimum scale, the lower limit of the range of a central place, is the minimum amount of purchasing power necessary to support the supply of a central good (government service) from a central place, . . ." (brackets added).

The conversion from the classic economic U-shaped cost curve to the threshold concept is made by seeking out the left hand corner of the U-shaped curve, set here as being eighty percent of the optimum economy, rather than the absolute minimum in the curve, the trough. Why not pick the most economic? Because it is not the most democratic. The introduction of thresholds in place of cost curves thus not only make the data easier to handle, it prevents imbalance towards technical efficiency and against political efficiency, by using eighty percent technical efficiencies rather than absolute technical efficiencies. As mentioned, there must be a trade-off between the benefits of participation versus technical economy. The smaller regions of government are closer to the people. A considerable technical literature exists on economies of scale and thresholds which can be entered through Hirsch (1970), Kreisel (1971) and Masam (1972).

What follows are example functions distributed throughout the hierarchy. Of course, technical work must continue until all governmental functions are distributed and then their position must be periodically re-examined to take into account the improving state of the art.

Example Political Functions and Approximate Distribution of the Appropriate Level of Hierarchy

<u>Hierarchical Level</u>	<u>Population</u>	<u>Example Functions</u>
Nation	20,000,000	Army, national police, regulation of external affairs, minting of monies, federal elections.

table III.7 Continued

<u>Hierarchical Level</u>	<u>Population</u>	<u>Example Functions</u>
Region (Great cities)	3,200,000	Special police, special fire, metropolitan transportation (subways, expressways, airports), regional tax, overall planning, city college, adult courts, elections.
District	480,000	Junior College, sewage and sanitation, health and hospitals, arterials, urban renewal, public welfare, public housing, district planning, elections.
Local Area	69,000	Secondary education, water supply, local zoning (within limits), historic sites, street construction, police stations, Refuse collection, elections.
Community	9,800	Libraries, fire stations, community identity (community naming, street signs, special marks such as a community flower), parking, street lighting, adolescent courts, sidewalks, primary schools, swimming pools, children's parks, children's recreation including summer outings, elections.
Neighborhood	1,400	Pre-school nurseries, day care centers, modification of local arterial traffic, pet control, beautification, alley and street clean up, extremely local zoning modification, elections.
Block	200	Public moderation of disputes between neighbors, supervision of children from pre-school to adolescent in outdoor play, removal of 'junk' (abandoned cars), street games for children, organizing special campaigns (charities), elections.
Citizen	1	Individual 'good citizen' responsibilities (e.g., not littering), help children and the aged, take care of own property, and so forth.

table III.7.

The table is no more than an educated guess based on amalgam of literature and, at the lower levels, field experience. The table cries out for improvement.

Application to Ottawa-Hull.

Having tentatively established a hierarchy and even more tentatively having assigned the various governmental functions and quas governmental functions to the hierarchy, it is the final step to provide a sample application of the model to a real world situation.

The city to be used to illustrate some of the technical solutions will be Ottawa-Hull rather than Montreal because the division of the single 'twin' city into two sub-units, English Ottawa and French Hull, is closer to the triple city concept in practice than is Montreal. Ottawa-Hull is chosen as an example city because it more nearly matches the urban national model with a French and English local governmental structure. It is claimed that Ottawa-Hull is better governed especially in regards to political expression for its national neighborhoods. Indeed, not only do both the English and French portions of the Ottawa-Hull region control much more than urban government than Montreal, but also the federal government's policy of supporting bilingualism among the Canadian citizenry has focused on the large 'industry' of Ottawa-Hull, civil servants in the federal government located there. It is suggested that the relative social contentment in Ottawa-Hull is due to these expressions of urban nationalism.

If the two city halls of Ottawa and Hull allow political articulation of urban national neighborhoods, it is the bi-national, mixed neighborhoods, which are without expression. Urban nationalism does not insist that all people prefer a single unmixed culture. It allows full expression to the range of feeling including the sizeable group that believes that mastering two cultures is better than mastering only one.

Several different geographic criteria could have been selected to represent the triple national character of Ottawa-Hull but simple use of the regions of the city that considered themselves dominantly French speaking, English speaking and bilingual was used. It can be seen on the map of Ottawa-Hull that there are large bilingual areas both north and south of the Ottawa River. The area to the southeast is a combination of the suburb of Vanier and a section of Ottawa called Lower Town. Not all the people in the region speak both languages but a majority do. Taking this as an example region, what would be the effects of a government restructuring to allow local governmental expression? The population of the region according to the bilingual census report of 1961, is 44,206. This size falls between a community (9,800) and a local area (69,000) in the hierarchy and is therefore of the threshold size of the smaller unit, a community. The local government would control its own primary schools, libraries, children's recreational facilities and so forth. The federal government might seek to

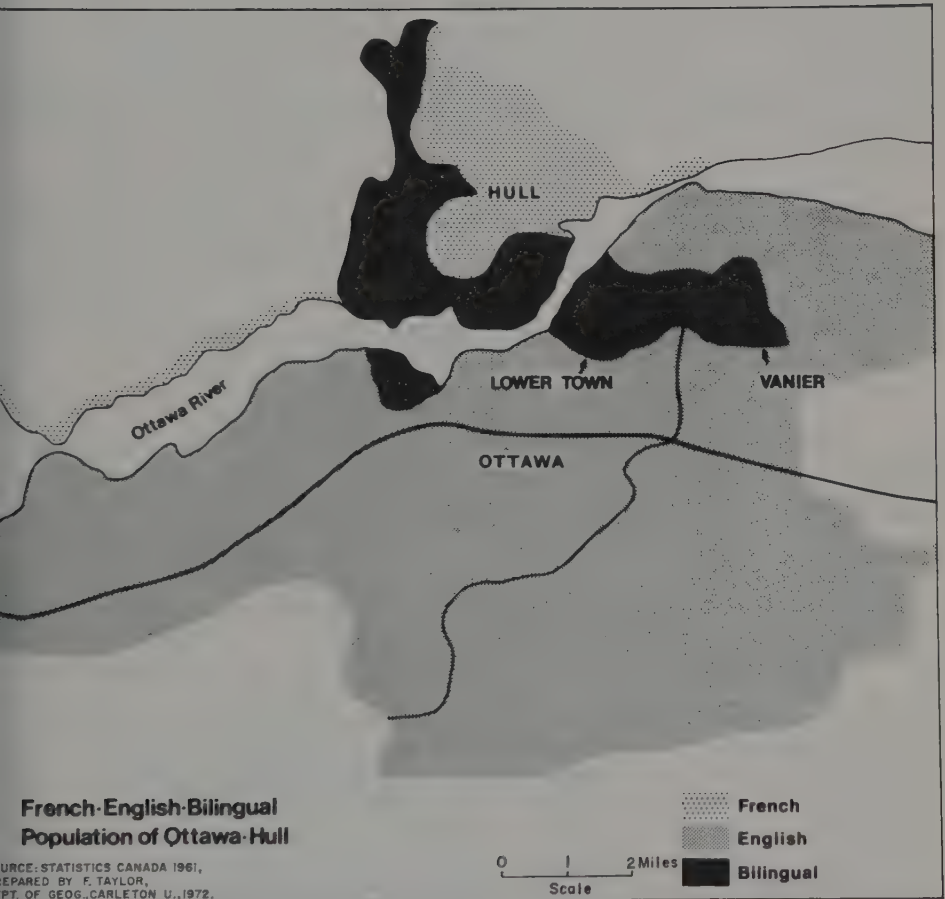


Fig. 124

encourage the growth of mixed neighborhoods with a tax deduction. If it is a good idea to encourage bilingualism in government service with a pay incentive, why not encourage it in the local governments within cities? That is, few people in Canada work for the government as compared to those who live in bilingual neighborhoods and would benefit from a bilingual tax incentive at the neighborhood government level.

Ottawa-Hull is not two cities, English and French. It is three cities: English, French and Mixed. Somehow all argumentation is swept into the drama of conflict and the mixed region that is articulated under urban nationalism is totally ignored though the only region of change. Mixed regions are where the cultures are in fact interacting, so why would these exciting regions be blotted out by not allowing them political expression within the city?

If no state in the world has produced an urban governmental structure to deal with nationalism, why would Canada be expected to be the first to tackle the problem? Canada's historical momentum exhibits an overwhelming fascination with the French and English conflict. It is one of the few states in the world, like Switzerland where the state is so evenly divided between two nations.

E: Conclusion.

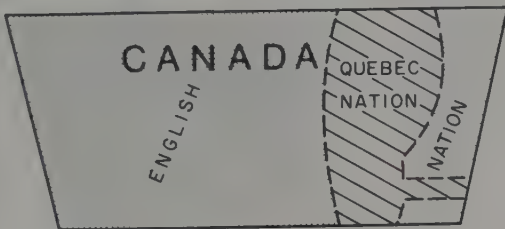
Comparison of the governmental sector with the economic, examination of grass-root urban organizations and examination of geographic theory all point to a similar general shape of governmental geographic re-organization. Three major recommendations are suggested.

1. The second level of government, the regional (provincial) has too many units. They should be reduced from the current twelve to from three to seven.
2. The political dominance of these recommended three to seven units at the second level of government, the regional, (provincial) should be shifted from rural to urban, for example 'Toronto centered region should replace the province of Ontario; as in the private sector.
3. The third (district) and fourth (local area) levels of government (county and municipal), need to be broken down into from three (field based experience) to five (theoretically based experience) levels of hierarchy which will be especially important in subdividing the current large populations of urban municipal units.

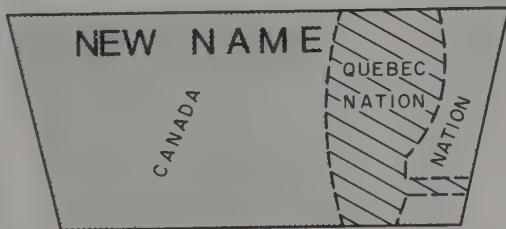
The details of the reorganization should be flexible since this allows the reorganization to most intimately fit the state. To illustrate issues not confronted: it is geographically possible for Quebec to separate. This question is explicitly up to the French people in the state. However, if Quebec does separate, then urban nationalism is still a problem inside Montreal for the minority

CANADA: Nouveau France and New Name

Canada as the Geographic Name of the State



Canada as the Geographic Name of the English Nation



Nouveau France as the Geographic Name of the State

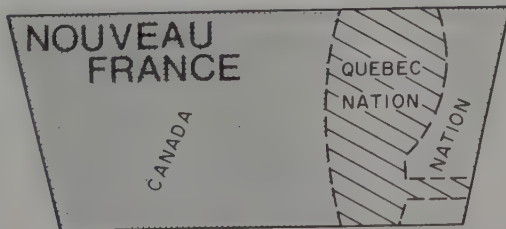


Fig. 125

English and in Winnipeg for the minority French. Another question not answered is the problem of just how many, from three to seven, regions (provinces) should be created. The smaller number increase French representation relative to English. These and many more detailed questions, the questions of application of science, the questions of democratic agreement, are beyond the scope of geography important as they are.

What can be expected from the urbanization of the government is that the average Canadian citizen, who is after all urban, will feel much closer to his government since he will in fact be geographical as well as politically much closer to his government. This must relieve negative feelings which range from alienation on one end of the scale of dissatisfaction to outright urban military revolt on the other end of the scale. The most outstanding grievances, the unresponsiveness of urban government toward urban nationalism, should be alleviated.

II: Federal and Provincial Prejudice Against Big Cities.

Since Canada continues to urbanize, sooner or later it must develop an urbanized government for the urbanization of the species is a vast biological event. Cities define modern mankind as much as hives define bees. The punctiform release of energies: coal, oil and nuclear force a punctiform distribution of the race. Biological events are great crushing events that cannot be resisted by political and economic means. There exists no choice in front of men except the choice to cooperate with these events and survive, or stubbornly resist and be crushed. Federal governments are as powerless as individuals in shaping the biological urbanization of the species. Rather than rallying against biological inevitabilities and attempting to stop, slow down or modify them, it would be preferable if governments sought to understand and fit in with them. Specifically, governments should face up to their responsibility of learning how to govern great cities rather than dissipating their limited powers in a vain attempt to force citizens to live in governmental units, such as new towns, where the government is practiced. If governments tend to break down in cities, the government not the cities should be blamed.

A: The Motivation.

Why is all less than international political expression crushed inside cities? Why are there no political regions in cities as opposed to political regions in the countryside? Why are there no provincial city street and block units functioning inside the large political units of the modern city?

Federalism.

The answer is ironic. Many federalists do not want local communities inside cities to articulate themselves because they feel they would tend to divide the city into potentially antagonistic

groups. Federalists the world around see the city as a great melting pot, where all the national groups of the rural nations come together, learn to work together, to mix, to marry, to unify the state. It is for fear of urban polarization that separate national neighborhoods are not politically encouraged. The countryside is accepted as belonging to distinct national groups but urbanization is the hope of federalists so that the multi-national rural character can rub-off in the cosmopolitan setting of the major cities. Is English population, the English sections of town in Montreal, the instrument so feared by the Quebecois? Are the English not dominating the economy? Is not English 'the language of the bosses' in Montreal? Does not the decreasing French speaking percentage of Montreal city force the spirit of 'separation-before-it-is-too-late'? Is not the battle of French speaking Canada really the battle of Montreal city? Do not 37.5 percent of the French Canadians live in Montreal already? (Statistics Canada, 1971 census). The remaining French rural population is not threatened with an Acadian dispersal and forced assimilation into the English culture of the majority of Canada. The device of urbanization with its lack of urban national political outlet is what panics urbanizing nations. The move to the city based on improved technology seems to be the doom of the national culture. And reversing the perspective, are not these French fears the English hope? All kinds of minority groups cling to the countryside to avoid cultural annihilation in the cities, for example the Canadian Mennonites.

Does Federalism Work?

If this scheme to melt down everyone in the cities to the dominant group actually works, what can the objections be? A generation or two of cultural pain must be endured and then everyone is the same and lives in peace and harmony. But the evidence of urban unrest raises serious questions as to whether or not melting down as presently practiced works. Less drastically, evidence raises the question as to whether the rate of melting down is not too high and one cultured and exerts a pressure which results in often violent backlashes of urban national cultural expression.

The basic difficulty is that the federalists are so impatient to achieve national unity through uniformity that they are willing to stifle urban political expression below the national level in order to quicken the process.

Interestingly from the point of view of those who wish to encourage urban bi-nationalism, (and where else but in the cities is this bi-nationalism to make its appearance), bi-national neighborhoods can express themselves as clearly as national ones. That is, mixed communities should also be given political power in the urban setting and unity-through-acceptance of variety should be achieved in a system so broad that all cultures are allowed whatever degree of self-expression their contiguous numbers warrant.

Beyond such an apparent utility lies the not so long run problem

of reaching 'One World'. Groups of people move toward geographic separation and geographic concentration as advantage shifts between integration and segregation. How are these pulsating needs to be governmentally accommodated? As the world becomes basically more mixed how is the variety and richness of the globe to be encouraged? How is de-culturation to be defeated and voluntary spatial organization to be maximized? Urban nationalism, the democratic control of peoples' cultures in cities, deals with these questions, since it allows both mixing and purity to co-exist.

Urban Sprawl.

The term 'urban sprawl' as used by such Federal agencies as the Ministry of State for Urban Affairs is geographically perjorative. Cities are land conserving; a concentrating of people. 'Agricultural sprawl' is a true sprawl, as is strip mining - a rapacious process consuming huge acreages and leaving decimated landscapes. As nations urbanize, the general pattern is to reduce the true sprawl-agricultural and even primary resource sprawls.

The perception of cities as gobbling up huge quantities of Canadian landscape is patent nonsense. An anti-people campaign is an off-shoot of the general 'population explosion' thought. The global image conjured up is of great hordes of people, just elbowing their way, cheek by jowl, into peaceful neighboring countries. This global view of 'urban sprawl' is easy to explode. Simply calculate the number of people in the world, the approximate number of square feet an individual takes to stand comfortably in a loose crowd; it turns out that the entire world's population could stand in an area twenty-five by twenty-five miles; the approximate area of urbanized Toronto.

The national version of 'population explosion', is the 'urban sprawl' version, though it takes only 0.8 percent of the Canadian landscape. It can be counter argued that it is prime land that urban expansion is consuming, not near worthless Baffin Island: but it can be counter-counter argued that it is the presence of the city that made the land valuable in the first place, as the Thünen rent model made clear over a century ago. Rather than attribute urban crowding to some jamming of cities from coast to coast, a megalopolis, it is much more reasonable to ascribe the crowdedness of cities to not enough 'urban sprawl'. Anyone traveling to London, England who is anywhere over six feet tall, is oppressed by the lowness of ceilings, by awnings jutting out on sidewalks, by the miniaturization of everything from elevators to beds. 'A tight little island' is an architectural problem, not a land consumption one. Land continues to be abandoned in England and returned to a more natural landscape than the blight of agriculture.

In an article entitled "The Creeping Megalopolis Invades Small Town Ontario", (Toronto Star, October 5, 1974), The Ontario Federation of Agriculture is quoted as saying, ". . .26 acres of prime farmland is going out of production every hour." "Creeping megalopolis

s certainly not guilty! A little multiplication shows that 350 square miles a year are going out of production. This is the approximate size of metropolitan Toronto. Surely Toronto is not doubling in area every year, nor does growth in all of the urban areas in Ontario account for 350 square miles. Reverse the "creeping egalopolis" scare headlines. A typical inner city lot is twenty-five by one hundred feet or 2,500 square feet. A typical farmstead, just home and immediate grounds, not even the barn and barnyard and other out buildings is 150 feet by 300 feet or 45,000 square feet. If the farmer sells out and consolidates his farm, a process that has been going on for some two hundred years, the farmstead then is returned to the plow, as has also happened for over two hundred years. It takes up eighteen times less room in town. Every farmer that urbanizes turns an acre back to prime farm production. Since 2,000 farmers leave the farm on the average in Ontario (Statistics Section, Economics Branch, Ministry of Agriculture and Foods, Ontario, in conversation, 1974) each year, urban growth is releasing many acres for replowing.

As Jacobs (1969) and others point out, the modern farm is an urban product from tractors to fertilizer. What level of civilization are farmers at in lands without cities? They are literally in the 'Stone Age'. Agricultural land is consolidating anyway as intensification of production through modern industrial-farm production methods take up less and less room. Thousands of square miles of farm land have been abandoned as production soars. The green house is obviously a high production space with the land it stands on a small cost compared to capital investment and labor costs.

B: Governmental Propaganda.

In view of this prejudice against tiny land consumption by cities, it is especially important that government agencies assigned to the cities not be consumed by anti-city geographic propaganda. It would be extraordinary if a Ministry assigned to agriculture should announce it was against 'agricultural sprawl' and that the Ministry was in the business of constructing 'new farms' apart from the existing blight of agricultural vastnesses. 'Breaking up farms' would not sound friendly in an Agricultural Ministry. It is often true that governmental agencies designed to save a particular aspect of life become instead its oppressor. Setting 'safe' standards of radioactivity ends up licencing the 'infernal stuff' rather than suppressing it. Agencies designed to suppress subversion often become subversive. Examples abound so the Ministry of State for Urban Affairs might become a favorite tool of pressure for those who really dislike cities and city dwellers.

Developers and Politicians.

Two major hypotheses develop around the 'urban sprawl' vilification one motivated internally, the second externally to the cities. The first is ascribed to developers who seek to artificially constrain developable land in order to inflate land values and their own profits.

Many devices, hypocritical and real, have been ascribed to the undeniable motive of development 'rip-off' profits; for instance, constraining sewerage capacity in order to reduce the supply of developable land and thereby drive up its unit cost.

If the internal motivation of the developers in artificially constraining the growth of the city is clear, and its effects clearly vicious, the external motivation, the second hypothesis, is even more chilling. A story current around the Ministry of State for Urban Affairs in Ottawa in the early 1970's is too truthful to bother to confirm its factuality. A scene is portrayed of a professor making a presentation to the Canadian Cabinet, with a series of acetate overlay maps showing urban population in Canada starting with 1700 and progressing in fifty year intervals, acetate overlay by acetate overlay. The professor drones, the Cabinet droops, 1750, 1800, 1850, 1900, ("Yes, Professor, do go on"); 1950, 2000. The Cabinet leaps to its feet with the year 2000. The map shows Canada consists of three cities - Montreal, Toronto and Vancouver. That is all that is left of Canada. In perfect chorus the Cabinet shouts "Stop urban sprawl!" They had lost their ridings!

What 'new towns' suggest politically is a device for artificially inflating the population of declining ridings so that the incumbents retain office. It means for the citizens of Canada, four fifths of whom are already urbanized, a potentially explosive decline in political power as the increasingly empty countryside, reinforced by new towns, makes war on the cities.

C: Voluntary Urban Dispersal.

However, in that cities are dispersing themselves without political inducements, and there is growing evidence that cities are doing just that, then these naturally occurring migrations from the city into the countryside could first of all be studied and then possibly encouraged. It seems that the machinery, the machinemass of the city, is sitting in the urban center while the people, themselves part of the biomass, are dispersing to seek out more biomass spaces. There is evidence of this spatial separation of machinekind and mankind inside the cities themselves as well. If study confirms that the separation is one of machinemasses from biomasses, then transport of machinery into the countryside as an economic base for new towns, is precisely the wrong strategy and ultimately a highly expensive mistake. Instead transportation routes into but not over the countryside and preservation and enhancement of biomass amenities in the countryside should be encouraged so that the separation of biomass spaces and machinemass spaces can be speeded up. A method of urban dispersal that cooperates with trends, possible biological trends, has a great chance of success. A method of dispersal that is contrary to naturally occurring trends is an invitation to folly.

If the actual map of where people have dispersed themselves to from Toronto is consulted it is clear that the dispersal is a forward-to-nature movement. How can this natural movement, which is a re-population of the countryside but not a 'new town' movement, be

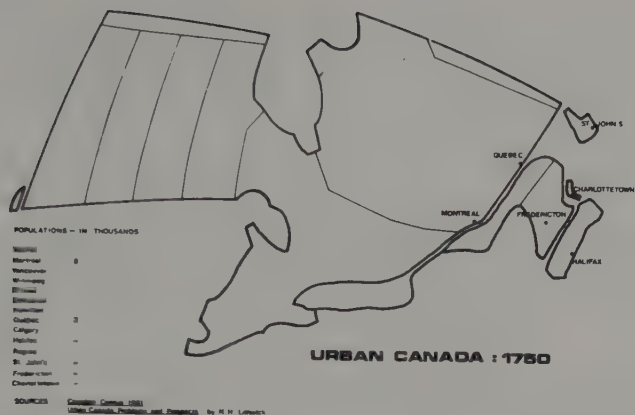


Fig. 126



Fig. 127

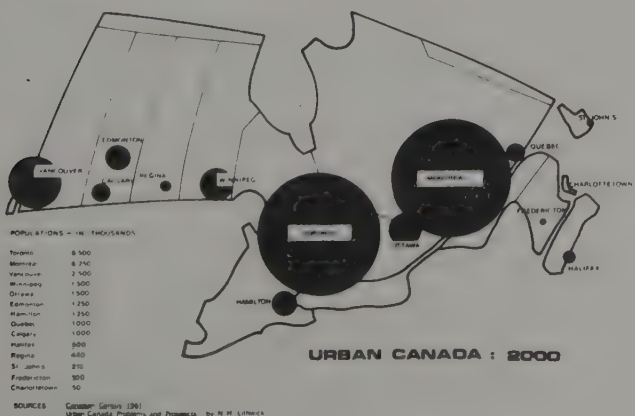


Fig. 128

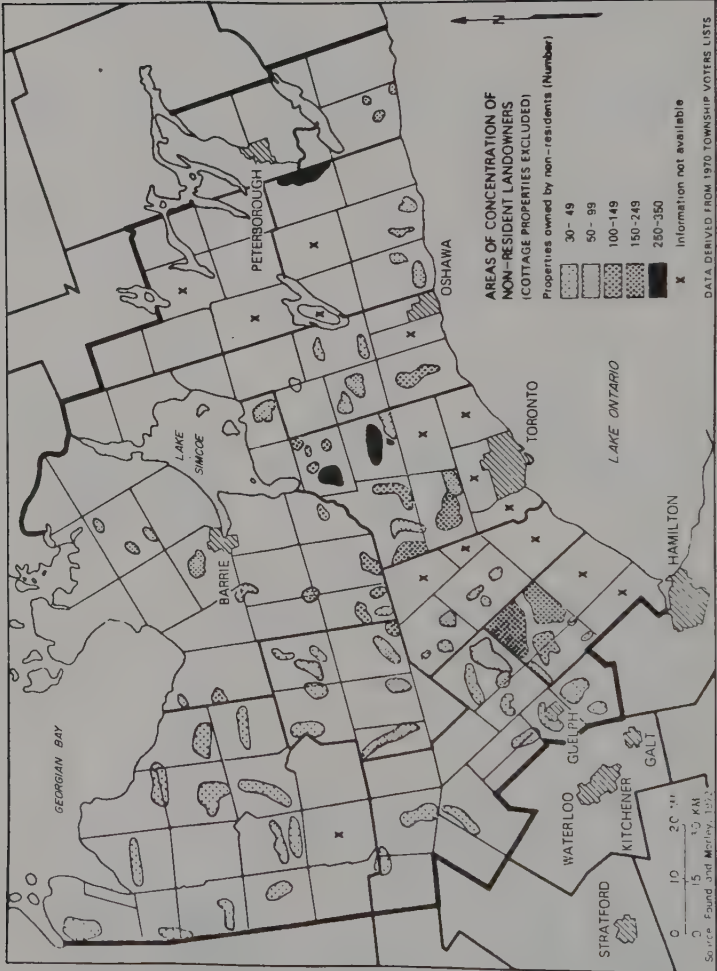


Fig. 129

helped? Why do tourists and cottagers mostly flock to each other? If they are trying to get away from it all it does not seem to be the 'all' of each other. Perhaps it is other classes of people, other races, from whom they flee or perhaps there are more positive forces such as the greenery, the fresh air and so forth, attracting them.

New Kinds of New Towns.

On a most concrete and practical note, assuming new towns are to be built, assuming they are to be built without much difference from the English model: even at this rather pinched scale of possibilities, much research needs to be accomplished.

A host of research questions are unanswered about the geography of cities - both internal and external. If the Ministry of State for Urban Affairs is going to build new towns it should at least make sure they are in fact new towns, not just old towns in artificially arrived at locations. If the architecture is to be antiqued, the street pattern should not be, otherwise the children will be slaughtered by the automobiles. Nostalgia has its limits.

Obfuscation of Urban Environments.

Urban environmental features with obvious rural counterparts are peculiarly named. One of the effects of this dual naming is to disqualify the inner-city from receipt of federal funds. Examples are abundant. 'Irrigation', a heavily subsidized rural-agricultural activity is called 'sprinkling' in the city and is done almost totally at private expense. The sewer system, a public feature, so rapidly drains the land that it must be massively irrigated to keep anything alive upon it. Why would the public over-draining of the urban environment be totally paid for by private replenishment of the water? Nationally, Canada has irrigated 1,626 square miles for farmers and none for city dwellers, (1971 census). 'Reforestation' commands federal and provincial funds but only for the empty countryside. Reforestation in the city is called 'landscaping' and is unfunded either by federal or local municipal agencies. There is approximately 800 square miles of inner city Canada denuded of vegetation. Some 444 square miles is reforested every year (Ross Grinell, Ministry of Natural Resources, Toronto in conversation, 1974). Two years of constant effort would return greenery to the nation's inner cities.

'Climate control' or 'climate modification' from cloud seeding to prediction is largely rurally oriented. Modification of the urban climate is cost-benefit feasible but only the most pressing needs are met such as detoxification of the air when pollution levels are deadly. National parks are overwhelmingly rural providing tourism to declining rural areas rather than trying to accommodate the tourist. The tourist trade is greatly mislocated relative to the tourists. An urban tourist in his own city is seeking 'amusement' - a totally privately financed matter. 'Soils' refer only to

rural, dominantly agricultural, regions. 'City soils,' the types of surface material which induce or permit various activities upon them are neglected by federal agencies. Somehow the urban environment is given totally new names. Even solutions to environmental problems caused by government agencies, are overwhelmingly paid for by private citizens. To tabulate the environmental terms:

Rural and Urban Synonyms.

<u>Rural</u>	<u>Urban</u>
irrigation	sprinkling
reforestation	landscaping
climate modification	pollution clean up
macro (important) scale	micro (unimportant) scale
tourism	amusement
soils	no name
wild life or game	pests
floods and flood control	overflowing sewers
national culture	decadence
clearing the land	urban sprawl

table III.8.

Game control, the deer population and the wild fowl population are viewed as rural. Whatever racoons, 'foxes and watercress' remain in Toronto's ravines are considered wonders, oddities, doomed; but certainly not cause for federal assistance. How could wildlife possibly be expected to live in the city in any case? Floods are a national matter for farmers and an individual problem for the urban home-owner in most cases and handled through the plumber or a man who reams out roots in sewers. Rural culture is considered a national heritage and 'clean'. Folk culture is overwhelmingly conceived as rural and subsidized on that basis.

D: Self Destruction of Governmental Agencies.

The Geographic Branch of the government was in turmoil around mid-century because it had developed an enthusiasm for the physical geography of the Canadian Arctic to the virtual exclusion of urban matters. Cost-benefit analysis has a way of catching up with all things in the end. Should the Ministry of State for Urban Affairs go the same way? Just what does the Ministry do? If it is fighting the cities then it should be retitled The Ministry of State for Anti-Urban Affairs. A huge appropriation would probably be forthcoming from the remnant rural Canada. But if the Ministry is to do Pro-Urban Affairs then it must turn out a highly recognizable product

Then, when citizens hear the name of the Ministry they can say, "Oh, yes they do such," just as when they hear of the meteorological services; "Oh, yes they make weather maps," or Energy, Mines and Resources, "Oh, yes, geological surveys". The Ministry might go into the 'sensing the urban environment' business: sensing what the Census does not sense. If specific sources of urban infection can be detected and located quickly enough, then a scientific fight can be made to preserve the higher degree of civilization of the Canadian urban alternative to the continent. A scientific effort to preserve and improve Canadian cities might have a salutary effect on cities south of the border. Canada can lead the continent. It has in the past and might again. Then when citizens hear the name, "Ministry of State for Urban Affairs" they might say, "Oh, yes, they save our cities; they save Canada".

III: The Natural City.

The Humber river in Toronto has as many people along its banks as the Fraser. Thus, in people miles, the most important measure of miles, the Humber is as long as the Fraser. Yet to approach the government on the grounds that the Humber is as important a national river as the Fraser and deserves as much funding, would be met with incredulity. The argument dumbfounds people because they have never thought of rivers in people miles, just physical miles.

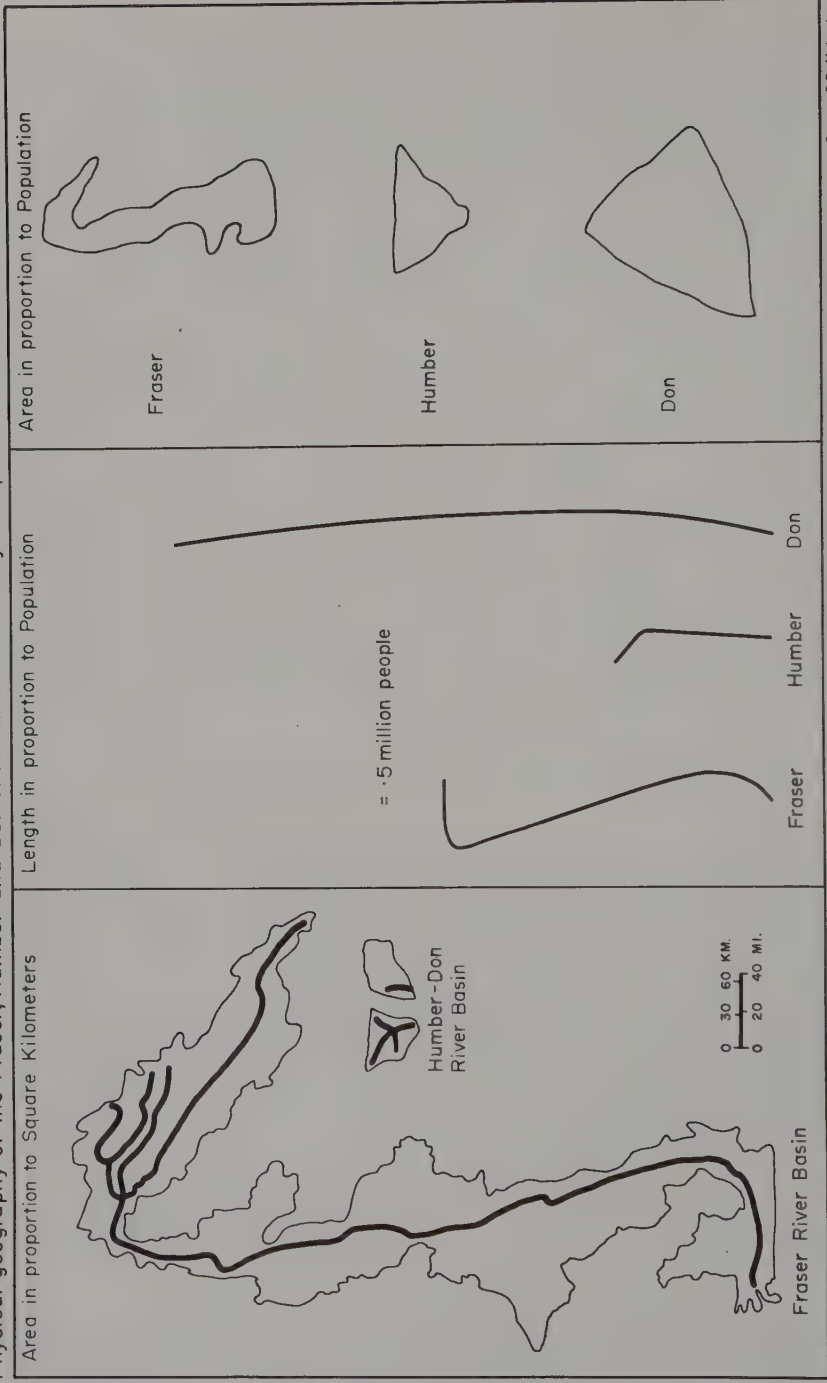
A: Restoring the Physical Environment.

The argument can be made in other ways. The Humber historically was one of the more important national rivers. During the period of French Toronto the entire continent, west and south, poured up the Humber Valley enroute to the Holland river and Lake Simcoe to Lake Huron. This route was a short-cut compared to the long passage through Detroit. For the historic importance of the river, it should be restored. Living landscapes are never restored, just buildings. We have 'zoos' to bring in foreign animals, museums and historic sites to preserve various properties; occasionally a village is restored or reassembled but never a living landscape. What would have to be done to the Humber to restore it? To expand the question, rather than ravines and rivers of the city facing gradual encroachment and destruction, a one way ratchet that can only see ravines being gradually reduced, why not a program of digging out the ravines again? The best defense is an offense.

Ravines.

Not to use funds liberally for city rivers would be another indication of the prejudice against city people in federal and

Physical geography of the Fraser, Humber and Don River Basins variously interpreted



Source: S.B. Malmsten

POPULATION OF FRASER BASIN 1.2 MILLION
POPULATION OF HUMBER BASIN .5 MILLION
POPULATION OF DON BASIN 1.7 MILLION
Fig. 130

provincial spending. What would be involved? What catalog of items would have to be discovered, surveyed and mapped? First the terrain would have to be restored. Especially where transportation routes have filled in ravines with banks. The fill can be removed and bridges put in to replace banks. Use of fill across ravines is pernicious, since it blocks human flows along the river. Where ravines have been totally filled, to be used by commercial or industrial activity, the land could be bought back and the ravines dug out. Where homes now occupy the fill the homes could be purchased as they appear for sale on the market.

Many other features could be restored. Streams are reduced because storm sewers drain the former catchment basin. If storm sewers are dumped into the old stream they cause flooding, since the sponge effect of the landscape, catching and holding water, yielding it gradually like a soaked sponge, is missing. A reservoir system might overcome the problem. But at some level of engineering the 'natural' ravine is not being restored. For instance, it is possible to pump water into the ravines, a Disney Land 'restoration'. Most citizens are aware of pollution from placing poisons in water that make it toxic. But other forms of pollution also occur. For instance, heat is introduced to rivers so that they do not freeze properly in winter. Heat pollution can destroy the possibility of a stream being cleared of snow to allow skating. The Rideau Canal in the nation's capital provides an example of a waterway well used for ice-skating over a good distance. Ice skating often could be through natural settings, similar to 'bike' and hiking trails, rather than in artificial rinks.

In general, ravines can be viewed as life circulation systems, as opposed to the machine circulation systems, that dominate Toronto today. Not just the flow of water and animals along ravines, nor the ribbon of greenery, but the flow of human beings makes ravines life circulation systems. Mankind is part of the biomass in ravines. The machines should be kept out. It is the philosophical position of this book, that ravines are for people and other living things, not expressways and subways. Specifically the Don Valley expressway is a mistaken location, difficult to remove now. Similarly, the Spadina subway should not be placed in the ravine. How can ravines and their streams be made more machine-circulation free? In addition to ice skating on frozen streams, canoeing still occurs on the Humber and could be extended. Bicycle trails and hiking trails could be constructed along the entire length of ravines. The edges of the ravines are often in private hands. Streets that end at ravines often have no parking facilities or trails down to the ravine floor. Parking lots, (but not automobile 'scenic drives') could be constructed in ravine bottoms to bring people

to the ravine. The presence of machines is incompatible with the presence of people, especially children.

Where machines have already encroached across or along ravines, then the vista quality of space could be developed. One example of insensitivity to opening up the landscape to sight is construction of bridges with opaque walls across ravines. One cannot see through the railings of bridges that cross many ravines and the panorama is lost. It is often argued that motorists would be distracted by the beauty of the view, therefore, a vista would be an accident hazard. It is infrequently argued that eyesores, such as roadside advertising, are hazards. Where machines are already in ravines, then at least let the scenery be seen. The long term plan should be to remove the 'infernal contraptions'.

Once the notion takes hold that ravines are nationally important rivers, because of their strategic location in the midst of millions of people, then any device to restore and fill them with people is within financial scale. Ravine slopes can be surveyed for sledding or tobogganing and such trails can be constructed. Almost ignoring the physical geography in the heart of the city, planners keep building 'green belts' among people who already have private parks surrounding their homes. If the argument is that land can be had more cheaply in the countryside, before urban expansion drives up the cost it can be equally argued that a cost benefit study must consider the benefits to those more geographically deprived, inner city children whose parents might not own cars.

Restoring Biomass.

Mankind suffers from a terrible conceit: that he can make war on nature and conquer it. He is most confident of his 'victory' in cities. In Toronto much of the original landscape is destroyed. The shoreline of the lake is unrecognizable: hills are leveled, valleys are filled and the whole surface 'waterproofed'. Only recently, usually in the form of disasters, has nature's power become clear, even in industrial centers. Hundreds had to die in London, England, choked to death, before the Sherlock Holmes sanctified 'pea soup fog' was found to be soft coal smoke that had to be cleared. Earthquakes provide dramatic levelers of cities and egos. The notion that national parks should be in virtually unpopulated wildernesses dies hard. Could Toronto's ravines and lake shore be declared a national park, not as an urbanized, landscaped oddity; not in the spirit of beautification; not an appeal for democratic distribution of governmental recreational funding; but out of realization that especially where men are most concentrated, in great human hives called cities, nature is especially

to be valued and paid for? One tree at Queen and Yonge is worth a forest at Yellowknife.

Trying to reduce the pollutants in the air and water in Canadian cities is an attempt to restore the old physical environment. Biomass restoration is neglected. Many spaces, especially in the inner city, could vastly increase the biomass in the form of trees, grass and flowers. Roof tops are almost uniformly barren. Almost all streets are capable of supporting a canopy of trees and flowers at least in pots. York University has constructed several buildings that make one feel safe from atomic attack, and also that scratching surfaces for safety matches are always within easy reach. It has also designed spaces which are obviously expected to attract people. These dead spaces seem to repel people like mixing oil and water. The only time the amphitheater is filled is at graduation since attendance is required at that site. It would be an interesting spatial experiment to see if filling dirt on top of the barren concrete and planting grass and trees would change the density of people.

The relationship between biomass and humans is unclear. On the more mysterious, yet testable end, is the claim that the ratio of alpha to beta waves changes significantly toward tranquility in the presence of greenery. Mental health problems related to the higher levels of high-rises might be due to disassociation from pure biomass, other living things. Trees have a buffering effect on noise, a filtering effect on air and wind modification effects. Taller buildings downtown produce alteration in the 'micro' climate including shadowings and reflectings of sunlight.

Modifying Climate.

The term 'micro' should not be used in reference to urban climate, because if the number of square kilometers is small, the number of people involved is large. Weighing the climate by the people, a cartogram usually ignored by climatologists and other physical geographers, shows that Canada's climate refers to, not the empty space of Baffin Island, but to the few cities of the nation. The base map of physical geography is prejudiced against the human effects of physical geography.

The conventional map of Canadian climate is largely useless in the sense that so much of it is unoccupied waste land, not even useful as a wilderness region. Except as a curiosity item who really cares what the weather is like today at the North Pole, either light and cold, or dark and colder. A superior base map of Canada's climate, perhaps, but certainly an important one, is the cartogram that weighs the climate by the population. Populated

climates are important climates; depopulated ones are not. This is especially true in climate reportage. In practice, meteorologists recognize this, since overwhelmingly, their stations are concentrated where the population is concentrated, in southern Canada. If geographers would provide them with a base map, to reflect their greater interest in populated than in empty Canada, then reportage might improve. Comparing the empty land map to the populated land map gives different impressions. Canadians, shift to a people in a humid continental climate with cool summers and no dry season, from a Canada, one third tundra and one third subarctic.

If the map weighted by population, as opposed to the map weighted by land, were used on the nightly television weather forecast, the differences in temperature between downtown and suburban Toronto would be of more importance than differences between Toronto and Baffin Island (see Munn et. al. (1969)). This is a reasonable perspective.

Climatic classifications suffer from commodity fetish. Climate is related to vegetation, which is related to agricultural production. Climate has effects on cities. Yet we have no climatic classification based on purely urban effects. What of the caging effects of climate, especially the caging effects on children? Does the seasonal shift in the light regimen in mid and polar latitudes effectively cage the children? What are the effects of extreme heat and cold and of wind? Children are among the weakest of mankind, so studying the effects of the environment on them (see Adamenko (1972)), indicates what tends to happen to the stronger.

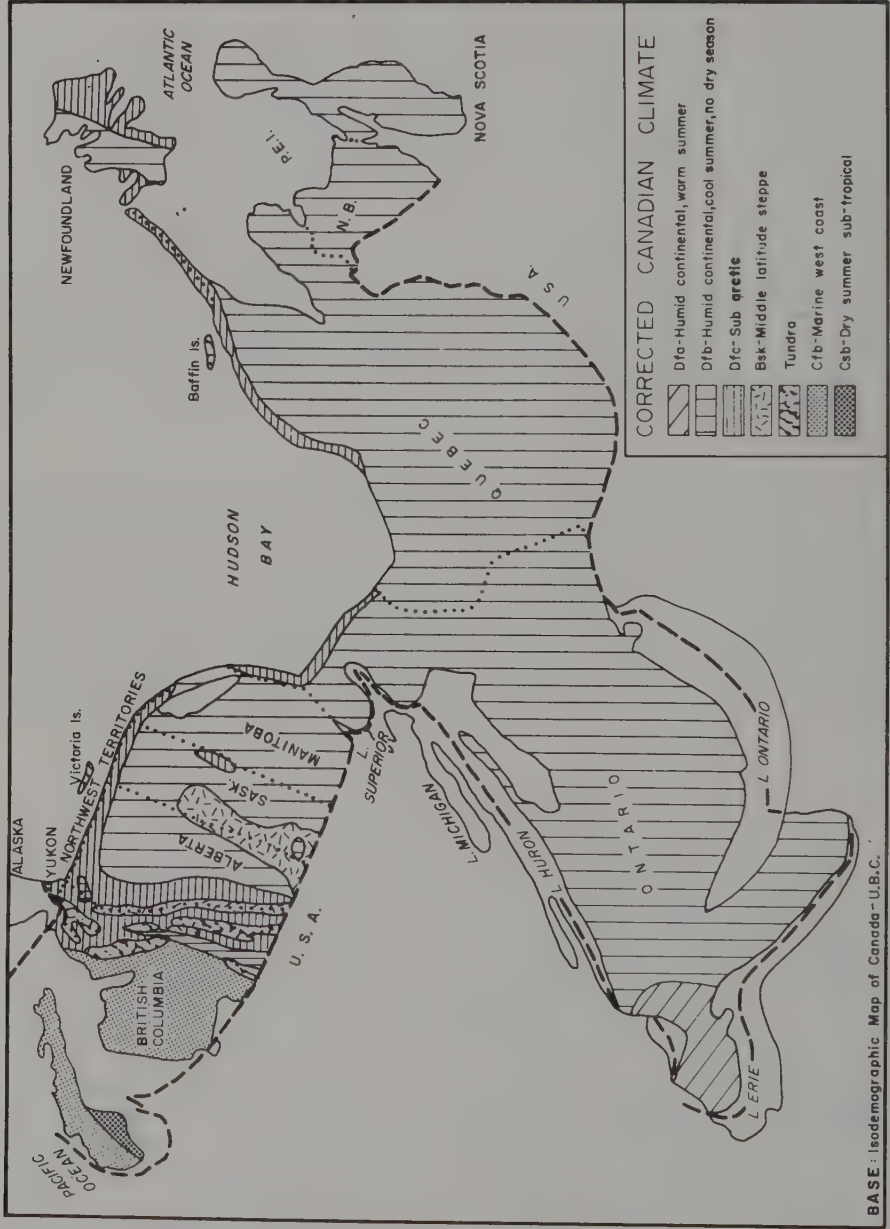
City Soils.

The study of soils is never a directly humanized subject. The map of soils for Ontario shows a blank space which traditionally stands for 'unexplored' where metropolitan Toronto is situated. The blank space does not stand for unexplored in this case because 'everyone knows' it would be foolish to consider soils in the city. Soils are for agriculture, not for people. If a map is made of 'urban surface materials', 'city soils', of the kinds of surfaces on which children sit, joggers jog, people dance, picknickers picnic, then the geography of soils is humanized. Just what kinds of surfaces do people use for what activities?

Physical Geographers' Neglect of Cities.

Restoration of the city's physical environment is of national importance. Unlike the inability of physical geographers to do much about the relatively empty countryside, which so attracts them, they can do a lot about the physical environment of cities, precisely because the physical space is so small relative to the

CLIMATE WEIGHTED BY POPULATION



BASE: Isodemographic Map of Canada-U.B.C.

huge 'space' of the numbers of people. The strategy of physical geographers should reverse from trying to seed clouds or melt glaciers or melt lake ice to restoring cities. Massive biomass replanting, 'reforestation', in urban areas makes good cost-benefit sense; yet it is an exclusively rural activity. Instead of trying to take the people of Toronto to 'nature' nature should be brought back to Toronto.

After a crude effort at biomass reintroduction, it might not be out of the question to try to match some of the original wild life. Perhaps various botanical gardens could be introduced with part of the vegetation reflecting the origins of residents. Zoological gardens are curious from a geographer's point of view because they seem to represent the importation of regions of the world to an alien land. In modern zoological gardens such as Toronto's, the landscaping is now improved; for example, by placing lions in an African looking environment. We do for African lions what we do not do for African children; we try to make lions feel at home. The 'hidden landscapes' for lions are less hidden than for the people among whom the lions live. If the 'zoo' idea were extended to the city as a whole, cities could be made physically interesting, beyond the minimum struggle now being waged, beyond breathable air, drinkable water and so forth; then the 'ecology drive' might increase its support and effectiveness. A study of Toronto's ravines was titled Foxes and Watercress. Foxes and watercress could be restored to Toronto as a whole with a gradual restoration of the ravine network. Toronto could be reforested and animal repopulated. Could fish be restored to the Don and Humber? Could the ravines and perhaps part of the Iroquois lake shore escarpment support some deer? Species could be checked as to whether or not they are 'child proof'.

Utopianism Versus Scientific Planning.

If such restoration seems utopian, look at it in two ways. The people who brought us the modern city have brought the city to the verge of collapse. These non-dreamers suffer precisely because they cannot dream, because they have no vision or plan. The idea of city growth and maintenance is best served by a degree in civil engineering. Sidewalks, roads, the machinekind of a city is their total conception of 'what really makes a city work'. Having laid the best tar McAdam surface on the continent they marvel that it periodically gets covered with the blood of the citizens who inhabit their best-of-all-possible worlds. They blame the citizens, rather than themselves. Planning for property, for machines, is not wrong as far as it goes. To give the sidewalk engineers their due, think what an oppressive, mud-mired mess Toronto would be if it had no sidewalks. Artificial non-organic, uninspiring concrete is an improvement over frontier cities where the dust from the late summer dryness was an earlier

form of 'air pollution'. The dreamers of yesteryear were then making utopian sounds about sidewalks and paved roads.

The difficulty with dreamers and dreams is that when events finally catch up with the dreams the anti-dreamers get hold of them; they fight additional dreams based on the success, of previous dreams and dreamers. Previous dreams about cities are no longer enough. Some dreams turned into nightmares, so there is a need to plan anew. Life is change. Cities are changing, growing things. They must always be re-shaped to fit the people who live in them. If the Italian community gets Italian vegetation in the public space of Christie-Essex: grapes, olive trees, whatever; then move out and the Chinese community moves in and wants to re-plant; why is that the end of the world?

The second way of looking at setting 'maximal-but-barely-possible plans' is that falling short of them can often be ascribed to the costs of implementation. But poor planning is expensive. 'Cookey-cutting planning' is like the motel rooms in big chains, modern and clean but hardly home in spite of the advertising. A home inside and a city outside, must be fussed over, all the little things the set of families that make up the city, have thought about and carefully built.

Demolishing the urban landscape of the past, be it natural or human, impoverishes a city. One demolishes the dream-plans of irreplaceable previous generations. Variety is lost. Modern planning is mass produced as on an assembly line. One good home expensively designed becomes a cheap design with its thousandth copy. Distinctive skylines are not the best finger print of the city. Forests and bluffs form distinctive skylines too.

B: Helping the Species to Survive.

The notion of naturalizing the city can be variously interpreted. If nature is read as all life minus mankind, then biomass increases would naturalize the city. But if naturalizing the city is taken to mean that our species is in a natural condition, one of long term survival expectation, then the relationships between nature (biomass) and mankind and machinekind must be considered. Where are healthy spaces for children? This is the operational method of measuring a natural human urban environment. To focus clearly on the most important element to mankind, mankind himself, three subcategories of our species are developed - children, women and men, yielding five categories.

Naturalizing the city might be interpreted as removing its violence. The healthy spaces of men-women are contrasted to the homosexual micro spaces of women alone or men alone. To name spaces occupied by men alone or men-and-machines alone is to name 'rough

to deadly spaces: logging camps, cowboy spaces, all male industrial factories, ships, boxing gymnasiums, football fields, hockey rinks, prisons, male-only sections of taverns; all male mountain climbing teams, all male geographical expeditions, all male armies. The sand and snow explorers push each other further and further into deadly environments till they finally die along with the camels and sled dogs.

By contrast, consider heterosexual micro spaces: churches, hospitals, schools, dances, parties, festivals, carnivals, theaters, parks and the most elemental of all, homes. Homes are the nests of mankind. They should never be referred to as 'houses' or worse 'dwelling units'. This makes property out of babies. Forcing urban planners and politicians to use the term 'nests' would bring changes in survival values. Zoning houses is a trivial matter compared to zoning nests. In the homes of the world are found the women, the children and the men. This is an essential biological space. It is above a value judgment since all species struggle for collective existence even those without nervous systems; so the home is simply a natural space. It is the nature of mankind to construct them as it is the nature of bees to construct hives.

At the urban planning level this suggests that the city should be zoned for heterosexual land use; that is, one should ban homosexual land use. The actual zoning of heterosexual spaces would have to be done step by step with the ultimate goal of totally mixed urban spaces.



MACHO-HE MAN-CANADA: CANADA'S RURAL MALE DOMINATED SPACES

Fig. 134

CHAPTER IV

NORTH AMERICA.

One of the most vivid impressions in crossing the border from Detroit to highly Americanized Windsor, is the drop in social heat. The model of social physics should be tested across the border because it seems obvious that it will not stand up.¹ The social heat differences are so great that they cannot be functions of distance, population and income. They are more likely to be national - cultural in origin.

Citizens across Canada and the U.S.A. have, as simple tourists seen such a startling contrast in the two sets of national cities that both Canadians and Americans agree, Canadian cities are better. In the Detroit Free Press the 3rd of January, 1974 in answer to the question: "In the past 10 years the number of U.S. citizens moving to Canada has doubled to over 22,000 yearly, Would you consider living in another country?" "Yes," received 62.3 per cent of the vote. No need to conduct a poll in Toronto to see how many these days want to move south of the border.²

In addition to citizens understanding, the politicians seem understand as well. Toronto's mayor, David Crombie, raised national flags over his election as a continental example, in 1972. The New York Times reflected this enthusiasm. At the mayor's conference in Dallas in the fall of 1973 Crombie was lionized. Ontario's Premier William Davis was similarly lionized at a transportation conference in Florida in the same period. In mid-February of 1974 Crombie was again the hero, this time in New York city speaking to a group of American planners and developers. Crombie emphasized the metropolitan-wide tax base in his analysis of Toronto's success. While Crombie has some academic credentials, a full-time mayor is not really in the best position to act as his own scientific staff.

¹Mackay (1958) measured interaction based on telephone traffic: "The drop in traffic from Montreal, Quebec, and Sherbrooke to the largest English-speaking cities in Canada is about a fifth to a tenth that of Quebec cities, it is about a fiftieth for cities in the United States. Thus the English-speaking Canadian cities behave as if they were five to ten times as far away as Quebec cities of the same size and separation and those in the United States as if they were fifty times different."

²An origin map of visitors to Toronto and Montreal is a map of great Canadian influence in U.S.A. American tourists to Montreal are drawn largely from New York and Boston. Morley et. al. (1973) shows one seventh of all visitors interviewed at eight major Toronto hotels came from Detroit. Rochester and Buffalo are also under great Canadian influence from returning tourists. Of American guests at the Royal York Hotel in Toronto in 1973, about a third came from the Buffalo region and a further third from Detroit (Royal York Management, in conversation 1974).

This leads to a self-critical comment directed at the scientific community. Why have not scientists really gone to work on the question of trying to differentiate the underlying engine of Canadian success? This book seeks to make a dent in the scientific lag and to chide the scientific community, who normally wait for public opinion to catch up. In this case, they lag behind an eager public and a receptive urban political apparatus on both sides of the border.

The research strategy of international comparison is to reason that three-quarters of the American people are urbanized and four-fifths of the Canadian; so comparing American cities with Canadian cities effectively compares the two countries: further, that Detroit and Toronto represent these two sets of cities. But can the differences between Canada and the U.S.A. be reduced to the differences between Toronto and Detroit? Is not Toronto about the best of Canadian cities and Detroit the worst of the American?

Toronto seems the bastion of English Canada. It is smug and arrogant; many feel less cultured, by a great deal, than Montreal. It is also the center of exploitation of the rest of Canada through its exploitative device, Bay St., its financial core. The western cities of Canada view Toronto as unduly prosperous because of the profits of home and 'international', typically American, corporations. The English maritimes are also bitter toward Toronto and are even more impoverished relative to it than prairie provinces. So among the major Canadian cities Toronto is too privileged, the country's most pampered city,

Detroit has a tremendous crime rate and on this basis is not thought to be a representative American city.¹ There is a second way of looking at the crime rates of northern cities like Detroit. They are resisting the 'southern strategy' of the 1970's. The peace of conquest, the kind that produces huge suicide rates as anger is forced inward and huge infant mortality rates, has succeeded in making the social scene peaceful in certain cities, while the personal scale is extremely violent. Social resistance often drops personal violence greatly. Part of the violence of Detroit is social, such as the rebellion of 1967; and part is pushed inward in huge 'senseless' murder rates. So the turmoil of Detroit can be viewed optimistically, as a resistance to the political reaction pouring out of the white 'South' of the U.S.A.

¹From January 1 to September 10, 1974, 20 murders had been committed in metropolitan Toronto (2.2 million) and 531 in Detroit City (under 2 million), Metro Toronto Police Dept. and Detroit Free Press, in conversation September 10, 1974). These figures provide an objective basis for the fear of people to walk the streets of Detroit at night and the complete lack of such fear in Toronto.

Dividing the continent into three social-economic 'countries' makes the point more clearly. North America contains 'the South' (the old confederacy, the slave states), with their legacy of racism. In those places where whites in N. America equally hate the blacks, the whites endure the lowest wages. The pole of white hate-poverty is the state of Mississippi in the 'deep South'. As long as the whites hate the blacks they will not join with them in politics, in unions, in anything; to better their common lot. A region of pure racism is a region of pure fools. The next latitude of attitude is 'the North', with its anti-slave roots that continue today in an urban form of strong integrated industrial trade union such as the thoroughly integrated United Auto Workers in Detroit. Then there is the 'Far North', (Canada), with its historic-geographic tradition as a bastion for runaways from the U.S.A., especially runaway blacks, the Jews of N. America. Under progressive leadership, the U.S.A. mobilizes 'the North' and attacks 'the South'. Under reactionary leadership 'the South' attacks 'the North' pushing refugees into Canada. The cities of Canada will not be able to leap frog their innovations into 'the South'. Atlanta is not nearly as ready as Detroit to be Canadianized. Atlanta imports and supports enthusiastically Canadian ice hockey because 'it is a white sport'. The open housing for all races policy of Toronto is not within reach for Atlanta which desegregated its buses and drinking fountains within only the last decade. Detroit and Toronto are good sample cities to compare. They compare the country of Canada with its more compatible neighbor civilization, the country of 'the North'.

This chapter presents three major themes. The racial theme is a crucial theme. With the major exception of Halifax, a segregated racial community, with all its attendant problems, Canadian cities have open housing for blacks. Windsor still has a concentration of blacks in two or three blocks, partly due to a lag of old fears of living among hostile whites, partly to the high percent of home ownership which makes for residential stability. But the Windsor ghetto is rapidly melting down. The Toronto ghetto, which used to exist in bad housing near the downtown railroad tracks, in St. John's ward, is totally gone. Blacks can and do live just about anywhere. This changes the tone of Toronto in dramatic ways. The effects are as important to Canadian democracy as the effects of safeguarding Jews would have been to a lost German democracy.

The second theme developed is an expansion on Crombie's enthusiasm for a shared tax base for Metropolitan Toronto. It is the general political-economy of Toronto. The shared tax base is one sign of Canadian social justice. Income tax is truly progressive. The presence of an active labor party has disciplined the extremes of wealth out of Toronto, extremes so visible in Detroit between Black Bottom and Grosse Point: Canada's urban rich are in the poor house relative to America's. The geography of income flow within the two cities is the cause of the life and death environmental differences between Toronto and Detroit.

The Three Racial Regions of North America; Canada, the 'North', and the 'South':

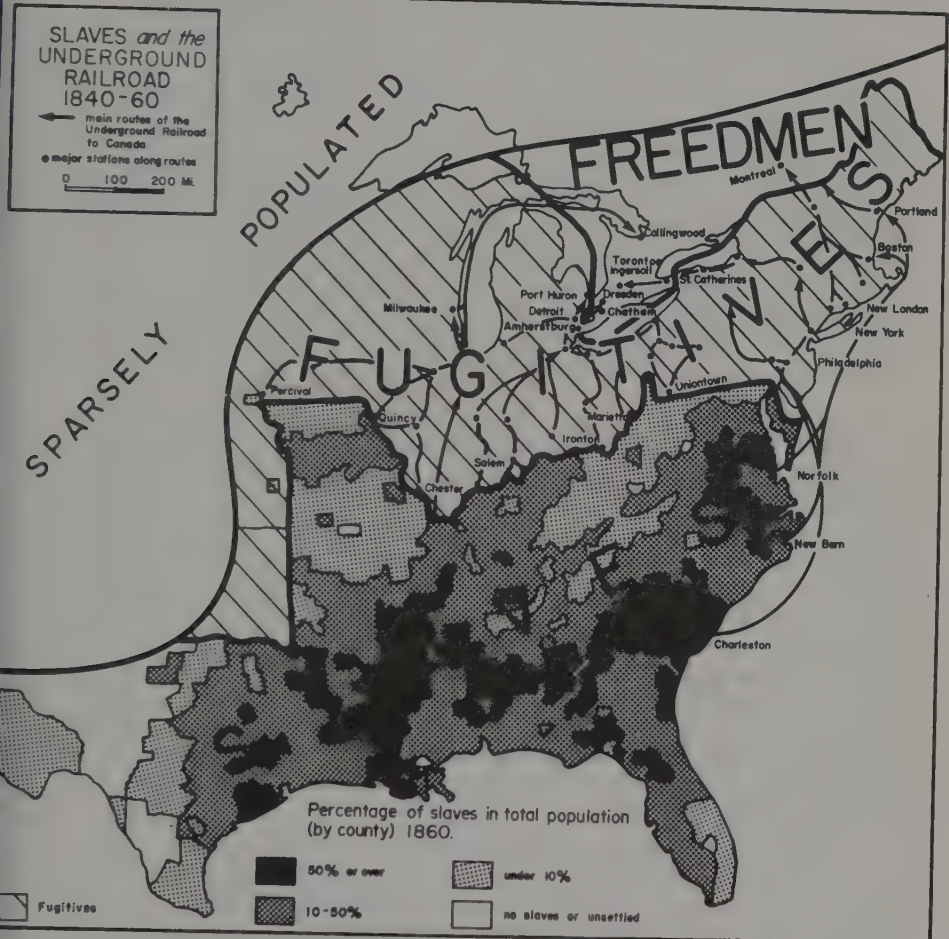


Fig. 135

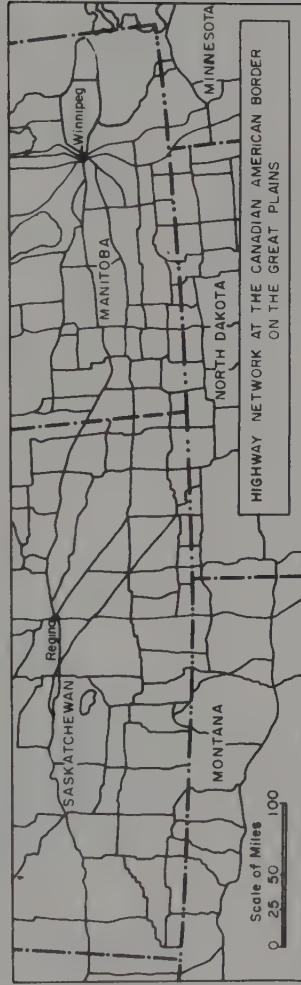
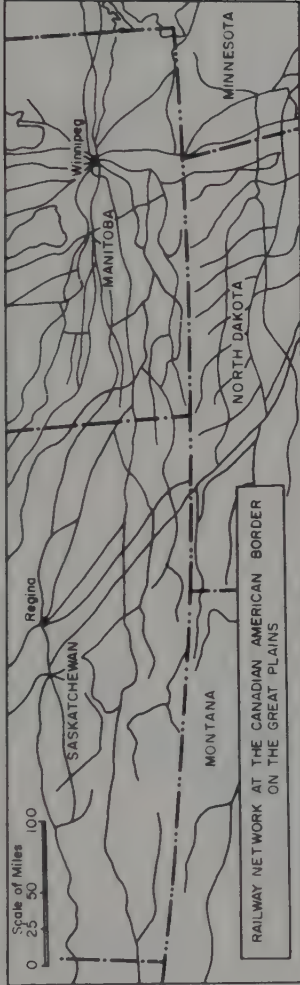
The third theme is the biological quality of Toronto compared to Detroit. For reasons not well understood, life is cherished more in Toronto than in Detroit. On Halloween, Canadian children are able to collect 300 percent more Unicef money than Americans. It shows in the murder rate, in the respect automobiles are compelled to show pedestrians and in the expansion of greenery at the expense of concrete. This newly discovered principle has been dubbed the expansion of biomass spaces relative to machinemas spaces.

Canadians exhibit some deep prejudices against Americans. They do not allow Americans an ethnic category in the census which lists Italian Canadians but not American Canadians. They complain about 'American accents' whereas an American cannot recognize a Canadian accent. They insist that they are different from Americans. They reject an American leading a Canadian in any matter. The difficulty can be seen in raising the question to a global scale. What two countries are more alike than Canada and America? To think of examples is hard. This torments Canadians. In addition, American investments are so heavy that it is almost fair to say that America owns Canada. A map of the economic flows between Canadian cities focuses on Toronto; but the map is prejudicial. When continental economic flows are considered, New York is the economic capital of Canada.¹

That these themes are important can be seen in the difference in life of Americans as compared to Canadians. Toronto is a capitalist city. Bay St. is the Wall St. of Canada. Canada is even more English than the U.S.A. and though its French nation, Quebec, seems more coherent than 'Occupied Mexico' of southwestern U.S.A., the comparison is within range. The historic geography of the two nations is so intertwined that efforts are made to differentiate artificially, such as agreed upon underplaying of north-south immigration routes in the continent as opposed to east-west routes. Why cannot Detroit be like Toronto? It seems so within grasp, so reasonable to expect for the Detroiters who spend a casual summer weekend strolling on the Yonge St. mall in Toronto. If Americans imported 'abolition' a century ago, and more recently ice hockey, then why not the Canadian urban way of life, 'a Northern strategy' for the continent?

¹The 'togetherness - separateness' of Canada, U.S.A. is illustrated in Wolfe's (1962) maps of railroads and highway networks at the Great Plains Border. The railroads are independently developed, the highways connected.

Canada's Border: A Barrier to Railways but not to Highways



Source: A. G., Vol. 52, No. 2.

Fig. 136

I.1: Detroit Humanly Viewed

All men are created equal. Any departure in the condition of men from this truth is a measure of the degree of biological breakdown amongst the species. The extreme irregularity of the income map of Detroit reveals extreme pathology since rather than reflecting the species' natural equality, the map depicts a region of species members surfeit with super-abundance, living near fellow members in a region below animal levels of survival and a zone in-between in constant danger and fear of falling into the region of non-survival. Thus, Detroit consists of three distinct biological cities: The city of superfluity, the city of need, and the city of death.

Fig. 131 This organic instability is the source of a constant threat of outbursts interspersed with realized outbursts. Yet these biological outbursts are commonly attributed to mere race, or religious differences, or politics, or even to individual personality disorders. But all of these lesser factors constantly shift and therefore could not be the underlying cause of the animal tension that constantly grips Detroit. Besides, it is not credible to claim that men experience deep animal urges from mere differences in political outlooks, or skin color, or accents of language when there exists the overpowering explanation of the biological lunacy of abundant, but inaccessible, food among the near starving.

The race hatred in Detroit is the hatred of survival. By 1974, one third of the dog food sold in the ghetto was consumed by humans (Senate Nutrition Committee.) The search for food, for life itself, a ruthless, restless, massive hunt fills the hungry with a desperate animal combination of hate and hope, while it fills the glutton with a combination of hate and terror as they stand between the warehouses bulging with food and the great animal mass of the city of death. Things are getting worse; a decade ago a 15 year old black Michigan young man could expect to live to age 68, today only to age 64. (Detroit Free Press, Aug. 31, 1974.)

And how biologically unnatural the situation. How strange for a species sub-group in the U.S.A. which has hungry children, to spend five billion dollars a year not to grow food. How strange of a species to permit hungry children in Detroit to parade past food protected from them by glass in the stores. Grocery store windows protect the food from the nibbles of flies and the bites of the children. How strange and grotesque a species to parade food down streets in front of its starving while withholding it. Yet that is what the ice cream lady does each afternoon in the city of death as poor children line the windows of the hovels to watch her pass with her Pavlovian drool-inducing bell and her 'no money, no food' law. If raw meat were to be dragged past the cages of starving lion cubs at the Detroit 'zoo' the 'Society for the Prevention of Cruelty to Animals' would protest. Ants share the food of the colony. Bees share the food of the colony. A city is a biological hive, yet the human hive is a pathology since children

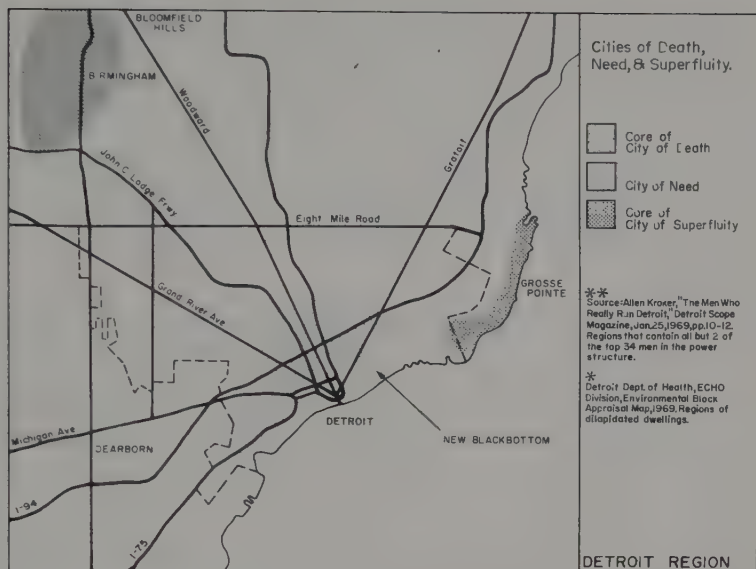


Fig 137

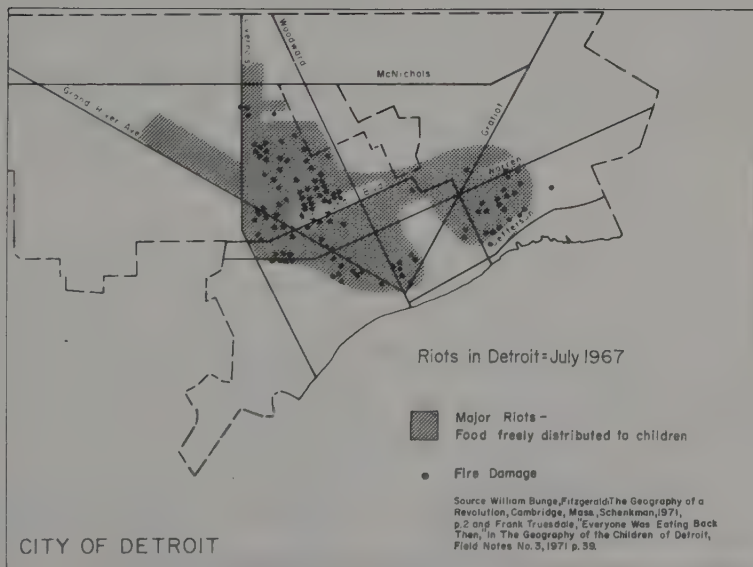


Fig 138

starve in such hives in the midst of abundant food, unlike bee ant agglomerations. American Indians shared the food of the col but the food is not shared in the biologically perverted city of modern Detroit. The 'surplus' food is stored in warehouses care fully guarded from the hungry. Only a biological breakdown of the system such as the total rebellion of the city of death in 1967 produced food for everyone; and the few days of the riot when the entire species was well fed is viewed as a calamity by all except the hungry of the city of death, who remember their brief feast with a wistful smile. Evidently, only when the system collapses can everyone eat.

A: Flows Between the Three Cities.

Since all men are created equal, if we know the true value of one man in Detroit, the departures from this value are a measure of the biological distortions of the species' nature. Those above the true worth of a man are distorted in one direction and those below in the other.

Life Power.

The 'worth of a man' is his life power which is what a man produces to maintain and continue the species. It can most clearly be measured in units of the number of children that could be fully supported by his annual efforts. All species must work, at least successfully enough to stay even with the necessary effort of the reproduction of their kind, or their species is on its way to extinction. Mankind's life power is derived ultimately from solar energy like that of all other species, and the extra nuclear energy peculiarly available to himself. Obviously, mankind has been gaining in life power by means other than evolving new muscles or organic development in the evolution of machines. Man has used his life

LIFE POWER

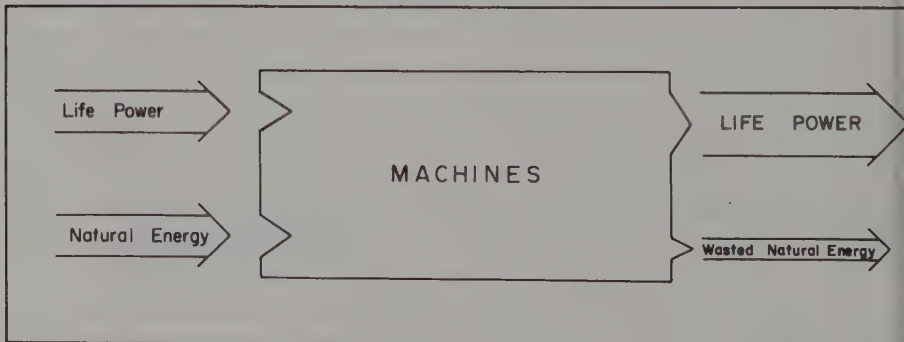


Fig. 139

power, his brain and muscles, to build machines to harness solar and atomic energies. He re-invests this additional energy in more machinery for capturing more of nature's energy and in training himself in the skills necessary to build and operate the symbiotically evolving machinery. Machines play the role of a nonorganic stomach, capturing natural energy, harnessing it and thus converting it to life power. Machines short cut the food chain. This dialectical cycling of using his own life power to harness natural energy is what we commonly call 'progress'; the level of its development at any given moment is called 'the level of civilization'.

The token of life power is money. The ability of man's life power to harness nature's energy and convert it through machinery into his species life power, is what distinguishes mankind from all other species. But nature's energy is not life power. Nature's energy is free. Capturing the energy, with men and machines, is what is expensive in human efforts and is measured in units of life power. Does the life power lie in the machines or in the men or both? In both, since anything men work on picks up their value in life power. But sick systems in which the unnatural condition of men working for machines prevails, place higher value on machines than on men, since they insist that life power comes from machines. This reversal of values leads to the logic that men are dragging machines down, because men all have to be given some of the benefits of the machines: the fewer people the less value has to be shared, and the richer the remaining people. This pathological thinking equates the decline of the species, with 'good times'. Machines and men are not to be equally cherished. Though children cannot exist without machines, the children's benefit, not that of the machines, must be maximized. The ratio of investment of life power, the equivalent units of child support, humans have invested in the machines. The machines are the crystallized, frozen, life power of the past. But the life power comes from men, who in natural systems are the master of the machines.

Machines 'pay off' like domesticated cows; they yield more life power through adding extra of nature's energies than the original life power invested in them. This property of machines is no more mysterious than the same property of a domesticated cow. Only sick systems worship cows or machines. The extra life power derived from machines is the real 'biological profit' which mankind then puts back into construction of more machines. This cycling process is accelerating and mankind could soon reach the level of practically free harnessed energy which would inflate the true worth of a man to nearly infinite life power, thereby relieving him of want and drudgery: Utopia.

Measuring Detroit's Life Power.

To find Detroit's biologically normal man the species member in balance with his animal worth in life power as measured in its

token form of 'annual income', two conditions must be met. The first condition is that he must not be gaining or losing money to someone else. This simply means that he and his machines work alone. The men of the city of need and the city of death pay a machine tax. This machine tax is the taxes paid for the privilege of using the machines necessary for life; it lowers the annual income of the men who live in the city of need and the city of death, below their true worth. The second condition of the biologically normal man in Detroit, of a man paid in income the true value of his annual contributions, is that the man must have been raised up whole to his full natural animal powers as a man. A man raised runted in mind and body is not worth as much as a man raised normally. In the city of death, some men have not been raised to their full powers. The men of the city of death pay exactly the same machine tax as the men from the city of need, but in addition they pay a death tax on the weak, the sick, the old, and the children. Therefore, it is not possible to measure the true worth of a man from the city of death for two reasons: the machine tax and the death tax. In the city of superfluity also, it is not possible to measure a man's worth for the same two reasons. A highly trained automobile executive is paid his worth in salary as a skilled administrator but this is buried in the extra money from the other cities.

Highly skilled, self-employed businessmen such as dentists, fulfil all conditions of receiving their full worth and no more. In Detroit in the 1970's the worth of a man, his true measure, what he should command in money since it is what he equivalently produced for his year's worth of labor, this true worth is approximately \$29,000 per year, the income of Detroit's dentists. Knowing this figure, incomes above or below it must be from the flows of money from one city (death, need or superfluity), to another.

The machine taxes, for the use of the machines necessary for life, paid to their owners in the city of superfluity, consist of the approximately 830,000 job holders of the city of need being paid only \$10,000, the approximate wages of an automobile worker, of their true worth of \$29,000 or a tax of \$19,000 each. This gives a total machine tax on the city of need to the city of superfluity of \$15,770,000,000 per year. Men from the city of death work side by side at the machines with the men from the city of need and pay the same machine tax of \$19,000 per man. But since the income in the city of death averages only \$5,000 per year, the difference between this income and the city of need \$10,000 income must be due to the death tax of \$5,000. Since there are approximately 130,000 job holders in the city of death, their \$19,000 machine tax totals \$2,470,000,000 and their \$5,000 death tax totals an additional \$650,000,000. The city of superfluity contains 30,000 job holders. Since they pay no taxes they get paid their full earned worth as men, namely, \$870,000,000 and net an additional \$18,890,000,000. The affluent do not use all these taxes. Most must be spent in collecting the taxes and

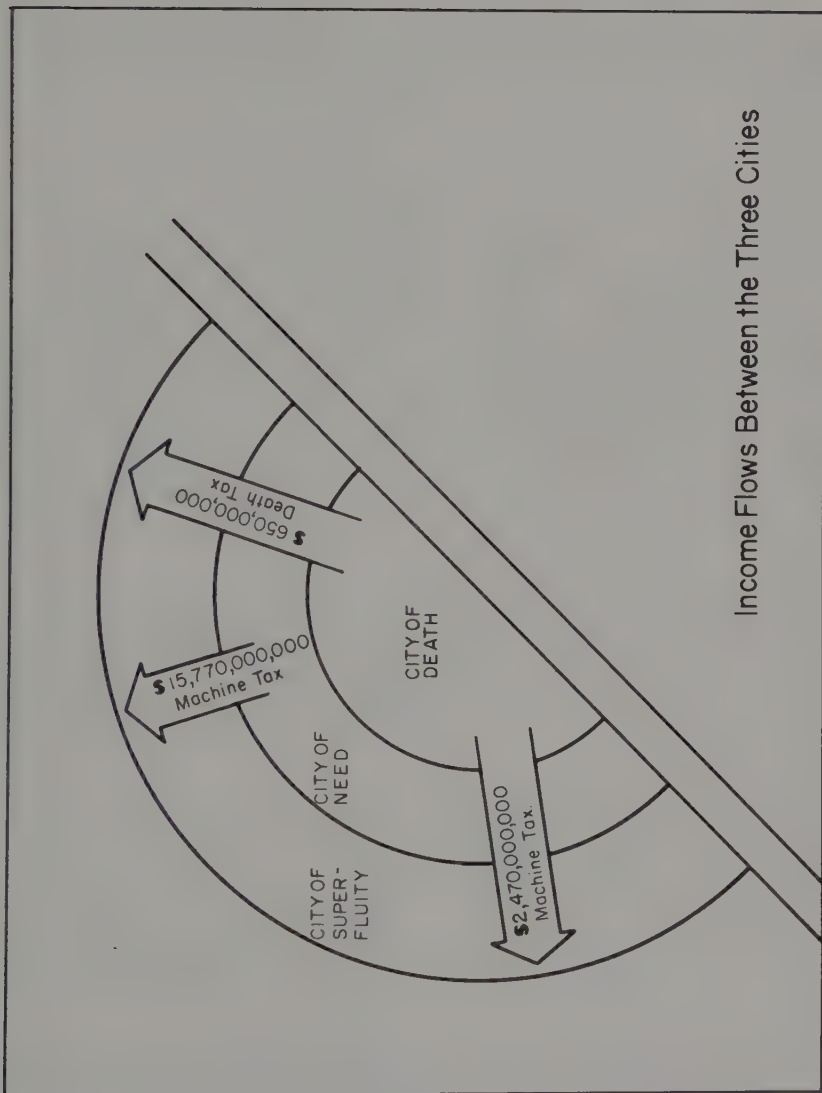


Fig 140

keeping them once collected; especially through expenses of mis-education, building weapons and supplying men to use them, the 'armed forces' and the police, leaving only a portion in pure profits, to be spent on high living.

Thus, the entire \$18,890,000,000 is wasted in terms of biological human significance. That part which flows into weapons goes into machines with the biologically perverse function of destroying fellow species members. Their perfection has turned the species into the only species that is his own unnatural enemy. Weapons, even unused, are a waste of money.

The machine tax is collected by paying people less than the wages they have earned. But the death tax is collected in various ways, some obvious, some not. Among the obvious are overcharging for food, housing, schooling, street repair and maintenance, clothing, appliances, and interest rates. Men of the city of death are invited to start their own businesses such as gasoline filling stations which they will own after twenty-five years; but stations are worthless, antiquated in twenty-five years and become eyesore 'hulks' dotting the city of death. By 'inconveniences' in such matters as queuing for phone calls, waiting for slow buses, waiting for city agents, a great deal of time is wasted, a hidden cost. Bus fare is nominally 35 cents, but the extra time in an inconvenient ride, on the average, might cost each rider as much as \$1.50, for an actual cost of \$1.85 per ride.

Overcharging for Food--A Portion of the Death Tax

	City of Superfluity	City of Death	Percentage H for City of
Milk, ½ gallon container	.51	.64	25%
Crisco shortening, 3 lb. can	.74	1.04	41%
Cheer detergent, giant size box	.70	.98	40%
Skippy, peanut butter, 12 ounce jar	.40	.51	28%
Pet milk, 13-ounce can	.16	.21	31%
Sugar, 5 pound sack	.57	.76	33%
Coffee, 1-pound can	.70	.94	34%

table IV.1 Continued

	City of Superfluity	City of Death	Percentage High for City of Dea
Pork and beans, 16-ounce can	.14	.25	79%

Source: "Focus Hope 68," Table Food and Drug Survey, 1968

table IV.1

The City of Death.

The city of death is the human garbage dump where everything tends to end up. The city of death is where old cars find their way, owner by owner, from the city of superfluity and city of need till eventually they are valueless. 'Junker cars' line the streets of the city of death and 'junkies' line the sidewalks. School books, new and shining, start in "the better neighborhoods" and year after year wend their way toward the city of death. Like the picked over garbage, the tattered books are eventually burned in the incinerators, conveniently at the trail's end in the city of death. Alcoholics from all the city slowly wend their way to the crematorium called 'skid row' and from there to inner city medical schools as cadavers.

All things, dead and dying, drift toward the city of death. The sick and old from the city of need end up in the city of death in run down hotels, filthy 'rest homes' and government housing projects. The butchershop leavings, the guts of hogs, the feet of hogs and similar cuts are shipped to the city of death to appear under pink lights as soul food to blacks or ethnic food to other residents.

The sophistry that slum buildings look worse outside than inside, a repeated lie told by rich commuters to each other, while passing through some of the results of their system, as they move from downtown to the suburbs, twice a day, can be punctured by the slum buildings the rich own. Lack of screens means that house interiors swarm with flies, and on the babies. Where windows are knocked out, buildings are frigid in winter.

The city of death is a city besieged. The blockade prevents certain life flows from reaching it. Doctors do not move toward sickness. Nor does material needed to repair buildings, encouraging rats and roaches, producing freezing rooms in winter. Not only is the city of death blockaded, it is literally dismantled. As the total city grows, all its parts grow in proportion. Doubling the size of a city automatically doubles the size of its slum.

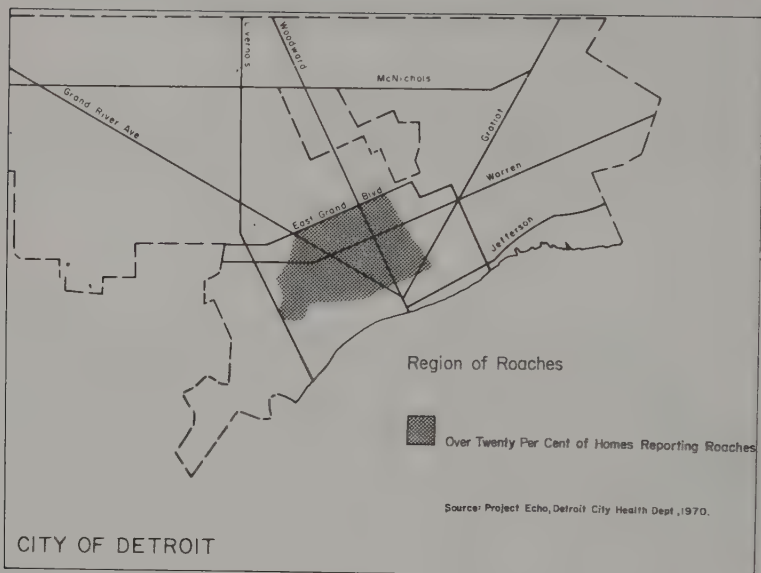


Fig. 141

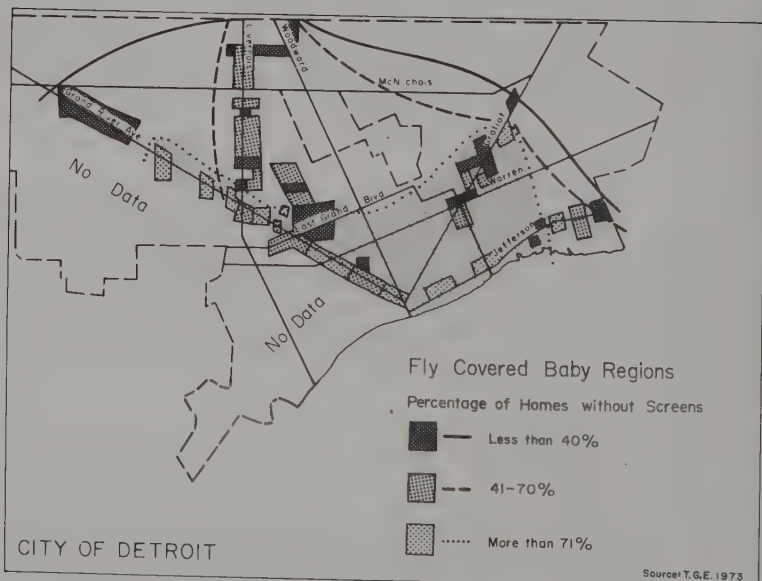


Fig. 142

Therefore, it is instructive to study a neighborhood at the edge of the city of need, as the city of death begins to approach and take it over. When slum dwellers from the city of death start to be crowded into the city of need; the city of need hires moving vans and starts dismantling the city of death. First, the furniture is carted off. Junk furniture, old car seats, orange crate 'tables', and so forth takes its place. As homes are converted to multiple dwelling structures, the stuff of buildings, walnut panelling, chandeliers, shrubbery, marble tile, anything of decorative value, is loaded onto trucks. Still, some stuff of value, such as copper roofing, remains. This is dismantled and moved out of the city of death; 'urban renewal' tears the whole place to shreds.

B: Barriers Between the Three Cities.

The three biological cities are typically separated by geographic barriers of various types. The most effective cushion between the city of death and the city of superfluity is the city of need. The city of need stands between; so the city of death searches for food in the city of need and creates tension between those two cities.

Non-Local Land Use.

Besides this geographic strategy of using as a buffer the city of need, other geographic barriers are used. One effective 'wall' is non-local land use. Non-local land use makes excellent boundaries. The best example in Detroit is the approximately one mile swath of non-local land use on the east side, that starts at the Detroit River and, extends to Eight Mile Rd., parallel, but west of Gratiot. For years this 'wall' had been a racial barrier, though recently breached along the river. It has defined the boundary between much of the eastern edge of the city of death and the city of need.

Walls.

Where these wide swaths of non-local land use do not exist, then overt walls, complete with barbed wire, are often constructed. The walls are almost always disguised in some-other-purpose form. For instance, expressways are aids to traffic only in their own direction. Across the expressway, at right angles to it, the expressway is a barrier, in Detroit literally a ditch, with

barbed wire fences re-enforcing the buzz-saw traffic.

Wherever rich and poor are in juxtaposition, as downtown, in in-town-living houses, walls will be provided. The enclave of superfluity in downtown Detroit is called Lafayette Park. To the south is the Detroit River. Rivers, golf courses, parks and other amenities are often used to disguise military purposes. On the west of Lafayette Park is the Chrysler Expressway securing that flank. To the east, an old railroad bed in a trench stops people in that direction. In addition to the fencing on both sides of the track, many former street-level bridges that crossed the railroad trench have been removed and others double-fenced. At the north end of the Lafayette Park area lies a series of public and semi-public buildings and walls around their parking lots which seem a good disguise; but, on this north end, the barriers become naked. Two streets, Russell and Rivard, continue from the old slums in the Eastern Market district to the north of Lafayette Park and head straight south into the affluent enclave. By building walls 'kitty-corner' across these street intersections and turning all traffic aside, the corners are blocked. On the Lafayette Park side these walls are disguised so effectively by turning the street gracefully, by using facing brick, by beautiful landscaping shrubbery, that people living on that side in an immediately adjacent apartment house, The Four Freedom House, do not even know the wall exists. The other side of the wall, has no of the disguises. The right angle turn at the intersection is preserved; the wall is unfinished concrete block with no landscaping. This 'Detroit Wall' also has a small pedestrian opening so that servants can walk through on their way to work from their slum.

C: Characteristics of the Three Cities.

The affluent suburbs of Detroit include a ring of neighborhoods from Grosse Isle on the south, sweeping over to Ann Arbor, around to Bloomfield Hills and Birmingham in the northwest and continuing around to 'the Pointes', the five municipalities that comprise Grosse Pointe, in the northeast. At Grosse Pointe the bulk of the power structure lives. A Grosse Pointe manufacturer will know far more about this affluent geography of Detroit, or for that matter the northeast side of metropolitan Chicago, Hubbard Woods, for example, than parts of his own city, New Delray, for instance.

The Feel of Rich Neighborhoods.

'The Pointes' in the city of superfluity have an unbelievable grandeur. But the splendor is unreal, even eerie. Children were meant to be raised in warm, human filled spaces, not too crowded, but just right in numbers. The tremendous private parks surrounding each house are lonely. No child could possibly use that much grass for play. It must make him feel apart, distant. To get a gang of kids together would take up a square mile of 'homes' and toddlers

could never make the distance. The children of the city of superfluity need an explanation of why they have so much wealth while other children in Detroit are hungry. Since there is no good explanation, a bad one is provided, that they are organically aristocratic by inheritance. In fact, men are as equal and different as snow flakes. The tremendous damage to the children of the city of superfluity being raised to feel they are better than others gives that city a bitter-sweet flavor.

A commuter culture develops in which the men spend up to four hours a day on an expressway or commuter bus and see their children only on weekends. Extreme versions develop where a man stays in town all week in a downtown hotel room or as a traveling salesman who may not get home but once a week or less. This extreme separation of work from home is reflected in extreme alienation of the man from his family. The loneliness of being not only apart from the family but beyond its comprehension, is agony. No people feel this agony more acutely than the leaders of the machines' owners. No group is less understood; their illusion is that they own the machinery; in fact the machinery owns them. Since they are always trying to explain the needs of machinekind to mankind, they are condemned to appear inhuman.

Look at life from the point of view of men who live in the city of superfluity. A machine called a printing press prints pieces of paper that say, 'The bearer owns me, and other machines'. For these little pieces of paper the owned devote their lives. A machine called a wrist watch runs a tyranny over them to the minute. The men run themselves on time the better to make the trains work. Unlike industrial workers, who openly hate the drudgery of their work and gladly leave it behind them as they leave the factory, 'owners', the most owned of all men, spend sleepless nights in service to 'their' machinery. Heart attacks among them are endemic.

'Hard Hat' Neighborhoods.

The city of need stretches in a great arch just inside the affluent suburbs but farther out than the city of death. This buffer city includes such neighborhoods as southwest Detroit, Melvindale, Redford, Ferndale, Warren and northeast Detroit, and is typified by the region called Dearborn. Here are the white workers, the 'hard hats', the solid members of the construction workers' union, middle America.

As the machines in the city of need become more developed, the seeming 'rise in the standard of living' is merely the necessary investment in the children to keep them from falling behind the needs of machines. So the city of need precisely keeps pace with the machines generation after generation. The machines tax out all the extras but do not take so much as to kill all the workers needed to tend them.

The city of need shines with hard work. It is the pride of

these people, all they really have to show. The city of need feels itself and looks to be hard pressed because it is. Unlike the grandeur of Grosse Pointe, Dearborn has a super-neat look. It is a neighborhood of 'home-owners' (actually mortgagers), not estate owners. The city is immaculate but rather than sweeping and free, the passer through is compelled to think, 'how pinched how regimented'. Everything in Dearborn is sucked into the Rouge plant of the 'Ford Motor Company'. The workers each shift pulse traffic through the streets and announce to all, "shifts out", more sharply than the old-time factory whistle.

The children of the city of need must be prepared to enter the factory. Track education systems slate them as factory fodder from before birth. The emphasis in school is on discipline, being on time, lining up for bells, neatness, all in anticipation of later factory life. The lives of the children are drawn to the shops and the children resist.

From this city and the city of death, the combat infantrymen are drafted and and some of them return. There are no rich young men in fox holes. The taxed workers lead an excruciating existence not only in their community but in front of the machines themselves. Unlike humans, machines do not tire. So that the actual work week, the number of hours men labor holding two jobs, traveling to and from work in Detroit, can be an unbelievable ninety hours. Shift workers sleep much of the non-working time. They essentially have no leisure time in the work house of the city of need. A middle-aged automobile worker in Detroit has a 'look' to him. He is thin, drained, all bone and lean muscle. Machines drain him of calories, of fingers, arms; every seven thousand automobiles produced causes an average of one amputation. The neighborhood is dominated by the Rouge Plant of the 'Ford Motor Company' in Dearborn. On one hand it is a point of pride, "The world's greatest industrial complex". On the other hand the Rouge is a horror, blotting out the sky with pollution, clogging the head with its noxious output and just sitting, huge, overwhelming, lighting the sky for miles about at night in the midst of the homes.

The Slum Ghetto.

The slums of inner city Detroit swing about in a small circle starting with Delray on the south, Bagley, West Side, Cass Corridor, Woodward East, and ending in New Black Bottom. The map compares infant death in Detroit with that of selected foreign countries. New Black Bottom has a higher infant mortality rate than thirty-one members of the United Nations. An infant born in Taiwan has a better chance of reaching five years of age. These slums are black and white.

The rat region of Detroit contains an estimated 600,000 rats more than enough for each small child in the city of death to have one apiece. The doctorless region and dentistless region would be

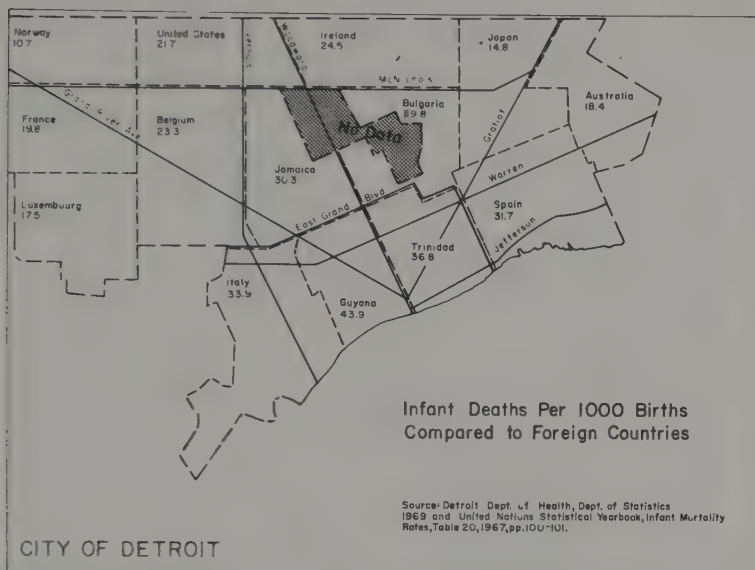


Fig. 143

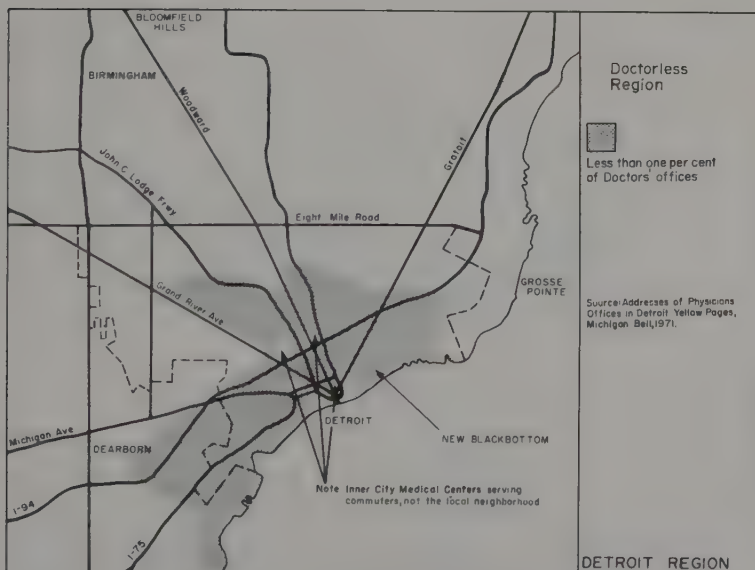


Fig. 144

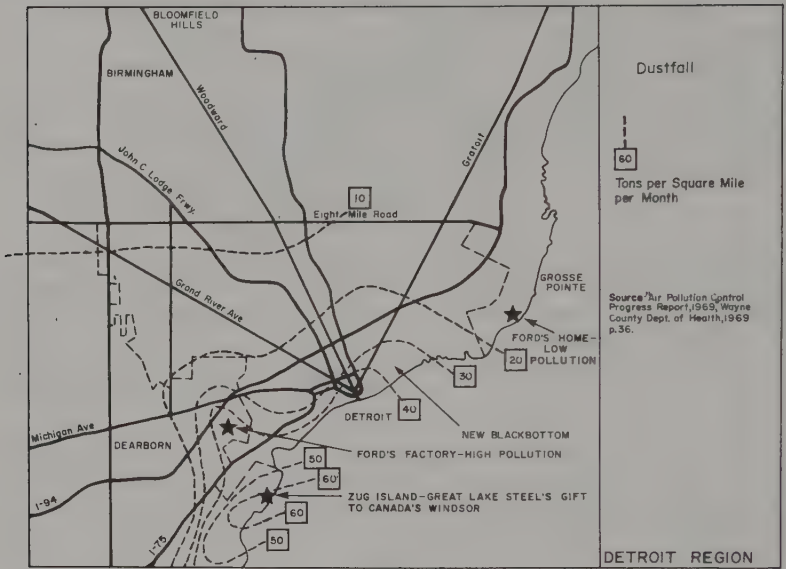


Fig. 145

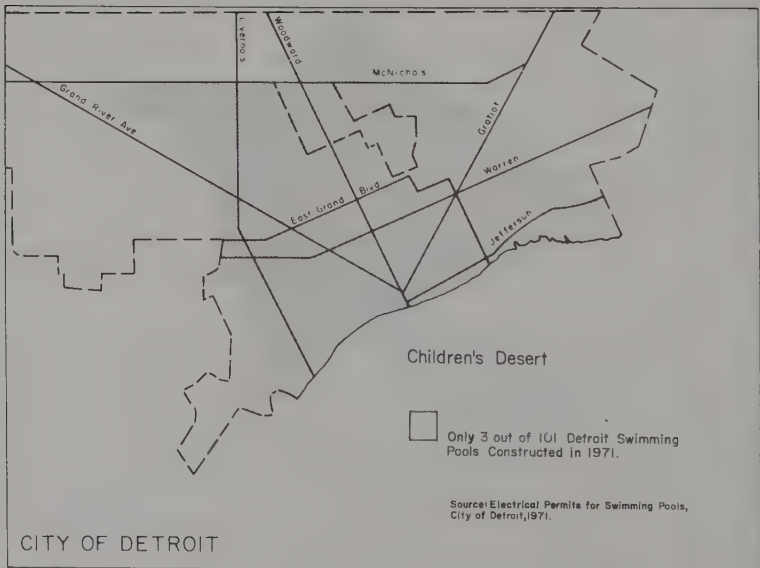


Fig 146

similar in size to say nothing of orthodontistless regions or plastic surgeonless regions. The city of death is hungry. If the children get a quarter, they rush off to buy food. There are almost no theater houses in the city of death. The children spend extra money eating. A 1969 U.S.A. federal survey of some 4,000 low income people in Detroit revealed "serious nutritional deficiencies" in at least forty percent of them. Of the children examined around thirty percent were physically abnormal, due to poor nutrition, especially in bone growth. Three percent of the poor children showed evidence of rickets. Whole regions are toyless: no coaster wagons, no crayons. The children never learn to roller skate or to ride bicycles. Old men pick at garbage in alleys beating the rats for what calories and proteins might be there - and the garbage of the poor is not as rich as the garbage of the rich. Mothers working as servants in the kitchens of the rich bring home table-scrap in soiled brown paper bags for their famished children. Abandoned homes punctuate the landscape. Rubbish decorates the berm. The flow of money out of the slum past the level of need is what converts a city of need into a city of death. It is a city losing ground, losing the future as represented by the children, any species' definition of future life. It is a city potentially on its way to annihilation, to extinction, to genocide, overwhelmingly a childhood disease.

Fitting In.

The city of death is filthy. Filth is apparent everywhere with garbage in heaps and unswept street gutters. Amid this ecology is tragedy; how well the people fit into the scene. Chronically unemployed slum youth, fifty percent and more, populate the porches and curbs. Every store has a knot of 'useless' young men in the front doorway. It is unnatural for a healthy species member to be just 'lying on the corner'. There is a terrible, isolated, lonely quality to people who do not care how they look; they are past embarrassment. Old ladies without teeth in broken-heeled shoes and sagging print dresses that hang loosely lurch down the sidewalks. Two or three old black men sit on a sidewalk door stoop, passing a bottle of wine in a paper sack back and forth. So used to being ignored, 'invisible', they have achieved some sort of privacy; they live in another world, a counter society. They are no longer picked upon. There is nothing left worth picking.

The Courage of the Slums: Its Grace.

The slums are impacted, teeming, noisy; amid all this dying and death comes a great shout of "life". It pumps out in music, the beat so strong as to be almost a heart stimulator thumping out "Live! live! live!" The boldness of color and dress of the young, shouting out, "This is me and I'm alive". The bravery of the style. The appreciation of style. Detroit's city of superflu

internationally notorious for its lack of culture, its tastelessness. But the Detroit city of death is one of the art centers the world.

There exists no paradox in the fact that when men are pushed death they reach out for life. The natural animal, the grace movement and thought, the cool efficient soulful understatement, the holding of body and wearing of clothing as a careful statement of self, do not reflect a happy carefree, irresponsible life. At the opposite. They reflect a miserable, care-loaded, grinding struggle, both individual and collective, against death. This is a culture hungry for life, of which it has precious little.

If the people of the sheltered city of superfluity understand little, the city of need understands that "life is hard work", even though it absurdly thinks it is being dragged down by the powerlessness. The city of death not only understands itself, it understands the other cities as well. It understands more deeply than "life is hard work". It understands that "life is survival". Those groups in the city of death for a long time develop not a culture of hard work, but a deeper culture of survival; it includes hard work, living on the margins not of a 'decent living' but of life itself. Basic animal values are brought forward in the fight for staying alive.

D: Proportions Among the Three Cities.

The relationships between the flows, characteristics and proportions of the three cities explain much. The city of death is going down hill. Its homes, its streets, its schools, and its children's teeth are allowed to fall apart as the money is sucked out. The city of need is allowed to just keep itself in repair. At all things elegant are built in the city of superfluity by the men and materials that commute out to that city every day from the other two cities in order to construct the new city. The city of need tends to improve each generation as the improved Chinese insist on more highly skilled men. So the average city is improving with only the permanent slum of the city of death as a sinking ground.

Out and Back Into Slums.

Several groups, in the slums in the past, can be sent back to the slums from the city of need. Getting out of America's slums might be more a temporary reprieve rather than an upward ground, one-way trip to the outer suburbs. Several groups that started outside the slums have been pushed there, such as Chicanos and American Indians. The threat of the slum is the threat to the entire city. Its standards set the standard of fear for all people

who might fall to that level due to prolonged illness or other misfortune.

Illusions.

The proportions of the sizes of the three cities in both income and numbers of people, are not chance amounts but are governed by the balance that produces maximum profit. It takes a fixed ratio of the three cities to keep the system in precarious balance. Concretely, the automobile executives in Grosse Pointe think they actually 'own' their machines. It never occurs to them that they will do anything to preserve slips of paper called stocks and bonds that seductively announce they own the machines. Grosse Pointe thinks it rules and that events are in biological control. That is the illusion of the city of superfluity. The city of need, the white hard-hats from Dearborn, think the city of death, the black workers from Black Bottom, is their enemy; that if blacks are kept in their place, biological stability will be obtained. The black worker views the white worker in Dearborn as the enemy; thinks that if he can triumph over him, he will get out of the city of death. Mankind is divided in front of the threat of machinekind.

The proportions among the three cities in Detroit are fixed in precise and precarious balance to continue the biological denial of man's natural equality. It takes more men in the city of need to contain the city of death because the passion in the city of death is greater than the quiet desperation of the city of need. The proportions are constant in all cities of the U.S.A. Small cities have small slums and big cities, big slums. The study of the geography of Detroit is, in fact, a study of urbanized America. Only a little multiplication is needed to obtain the proper continental scale. To understand all other unnatural cities of the world, a little more multiplication, after adjusting for the level of civilization, by finding the natural worth of a man locally. If the proportions themselves are upset, especially by the growing or contracting of the city of death, a total breakdown in the carefully balanced tensions will threaten to destroy the entire biologically unstable system.

E: Planning the Abolition of the City of Death.

Why would Detroit contain a city of death at all? The city of death pays its way by intimidating the city of need into great effort. The hell of slums whips on the needy, keeping them in quiet desperation, which produces output beyond that lost from the city of death.

In Detroit, the inner city, the 'City of Detroit', is underpowered. Gerrymandering has moved functions, such as local poli-

to 'too-large geographies', such as the Wayne County Sheriff's Department. These powers must be moved back down the hierarchy of government so there are some truly local police to support. Wards need to be re-established in the 'City of Detroit' and so forth. Suburbs have local government, the city core does not. 'Power to the people' must be run down the ladder of governmental units, not up. Once that is done then some functions, more efficiently handled at a metropolitan level can be pushed upward, such as Detroit Street Railway (DSR). As things stand now, black Detroit, just having won power with Mayor Coleman Young, is being asked to give up the transit system, without Ford and his suburban compatriots first giving up the Wayne County Sheriff's Department, which should be abolished along with other functions at too high a level in the hierarchy of urban government. The major stumbling block to the rationalization of government is that Detroit is locked in race-class war.

Reconstruction and Evacuation

Two strategies exist in planning for elimination of slum conditions. One is to tear down and rebuild the slums in place. The other is to flee slums. Both strategies, reconstruction and evacuation, should be applied. Every improvement of the slums counts. Even a day in the country for each slum child each summer is better than what they have now. But of the two, the main thrust must be for slum rehabilitation.

F: Detroit Guilt.

There are geographic laws today outside the control of powerful men'. The von Thunen rent model applies to internal city structures, by describing several areas placed as closely to a point as possible, resulting in circular rings of varying width, around the central point. The model proves the impossibility of moving downtown from downtown. In Detroit, as other cities, it keeps recurring to men from the city of superfluity that if downtown were nearer the suburbs, time would be shortened and danger from slum dwellers reduced. In the 1920's a 'new center' was constructed four miles north-northeast from downtown Detroit. The 'new center' has never grown from its initial size. Subsequent growth returned to downtown. Isolation of the 'new center' is a major problem which planners keep trying to solve by clearing out all residences between downtown and the 'new center'. In the 1950's management extended the suburban shopping center notion into complexes of insurance companies and offices, partly to stop the tyranny of long-haul commuting. But the 1960's saw the pull of downtown re-assert itself. Most office construction in Detroit is now there again. Downtown cannot be moved and only understanding the von Thunen model can make that clear.

Geographic Laws.

The von Thünen rent model merely places competing areas as near to a central point as possible. The general pattern is concentric circles of varying width. In the urban application, the central point is the central business district, and the areas competing are residential land uses within the city's three regions, death, need and superfluity. It also explains why downtown cannot be moved outward, even by the 'owners' of downtown. People can no more repeal the laws of geography than they can repeal the laws of physics. If men attempt to build 'new centers' or suburban offices into a new central business district they will run into problems of cost in transportation which will reflect in higher rents. If people build a new suburban center, all the major transportation routes must converge there, not at the old center. Then von Thünen's law will take over and the area around the new center will become slum. That is, the ultimate cost of moving the central business district out of the center is the cost of moving the entire city the distance between the old center and the new. This astronomical cost accomplishes no change at all in the relative locations of the internal city. The new center becomes the new center of the slums and commuter distances all shift to the same range as today. For instance, if Detroit's 'new center' of the 1920's had been made to work it would have been at the cost of moving all Detroit four miles north-northeast. Decision makers have much less power over the geography of cities than they perceive.

Machines as a Force.

The machines yet untamed. To date, the world's cities have been essentially created by machinekind not mankind. The only animal not caged at the 'zoo' is man. There exists another uncaged creature, the machines called automobiles. In what sense are machines dead? They are animated, self-propelled, self-controlled, and increasingly self-reproducing. The automobile is given more and more freedom to roam over Detroit; its children, less and less. The miles of fencing put up to 'protect' children from expressway, arterial streets, parking lots and so on are more and more caging the children. Only the sidewalks are officially theirs. All other space is illegal to them, off limits, "Private Property, Keep Out!", "No Ball Playing." Yet machines are welcomed all over the landscape. "Free Parking,, Drive-in-Movie, Motel." Detroit boasts a drive-in funeral parlor where one can view the deceased from the comfort of one's own car. Airplanes fill the air with noise and other pollution. An index of how powerful the unbridled strength of machines is becoming can be gotten from just listening to the whirr of the devices.

Each decade it becomes noticeably louder, more powerful, and more and more drowns out the sounds of children. We must reverse our planning and cage the automobiles not the children.

Automobiles and Children.

An especially deadly space is children and machines. So-called automobile accidents in Detroit are not accidents if they can be spatially predicted, as they can be. The automobile has been placed in too close proximity to the children on residential streets, serving as commuter streets. The parking lanes are cleared for two extra lanes of traffic, summing to three and four lanes. One way streets are installed. A de facto fifty to sixty mile an hour speed limit is encouraged and the children tumble into the traffic mechanically from running down their front steps across 'the curb' which curbs everything but the children.

Who is to Blame?

Which individuals or groups are to blame for this situation? Easy answers come to mind. The rich in the city of superfluity have the power, therefore the responsibility. This group is largely white, Anglo-Saxon, Protestant and appear to be the cultural and racial suppressors of the rest of Detroit. In terms of class warfare, the city of superfluity is the ruling class neighborhood, therefore guilt would also point to them. But other evidence contradicts this. Their commuter culture is misery and artificiality. Businessmen often have high blood pressure, a disease of tension. At the scale of Detroit, the unnaturalness of the relationship between machinekind and mankind can be seen in the map of suicides, a misery index, which shows no areal differentiation. The map of suicides shows no difference by income, race, class or culture. Suicide is uniform in its indication of misery. When the hive is sick, it is sick for everyone.

Detroit, as a prime missile target, is at that level, one big city of death. It is in the species' self-interest to collectively defend itself. The species faces the material presence of doom and should collectively defend itself; it has no other choice except non-existence. Eradication of a species proves its collective malfunctioning, not the guilt of individuals or classes.

If not Who, then What is to Blame?

What then is the cause of all the misery? The nickname for Detroit is 'Mo Town', meaning 'Motor Town'. Detroit has the

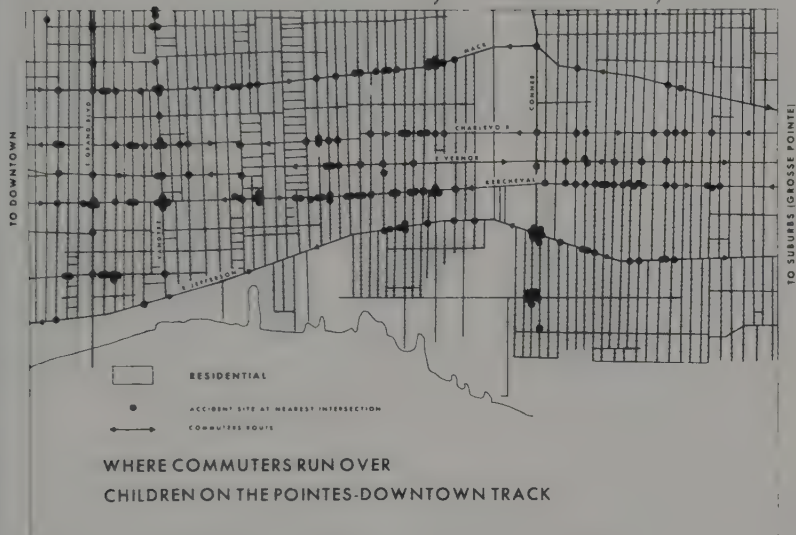


Fig 150



Fig 151

highest ratio of machines to men in the world. No city in the world symbolizes machines as much. Even those underpaid for producing the cars are proud of them. The city of death that typifies Detroit as Mo Town. Workers numb from the stupification of the assembly line boast that Cadillac sweepers have pride over smaller car sweepers. Huge signs on expressways announce the total number of cars turned out for the year like the score of the Detroit Tigers in a World Series. If machines could make people happy, Detroit would be Heaven.

In the city of death neighborhood grocery stores have a policeman. Each drug store has a "rent-a-cop". Store owners are armed. Pistols stuck in the belts of service station operators bulge under their jackets as they bend to fill gasoline tanks. Special equipment is installed such as electric locks on doors which can be activated only by pressing a special button. Peek holes allow identification before the electric lock is sprung free. Shops brick up former display windows. No service with a smile in neighborhoods where the customer is always wrong.

If people rise up against this machinery, the answer is more machinery: helicopters, armoured cars for policemen, special computers for speedy dispatching of law enforcement officers; even Army tanks were needed in 1967. And if enough of this machinery is present then the people are cowed by it and the government announces that it has 'solved' the problem of the inner city.

The machines are worshipped, given more and more of Detroit's physical space. Automobiles and jet airplanes cross space with increasing freedom while children, the least powerful group, are more and more confined. The machine spaces, both transportation and production, dominate the center of the city whereas the children spaces are extremely pinched. Mankind and machinekind have a symbiotic relationship established in contemporary anthropology and contemporary geography. In what sense are the machines spatially different from animals? While the Ford Rouge plant in Dearborn still needs human pilots to deliver raw materials to it, the conveyor systems internally, including a possible fully automated assembly line, approach closer and closer to self-reproducing assembly lines -- a factory to produce other factories that produce other factories and so forth -- reproduction is not that far away. Mankind and machinekind biologically coexist in Detroit but with mankind in service to the machines. This is the cause of the misery.

The 'power structure' in Detroit is as entrapped by machine-kind as the powerless. If automobiles demand more expressways, down come people's homes. Who is to blame for the evolution of machines? It is mankind's great conceit that he, rather than the

achines, is evolving. Machinekind runs amuck over us in Detroit. Machinekind is unbridled, wild and out of control. In face of this apparent-when-thought-about' danger, mankind is divided into those who think they own the machines rather than being owned by them and those who think other men, not the untamed machines, are their enemy. Capitalists are the enemy only in the real sense, that they tend to be the last group to see that worshipping machines over children does not work.

Toward a Human Detroit.

Geography is a marvelous instrument for teaching our fellow-men about the real nature of the crisis of Detroit. What parts of the city do men most enjoy? The parks are the most natural part of the city, natural in the sense of being least dominated by machines. Even an abandoned lot is preferred by children to built up' (torn-down-of-life) areas. Planners need to make maps of machine and children spaces. Plans should be drawn up to cage machines and liberate children and therefore everybody. Detroit needs a safely buried subway and less surface-dividing, noisy, dangerous expressways. Detroit needs parks free of automobiles. It needs paths safe for bicycles only. It needs to feed, house, educate and love all its children. It needs a new name, from 'Motor Town the Terrible', with one of the highest murder rates on the continent, to 'People Town the Peaceful'.

I.2: The Black Salvation of Canada.

Many Canadians perceive Canada as being barely independent of the U.S.A. However, all the winds and influential forces do not blow from the south. There is an occasional northern breeze and historically, at least, one northern blizzard.

A: Northern Blizzards.

Canada was the center of an innovation that rocked the continent: emancipation, freedom from slavery. The U.S.A. has had a peculiarly savage history and maintained slaves for over a century after the French had abolished slavery, even some years after abolition in the British Empire.

It is discouraging that "the primate city" of Canada is New York. Canadian artists, playwrights and ambitious young men, all head there or to Hollywood since these cities are the centers of continental creativity, the communication centers, the centers of innovation. Hågerstrand's work on the spread of innovations using Swedish data shows a non-city, non-hierarchy spread, by word of mouth, for agricultural innovation. Other innovations do not reflect the urban hierarchy. It is a reasonable hypothesis that as a country is urbanized the urban hierarchy becomes more important in the diffusion process relative to rural areas.

A punctiform rather than an areal pattern of spread should therefore appear. The geography of innovation historically, when the continent had an overwhelmingly rural distribution of population, should be much different to the geography of innovation today when few farmers are left on the land.

Today the centers of rural innovation are the cities, almost exclusively, and innovations spread from city to city. In terms of time distance or ease-of-communication distance, cities are often closer together than the intervening countryside. It is often easier to get from Toronto to Montreal by plane than to Kingston halfway between. So the countryside between cities is more distant than conventional maps show.

The countryside is backward. If one plots the spread of innovation on a map it will show isolines of time going back into the countryside; the farther into the hinterland, the farther back in time. Reactionaries know this. The geography of reaction, whose cultural form is called 'nostalgia', is to mobilize the backward rural areas, capture provincial towns and march on the progressive centers. The geography of Hitler's strategy within Germany was to concentrate in backward and rural Bavaria prior to 'capturing' its city, Munich. From there he marched on Berlin. Nixon's strategy, aptly called 'The southern strategy' was to consolidate the racist rural base in the south and then its provincial centers; then to seize the eastern establishment centers, Washington D.C., New York City.

In the internal geography of cities, the infant mortality rates show three distinct sub-cities, the cities of death, need and superfluity. The strategy of the reactionaries is to use the political-geographic base in the suburbs to make an alliance with the city of need against the city of death: the rich and the hard hats versus the blacks in the U.S.A. When things are moving progressively then it is the city of death and the city of need versus the city of superfluity. So the geography is consistent. Outward from the city center one moves to increasingly backward rings through the suburbs, out into the rural and small town provincials and ending in the most remote and backward of places.

Inner City Creativity.

Before leaving the point of the special productivity of culture innovation in the city core, it must be emphasized that the poor are not culturally deprived. The Globe Theater was in the south end of London, the 'wrong side' of the river from Shakespearean days till now. Artists' colonies do not locate in the suburbs but in the slums. Starving artists often started as starving children. They are not refugees from the suburbs in an underpaid trade; they are from the slums. The culture of the poor, be it Charles Dickens or the Mo Town sound, is the dominant culture. The rich preserve everything, the 'correct' language, the 'conventional' architecture. They tend to preserve

the past in endless restorations. A culture of restoration is hardly avant garde. The poor were always poor, mostly; so they do not look backwards and therefore are the innovative culture. Their hope lies in the future. The wave of the past, nostalgia, can never be the wave of the future. Therefore, in the end, the poor dominate the rich. Mapping where artistic and other cultural production actually occurs in a city is instructive.

Progress is made in the inner city. If the inner city is crushed, oppressed, destroyed - then so is that nation's progress. So the geography of progress is to articulate the city core and let its example and power extend to the nation. Vanguard geography is the defense of the species in the inner city. This is where the blacks live in the U.S.A. Others live there but the percentage of black people in the inner city is a higher percentage of their group than is the case for any other group.

How Ideas Spread.

Before establishing a modern day strategy of innovative spread from Canada to the U.S.A., the historic example of this 'gale from the north' must be established because Canadians in general and black Canadians in particular are not familiar with the magnitude of Canadian influence on the U.S.A.

The commonality of the spread of innovation from the earlier rural days to present urban days, is that a man will change his mind almost exclusively on what he hears by word of mouth. This is the overwhelming and startling result of Hågerstrand's innovation work in Sweden over the years. In a classic micro-study of the spread of innovation among farmers, Hågerstrand proved that, depending on the threshold of resistance, farmers had to hear face-to-face of the innovation one or more times. Innovation spread from Denmark, a country that is usually more advanced than Sweden in agriculture, across the Skane of southern Sweden, then up the Swedish Baltic coast to Stockholm, then westward down the Swedish lowland in an inverted "J" on the map. This was always the pattern of innovation. There was a repeat of this diffusion of agricultural improvement time and time again. The Swedish lowlands were always last to receive the improvement. And this was so in spite of the fact that the Swedish agricultural service, the governmental educational program for farmers, worked in a hierarchical geography and uniformly introduced the same invention across the nation. The farmers nearly ignored the governmental experts, the media, the printed word, the teachers, the professors; instead they relied mostly on word of mouth.

The Grapevine.

Among blacks this method is called 'the grapevine'. The term 'the grapevine' is an ancient, slave term and 'the grapevine', the oral medium, the word of mouth method was anchored in Canada at one end and the 'Deep South' at the other. What flowed north on the

'Underground Railroad' was less interesting, than what flowed south. Down 'the grapevine' from Canada came 'The Word', the innovation, plus trust—since one got the message from someone one knew very well and could take revenge upon if lied to over a life and death matter. Unlike newspapers, such as the American abolitionist Liberator or the almost unknown, even in Canada, but equally important Canadian, The Fugitive out of Amherstburg, one can trust face-to-face messages because of the accountability of the message carrier. If a newspaper or television lies, what recourse does one have? They are remote one-way, non-accountable media. If a man lies face-to-face, steps can be taken. Thus, 'the grapevine' really spread the Canadian message south. With only a handful of blacks in Canada, the important aspect of 'the grapevine' was that the entire U.S.A. was kept informed, especially the black south.

The Power of Slaves.

Few people in N. America seem to understand the power of the black south. The very term, 'The South' is always construed as 'The White South'. But the black south won the Civil War for 'the North', and for Canada. Even before the Civil War began the American army was concentrated in the south (and away from Canada's borders). The forts, the artillery, the officer corps were all southern and in the south to guard against slave revolts. The slave revolts were inspired from examples even further south in the Caribbean. Briefly, the French Revolution freed the slaves in the French Caribbean and set up black republics on Haiti and Guadeloupe, (Martinique had fallen into British hands and thus remained firmly in slavery). After the British, among others, succeeded at Waterloo in reimposing the Bourbons on the French nation the French tried to reimpose slavery on the two French West Indian former colonies, now black republics. Large armies were sent to both Guadeloupe and Haiti. After a generation of freedom and their own republics one can imagine the ferocity of the resistance to these French invasions. In Haiti the French were barely defeated; in Guadeloupe they barely won.

How Canada Benefited from the Resistance of Slaves.

The example of black freedom in Haiti led to many slave revolts in the south of the U.S.A. and a military build up of American forces. Thus the innovation of black freedom in the French West Indies inspired the millions of blacks in the south of the U.S.A. to revolution and pinned down the American army in the south inhibiting America's northern expansionist ambitions. If a graph is made of the number of military incursions into Canada by the Americans it can be seen that before, during and immediately after the Civil War, the military pressure was off Canada. Later in the century British Columbia became threatened by American military incursion. The period of the Civil War got the Americans fighting among themselves over the blacks so that

Canada was saved for that period. Canada may have been invaded during this period without this 'diversion'.

Mexico had for centuries been established in what is now south-western U.S.A.; yet was conquered by the 'Manifest Destiny' of American imperialism. 'Manifest Destiny' had no biases toward any cardinal direction. Americans did not 'go west', they went anywhere they could, south into Mexico and Cuba, and many went north. Their army threatened to follow them north just as their army followed them into Mexico, and into hundreds of Indian nations. Would Canada's fate have been different?

The Historical Geography of the Underground Railroad.

Look at the geography of the operation in some detail. The Rengerstrand model of diffusion would show the innovation-freedom spreading from the north, (through what the Americans call "The North", meaning north of their south, but south of Canada), to the south and finally to Dixie - the slave states. The map does not show an idea to spread. Face-to-face contact via the 'Underground Railroad' did. 'The grapevine' electrified the U.S.A. by electrifying the black south. Harriet Tubman was a southern black woman, an 'underground railroad conductor', commuter, going back and forth from St. Catharines to various parts in the south. She brought up slaves; she took down the idea of freedom, 'The message'. She was admired by millions of Americans, black and white. Her message "freedom in Canada" is still being taught by word of mouth and media throughout the U.S.A. Was she really an American? Or is she not a Canadian? How were these things measured in those days?

The inspiration of Canada in the U.S.A. was convulsive and conclusive. Josiah Henson, who established Dawn, near Dresden, was Canadian. This black Canadian was as important as Frederick Douglass, the black American. Yet not even the black Canadian school children of Dresden know of him, a pedagogical disgrace. Henson's autobiography was used by Harriet Beecher Stowe for the propaganda piece of the Civil War, Uncle Tom's Cabin. Henson met personally with Queen Victoria. Why did she grant this Canadian an audience? Only her meeting with Frederick Douglass is remembered each, but her meeting with Henson has the ring of political genius. Why dignify the black abolitionists with a royal audience?

What happened to these black Loyalists? Most returned to America, first to fight in the Union army which removed most of the able-bodied men in 1861; then most of the rest followed as 'reconstruction' administrators. The fugitives were among the bravest of the black Americans. The percentage of runaways was

low and their fate hideous such as crushing their thumbs on a vice. Their Canadian freedom had given them training in administering their own affairs. Henson set up a village at Dawn, containing a school, grocery store, hospital, refugee house, factories and mills. So the refugees returned to America. Theirs was not a mass migration to Canada but a 'semi-mass visit'. The 'Underground Railroad' was a communication system more than a migration system.

If black Canada was central to the 'Underground Railroad' and the salvation of Canada in the 19th century, whites cooperated. Inside the U.S.A., the Quakers and Puritans, (who mostly converted to Unitarianism and, in turn, to Congregationalism), ran the white side of the 'Underground Railroad'. John Brown's father and brother were Puritans and fighting slavery had been a long tradition in the north. The 'Underground Railroad' existed as soon as there was a population in Canada to whom slaves could be spirited. The entire north mobilized and trained around the 'Railroad'. John Brown, the most famous white conductor, fled from Kansas after liberation was first tried, across Iowa, through Chicago, then to Detroit. He held a series of nationally significant meetings both in Detroit and at Chatham on the Canadian side of the border. He urged armed resistance to slavery.

Canada was an idea. The word 'Canada' took on the same mystical meaning as 'The North Star'. For millions of American slaves 'Canada' meant 'freedom'. This idea was Canada's great impact on the continent in the 1850's, not the 40,000 to 75,000 runaways who found refuge in Canada from American slavery. Canada was ideology, an idea, not merely an immigration terminal.

Canada as a Military Invader of America.

Nonetheless, Canada's help in abolishing continental slavery had some military aspects. At the Chatham Convention in 1858, a program of mountain guerilla warfare was proposed by John Brown, to free the slaves. Spain, the Caucasus and the Maroons of Jamaica were studied for tactics and a grand strategy unfolded. "The plan of campaign as promulgated at Chatham, was, to use the mountains and swamps of Virginia as places into which slaves could be induced to escape,.....a chain of counties extending through South Carolina, Georgia, Alabama and Mississippi, well fitted to receive and conceal refugees (was identified)". Hamilton (1894); brackets added.

Brown, chose martyrdom to guerilla warfare. Canadian blacks, in companies, made American soil, with the intent of marching far into the heart of the American south to destroy slavery.

According to Stanley J. Smith of Ingersoll (in conversation, Toronto, 1974), Brown went to many of the black settlements in Canada, including less prominent places like Ingersoll, unmentioned in historic literature. Smith interviewed many sons and daughters of "Brown's Liberation Army" as it was officially called and insists that from sixty to seventy men from Ingersoll alone formed a contingent to march to John Brown's aid when the news of Harper's Ferry reached them. They had arrived in a company at Port Stanley to embark when news of Brown's capture turned them about. A similar company from Chatham was in Detroit when the tragic news caught up with them.

Of the twenty-two men in the Harper's Ferry raid, many had been to Canada and three were Canadian. Two white men from Markham near Toronto (William H. Lehman and Stewart Taylor) were killed and a third Canadian, a black (Osborne P. Anderson of Chatham) narrowly escaped with Brown's son, Owen, (see Hamilton (1894)).

The effect of Canada's participation on the 'Slave South' was horrific. "After John Brown's raid at Harper's Ferry, Governor Henry A. Wise of Virginia had hinted at international subversion of the American (i.e. Southern) way of life by 'sectional organization' originating in the Canadas and he had predicted that the war on abolitionists would be carried into the Negro welcoming provinces. He probably agreed that there was no country in the world "so much hated by slaveholders as Canada", (Ward 1855). De Bow's Review summed up abolitionists as "the vile, sensuous, animal, brutal, infidel, superstitious Democracy of Canada and the Yankees." Winks (1960): second bracket added.

Like all oppressive systems, slavery must continuously expand. The system is a dog-eat-dog system and new dogs are needed each day. Slavery moved westward in the U.S.A. The routes of westward slave expansion are never shown on American maps, just free trails like the Erie Canal route, or the Oregon Trail; but slaves and their masters went west too, from breeding farms in Virginia to Mississippi and Texas. These trails where the migrants clanked as they walked need mapping. Slavery also kept probing north. At one time, under the French, Detroit had slaves. Montreal had slaves, as well as a later 'Underground Railroad' terminal. These territories were lost to slavery but slavery did not stop its ambitions for reconquest. The northern white worker fought out of self-interest. If black slavery were allowed to re-establish itself in the north, what would happen to white wages? In the south, what were the wages of the 'free' whites of sharecropping Mississippi? If all the U.S.A. went reactionary, back into a slavery that had to keep trying to expand to maintain itself, what would be the threat to free white labor in Canada? Self-interest was clear in freeing the slaves but a sense of moral rightness, an ethical feeling, also existed.

Scientists keep inveighing against sentiment proving the existence and power of sentiment. Emotionally, Canada, was against slavery. True, the blacks in the refugee camps were in pretty miserable condition. Wagon loads of food and blankets from Detroit barely kept them going at Chatham. But many white Canadians were in pretty poor condition. There was and is race prejudice among the white Canadians. Canada was no bed of roses for black Canadians, but compared to the U.S.A., the black songs, many still sung, about freedom in Canada, were deserved hymns.

B: Early 'America-Canada' Migrations.

Most of Upper Canada's early settlers did not come directly from Great Britain, but rather from America. In fact, before 1815 when restrictive legislation was introduced in America, 80 percent of the pioneering inhabitants of Upper Canada had arrived from America. Americans migrated in waves to find both a more liberal society and greater economic opportunity in Canada compared to America. This reverses the stereotype of America as the "land of the free" and the "land of opportunity". Earlier arrivals were anti-American, sought opportunity in Upper Canada, whilst later arrivals were opportunistic, attracted by cheap land in Upper Canada.

Go North Young Man.

Beginning in the east and moving west across Canada recapitulates the history of American settlement. After 6,000 to 10,000 Acadians were scattered by the British from 1755 onwards in the first and worst of Canadian expulsions, Nova Scotia was repopulated by settlers from Massachusetts. This resettlement took place immediately before the American Revolution. The United Empire Loyalists, known to Americans as Tories, formed the backbone of the original 'British' migration at the close of the American Revolution. They swelled Nova Scotia with about 30,000 additional New Englanders.

In Upper Canada (now approximately the province of Ontario) three types of Americans pioneered. The first wave was the United Empire Loyalists with monarchical sympathies. After them came "Late Loyalists", attracted by the generous land distribution system. Still later came Americans willing to take any oath or move anywhere for cheap land. By 1813, 80 percent of the pioneering inhabitants in Upper Canada had come from America. For instance, the 'Eastern Townships' of Upper Canada were settled by Americans from northern Vermont who simply went due west from their Vermont homes and crossed the border.

After close to one hundred and fifty years in what was to become the U.S.A., these 'British' were Americans. True, settlers from England directly migrated to Canada after American colonization. But the continued American influx was

also great.

The Iroquois moved from New York State fleeing the revolutionary Americans who ironically copied the Iroquois governmental structure as the model for the new American government, while persecuting the Iroquois. The Iroquois came out of the U.S.A. with the United Empire Loyalists and settled among them in southern Ontario. As the Americans went west the Indians fled north including some of the Sioux with Sitting Bull in the late 1800's.

Other groups sought to escape America but were not lucky enough to get to Canada. For instance, slaves kept running away to the west to join Indian tribes. Oklahoma was heavily black. 'Manifest Destiny' caught up with it. The Mormons fled to unorganised territory in Utah. Generally, maps showing the routes traveled by pioneers in both countries show only internal trails, like the Oregon Trail. They omit such trails as El Camino Real, from Mexico city, settling the area later occupied as "the southwest" U.S.A. (the northwest of Mexico). Canadians might find it flattering to show these routes of freedom from the U.S.A. into more liberal Canada.

The economic motive led to colonizations from the U.S.A. as American prairie farmers crossed the border in search of land. The English speaking component that colonised the prairie provinces contained many from America. From 1897 to 1912 approximately three-quarters of a million Americans settled in the prairie provinces.

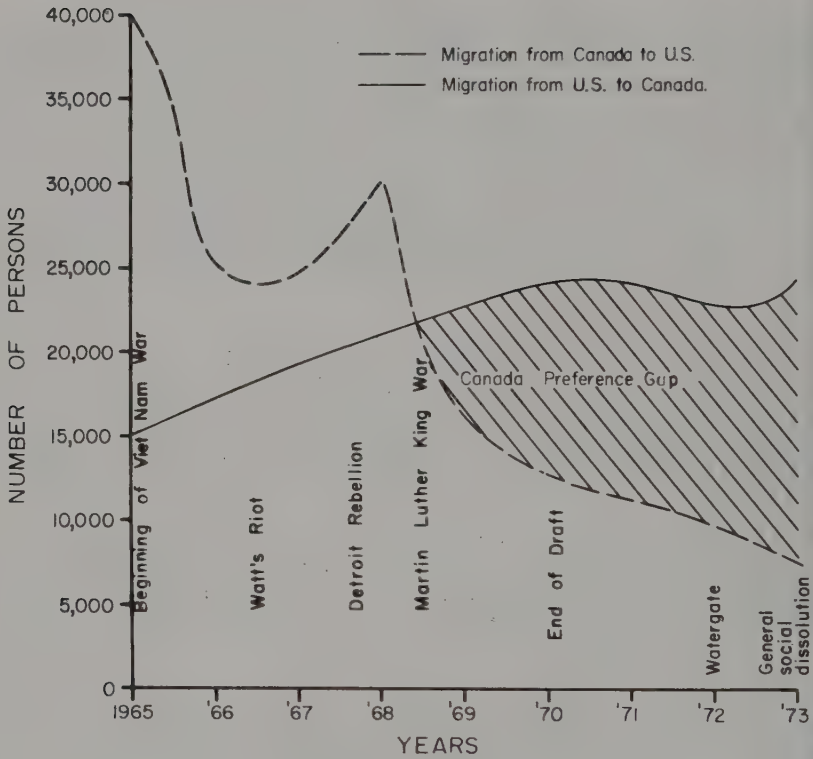
The far west of Canada, like the far west of the U.S.A., was actually settled earlier than the prairie provinces which lay in-between. Gold was discovered on the Fraser River in 1856 and the Americans flooded in from the depleted gold fields of California.

Canadians drove Canadians into America in the suppression of the rebellion of 1837-38 in Ontario and Quebec. Louis Riel found asylum in the U.S.A. in a later period with the crushing of the French-Indian uprising which he led. But these were nothing compared to the waves of slaves, Indians and 'unpatriotic' whites, crossing northwards over the border. The immigration continues as 'draft dodgers' move north to Canadian cities. But, the vital migration was and is black.

C: Canadian Leadership Today.

Canada has not been as passive a receiver of American insult, exploitation and domination as reading Canadian historic-geography would indicate. The 'northern strategy' worked over a century ago and if history is said never to repeat itself, geography usually does. Centers of innovation typically disseminate many

AMERICA DODGERS



Source: Statistics Canada & the U.S. State Dept.

Fig. 152

innovations that follow the same general paths. In this sense, geography repeats itself. Some adjustments are necessary due to population shifts, the continent's urbanization. No longer will the small town appear as 'Underground Railroad' stations like Owen Sound in Canada or Grinnell, Iowa in the U.S.A. The plethora of small town names really reflected the farm nature of the population. The actual stations were not mostly in these small towns but on isolated farmsteads whose nearest town is shown on the map just to establish a recognizable place name. Innovation now goes from city to city which is still from people to people and still mostly by word of mouth. The blacks are still the key group and their geography the essential geography. Canada's role in assisting American blacks has been continuous. For example, in 1905 Dubois helped form the 'Niagara Movement' which led to the formation of America's largest black organization, the National Association for the Advancement of Colored People (NAACP). They met in Niagara, Ontario, not Niagara, New York, as popularly believed.

Spreading Urban Innovations.

Most blacks, American and Canadian, live in big cities these days. They do a lot of traveling from city to city. American blacks come as tourists to Canadian cities. Montreal has been known for a long time among American blacks as the most 'cosmopolitan' city on the continent. Black tourists come for the same reasons as white ones. They like to walk around the streets at night without fear of being mugged. Blacks suffer from more muggings in New York than do whites, contrary to a white prejudice that sees crime by blacks as race war. Black criminals mostly victimize blacks, including blacks raping blacks, blacks killing blacks and so forth. The barbarism of American cities is especially victimizing blacks. Slaves mostly killed each other, some say in sheer frustration caused by their inability to kill their masters. Twisted reasoning appears in twisted systems.

Black Tourists.

Black American tourists are not seeking immigrant status in Canada. Nor could Canada offer employment. Black Americans cannot go back to Africa for the same reason. How would black Africa absorb almost thirty million people? Some black Americans do migrate to a freer country; some black 'Underground Railroad' members so loved their host country that they refused to leave even under the blandishments of generous employment of 'Reconstruction Days'. Josiah Henson's descendants are proud fifth and sixth generation black Canadians. Black American tourists return home with 'The Word'. "Toronto is better than Detroit, much better." "Toronto is better than Buffalo, much better." "Montreal is better, much much better, than New York or Boston." This is true of many American tourists. Canada offers a civilization

lost and dying in American cities. If the white working man from Detroit finds a white working neighborhood better in Toronto than in Detroit, and he does, then what does a black American slum dweller find as his counterpart in Toronto? That is, the differences between black Canadian urban neighborhoods and black American urban neighborhoods are the greatest differences between the two countries.

American black tourists, after seeing all the usual tourist sites, also are especially interested in how the blacks are doing. Never mind that West Indian blacks and American blacks do not get along in the U.S.A., in Canada or in the Islands. They do have tension between them. With Canadian blacks as proud descendents of several generations standing, the tension is three way. Nonetheless, they have a great commonality, their black race. In the eyes of the whites, where they exist as a minority, they all look alike. If they can force distinctions to be recognized among themselves, they cannot force the whites to distinguish. This is understood by all blacks,

So the black American tourist looks around and compares what he sees in Toronto to what he sees in his backyard. The comparison is incomparable. Where is the glass that glistens in all black American slums? Where is the ghetto, the forced geographic concentration of the blacks into one section of town? Surely, the ghetto must be starting somewhere. Open housing in Toronto means open schools without bussing and nearly open employment. The black Americans not only see this; they are beginning to show interest in special black Canadian events. They are beginning to mingle as tourists with black Canadians. 'The Emancipation Celebration', commemorating the 'American Emancipation Proclamation' even in the Canadian town of Windsor, has been a Detroit black celebration for many years. Now groups of black Americans are making pilgrimages to Dawn and Josiah Henson's grave and village. Black Americans come in increasing numbers to the carnival on the Toronto islands. A rather large black American community has established itself in the lower part of town in Montreal. The 'Underground Railroad' is starting to work again; this time 'the grapevine' is to the center of American cities, the key innovation locations.

Big City Hatred is Undemocratic.

Consider the political geography of the continent without racial overtones. What happens if the cities are not given political power relative to their populations? A 'rotten boroughs' system develops in which the increasingly empty farmland is given relatively more power over the increasingly populated cities. If this process is not reversed it can become the political geography of reaction, even fascism. If cities are the place where most people are, but are increasingly powerless, then democracy is dying precisely in proportion to the gerrymandering. If the problem of

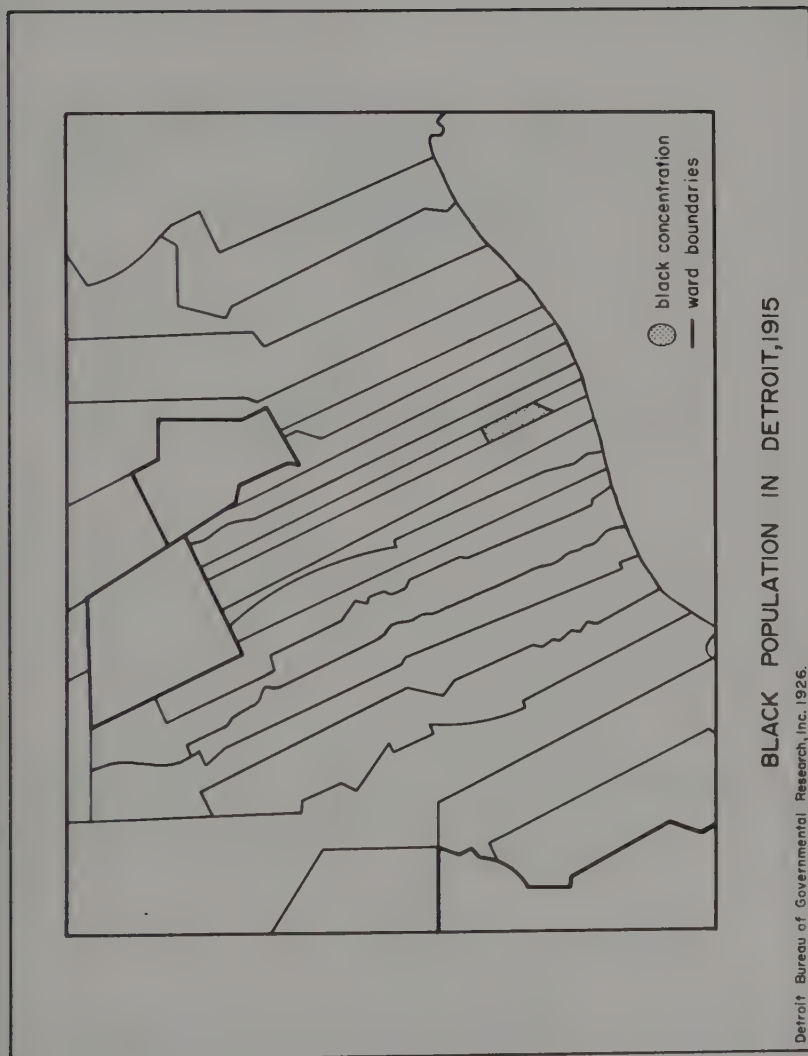


Fig. 153

need increasingly shifts from rural to urban slum poverty, then the increasing powerlessness of the cities is precisely proportional to the gerrymandering and represents a growing national inhumanity. If the problem of innovation, a big city centered activity, is not recognized and instead the down-the-Hägerstrand-gradient-of backwardness regions are given power over the progressive big city, then the wave of the past becomes the wave of the future, an explosive impossibility. Life moves forwards not nostalgically backwards.

Fortunately for the N. American continent and the world, there is a 'northern strategy' in the 'Canadian Alternative'. The possibility of increased urbanization of political power; therefore the democratization of Canadian national life is important in the relatively civilized quality of Canadian life compared to the urban, and therefore national, morass in the U.S.A. Part of the strategy to Canadianize American cities would be to export to America the Canadian strategy of national and ethnic expression.

Maintaining rural-agricultural political power over urban societies produces in the U.S.A. a 'southern strategy' and a 'middle America' strategy. Politically the backward and depopulated rural forces are assembled using their disproportionate gerrymandered power to join with the suburbs to march on the inner cities especially of the eastern seaboard.

Add racism to the picture, with the blacks being to N. America what the Jews were to Central Europe, then the seriousness of urban nationalism emerges. Hidden landscapes move from a sensitivity with perception to a community's right to articulate itself, to an urban expression of nationalism to an international defense against a potential radioactive fascism.

D: Black Canada, Black America.

Several maps make clear the difference between Canada and the U.S.A. The legacy of massive chattel slavery continues. Only in Halifax, a direct importation of Virginia United Empire Loyalists with their slaves, has Canada had the racist historic geography of 'The South'.

Detroit's Racial Geography.

The first map is of the racial distribution in Detroit. Huge areas of Detroit, square mile after square mile, are solidly black and slum. No matter how integration is defined, by proximity, by attitude or by change, Detroit is as ghettoized as Johannesburg in the Union of South Africa. To become slightly technical, a racial ratio of fifty-fifty is an integration ratio of one hundred percent. If the racial minority is twenty-five percent, the integration ratio is fifty percent and so forth. Merely doubling the

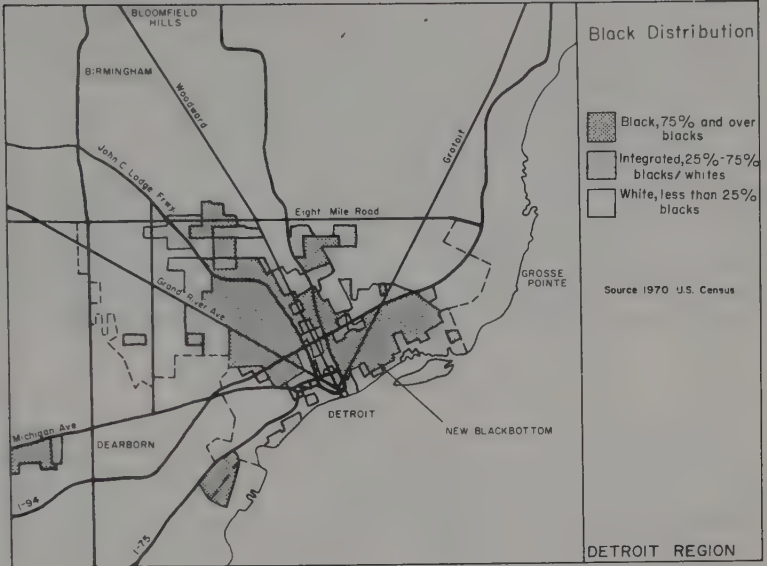


Fig. 154

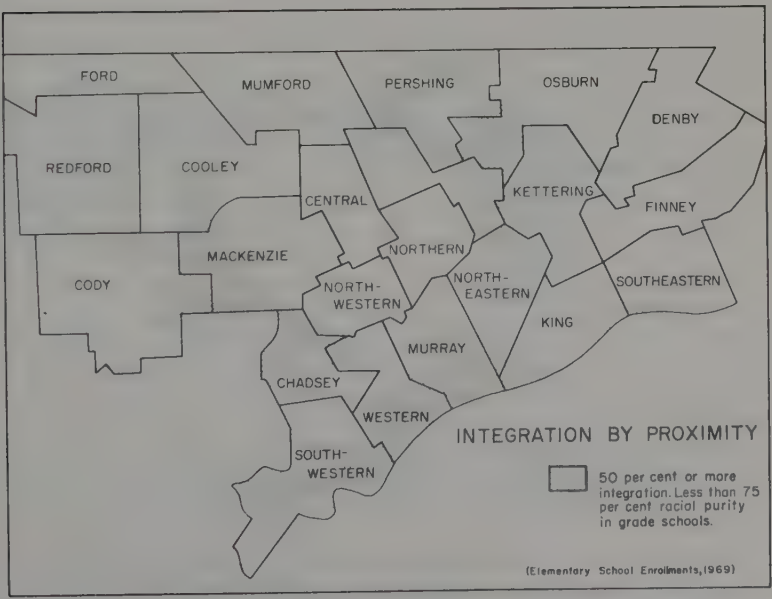


Fig. 155

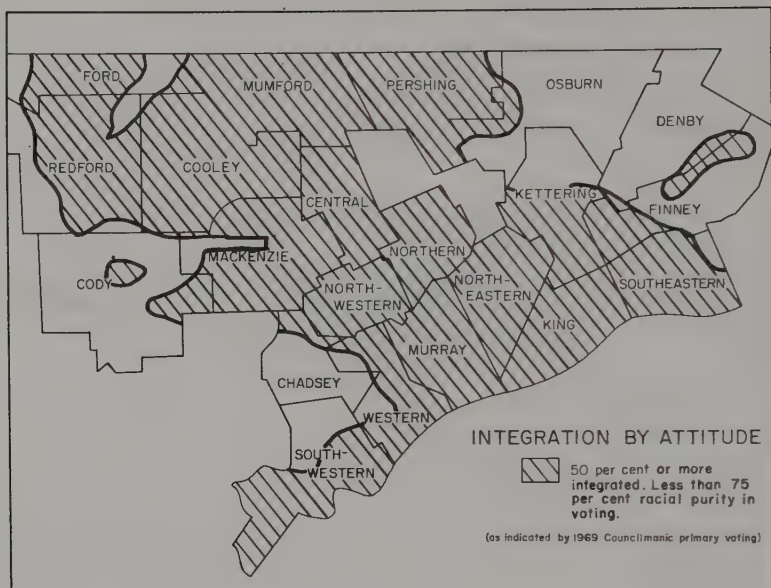


Fig. 156

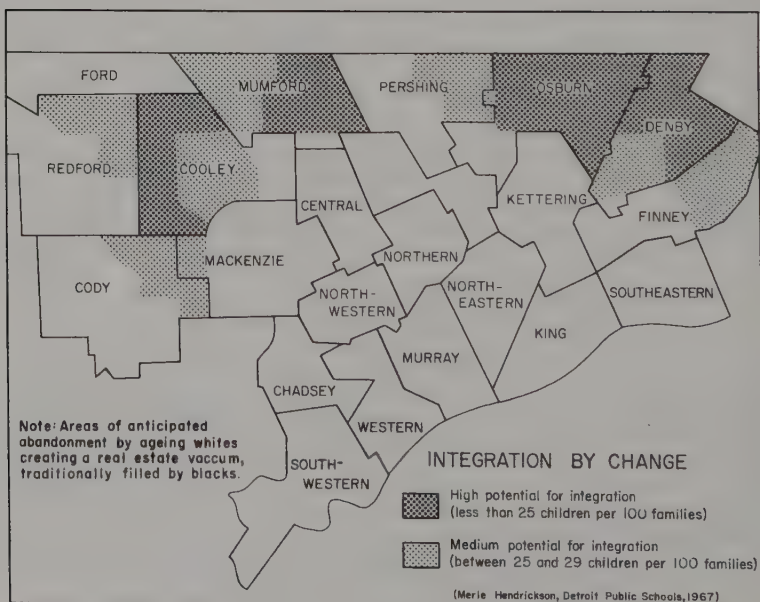


Fig. 157

minority percentage yields the percentage of integration. Detroit is massively segregated and getting worse on the basis of residential geographic proximity. The attitudinal integration map is drawn from voting records where the population had enough candidates to vote black only or white only. This map shows large correlations of tolerance among the blacks; only northwest Detroit showed a white counter tolerance mainly based in Jewish and liberal Catholic communities. The integration by change map is based on the definition of integration that reads, "the time between the first black family moving in and the last white family moving out". Even this cynical and minimal integration is found in relatively small areas of Detroit mostly where older white communities reaching retirement age create a local glut on the market. The real estate industry fills the vacuum of white abandonment with young black couples at highly inflated prices achieved by means of 'block busting'.

Toronto's Racial Geography.

Segregation in Halifax clearly shows the effect of importation of southern white American bourbons with their 'property' in the 18th Century. Torontonians maps of the distribution of blacks are entirely different to those of American cities and Halifax: typical of the geography of race in Canadian cities. There is no ghetto. The first map shows the racial pattern of Toronto as dispersed. Yet many Torontonians feel that there is in fact a black ghetto forming around the Bathurst and Bloor area. The second Torontonians map shows the distribution of black businesses. They are much more concentrated than black residences. Seventy-five percent of black residences lie in a sixty square mile area and seventy-five percent of black businesses lie in only an eighteen square mile area. The businesses are more than three times as concentrated as the residences. This explains the heavy concentration of black pedestrians in the Bathurst-Bloor area. They are there to shop and socialize in the black center. This gives passing whites and blacks an impression of a black residential ghetto behind these arterials which detailed field work revealed to be false. Toronto's perceived 'ghetto', the last of the series of maps, shows one black for every ten whites.

It is not a matter of percentages or absolute numbers of 'them'. Toronto at one time did have a black ghetto when both the percentages and absolute numbers of blacks was much lower. Halifax has a ghetto with only thirty thousand blacks as opposed to Toronto's seventy to one hundred thousand. The black community in America's Minneapolis in the 'liberal' north of that country is smaller in total numbers and percentages than Toronto, yet Minneapolis, Minnesota is as ghettoized as Jackson, Mississippi.

The black community of Toronto is divided on the question of whether to voluntarily segregate themselves or to integrate with the larger population. Part of the argument is attitudinal. Generally the more militant blacks, those who believe in a black power

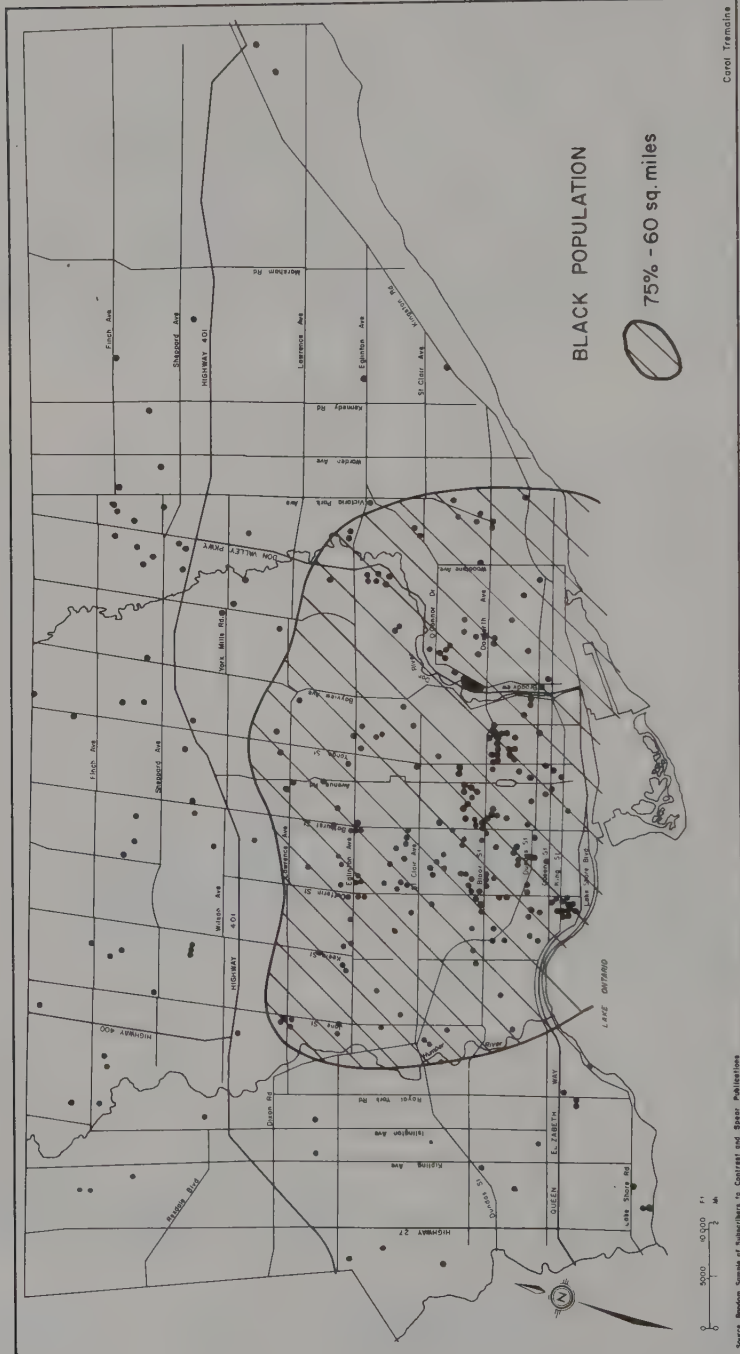
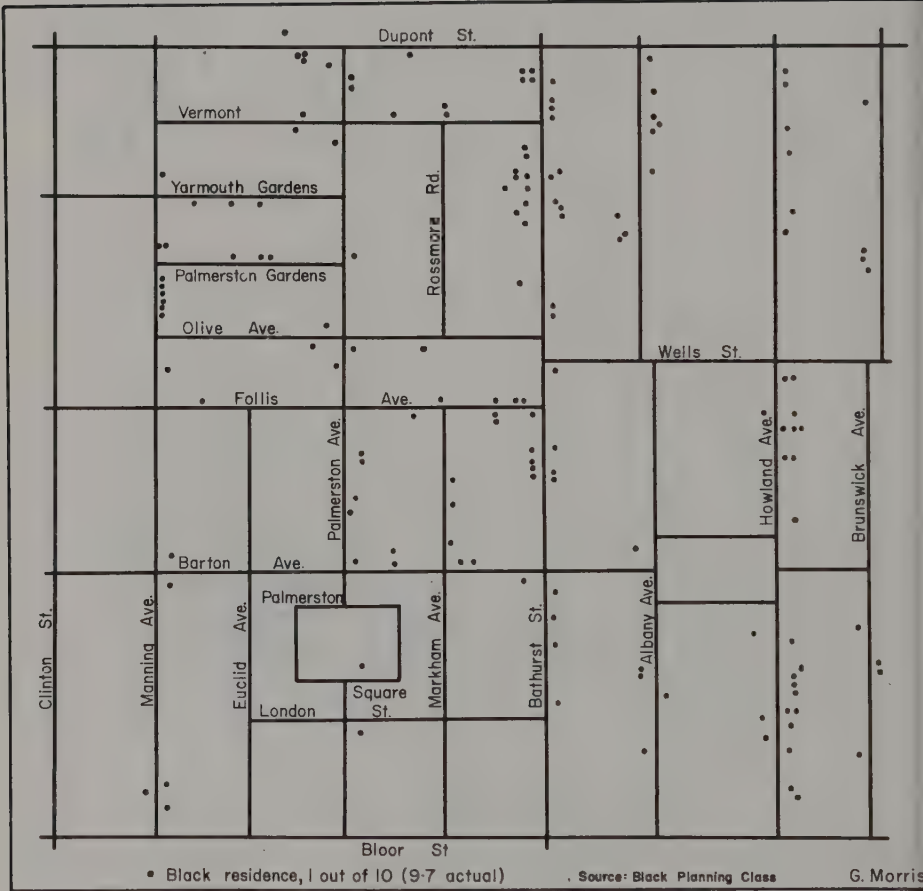


Fig. 158



TORONTO'S PERCEIVED "GHETTO"

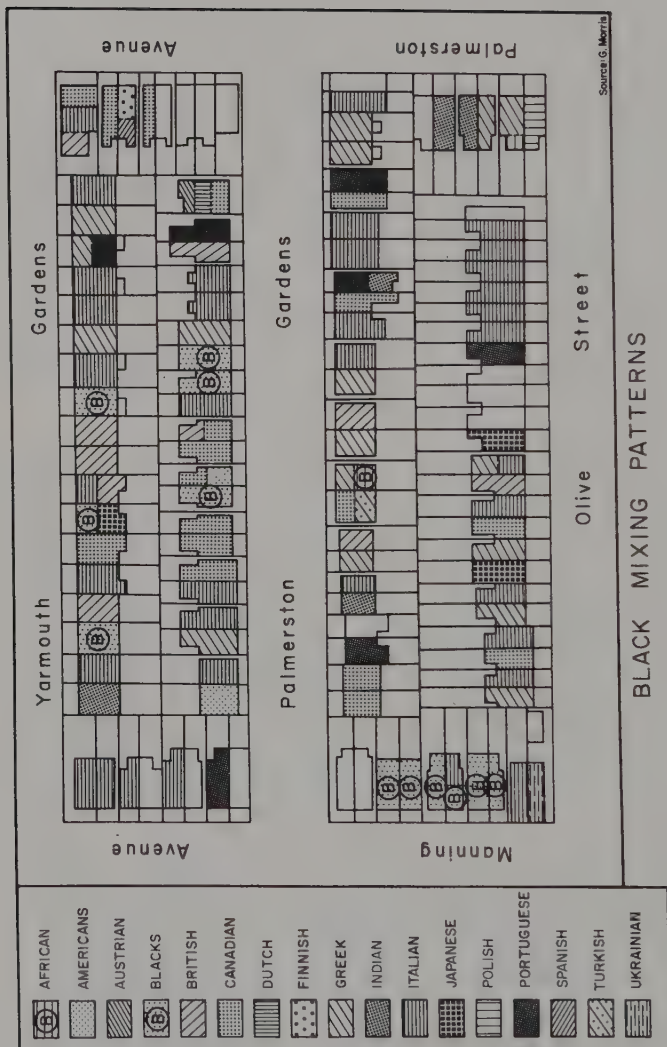
Fig. 160

approach feel that the community of interest among blacks cannot be articulated without a community of geography. Scattered blacks cannot obtain power, partly on the purely political-geographic grounds that they cannot fill up a ward with black voters. This group seems to feel that those who disagree, who are scattered, are naive and will learn that the blacks must come together out of negative and disappointing and sometimes even violent experiences among the whites. The integrationists, often from the W. Indies with its much lower standard of living, feel that by scattering among the whites they are assured of white standards of living in local facilities, schools, services, shopping malls and so on. The whites will not discriminate against a neighborhood if only a few blacks would thereby be punished and a lot of whites. Blacks of the integrationist sort also are consciously bending to white fears of blacks congregating. Scattered blacks do not threaten whites as blacks know even better than whites. The integrationists are often middle class and have had some successes in fulfilling their ambitions. So the argument rages inside the black community. The essential difference between the arguments in Toronto and Detroit is that in Toronto the blacks have a free choice. They can group or scatter voluntarily as they see fit. To date they have widely scattered, voted with their feet, for integration.

In great detail the black population in the sample area of the inner city shows six blacks contiguously on Manning Ave. But the same map also shows six contiguous Italians. It would be astonishing not to find six Scots adjacent or six Americans for that matter somewhere in Toronto just by the laws of probability. But these minor groupings are not nuclei around which other blacks will cluster. Rather, blacks in these groupings or in apartment house groupings tend to get most uneasy, not with each other's company, which they enjoy, but with fears of cut backs in standards if they ever geographically group as in the U.S.A. So they tend to rapidly disperse themselves motivated by this fear. Individual apartments along Bathurst St. and especially Vaughan Rd. show some of these minor concentrations but typically these are people in the process of dispersion not concentration as the two maps of Grant Morris's W. Indian friends, an unscientific but typical sample, show. W. Indian blacks move initially into Toronto's traditional immigrant reception area of rooming houses around the 'Kensington Market' region and for a period of time find comfort and support in each other's company. Following their rapid recovery from cultural shocks and the acquisition of steady employment, they disperse throughout metropolitan Toronto. In American cities, southern rural blacks arrive in similar traditional reception centers but then pathetically spend generation after generation moving about inside it.

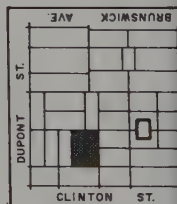
II: Toronto-Detroit: A Tale of Two Countries.

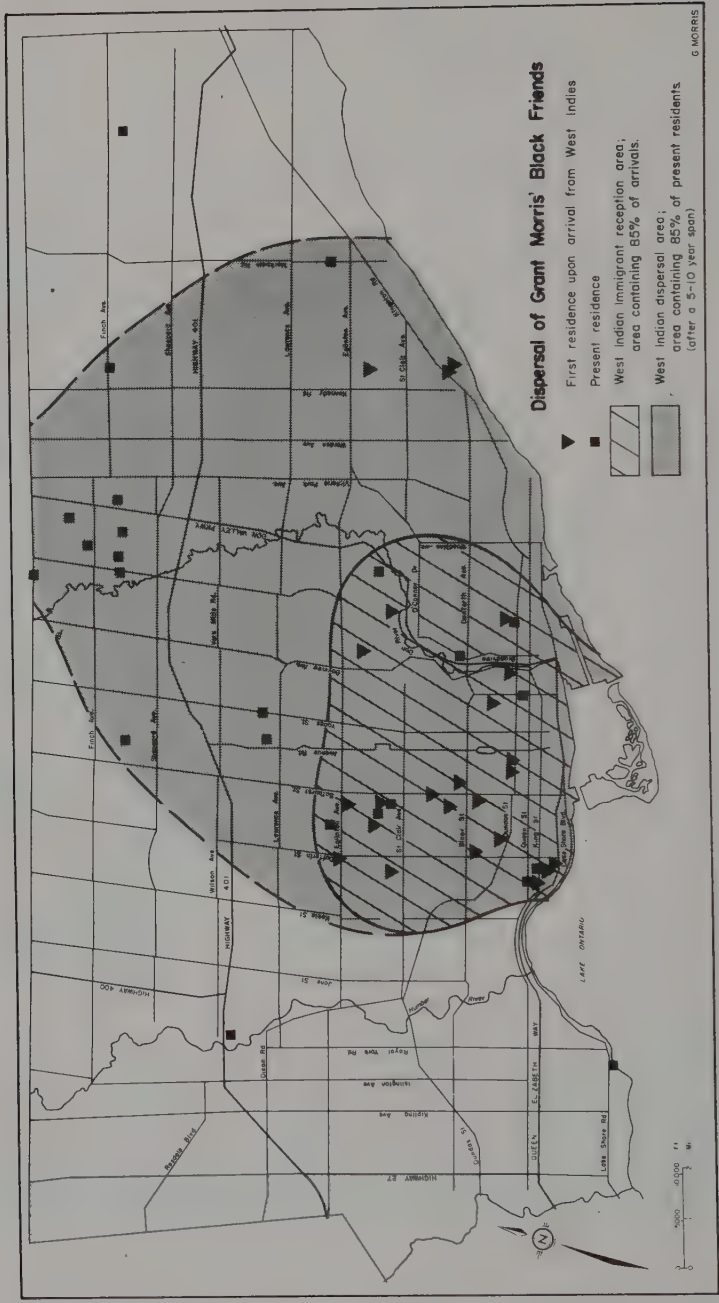
It is instructive to look to American cities to see what went wrong. Detroit had a ward system of government based on French long lots until World War I when blacks and Poles began to fill up



BLACK MIXING PATTERNS

Location Map of Study Area





G. MORRIS

Fig. 163

ards on the 'East Side' and were in a position for 'Common Council' participation. The blacks were a tiny minority in Detroit at the time. Racism depends on the percentage and absolute numbers of racists and their victims. Racists should not be allowed to bunch. Racism shows no correlation whatsoever with the number of victims but rather with the racists' need for a scapegoat such as occurs during times of economic collapse. The simple gerrymandering device used in Detroit in 1919 was to announce that bigger government is better government and introduce a citywide election system. Thus racism was used to destroy democracy for everyone. This also kept blacks out of the government and in the streets until the late 1950's. As the city itself threatened to go black, the cry was again heard in Detroit for 'metropolitan efficiency'.

A: Democracy and Racism.

It is not the case that people realize that sophisticated, abstract, theoretical, philosophical arguments contain their fate: that their political enfranchisement is being affected where it counts, in the cities which have become America. The blacks in Detroit did not riot when they lost the ward system. The city newspapers put up a din of 'reform' and 'efficiency in government'. The effects were indirect but nonetheless inevitable and explosive. The blacks, without power, were left poor. What is the purpose of power other than to redistribute wealth: to cut the pie differently? So the blacks rioted, repeatedly, till today Detroit is an armed camp. What are the costs of policing a city seething with racial class warfare, with physical guns prominently displayed? To celebrate New Years Eve, in the last few years, the black community of Detroit, mile after mile of the solid ghetto, hundreds and hundreds of thousands of people, go into their backyard at midnight and fire off tens of thousands of automatic weapons.

The corner drug store has an armed and uniformed policeman. There are as many private-commercial police as public ones, a division worth). The corner dry cleaner has standard 'made-only-in-America' counters. These absolutely seal the owner from the customer. A solid steel counter is topped by a counter to ceiling bullet proof glass. A little hollow in the counter under the glass enables the customer, (who is always wrong in these regions), to slip money under without being able to put a pistol in the dip. To pass one's dry cleaning through there is a device similar to that used by an astronaut going into a spaceship. First, the owner locks the door on his side of the air lock; then the customer can unlock his side and put in the dry cleaning; then his side automatically locks as the owner's side is unlocked.

Some Things Toronto Does Not Have but Detroit Does.

Toronto lacks many of Detroit features. It lacks a comfortable rat region. So few rats exist that no rat bites have been reported in over four years. Detroit lives in fear of rats,

RAT REGION, Spring 1974



Fig. 164

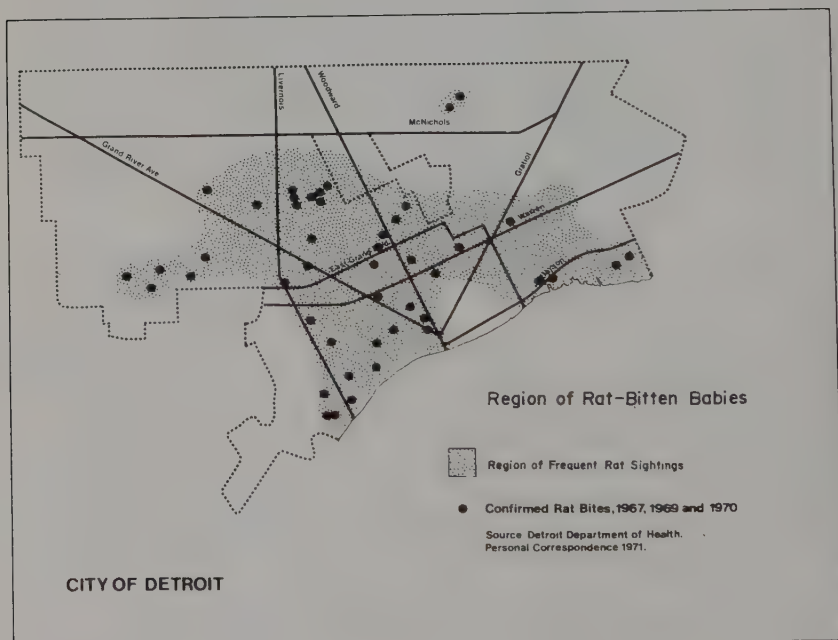


Fig. 165

at least significant sections of Detroit do. In Detroit, the inner city is full of glass. For mile after mile not one expansion crack in the sidewalk is free of slivers of glass. The term is glass impregnated, as are the alleys, school yards and so on. There is no glass region in Toronto. The toyless region is missing. Though doctors are not uniformly distributed in Toronto, there is no doctorless region as in Detroit. In Toronto there is no region without 'movie' theaters. Murder is so common in Detroit that it is personal; everyone knows someone involved. In Toronto it is a strange item in the newspaper.

How to Become More Like Detroit.

In more civilized countries than the U.S.A., the poor are given political power so they can stop being poor. So the question of neighborhood control in Toronto is again back at the international level of importance. If Toronto wants to become more like Detroit, then it should gerrymander the poor out of power. If Canada wants to become more like the U.S.A., then let Toronto follow the political geographic history of Detroit.

The Art of the Scientific Comparison of Detroit and Toronto.

The comparison of Toronto and Detroit must be raised from the level of political rhetoric to science. Despite what geographers call 'areal differentiation', almost no systematic comparison is accomplished. It is not accurate to say that any two cities paired between Canada and the U.S.A. would yield exactly the same results. American cities do vary between themselves as do Canadian. But still there are enormous differences between practically any American city compared to any Canadian one.

Not all the differences are geographic; for example the quality of education. Still, many urban differences (perhaps a third) appear as a landscape difference and thoroughly amenable to geographic technique. It is proposed here that, at least a geographic start, a systematic monitoring of the differences between cities, be made. The two cities selected are Toronto and Detroit. The two are popularly often compared, but pure geographic feasibility is also important. Urban exploration started in Detroit and now centers in Toronto. Both professional and community support exists in Detroit for the work and a considerable body of data have been accumulated on that city. Toronto is also establishing a body of data and community contacts. The two cities can be compared.

B: Detroit and Toronto: A Factorial Comparison.

Can we construct a map that would indicate those areas of Toronto that are most 'Detroit-like' - an Americanization index? Conversely, could the Canadianization index map of Detroit be drawn?

The criteria that would be used to derive the index might only

be obtainable at the micro-scale of geographical exploratory work; but the geographer would need such data for all locations in each city - a task demanding a tremendous amount of energy and research support. In the absence of such support, an alternative strategy is to use whatever data are currently available: in this case, the census data for 1960 (U.S.A.) and 1961 (Canada) were examined.

The social geography of urban areas has been extensively studied by sociologists and geographers, largely stemming from the pioneer ecological work carried out by Burgess and his associates in Chicago in the 1920's (Johnston, 1971a). Later research by Shevky and Bell, ("Social Area Analysis"), has since been systematized, largely by geographers utilizing a common approach and methodology, as "factorial ecology" (Rees, 1971; Johnston, 1971b) since it rests on the application of factor analysis to urban data (Rummel, 1970). A full discussion of the many problems involved in factorial ecology is beyond the scope of this report, but an excellent monograph on Toronto (Murdie, 1969), is readily available and should be consulted. Our purpose here is to utilize the method in a comparative setting: how might one use these data to describe the similarities and differences in the urban structures of Toronto and Detroit?

The approach to answering the question was as follows: (i) define data matrices for Toronto and Detroit that would be as comparable as possible; (ii) analyse the matrices in turn for each city, in order to describe their structures and patterns of underlying dimensions, and to identify how closely these are related to expected patterns in the theoretical literature; (iii) form a new data matrix that essentially combines the two individual sets of data: analyse this matrix in the same way to ascertain whether the same patterns are repeated. If the latter were true, the variations between and within the two cities would override any differences between the two, and it would then not be possible to construct the index maps using the census data. However, with the acknowledged differences that do exist, we might expect that at least one of the basic components in this solution would serve to differentiate the two cities. If such were the case, the analysis would allow us to place all areas in Toronto and Detroit on the same scale, which could serve as the desired index.

Problems of data comparability are considerable. For example, consider the definition of "housing quality": in Canada a measure is available of houses "in need of major repairs". Is this equivalent to the U.S.A. definition of 'deteriorating' and 'dilapidated' housing? Complete answers to such problems would require an extensive analysis in its own right: for our purposes, we were able to define 41 variables that could be regarded as approximately equivalent. A preliminary analysis revealed that several attributes were redundant. For example, the proportion of persons "married" was consistently strongly related (in a negative sense) to the proportion of persons "single": we therefore deleted the "married" persons from the sample of tract characteristics, whilst others

Definition of Variables

Variable Number	Short Name	Definition
1	Youth	% of total population aged 0-14 years
2	Old Age	% of total population aged 65 years and over
3	Single	% of population aged more than 15 years - unmarried
4	Foreign Born	% of total population born outside country
5	British Origin	% of total population originally from British Isles
6	Grade School	% of population not attending school (Can.) (over 25 years of age U.S.) with elementary schooling (less than 8 years)
7	Higher Education	% of population not attending school (Can.) (over 25 years of age U.S.) with post-secondary education
8	Large households	% of total households with 6 or more persons
9	Persons per family	Ratio of all family persons to families (Canada: defined by census)
10	Single-detached	% of total dwellings "single-detached" (U.S. 1-unit structures)
11	Rooms per dwelling	Ratio of total number of rooms in unit to total dwellings (U.S.) (Canada: defined by census)
12	Crowded dwellings	% of total dwellings with 1.01 or more persons per room
13	Owner-occupied	% of total dwellings owner-occupied
14	Short occupancy	% of total dwelling occupied less than 2 years

table IV.2 Continued

Variable Number	Short Name	Definition
15	Long occupancy	% of total dwellings occupied more than 6 years
16	Recent construction	% of total dwellings constructed since 1945: Canada 1950: U.S.A.
17	Major repairs	% of total dwellings in need of major repairs (U.S. 'deteriorating' and 'dilapidated')
18	Female L.F.P.R.	% of total females aged 15+ in labor force
19	Unemployed Males	% of total male labor force 'looking for work'
20	Managerial	% of total labor force (M + F) in managerial occupations
21	Professional & Technical	% of total labor force (M + F) in professional and technical occupations
22	Clerical	% of total labor force (M + F) in clerical occupations
23	Sales	% of total labor force (M + F) in sales occupations
24	Laborers	% of total labor force (M + F) in laborer occupations
25	Stayers	% of total population 5 years and over with same residence 5 years before
26	Metropolitan movers	% of total population 5 years and over with different residence 5 years earlier but still residing in same metropolitan area

table IV.2

Sources: (a) Canadian data: 1961 Canadian Census Tract Data for Metropolitan Toronto; R.A. Murdie, Dept. of Geography, York University
 (b) U.S. data: 1960 Census Tract Summary Tape for State of Michigan; Data Labs, 1601 North Kent St., Rosslyn, Virginia 2220.

ere so unique in their spatial distributions, (especially ethnic groups), that they added little to the explanation of overall variation between census tracts.

As a result of this preliminary work, the number of variables was reduced to 26, and they are listed in table IV.2 together with tract definitions. An attempt was made to maintain some balance between the types of measures represented, but the resulting set is relatively overrepresented by variables indexing elements of the housing stock, and by measures of employment and occupational status. Note that attributes of race and income are not available: for the first, the approach of the two census bureaus is completely divergent (Canada does not collect "racial data"), whilst measures of income are notoriously difficult to translate in a comparative study of this nature (differences in definition of income, differences in systems of taxation, etc.). However, it was felt that since income, education and occupation are generally highly associated with each other - indexing social class - the omissions could be related to other factors.

Before reporting the results of the analysis, it is wise to keep in mind certain overall differences between the two metropolitan areas. "Toronto" is defined as the Municipality of Metropolitan Toronto in 1961 (see Murdie, (1969)) - a region approximating the built-up area at the time and smaller in extent than the census-defined Metropolitan Area (C.M.A.). In 1961 the region contained 1,618,787 people - less than half the 3,762,360 found in the Detroit Standard Metropolitan Statistical Area (S.M.S.A.) in 1960. In order to maintain a conceptual similarity in the definition of the boundary of the study areas, only a part of Detroit S.M.S.A. was selected, again approximating the limit of the urbanized area. The industrial satellite town of Pontiac and many rural townships were therefore excluded from "Detroit".¹ The basic differences between the two cities lies, in fact, in the divergent criteria used to delimit the boundaries of metropolitan regions.

Results of the Analyses of Individual Cities.

The broad results of the three analyses are presented in table IV.3. Whilst we are concerned now with the underlying structure of tract-to-tract variation in the attributes (table IV.3) of the two regions, the table shows that the three analyses have many similar characteristics. In each case, a five-factor solution was derived: the first factor accounts for over 20 percent of the total variance in tract characteristics, and together the five factors capture over three-quarters of the variance in the original 26

Excluded from Toronto were 15 tracts identified in Murdie's work (op.cit., Table 37, p. 189); and from Detroit S.M.S.A. the following tracts: (a) in Wayne County: 914A and B, 931-944, 947-948; (b) in Macomb County: 21-23, 31-32, 34-67; and (c) in Oakland County: 65, 70, 72-76, 78-126 (a total of 134 tracts).

Metropolitan Factor Solutions

Place	N	Factor	Eigen value*	% Variance	Cumulative
Toronto (Metro)	295	1	5.403	20.78	20.78
		2	4.865	18.71	39.49
		3	3.605	13.87	53.36
		4	3.051	11.73	65.09
		5	2.967	11.41	76.50
Detroit (Part of S.M.S.A.)	654	1	5.580	21.46	21.46
		2	4.602	17.70	39.16
		3	3.800	14.62	53.78
		4	3.432	13.20	66.98
		5	3.041	11.70	78.68
Combined	949	1	5.745	22.10	22.10
		2	4.210	16.19	38.29
		3	4.111	15.81	54.10
		4	3.456	13.29	67.39
		5	2.098	8.07	75.46

table IV.3

*Reported eigenvalues computed after varimax rotation.

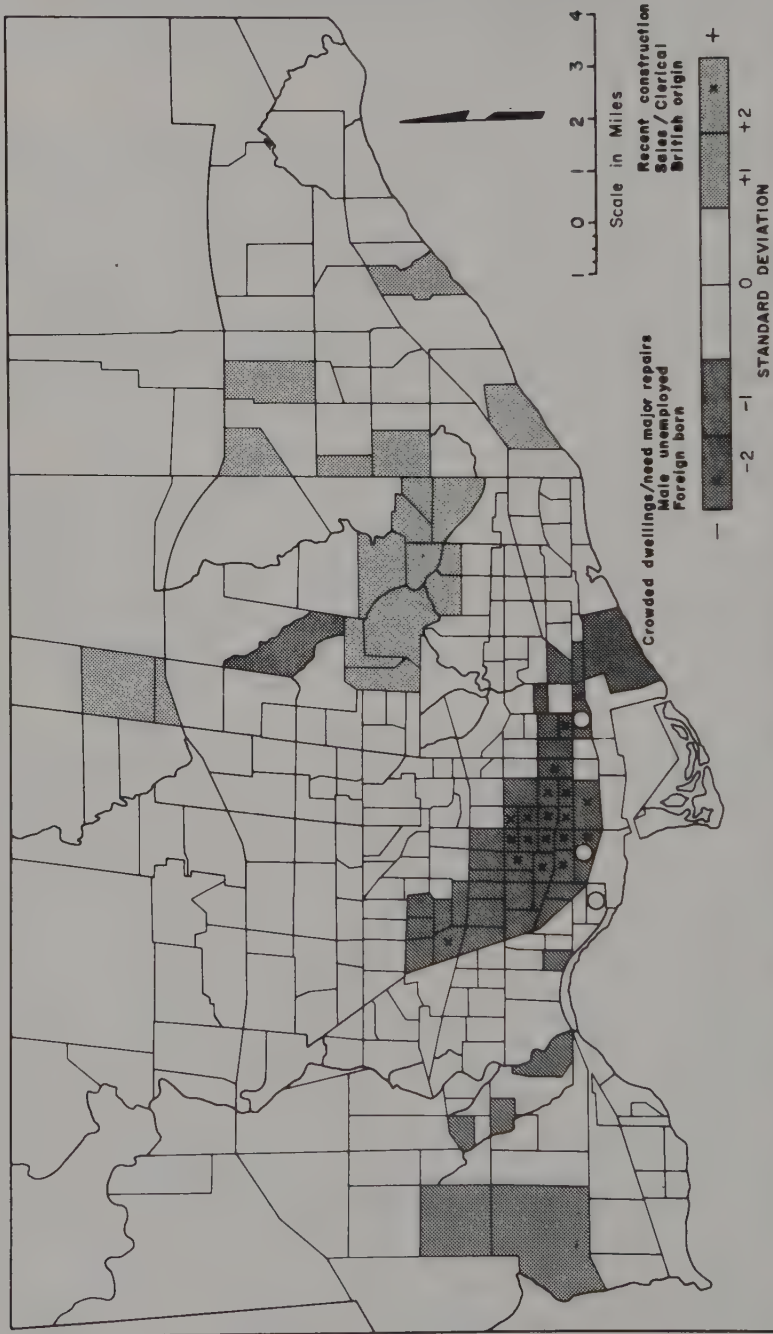
variables. Subsequent tables and maps demonstrate how we might interpret these underlying dimensions, but it is important to refer to the existing state of knowledge among such basic patterns in the social geography of cities, so that the particular area studies can be put into a theoretical context.

Many studies of urban areas in developed industrial economies have used the reported methodology, and in general four components or factors have been identified. In order of importance, they are: (i) socio-economic status, which usually has a sectoral spatial distribution; (ii) family status (or stage in the life cycle), which serves to differentiate inner city and suburban areas, and generally has a zonal pattern; (iii) ethnic or racial status, representing various levels of segregation by discernable groups, often in a clustered or nucleated pattern; and (iv) areas of recent growth contrasted with residentially stable neighborhoods. These generalizations should be kept in mind as we look at the results for Toronto and Detroit.

Table IV.4 presents the factor structure for Toronto. The entries in the table, known as factor loadings, indicate the correlation between a factor and the original variable (table IV.2); the "communalities" represent the overall level of explanation for any particular variable that is given by the five-factor solution. The factor loadings are used to label the new variables that we have created in this analysis, and in each case the newly-created scale is a continuum and census tracts can be characterised by the signs of the loadings.

Factor one, for example, describes areas that, at the positive end of the scale, are characterised by high proportions of persons "foreign born", (variable 4, + 0.642), high levels of male unemployment, (variable 19, + 0.786), low levels of education (variable 6, + 0.754), and crowded dwellings (12, + 0.657) in need of major repairs (17, + 0.641). In comparison, the negative end of the scale is made up of areas that contain high proportions of persons of British ethnic origin (5, -0.797), a high proportion of houses built since 1945 (16, -0.553), and high proportions of persons employed in sales (23, -0.647) and clerical (22, -0.553) occupations. The descriptive label we might attach to this new variable or factor should (therefore) relate to the characteristics of census tracts at each end of the continuum: in this case the factor seems to represent aspects of recent immigration to Toronto, with the "host" society represented by an occupational structure clearly associated with metropolitan employment opportunities. We have mapped the pattern of factor scores, figure IV.32, in an attempt to understand the component more clearly. Strongly outlined is the immigrant reception district and its extension to the northwest of the CBD, and this area is easily identified as the major concentration of Italian households in Toronto in 1961. Negative factor scores (note that only the extremes are represented) are most common in East York and stretching east into the Borough of Scarborough. Since both occupational and housing characteristics are associated with recent immigrants, we have labelled this factor "Correlates of Minority Status". As in all the analyses,

Correlates of Minority Status in Toronto



NOTE: FACTOR ONE DESCRIBES 21% OF THE INTERNAL GEOGRAPHY OF METROPOLITAN TORONTO.

Principal Components Loadings*
Toronto (Metro)

Variable	Factor					Communality
	I	II	III	IV	V	
1		-0.890				.924
2		0.722				.546
3		0.848				.860
4	0.642					.615
5	-0.797					.643
6	0.754		-0.418			.840
7			0.876			.871
8	0.774					.823
9		-0.883				.865
10					0.780	.798
11		-0.611		0.536		.852
12	0.657		-0.552			.801
13		-0.490		0.544		.713
14				-0.612	0.617	.873
15				0.919		.875
16	-0.553	-0.591				.788
17	0.641					.418
18					0.764	.772
19	0.786					.728
20			0.792			.855
21			0.730			.731
22	-0.553				0.728	.924
23	-0.647					.775
24			-0.731			.672
25				0.874		.782
26					0.596	.548

table IV.4

*Only loadings $> \pm 0.40$ are indicated, for the rotated solution.

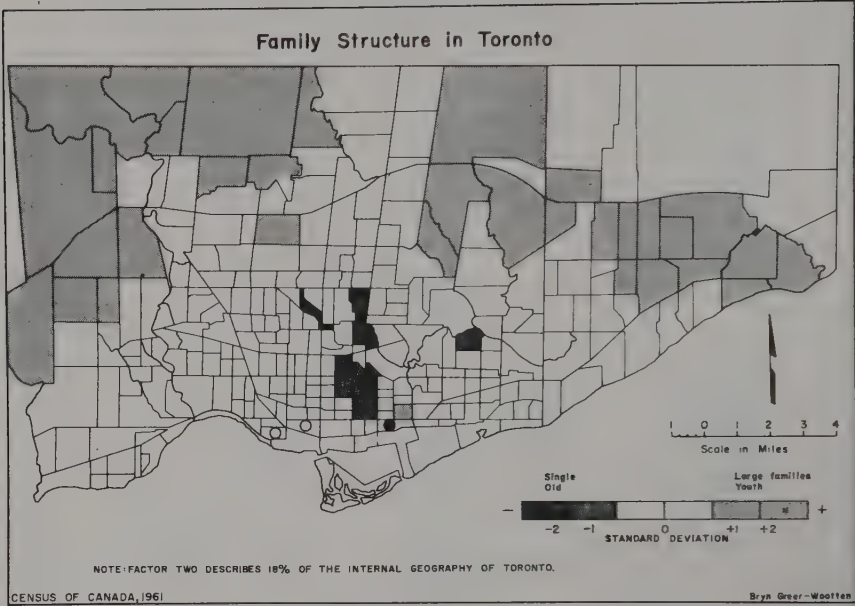


Fig. 167

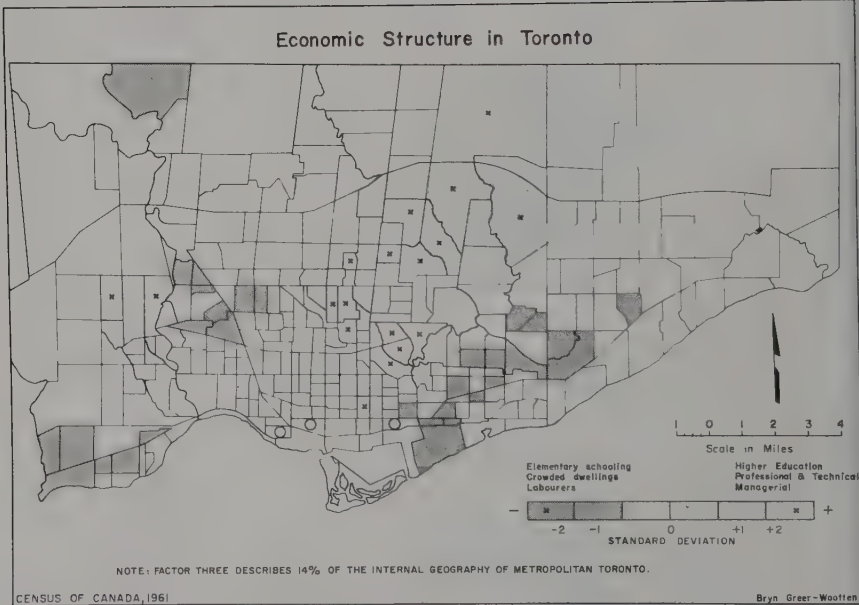


Fig. 168

Residential Stability in Toronto

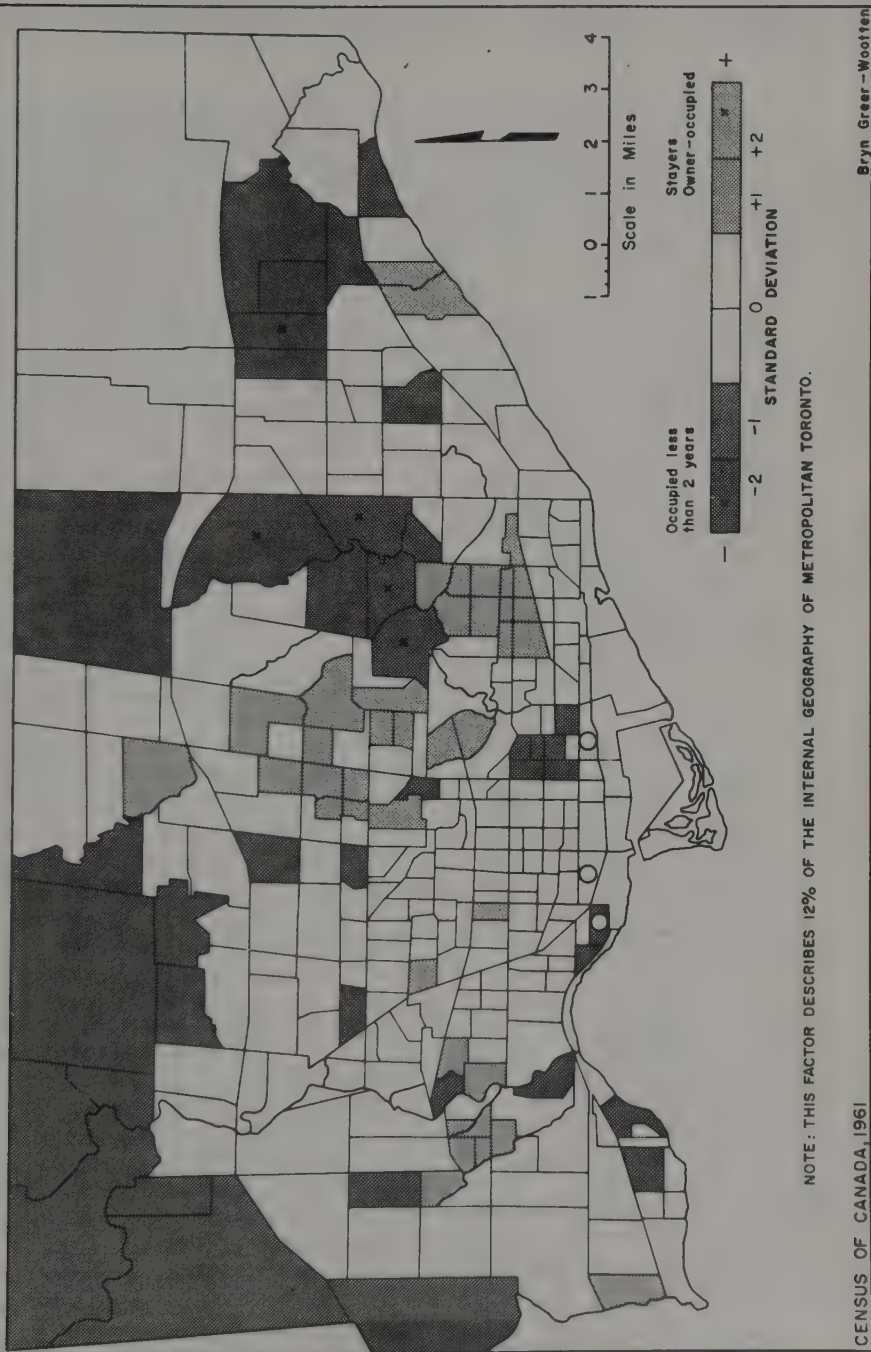


Fig. 169

the order of a factor indicates its importance; so we might say that the impact of immigration on Toronto's social geography is the most striking element in 1961.

Using similar ways of interpreting the results we may now briefly indicate the nature of other factors. The second factor clearly represents "family structure" - see figure IV.33. The scale that is created compares areas with high proportions of older persons and young single adults, with areas that had large proportions of young persons. Large numbers of persons per family, rooms per dwelling, etc. The expected concentric zonation of this factor is well shown on the map: a central core of areas with single and older persons stretches north along Yonge St. from the C.B.D. The younger families are located in the suburbs in all directions except due north (early development of urban growth along Yonge St.) and to the northeast (undeveloped rural areas of northern Scarborough).

According to our overview of other studies, socio-economic status should have been the first factor isolated in this analysis. However, it is represented by the third factor in Toronto in 1961 - contrary to the findings of Murdie, and in large part due to the number and type of input variables that we were constrained in using in this comparative study. Figure IV.34, however, repeats many of the features of Murdie's map of "economic structure" in 1961: low status areas, characterised by high proportions of laborers, grade school level of education, and crowded dwellings, and found in three locations associated with early industrial development, especially along railroads - in the western part of the Borough of York; along the Lakeshore in the old town of Mimico; and in the eastern part of the City of Toronto, stretching from "Cabbagetown" east into Scarborough. Two main blocks of high status areas (high proportions of persons with post-secondary schooling, in professional and technical and managerial occupations) are evident: centrally, in the 'prestige' locations stretching north from Rosedale and Forest Hill; and in the west in the old town of Swansea.

The final factor that we have mapped (figure IV.35) represents "residential stability": stable areas, characterised by high proportions of "owner-occupied dwellings" and residents who had not moved in the period 1966-71, corresponding to the older "inner residents" of the metropolitan area, including the eastern part of the City of Toronto and the extension of early development north along Yonge St., as well as the 'prestige areas'. Low stability areas - with large proportions of dwellings occupied for less than two years - are found in two situations: centrally (highly mobile residents) and in peripheral areas (subject to recent suburbanization).

The final factor in Toronto represents areas that were mainly apartment districts, with high proportions of clerical workers, high levels of female labor force participation, many movers, etc. This element of Toronto's structure - again, often found in other

udies - appears to represent parts of the city where the "young adult life" is predominant, and these areas are often aligned along major public transportation routes with easy access to jobs in the B.D.

The results of the analysis for Toronto replicate most of the findings presented by Murdie, except that immigration is given a greater emphasis and, consequently, the role of socio-economic structure is played down. Our expectations for the Detroit analysis would be a greater congruence with previous studies, in the presence of known differences with respect to the impact of immigration.

The factor structure matrix for Detroit is presented in table 7.5. The negative end of the scale created by factor one is similar to its Toronto counterpart except for the absence of "foreign born". Census tracts here are characterised by high proportions of laborers, male unemployment, and grade school education, whilst the housing stock exhibits a high degree of deterioration. Conversely, the positive end of the scale has more high status occupational attributes than in the Toronto factor: areas with positive scores have high proportions of their labor forces in professional and technical, managerial, and sales occupations, many persons have higher educational attainment, and there are higher proportions of persons of British ethnic origin. It seems clear that some major elements of economic structure are indexed by this factor: the map (figure IV.36) corroborates this interpretation very strongly.

Negatively scored tracts are highly centralized and found in two major locations: (i) on the old East Side (east of Woodland) - the original core of the ghetto, Black Bottom, and (ii) further to the west around Delray, where Polish immigrants and black families suffer from industrial pollution. The higher status areas are clearly recognizable as the power structure locations in Detroit: (i) Grosse Pointe, to the north east; (ii) nearer to the Central city, the older "in-town rich" area of Indian Village, north of Belle Isle park; (iii) a group of three central tracts - Lafayette Maisances - a relatively new rich "in-town-living" district, with integrated housing (Detroit's answer to Chicago's Marina Towers); (iv) other central locations are associated with certain institutions, for example, Wayne State University; (v) to the north-west of Grosse Ile; (vi) the western inner area of Dearborn, characterised by executives of the automobile industry; and (vii) the newer extensive estate areas of suburban Bloomfield Hills and Birmingham, following the historic sectoral axis to the northwest along Woodward Ave.

The affluent suburbs and inner city slums are evidently contrasted in this, the most important element of Detroit's social geographic structure. The acknowledged gap between these two worlds is represented by naming the factor "Extremes of Social Class". Note that the pattern of social class is more concentric in Detroit than in Toronto - a feature that is just as prominent

Principal Components Loadings*
Detroit S.M.S.A. (part)

Variable	Factor					Communality
	I	II	III	IV	V	
1		-0.726			-0.635	.950
2		0.829				.794
3		0.848				.779
4				0.586		.672
5	0.506			0.490		.544
6	-0.780	0.505				.878
7	0.937					.931
8					-0.705	.866
9					-0.906	.849
10		0.522	-0.599			.657
11		-0.585		0.441	-0.400	.818
12	-0.459				-0.553	.791
13	0.443	-0.557	0.534			.906
14			-0.820			.793
15			0.868			.930
16	0.529	-0.680				.768
17	-0.500			-0.421		.664
18				0.700		.718
19	-0.539					.723
20	0.842					.836
21	0.886					.809
22				0.870		.832
23	0.704					.728
24	-0.579			-0.429	-0.417	.734
25			0.889			.913
26			-0.599			.574

table IV.5

*Only loadings $> \pm 0.40$ are indicated, for the rotated solution.

Extremes of Social Class in Detroit

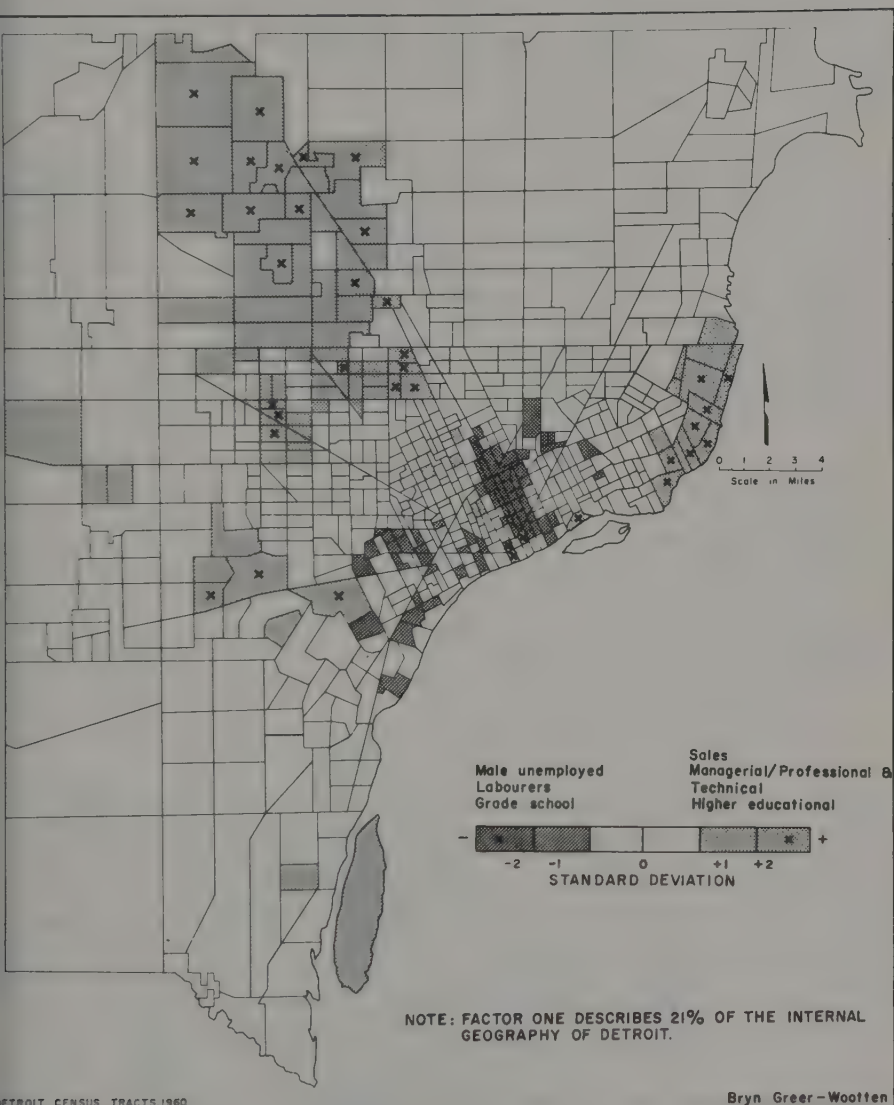


Fig. 170

for "family structure" (factor two: figure IV.37). The factor loadings for this component are very similar to those for Toronto: areas characterised by older and single populations are compared to tracts that have higher proportions of young persons, dwellings that are mainly owner-occupied and have been built since 1950, with a large number of rooms. Essentially the latter type of area, primarily suburban, represents "middle-class Detroit": not the most affluent suburbs, where both husband and wife might work to pay off the mortgage. The older areas are centralized, and, generally dying except for the very new parts such as Grosse Pointe - and Detroit' "skid-row" is typical of this factor.

"Residential stability" for Detroit is represented by factor three (figure IV.38), with, once again, very similar factor loading to the Toronto component. Areas characterised by high proportions of intra-metropolitan movers living in apartments for less than two years, are compared to the stable areas of the inner suburbs. Not also that this pattern is concentric for Detroit, and that both newer developments in the periphery and a highly mobile central area are represented. The most extreme factor scores for the central city tracts ($> - 1$) clearly demarcate the changed direction of expansion of the black ghetto, away from Black Bottom towards the northwest.

The remaining factors for Detroit have not been mapped. They represent the type of "young adult" areas (factor 4, similar to Toronto's fifth component), and crowded conditions associated with the ghetto (factor 5). The three major factors are similar to those in Toronto (factors 2, 3 and 4): only the immigration factor seems to differentiate the two cities. A more specific approach to the question of similarities between the two, as indicated earlier, is to merge the two data sets - and repeat the analysis.

The Combined Factor Analysis.

What sort of expectations should we have now, faced with another analysis that is treating all census tracts as if they came from the same city? Unfortunately, for this question, there are very few previous findings to refer to. A comparative study of Montreal and Toronto that used the same approach, however, did come to some interesting conclusions: the first factor served to highlight the important differences that exist between the cities with respect to ethnicity and the nature of the housing stock. Once this factor was taken into account, the remaining components repeated the patterns evident in studies of each individual city.¹

From the analyses reported so far, then, we might expect that such a first factor would differentiate between Toronto and Detroit and perhaps it would be in some way related to the different recent immigration histories of the two countries. With these thoughts in mind, we examine table IV.6.

Immediately, the similarity to factor 1 for the Detroit analysis

1. (See Murdie and Greer-Wooten, 1973.)

Family Structure in Detroit

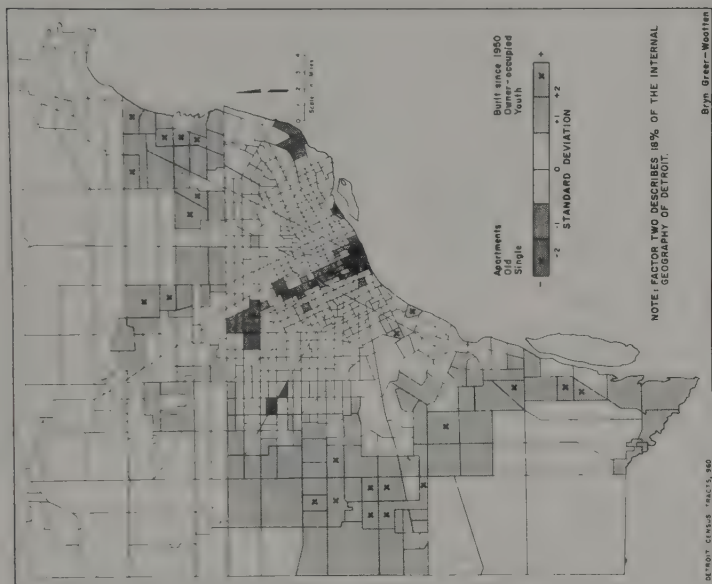


Fig. 171

Residential Stability in Detroit

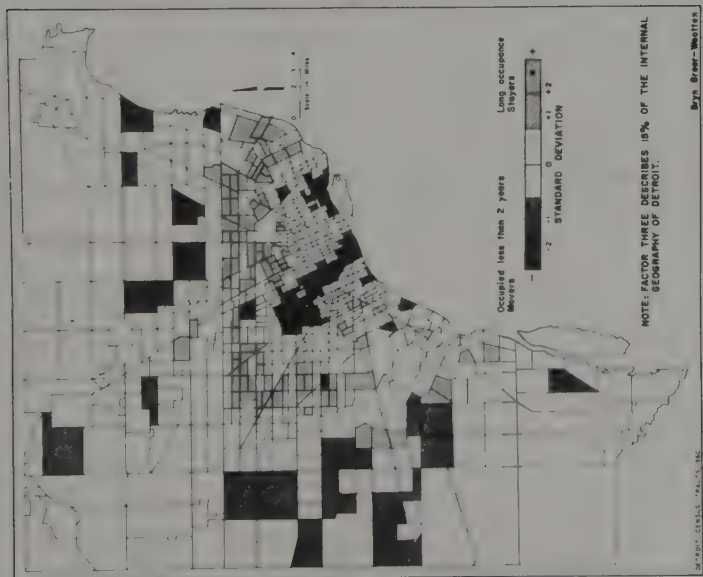


Fig. 172

Principal Components Loadings*
Combined Data Sets

Variable	Factor					Communality
	I	II	III	IV	V	
1			0.897			.891
2			-0.758			.615
3			-0.871			.805
4		0.798				.802
5		0.850				.783
6	-0.640	0.535				.823
7	0.794					.654
8	-0.622					.684
9		0.947				.933
10		0.456		-0.471	-0.404	.744
11		-0.456	0.565	0.417		.761
12	-0.765					.744
13			0.607	0.567		.850
14				-0.790	-0.404	.822
15				0.910		.854
16	0.454		0.659			.809
17	-0.565	-0.428				.585
18					-0.748	.764
19	-0.611	-0.476				.699
20	0.758					.746
21	0.810					.670
22					-0.758	.816
23	0.747					.718
24	-0.747					.602
25				0.880		.809
26		0.509				.637

table IV. 6

*Only loadings ± 0.40 are indicated, for the rotated solution

s apparent: social class is measured by this component. Does this then indicate that Toronto and Detroit are different from each other with respect to social class? The factor scores have been mapped as figures IV.39(Toronto) and IV.40(Detroit): the two maps should really be viewed together, since we are constructing new scales from the combination of the attributes for all census tracts. Space and clarity of representation forbid this possibility, but the reader should keep it constantly in mind for all pairs of maps. Figure IV.39 as far as the higher social class areas are concerned, repeats the patterns evident from figure IV.34 for Toronto, but the negative end of the scale includes both the immigrant area outlined earlier (figure IV.32) and the low social class areas in the eastern part of the City of Toronto. Detroit's pattern of social class (figure IV.40) mirrors the situation shown in figure IV.36: the extremes of class in that city, from central city ghetto areas to affluent power structure areas.

The important finding here is that the most important factor in the combined analysis clearly puts social class differentiation as the most common shared phenomenon between the two cities. Equally significant is the fact that social class was only third in importance for this set of characteristics for Toronto alone: placed into comparative frame, it emerges as the most important factor.

The second component does match up to our expectations. On the surface it compares areas that are characterised by high proportions of male unemployment, and housing that is in need of major repairs, with areas that have high proportions of foreign-born persons, those of British ethnic origin, high levels of intra-metropolitan movements, large numbers of persons per family and a housing stock characterised by apartments. This would seem to differentiate between Toronto and Detroit with respect to the immigration factor. Indeed, a preliminary examination of the factor scores indicated that all Toronto tracts had positive scores, and all Detroit tracts (except for seven) had negative scores. Could one ask for a greater differentiation between the two cities. This is the Americanization index map, the map the study ought to discover.

Figures IV.41(Toronto) and IV.42(Detroit) exhibit the spatial distribution of the factor scores, using exactly the same criteria or mapping as has been used for all maps in this section. Imagine the two cities are drawn on the same map: there is evidently no overlap between them at all! Figure IV.41 clearly delimits the immigrant reception district in Toronto; figure IV.42 outlines the areas of worst housing in Detroit's black ghetto. This is the tale of the two countries.

Given the unique distribution of the factor scores, the question was raised, once again: "how can we derive a map that would show the Americanization of Toronto?". Clearly, the scale that has been derived will not allow us to do that. The question was modified: "which tracts in Toronto are most like the Detroit tracts, and vice versa?". We chose then to map the 10 percent of Toronto tracts that

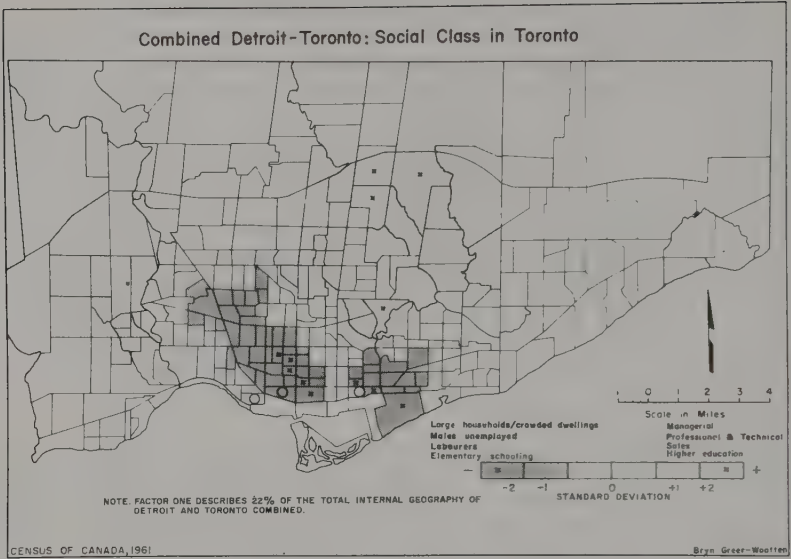


Fig. 173

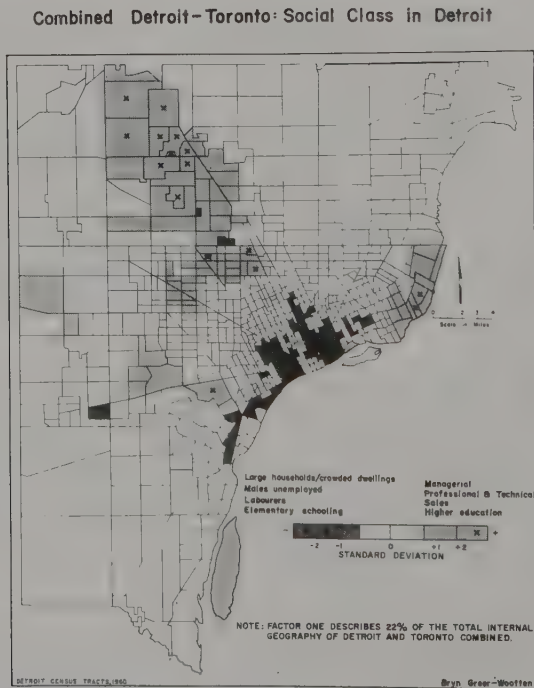


Fig. 174

Quality of Inner City—Detroit Ghetto Slums:
The American Essence



Fig. 175

Quality of Inner City—Toronto Freedom Factor:
Inner City Hope: The Canadian Essence

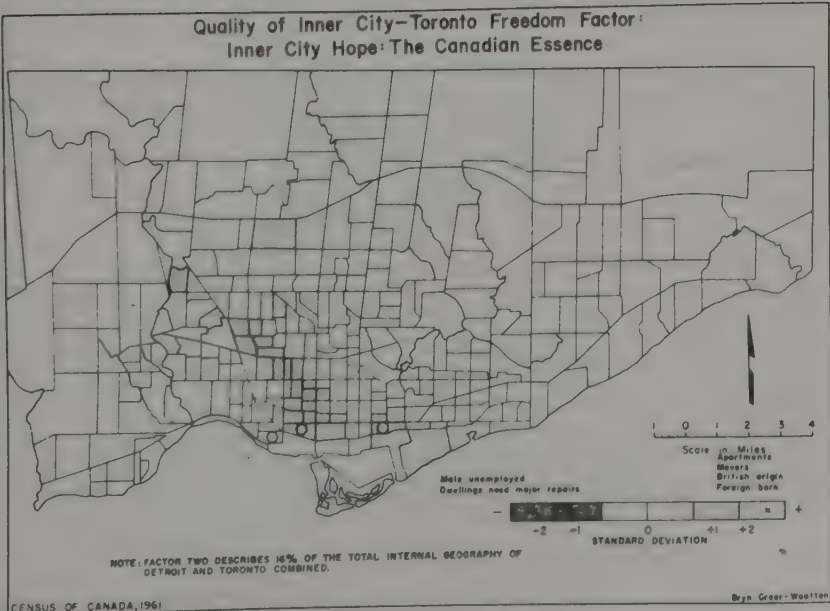


Fig. 176

had the lowest positive scores (and the 10 percent of Detroit tr with lowest negative scores): see figures IV.43 and IV.44. The only areas that are similar in both cities are those that are associated with higher social class: this is particularly the case if those seven Detroit areas that actually had positive scores are identified - Grosse Pointe and Bloomfield Hills.

The implications of this finding are quite disturbing: for Detroit the central city ghetto represents entrapment, but for the Toronto reception district, with a mosaic of backgrounds and a strong working class flavor, there is still hope. Black families move from the south to the inner-city slum ghetto of Detroit and are still entrapped there three generations later. By contrast black W. Indian immigrants to Toronto are out of the inner-city immigrant reception area and into the suburbs in less than ten years typically. Upward social mobility and spatial freedom to move to the suburbs is possible for Toronto's blacks. With these inferences in mind we considered the dichotomy "the freedom factor" representing the real difference in the urban worlds of Detroit and Toronto.

The aspect of Detroit that most typifies it as American is its disgraceful slum ghetto, the shame of the U.S.A. The aspect of Toronto that is its glory is its inner city decency. The part of Toronto that is least Canadian and most American is the rich side of town, the affluent suburbs. This is not only true environmentally and architecturally, but also it is where some of the American 'corporate-owners' of Canada live. The only part of Detroit that is a 'Canadian' part, achieving at least biological decency for the children, is the rich part.

Replication of this study using data from the censuses of 1970 and 1971 would, it is hypothesised, demonstrate an intensification of the pattern of the 1960's. That is it would demonstrate a further decline in civilization in the U.S.A.

Why Detroit Might Encourage Comparison.

A comment on why Detroit encourage such comparison seems useful. Might such comparison of the two cities, especially if governmentally financed and sanctioned, strain relations between friendly powers? Neither Detroit nor the U.S.A. need construe such monitoring as humiliation. Cities in the U.S.A. are in such a condition as to need all the help they can get. Not only 'war resisters' have discovered that Toronto provides a haven. Businessmen and American families have made the same discovery. Many Americans are currently questioning their nation's traditional self-assurance. An "Americanization index map to Toronto, is a

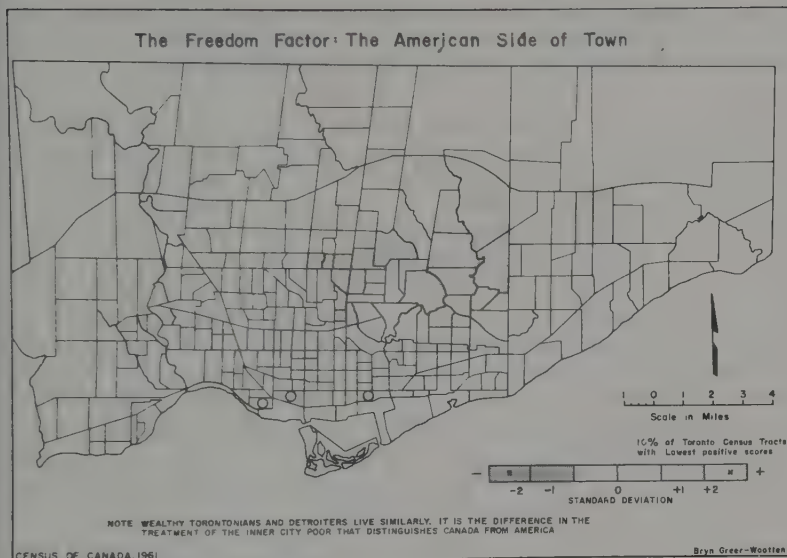


Fig. 177

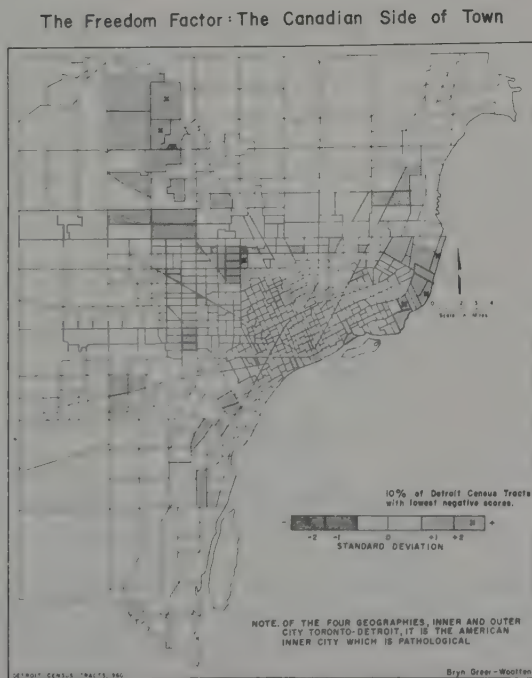


Fig. 178

'Canadianization index map' to Detroit. Consciously patterning American cities after Canadian cities would give many Americans a hopeful alternative. That is, they should eagerly await the index, to see if they are catching up with the more civilized portion of the continent or falling further behind.

Canada's self-interest lies in ensuring that the difference on the biological level decrease; not that Toronto should be reduced to Detroit's condition, but, that Detroit be raised to Toronto's.

How to Cure Urban America.

Toronto, a capitalist city, is healthier than American cities such as Detroit. Many questions dealing with 'why' and 'what to do' are geographic; they can be mapped, packaged, made into engineering techniques and exported. What is clear should be treated as clear. Race-class war is muted in Toronto. A major cause-and-effect of this crucial difference between Toronto and Detroit is Toronto's open housing for blacks, meaning the end of the American feature, the super-exploited slum. End the entrapment of ghettoized slum dwellers. Let each family move out as income permits; disperse the slum; the high infant mortality regions and the sickness of American cities decrease.

Must Capitalism be Destroyed in Order for America to Live?

If all children can find a good life under a liberal capitalism, as opposed to an illiberal capitalism, then the Darwinian minimum of species survival is met. If in the process of citizen protecting the children the system is destroyed, who could mourn the passing of an anti-child system? Systems should not be overthrown or supported out of dogmatism but out of objective tests. Any system that can provide a good life for its children, the life of life, at home and in areas of influence abroad, passes its survival examination. Any system which cannot, deserves to be expunged as a disease. Let child protection begin in earnest. The children, not systems must survive.

III: The Indian Plan for North America.

After this introduction, the remaining content of this chapter is an edited version of tape recordings of conversations with Du Redbird, Ojibwa philosopher. Redbird reflects a pan-Indian outlook. There are "two hundred million Indians in this hemisphere more than when Columbus landed". He is in the tradition and blood dependency of Tecumseh, who united the native tribal-nations over a century ago and burned all forts, except Detroit all the

way to Pittsburg. Pan-Indian philosophers are militant in tradition. Redbird has done extensive traveling such as to the Pueblos in southwestern U.S.A. where he obtained his thoughts on how Indians would construct high-rises. Redbird points out that until only a few decades ago these were the largest apartment houses in the world and had centuries of experience to draw upon in construction.

The wisdom and evidence of Redbird is therefore the weight of North American native peoples not mere personal insights. Redbird's genius is his projection of the past into the urban present and future. He sees Indians as leaders of philosophy not "little brown brothers" to be patronized. Though Toronto is used for the urban planning model, the thoughts are obviously applicable to cities around the world. In reading Redbird's thoughts, it is difficult to keep in mind that he is speaking as a scientist in the sense that his ideas are practical and have served people on the North American continent for tens of thousands of years. His plans are not utopian. They worked for tens of thousands of years. They are 'dreams' only in the sense of the modern city having become a nightmare of impracticality, even Darwinian non-survivability.

Redbird represents what he terms 'electronic tribalism', the old brotherhood of the tribe that all our ancestors enjoyed - red, yellow and black - in a high technological state. Not all aspects of the 'good old days' were desirable. The bugs swarmed over our species in warm weather; we froze in the winter; we starved and the babies died like leaves in the fall. But the relationships among people as brothers and sisters in the tribe, as bound together spiritually in deep mutual commitment, that long lost lack of loneliness must be returned to our tribal community. How are cities to be arranged to re-ignite this long lost, for most, heritage of mutual trust and help. Redbird outlines an urban model for brotherhood.

A: Using Toronto in a Native Way.

'Before the white arrival in Toronto, Toronto was a meeting place. It was neutral territory. It was a place where all tribal peoples would come to hold festivals, to hold pow wows, to trade, to interact with one another in an area that was free of wars or feuding. Toronto was considered to be a holy place. If the same kinds of processes are to go on today people would have to recognize Toronto as a place where that kind of activity - the cultural activity of the people - could occur.

Central to the city would not be Bay St. as it is now - the market place - but the city would have to develop around the cultural aspirations of this location as a meeting place. Why separate the university from the city. The city itself should be the university of the people. In order to have access to the educational tools or resources one has to become a student. If this were a native city everyone would have access to those educational resources. People would not have to register to become a student. The people

who are now engaged in teaching only teach students, they do not teach the people. If an individual wants to go to learn about psychology, he has to become a student of psychology. If the professors were public servants their forums would be open for everybody. The O'Keefe Center is a building for meeting but it is not open to the people. The Yonge St. mall is closer to it, but the motivation behind the Yonge St. mall is still the market place. In the ancient Indian cities the market place was thirty or forty miles outside the city, because engaging in commerce could not be done in a spiritual place. The cities of Meso-America, those of the Aztecs, Incas and Mayans, were all built around their temples the spiritual center, the place of human aspirations of the people. People wanted to live close to the temples. But in Toronto the city is still being built around the market place. Developers put up a plaza then up go the apartment buildings around the plaza. Everything is geared to the business of buying and selling. The 'Mariposa Folk Festival' is the closest to the native plan for 'downtown', for the focus of the city as a spiritual exchange between people. What is Yonge St. but a street lined with stores? That is the reason for its existence. People go down to look at each other wandering around the mall aimlessly. They are not getting educated.

In an Aztec city the stairs in the central temple had three hundred and sixty five steps, so that a child, by the time he got from the bottom of the temple to the top of the temple, was reminded of the calendar by the fact that each stair had the name of a day attached to it, a name for each of the three hundred and sixty five days. The actual urban landscape was an education. To walk around the base of the temple was exactly one billionth the distance from the earth to the sun. The McLaughlin Planetarium of the Ontario Science Center are good but they are not the focus of people's lives. The Science Center is an appendage to what people do which is the day to day business of doing business in the central business district. Everything is geared to a competitive, business money oriented activity. People go out to the planetarium or the science center as recreational activity rather than as a part of the nature of why they are in the city.

Looking at Toronto's skyline now it appears to be so many building blocks piled up and they concentrate in the Bay-Queen area. The Indian skyline would be dominated by the bluffs and the area in front of them where the land dips down and is flat. This is the natural landscape. You could remove all the buildings and put them back into the landscape as you had before the western European man came. The buildings would be compatible and have a reciprocal relationship with the land. The problem is now the way the buildings are built: ideas being introduced from either New York or Los Angeles. There exist building materials from which beautiful, living houses can be built; for example styrofoam which takes any contour that you care to have.

What reason do people have to live in a city? If the only

reason people live in the city is to make money, then people are cheating themselves as people. In highly planned Mississauga the town planner puts up a plaza then all the buildings go up around the plaza. They are all geared towards getting the customer out of the apartment building and over to the plaza. What if the central core of the community were to be designed to bring people down to an educational or cultural activity, rather than an activity of buying and selling?

What happens to the children in a place like a plaza? The older children 'hang around' the plaza. And there is nothing to do in the plaza. The stores close at nine o'clock, so they deactivate the property in aimless gangs because there is no focus of involvement except buying and selling. The Yonge St. mall is a classic example. There is a tremendous need in the city for people to get together. The energy that is being expended by people walking up and down the mall, needs refocusing. The people playing the guitars should be the activity on the mall - concerts, lectures, across the board, anything that has to do with the development of human activity, around learning, around becoming more creative, expressing the facilities of your soul, spirit and mind! And recreational in the sense of expressing yourself physically too. Those should be the activities that are going on in the Yonge St. mall, not buying and selling. In order to enjoy the mall you have to spend money or just wander around. Public entertainment, like a man playing a guitar displeases the businessman because it is competitive. The people do not go inside the stores and buy things. If the city government hired B.B. King and put him on the street, the Colonial Tavern would feel threatened.

The Rest of the City.

Today's 'green belts' are inaccessible to many people. They exist where it is already green anyway. In Toronto there is no green belt within the city. Pastures became parks in England because there was a common where the cattle would keep the grass short and the trees and bushes shorn. The aristocracy would have a picnic. That became a park. Now parks are built like that in Toronto with lawn mowers in place of cattle. Parks can be green belts, not artificial pastures.

If the city is redesigned so that people can participate with each other and have a tribal kind of experience in the city, then just about everything would have to be changed. The city could not be blocked out in squares. The city itself would be random. It would be irregular as opposed to north and south, east and west. The streets would follow the contours of the land, such as Dundas which was once an Indian Trail.

Now the city is divided up into sections where there are rich people and poor people, and depending on the section of the city in which people live things like their insurance rates are different. The elite would not have sections of the city. In

Forest Hill there would be just as many poor people as rich people.

The focus of the sections of the city would become tribal. Certain tribes were good at certain things. The 'Tobacco' people would have their fire. Another fire would be the 'Flint' people. Each tribal group had their own speciality and camp fire when they would come to Toronto, before Toronto was today's Toronto, when it was "The Meeting Place". Toronto is a native name for "The Meeting Place" but it is now "The Meeting Place" in name only; its meaning is forgotten.

Different sections of town used to perform different functions. To do this today people should be able to go to a section of the city where certain kinds of activity would be known to be taking place. The Kensington Market is an example, a flea market atmosphere. In the old days that would be a tribe. The flea market is a fire. Instead of boroughs as now, these boroughs would become tribal territories. Today each one is a carbon copy of the next one. A few years back Yorkville was a center for activity, small artists, art shops, coffee shops, slightly Bohemian. There were craftsmen and artists so that no matter what part of the country you were from you knew that if you wanted to get involved in that kind of activity there was a place that existed where all these people performed their function.

Today there is the 'zoo' outside the city. The 'zoo' should have been in the central part of the city, so that people could walk to it. The keepers of animals should grow up in that tribal section of the city. The children would learn to be 'zoo' keepers by participation.

The City as a School.

The city should become a school. The children should have free access to all activities going on the way it used to be. I remember a child was going to be a canoe builder nobody stopped him at the door and said, "Hey, kid, you can't come in here," the way it is now. Today the functions of the people are all hidden, that is, the work that they do. The public does not have access to an automobile plant. What do those people do? In an Indian community they have to have watchers. If a man wants a car fixed in a reserve he has to gather up half a dozen people, put them in his car, drive over to the mechanic, and watch him fix the car, because if the mechanic does not provide the mechanic with an audience that car will never get fixed no matter how much money is offered. The mechanic gets his status out of his ability and if there are no watchers there is no status. If a car is taken to an Indian mechanic and is left there to be repaired for fifty dollars within a week, at the end of the week it will not be fixed. But if the mechanic is provided with a little crowd, it will be fixed instantly.

The reason that the government cannot build houses on reserves is that the government just expects one to hire workers. They



Lake Ontario

Fig. 179

not realize that the workers have to have an audience in order to get any pleasure out of what they are doing. If a worker is being watched he feels he is getting the attention that his skill deserves and that is worth more than money.

Factories should have constant tours. A young person interested in television can walk into CBC and stand there and watch what is happening. A construction site is space where the side-walk 'worker' can watch. Great numbers of people are engaged in that activity. But sites should be wide open instead of being boarded up, one should use plexiglass all the way around the site. In this way the function that people perform becomes important in the sense that it gives them a feeling of respect since people will come to watch them perform their skills. An audience watching a construction crew, causes them to do their job.

Indian High-Rises.

The closest example to an Indian type apartment dwelling is Habitat in Montreal where there is living space. It is like an Indian pueblo. Habitat has become an enclave of the elite. The people who deserve to live in that complex are kept out. In a high rise in Toronto there are no gardens. In a pueblo, the roofs grow much food. This accounts for the irregular roof line. The Indians did not just build something straight up and put a roof on the top and a penthouse at the top. The pueblos were built in a staggered pattern. The roof of one person's house was the backyard of another person on the next floor.

Right in the center at the bottom was the meeting room, a spiritual place, a big arena. The most important place in the Indian pueblo was at the bottom, not at the top. In Toronto, the penthouse is on the top and the cars in the garage at the bottom and the people try to rise up. The higher the floor the more status and the more it costs. This is upside down.

Indian Houses and Neighborhoods.

Today there is a technological society. Technology utilized in a native way is functional. In an Indian community houses do not have sculptured lawns or fences around them. The houses are for the most part unpainted. What is the reason for this? The people who live in the house do not tell their neighbors anything about themselves by the kind of house they live in. If paint does not improve the insulation of the house, or the function of the house as a house, then paint is not used. Fences do not improve the function of the landscape so there are no fences. Lawns do not improve the yard, the place upon which the house stands, so there are no lawns. The 'western man' going through an Indian reserve says, "Look at how these people live". The Indian does not put all the expression of himself on his house, since a house is strictly functional. It keeps people warm and keeps the rain off - that is what a house is supposed to do. Perhaps seventy percent of the goods produced in

N. America are simply goods to help people tell neighbors about themselves. The goods have no function to help the person become a more human kind of person. The modern city is an ego trip by 'western man' and is an accumulation of 'junk' around himself.

The Open and Free City.

The Indian city is physically open. The kinds of houses should be so flexible that the individual family can do what they like with the house. Children should be allowed to roam, as in the forest. In the Kootenay plains of the Rocky Mountains the Indian children are free to roam. Children learn very quickly how to cope with their natural environment. Children should not be protected from the natural environment because that is the natural world. Children cope with mountains in the Kootenay plains. Gravity has no court of appeals. If a child walks off a mountain the child dies. Children grow up understanding these natural laws. Indian children go off in canoes into "the big water" without life jackets. They do not drown. 'Protecting' children too much from the natural environment leaves them helpless.

B: The Natural Regions of North America.

In the traditional way the countryside was the environment. The western European man looks at something and decides to change it into something else, and then he changes that into something further: this is described as progress. In his development, probably starting with the Greeks, a man made a pot one day and he looked at it and said: "Well, that describes me. That cup is me. I created that cup". But then when it fell over and broke he decided he had better make another one, and another one, and another one, because of his realization that anything that he made that he identified with was dying. Today in a 'western European' world, people identify with houses, cars and so on; material goods that have a way of rotting, rusting, corroding, falling apart. So any man who lives in today's world who identifies with these things has to get up in the morning with an incredible urge to produce something because his world is dying. But the Indian man identified with the sun, the moon, the stars, the grass and the trees. These are eternal things. If men have a relationship with eternal things they do not get up in the morning with an incredible desire to produce.

In the rural landscape the white man fears nature, such as weeds encroaching onto the fields and feels that if he does not work at it diligently, the land will degenerate into wilderness. The natural state becomes dreaded. The Greeks thought there was no order in the universe and it was man's destiny to create order. Because people live in this Greek defined 'orderly' world their perception of the world changes radically. People who live in angular environments can only see straight lines. They can not see irregular forms and shapes. In an experiment with white and Indian children, drawing squares and other geometric forms was immediately

understood by the white children. Irregularly shaped forms, like a leaf, could not be drawn by the white children, but the Indian children could draw them very easily.

Restoration.

One of the terrible effects of the distortion of nature is that one never can get it back to its original state. For N. America to go forward to a totally natural state, which is more conducive to human development, is not an optimistic possibility. Now that the land has been pillaged and raped and ruined to such a large degree it is wishful thinking to hope to plan a way for it to come back again. It is only possible to stop the destruction. Total restoration is a dream. Canada has large wilderness areas left that are being destroyed, such as by the hydro projects in northern British Columbia area which are ruining the delicate ecological balances - and only some Indian people and a few others know about it.

Canadian Cities as Indian Sites.

All the cities in Canada are built in 'Indian neutral territory'. The British and the French both learned quickly that if they built a fort that was not in neutral territory that it would be burned down. Ottawa, Montreal, Quebec, Toronto, Winnipeg, Regina, Saskatoon, all were specially designated tribal areas of neutrality. These places were places of festivals of life, places for celebrations, and they would be so today. Cities, especially those projected into the future, are going to be built for specialized reasons and that cosmopolitan factor will be lost.

More Indian people live in Toronto than anywhere else. Toronto and Montreal have the best relationship with native people, as compared to Vancouver or Winnipeg or any of the western cities. In Winnipeg particularly, the Indian people live in one section of the city by force: they live in the Portage and Main region, an Indian ghetto.

The Covenant with the Land.

Groups of people who express a particular emotional energy in relation to the land, would have a covenant with their environment. Only the Indians have a covenant with this continent: a reciprocal arrangement between oneself and the environment. The covenant is personal. You will not do anything to harm the environment and the environment in turn, does not harm you. This covenant which the native people had with the land was so real it was like a marriage. The land became sacred, in the sense of being the mother, mother earth. And that covenant between an individual, a personal level, with his environment is what is missing in N. America.

If the covenant were re-learned and applied, the homogeneity

of N. America would disappear because the natural environment is much more varied than the goods that men produce. The regionality of the continent would become more pronounced. Now the airplanes are the same, light bulbs are the same, so you get a human environment which is highly uniform even though the natural environment is not. The 'urban man' lives in a similar environment particularly in N. America where people can go from one end of the continent to the other without human variety. Things that men make are all standardized. But the natural environment is various. The covenant with the environment produces a sense of the brotherhood of life, as opposed to the brotherhood of man. To know the full extent of human capacity, humans must know life, not just each other.

The great debates of Toronto, like the Spadina expressway, or development downtown, would be ludicrous because people in a brotherhood of life would not be even able to entertain the idea of the Spadina expressway. The reason these debates develop today is because people are dealing with the brotherhood of man. Some say the brotherhood of man is getting more people into downtown Toronto faster, and other people say the brotherhood of man is keeping as many people out of downtown Toronto as possible and allowing enclaves of neighborhoods to exist. But neither group is correct. The people who are talking about preserving their neighborhoods are simply preserving a 19th century process of raping the land rather than a 20th century process. So there are two groups, both wrong, and they are having these great debates.

Language and Environment.

If a man's name is so important, does it not follow then that the name of the environment and everything that is in it, should be as personal as is a man's name? It would be ludicrous to say that everyone who lived in Rosedale should be called Jones, and everyone who lives in Scarborough should be called Smith. And yet this is what the 'western European' man does to grass and trees. All trees are just trees, unless to a botanist who gives trees a group name. Individual trees do not have individual names, the way they do with Indian people. If an Indian is traveling he will say, "What is the name of that tree"? And that will be 'The Tree of Great Shade', as opposed to 'The Tree of Small Needles'.

The western man would say "That is unrealistic. It is bad enough that we have got so many languages in the world now without having more". But the process of communication was never diminished among native peoples simply because they had different languages. Communication is not simply a language thing, though it has become that way in western European terms. The non-verbal forms of communication, so prevalent among native people, have disappeared. So speaking different languages does not mean people cannot communicate.

There are so many different Indian languages because the geographical nature of the environment causes people to describe things in relation to a particular environment. This produced one language

for the southwest, one language for the mountain people, another language for woodland people, another language for people that live along the river. As the environment changed the language had to change. There were well over three hundred separate languages. A Chinook is as different from Ojibawa as Chinese from English. These people lived in close proximity yet they had a different environment. One was an agrarian group. The other was a woodland group and wandered. There is more validity in the Indian division of the continent than the way it is divided today such as the straight line separating the western two thirds of Canada and the U.S.A. In the U.S.A., as people come out of one state into the next state, the environment changes radically, such as crossing from Missouri into Kansas or from Texas to New Mexico. The Canadian provinces mostly are not connected to environmental changes. The most natural division of provinces would be east and west, not north and south as they are arranged. This causes political problems. A man in northern Ontario has much in common with a man in northern Quebec.

A map of natural regions has become an absurdity for modern man because there is nothing natural left. But when man was natural man-in-nature, then man's regions were a reflection, of the collective environment of which man was only a part."

Portion of the Natural Regions of North America

Native People Nations, Pre-Columbus



Source: Indians of North America—H.E. Driver

Fig. 180

CHAPTER V

EARTH.

How should the world be divided? From the view of the geography of human survival, new ways emerge. Infant mortality is more important, than exploitation as an element to be mapped; though infant mortality is always associated with super-exploitation. Industrialization is a bad criterion since it lumps tools with weapons. Nazi Germany was highly industrialized and highly toxic to children. Sorting out child protective factors, separating half-truths like 'industrialization', 'population explosion' and 'non-renewable resources', is the subject of this chapter.

I: One World.

Toronto is of global importance: it is not merely one of few cities with over two million population, (present world rank of forty second); it is a pivotal city for the continent and an experimental city for the globe. What can Toronto, as an important global city teach other cities of the world? This question cannot be applied to all cities. It cannot be applied to Calcutta where the only lessons are negative, where population is in decline internally, maintained only by a constant influx from the countryside. Cities with high infant mortality rates are to be avoided not emulated; the world map of high baby deaths contains only 'bad' cities which can only learn from, not teach, other cities.

A: Uniquenesses and Crucial Aspects of Canadian Cities.

As a city of life, what can Toronto represent to the world uniquely? Toronto is one of the rare English-speaking cities of the world without a racial ghetto. The U.S.A. and Union of South Africa have rigid, apartheid-ghetto urban systems. Australian and New Zealand cities have excluded non-whites nationally, so that entire subcontinents can be typified as 'the white side of town'. England has race problems and incipient racial neighborhoods such as in London; although discrimination is less severe than in the American-Union of South Africa model. But Toronto, as a shining light in the English-speaking world, is not unique among the world's cities in terms of racial desegregation. In this respect, Toronto is no better than Havana. Cuba is thirty to forty percent black and totally integrated. Other Latin American countries have desegregated cities too.

Biomass and Machinemass Spaces.

Among the world's cities, Toronto cannot claim the highest amount of biomass. Shanghai, the world's largest city, reforests

any years ago, can claim a lead over Toronto in this respect. The love of nature, in Toronto, its fight for its ravines, its nature trails and walks - all distinguish the city from American cities. Yet, on a global scale, these practices are not unique. Toronto's sensible mixture of transportation machinery - its minimal use of expressways, its subways, buses, street cars, ferry boats to residential neighborhoods on 'the Islands' in Toronto Harbor - is impressive on the continental scale, especially in comparison to excessive reliance on automobiles, in the U.S.A. Yet, in comparison to European cities, Toronto's sensible mixture of transportation machinery is not unique. Although Toronto's subway has a less unpleasant odor than New York's, in many respects Moscow's subway is superior to Toronto's. Moscow could teach Toronto about subways and Toronto, in turn, could teach New York. High-rise residential buildings, constructed by huge cranes, were first used in Moscow. High-rises are disastrous for children. Exported to Moscow, Toronto's increasing resistance to high-rise construction, could improve Moscow. Yet, on a world scale, even Detroit - a city of family low-rise dwellings - could teach Toronto an urban geography lesson.

What is unique, to Toronto and other Canadian cities, is the growing practice of confining machines, relative to people and other biomass. Putting machines in their place is a Canadian contribution to the world's cities. Planners from all cities of the world should study this Canadian practice

Global Comparative Urban Geography.

We really know little about the cities of the world beyond their location, population, and languages spoken. A research strategy might be to look for urban extremes, antipodes; the list below is only a first approximate guess. The following should be regarded as speculation intended to demonstrate that further examination of the question is worth the effort.

Calcutta has perhaps the highest infant mortality rates of any city in the world. The quality of death in Calcutta should be examined in detail especially for such features as extremely wealthy sections of town, unevenness in infant mortality within the geography of that city. Some African or south-east Asian cities might be as bad. Genocidal cities, with extreme differences based on race, include Detroit.

The antipodes appear to be Moscow, Peking or Shanghai, cities with the most improved infant mortalities. An historic geographic approach might be dramatic. The city with the lowest infant mortality might be Oslo which would imply a classless city. The city with the best infant mortality relative to ability to pay might be Tokyo. It would imply an urban geography that gives spaces to children. Moscow should be examined from this point of view too since a popular slogan in the Soviet Union is

'the children are the privileged class': even hostile visitors report that children are central.

Machine and biomass spaces are central to understanding the city, but, almost unstudied. Probably Osaka is the world's most machine-dominated city with Detroit and Los Angeles not far behind. Pre-industrial cities, like Calcutta, are not as interesting as extremely industrial cities with relatively small machine spaces. Toronto is moving rapidly toward increased biomass and decreased machinemass spaces. It might be the most rapidly improving city in the world. Moscow might represent the highest ratio of mass transit (machine space compressors) to private cars in the world. In this sense Moscow might be the best.

The degree of ghettoization in a city is a further indicator of the underlying nature of the city. Toronto is certainly the most racially mixed in the English speaking world, with open housing for blacks. For antipodes, Johannesburg might be explored or Singapore. Integration of many races, not just two, might be Honolulu and it might be the only American city to achieve a world victory. Voluntary segregation, maintenance of an urban mosaic as opposed to a forced melting pot, might be Toronto, with Israeli Chinese and Italian concentrations.

The spatial distribution of income should also be explored. The all time high of total income has probably shifted from New York city to Munich in West Germany. Total wealth or highest per capita wealth leaves much to be desired since the spatial extremes in New York city are striking. Stockholm might be the most uniform in the geography of urban income.

Overall, Rio de Janiero might prove the worst city in terms of extremes. Peripheral slums might indicate that the poor are so poor that even extreme crowding does not buy them good location.

In a composite ranking of the largest cities in the world, say the top one hundred, from best to worst, the only Western hemisphere cities that have a chance would be Vancouver, Toronto and perhaps Honolulu. The 'Old World' has the best cities. A composite ranking might be to the advantage of cities that are not antipodal but like a pentathlon athlete, do pretty well all round; for example Copenhagen.

American Backwardness.

Below the global level, what distinguishes Canadian cities, therefore Canada, from American cities, therefore America? The U.S.A. projects itself as 'leader of the free world'. Sometimes this 'free world' becomes 'the world'. President Nixon in a grand moment, in the 1960's gave a 'state of the world' address, surpassing even the Pope. Other evidence of American globalomania

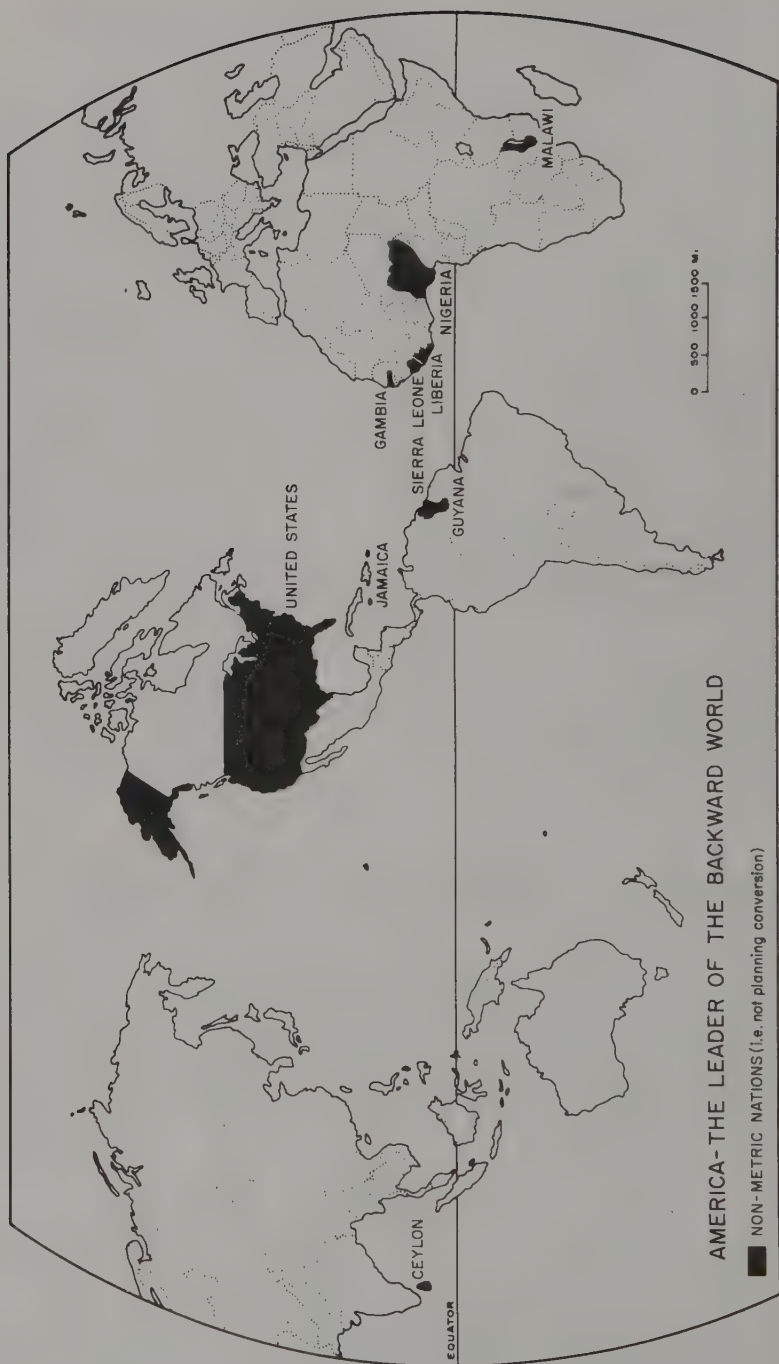
cludes statements, such as 'world wide inflation' or 'world wide energy crisis', ignoring that the 'enslaved world' behind the 'iron curtain' has neither. Provincialism is not confined to America; it, a sense of humor at the hilarity of the sombre pontification is missing. Political satirists in America never include the nation as a whole, as an object of therapeutic ridicule: they have not hit upon the real religion of the U.S.A. - nationalism.

An atlas of the U.S.A. as leader of the backward world is guaranteed worst seller; but many maps could be produced for it. The U.S.A. is the only country in the world, with the exception of British Honduras, to lack nationalized railroads. Half of Canada's railroads are nationalized. American railroads do not work efficiently, are constantly going bankrupt, and have to be bled out by government money without government ownership or control. The rest of the world views nonsocialized railroads to be as silly as privately owned sidewalks. A map of the isolation of the U.S.A. in votes, in the United Nations, is dealt with in the U.S.A. by ignoring the United Nations, with headquarters in New York city, but lost there. The people of the host country know little about the United Nations. An attitudinal map could be constructed to establish such an assertion. But, if the atlas is too costly to construct, at least it can be typified by one example; which countries are converting to the metric system and which are non-metric? Considering that President Thomas Jefferson introduced the U.S.A. to the metric system of currency, one of the first nations to convert, and almost succeeded in getting the metric system adopted, it is ironic that the 'leader of the world' is in such strange, non-metric company as Malawi.

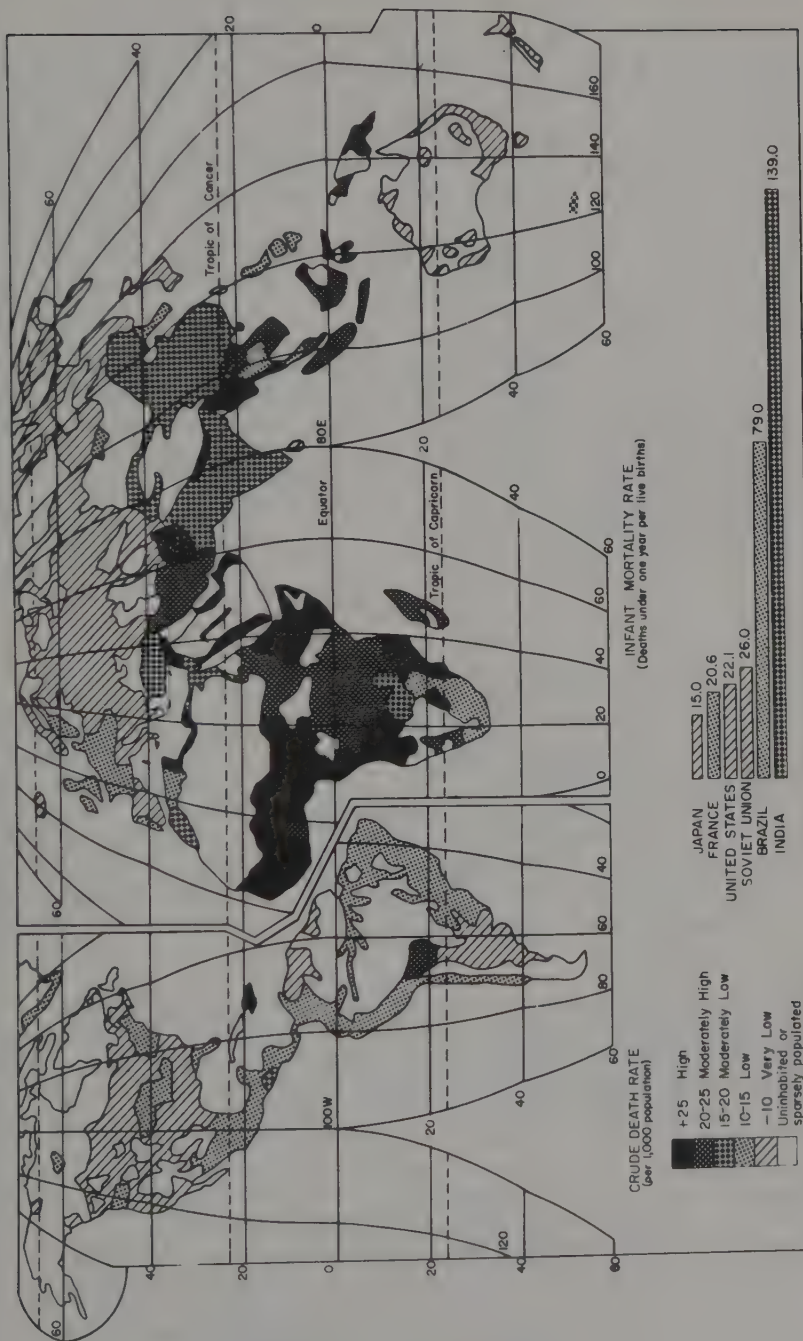
The Worlds of Life and Death.

Having established America's peculiarities, a crucial survival matter lacks a trace of humor - the infant mortality rate map of the world. The world range of infant mortality is from ten to two hundred deaths per one thousand live births, in the first year of life. This is the most crucial areal differentiation of the earth's surface. Where in the world are the children massively dying? In America. With an infant mortality rate only twenty in the range from ten to two hundred, the answer would seem to be incorrect. If the world were divided into two parts, the living baby world and the dying baby world, surely America would be in the living baby hemisphere. It is not. Relative to its ability to pay, America has the fourth worst infant mortality rate in the world.¹ The internal disuniformity of infant mortality rates in American cities separates America into two

ability to pay is calculated as follows: world rank on G.N.P. per capita minus world rank on infant mortality rate. Sources: G.N.P., World Military Expenditures 1970 Bur. of Econ. Affs. U.S. Arms Control and Disarm. Agen., Wash. Inf. Mort. Stat. Yearbook 1973 U.N. Dept. of Econ. and Soc. Affs., Stat. Office.

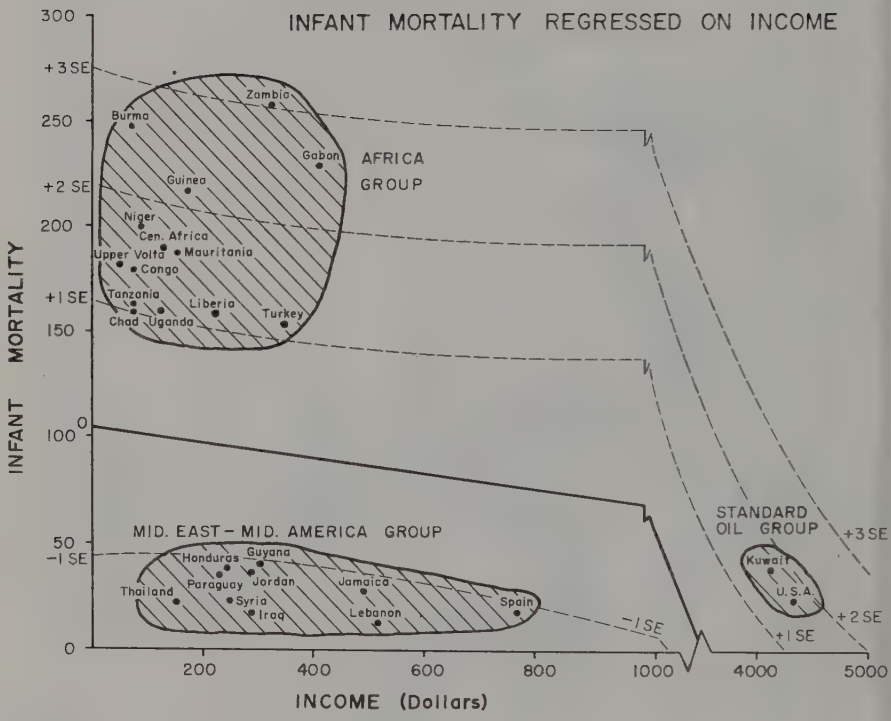


INFANT MORTALITY RATE



Source: Goodes Atlas '71

FIG. 182



Regression Constant = 105.337
 Coefficient = -0.0374

Infant Mortality—the number of deaths from 0 to 1 year of age per 1000 live births.

Source: U.N. Statistical Year Book 1973

Income—G.N.P. per Capita in U.S. currency.

Source: World Military Expenditures 1970

Bryn Greer-Wooten

Note: U.S. should have a Swedish Infant Mortality of 10 not 24, that is, America kills 44,000 of its own children each year.

Fig. 183

tations one of 'haves' and one of 'have nots', poles apart.

The other America of native people's reservations, Appalachia and black ghettos is a disgrace. America has some of the worst internal extremes in the world. Poor children literally starve in the world's richest nation. Nations with much less wealth lack starving children. The geography of infant mortality in Hitlerian Germany is instructive. As the Fascist regime gained power, the map of infant mortality inside Germany began to show extreme differentiation. Those babies considered Arian were more protected than before, while those considered Jewish were under increasing pressure. Jewish ghettos and later, extermination camps showed tremendous infant mortality rates. However, since Jewish children were less than one percent of the population, the average infant mortality rate for all German children actually went down in the beginning of the Hitlerian period. National averages can be deceptive since they disguise the singling out of children who are targets for genocide. In the U.S.A. the same disconcerting pattern of great differentiation in infant mortality rates across the map exists. In Detroit the rate of difference between Black Bottom, the black ghetto on the east side and Grosse Pointe, the Anglo-American community on the suburban east side, is at least four hundred percent.

There is zero population growth today among black Americans and the national percentage of blacks has declined from a colonial twenty to a current twelve percent. Discrimination against post-slave immigration only partially explains the decline. On the other hand miscegenation makes a 'Southern white man' unfindable. Certain rural infant mortality rates, such as on native people's reservations, for example the Navajos in southwestern U.S.A., also show large anomalies relative to the national map. In that these areal differentiations are racial, the pattern suggests genocide; selectively killing a race through their children. That Canada is not free of this internally articulated map is clear with native peoples, such as the Ojibwa in Kenora.

In terms of the rate of improvement, of lowering infant mortality rates, the U.S.A. is again an international disgrace. Only peculiar kinds of geographers or other travelers look for the slums of cities, as well as the high spots. In Calcutta, the slums are unavoidable. In Lund, Sweden, they do not exist. But in American cities, if one pursues the blue bird of happiness, it is possible to avoid contact with the slum. By careful spatial selection, a visitor can announce: "I have seen America and it is a wonderful place." But a scientific geographer, who looks for extreme evidence, is horrified by the extremes, especially the extremes of American urban baby environments. The U.S.A. belongs in the hemisphere of 'baby death'. Canada does not. Toronto lacks the quality of baby killing environments that the U.S.A. possesses. In Toronto, the species is fairly healthy. How can this truth, felt and observed by scientific travelers, be statistically demonstrated? The raw

national average rate of infant mortality is not enough; but, the ability to pay, relative to the infant mortality rate, added to the new rate, yields a combined index which can be used to map justice to life. Canada is on one side of this line, the life side and America emerges as the leader of the world of death. Though politicians, and people conditioned by them, might view the map as merely political, it is not. It is a geographic matter depicting a Darwinian condition, not a political one. Mankind is an endangered species and below the level of global disaster, lies a horrifying geography.

The Crucial Difference between Canada and the U.S.A.

American cities are sick. Is this a necessary concomitant of capitalism? Global evidence is plentiful and mixed. Fascist cities are child killing, especially those conquered cities, outside the fascist homeland. Most people conceive of the world as being divided between communists and anti-communists. This book divides the world up differently, in Darwinian terms. Where in the world is the species thriving and where is it declining? Communist cities have low infant mortality rates; so also do western European and Japanese capitalist cities. Capitalist Norway's cities have relatively low infant mortality rates relative to their ability to pay. Yet the infant mortality rate of capitalist U.S.A. is twenty-sixth among nations of the world. The U.S.S.R. and Bulgaria with much less wealth are now immediately behind the U.S.A. and should pass it in 1975. Communist East Germany is already far ahead of the U.S.A. Twenty-five nations have lower infant mortality rates than the U.S.A. and the situation is worsening, since U.S.A. was previously ranked seventeenth in infant mortality. The American system, the national brand of capitalism practiced there, is sick. Capitalist cities vary greatly. Not all are sick, as are America's cities. Capitalist Calcutta, Rio de Janeiro or Saigon are much worse than capitalist Stockholm, Hokkaido or Vancouver. Canada's infant mortality rate is fourteenth: its income rank fourth. Therefore, it is only ten ranks below its ability to pay, compared to America's twenty-five ranks below its ability to pay. The rate in Canada is better and improving while America's is worsening. Canadian cities basically work and are not sick or child killing. Children are more likely to survive in a Canadian city. This is the fundamental difference between Canada and the U.S.A. It is not a unique, but a crucial difference. Canada is in the life world and the U.S.A., in the death world. Toronto, unlike Detroit, has almost no 'city of death'. Every tourist intuitively feels the difference.

B: World Walls and Their Destruction.

It is geographically sad to note that as transportation has become easier, restrictions against 'one world' movements have become

greater. At the time of the 'grand tour' of Europe, only the rich could afford the tour and there was no passport system. As travel became commonplace and men and women began to migrate to find work, or at least the hope of food, then a strict passport system was instituted. The ease with which desperate people high-jack airplanes has put the entire North American continent 'on a frisk'. Everyone, even the wealthiest people, get 'padded down' by hand and machine, every time they get on an airplane. Warntz (1965) has produced work showing how many people would have to move from where to where to distribute the population of the world equally among the income. Rather than moving the wealth to the poor, he suggested moving the poor to the wealth: distribute the poor, rather than distribute the wealth. If the Indian subcontinent went to Europe, and China to North America, then that would do the trick.

".....the population surplus is of the order of 550 million persons. If this number of persons could be transferred out of China and India with no reduction in these countries' total national incomes the average of Per Capita Incomes could be raised there from the current average of \$60 per person per year to approximately \$150 per person per year.... this (underpopulation) indicates a population deficit for the United States, Canada, Australia, Sweden, Brazil and Argentina not greatly different from 550 million persons..." Warntz (1965).

Obviously, people with wealth will not tolerate such an 'invasion' by the poor. The walls of this world have to be in place until standards of living between various countries are approximately equal. Not only is this true from the point of view of the countries being 'invaded' - the wealthier countries, but also from the point of view of the countries which people are leaving. Poorer countries tend to lose their best trained, young people to wealthier countries - the 'brain drain'. Therefore both rich and poor countries tend to discourage migration between themselves.

There is an element of confidence in the illegal immigrant 'racket'. Most clearly with the Mexican migrant worker in the U.S.A., the so called 'wetback', there is collusion with the agricultural growers and the government to allow people to 'sneak' across the border. Then, they work as illegal immigrants, therefore, rightless people, for much less than legal wages with no facilities for their children's schooling and so forth. If they ever protest, they are immediately deported as illegal immigrants. Though Canada does not have the mass entry of the American 'wetbacks', it still allows illegal West Indian and other 'immigrants' for similar motives - to do jobs Canadians will no longer do.

The Detroit and Berlin Walls.

For a geographer, to restrict travel is personal imprisonment. The general population views 'walls' also as a restriction to freedom. The famous 'Berlin Wall' is viewed as such an infringement on

freedom. The anti-communists Kolars and Nystuen (1974) ascribe the 'Berlin Wall' to ideological failure:

"West Berlin is a spatially separated enclave of West Germany in East German territory as a consequence of the termination of World War II. Germany was divided into two parts by Western and Communist powers; Berlin, the former capital, also was divided. In the following years, thousands of East Germans fled Communist control by crossing into West Berlin despite efforts to halt them. Eventually the East German regime erected a solid, fortified, and patrolled wall between the two halves of the city in order to prevent the escapes. The wall remains a real and symbolic barrier between the two Germans."

In fact, the wall arose because West Germany, some years ago, was considerably more wealthy than East Germany and the East Germans were seeing their country 'brain drained' away. As living standards in the two Germanies have become comparable, so has a relaxation in travel restriction between the two. The literal walls in Detroit, separating race-class groups, are every bit as discouraging as the wall in Berlin and exist for similar reasons. American geographers among others, ignore the Detroit Wall in favor of distant walls - remote control freedom fighting.

Tearing Down the Walls.

How can the world's walls be torn down? How can the species achieve 'one world'? Assuming all countries are rich is not as far fetched as it sounds. In 1913 there was just one mass production plant in the world, Henry Ford's Highland Park plant, in a suburb of Detroit. A modest historic plaque marks the place. It mentions nothing of the geography of the copies of this plant; how in little more than half a century the plant has been repeated and expanded into almost all parts of the world. Soon all nations will be industrialized, therefore, wealthy. Then the basic conditions for tearing down the walls should be met.

But what of the threat to cultures, to racial identity, to national loyalties, if 'one world' is achieved? Who wants 'one world' if it means an undifferentiated world? With industrialization comes urbanization, so the geography of world mixing reduces to the mixing of cities and the mixing within cities. Hidden landscapes of individuals and city blocks becomes, at a higher spatial scale, urban nationalism a solution to the problem of mixing and not mixing. It avoids the false dichotomization of the 'melting pot' versus the 'mosaic' and concentrates on letting people mix and unmix voluntarily. Sometimes people must separate to come together. In Toronto the Italians have decided not to mix as have the Jews. No one objects to their mosaic. The blacks and the Quebecois have decided to mingle and no one objects to their melting pot. Groups might change their minds in either direction, in the future. At the national level, urban nationalism lets passions for purity or

assimilation flexibly ebb and flow, pulsate with popular rhythms.

Consider global examples of the applicability of urban nationalism as a device for scientifically achieving 'one world', with a minimum of chaos and violent disorders. At the end of World War I geographers were called upon to help establish boundaries between states in Europe. Since then, this science has not been much used as politicians feel that setting political boundaries is their concern alone, without reference to expert tradesmen in this subject area. Lack of technical skills on the part of the political laymen leads to simplistic notions of urban government.

What is most technically difficult in the Middle East, a problem causing global nuclear alerts and economic slow-down and near panic in so much of the world? It is the disposition of the problem of Jerusalem. Urban nationalism, national expression just short of full sovereignty, is a solution sophisticated enough to help in the immediate crisis in finding a peaceful, just, or livable solution to the Middle East crisis, the question of how do the Palestinians and Israelis live in proximity.

It might well be that Soviet Jewish dissatisfaction is not based on religious discrimination, but, rather, on national discrimination, based on the notion that a nation must consist of people and their land. Since the Soviet Jewish population had no land within the U.S.S.R., they were given a portion of Soviet eastern lands in the early 1920's. Nowhere in the world have significant numbers of urban people successfully returned to rural life and the Soviet experience with its Jewish national state of Biro Bijan is as unsuccessful as other attempts.

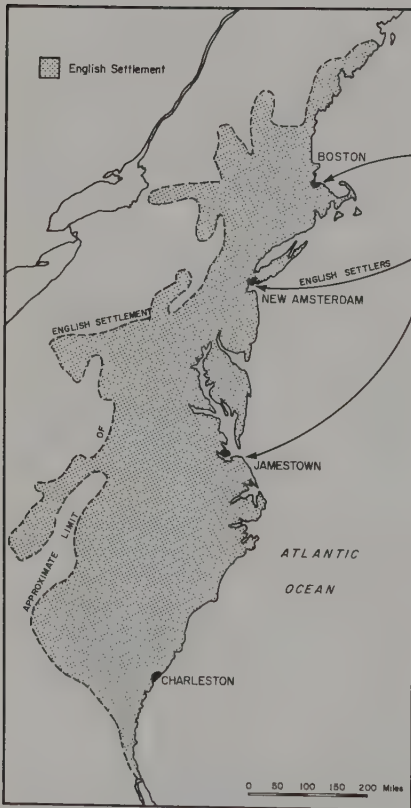
Canadians often ask the question: "...why don't the blacks of America form their own nation?" Some elaborate on this theme and point out that there are as many blacks in America, as Canada in Canada. The difficulty is one of geography. Where can the blacks set up their nation? Africa? The old 'Black Belt of the South'? Two basic problems exist in 'returning' to some long lost homeland. The reason people left was to make a living elsewhere, usually under threat of dying in the old place. Immigrants from Ireland, after the potato famine and, slaves from famine-stricken Africa are similar in that they left their homelands under penalty of death for remaining. The old homeland cannot re-absorb the people into the economy and, therefore the second problem is the resistance of people who remained in the homeland. Israel represents both problems. So where can the blacks in America form a nation but where they now live, in the ghettos of cities? Whatever nationalism they can muster must be in the spaces they now occupy. The prejudice that landless national expression is impossible, is so deep that many urbanized people have generated 'back to the land' movements to establish separate nations.

For urban American blacks, first, there was the common experience of slavery that included capture and forced migration to

a distant continent. This showed up in American ghettos as a pan-African feeling with African cultural history widely taught, African hair style and clothing styles widely imitated. But, after Liberia, there was no successful movement to return to Africa, despite Garvey's call, in the 1920's. The 'black belt of the south' has more recently been considered a possibility for establishing the basis of landed nationhood. Both religious groups (Moslems) and secular groups (New African Republic) have projected such programs. With over fifty percent of the blacks of the U.S.A. scattered in urban centers, this implies a large return migration and reduction of living standards, to say nothing of fierce resistance by whites in the area selected for black nationhood, or nation-wide resistance to balkanization of the state.

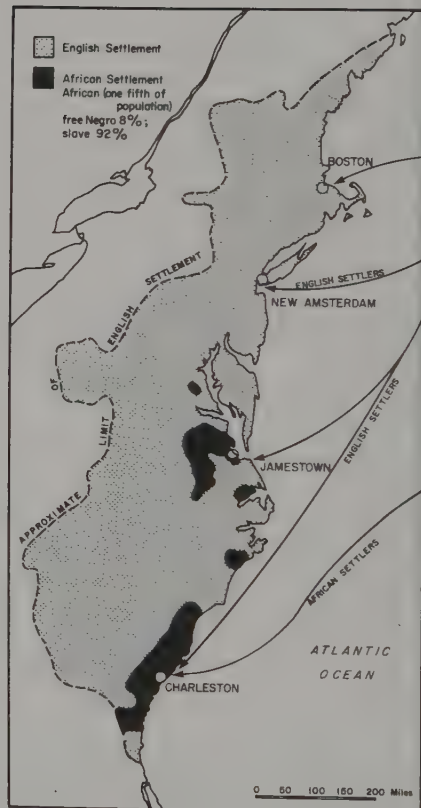
The recent political geographic thrust of young black urban politicians came in the form of increased black urban power under the concept 'community control'. This had a white counterpart in 'local government'. But community control is not grappling with the basic problem of the degree of sovereignty, the problem of 'the nation'. All these geographical solutions to black nationalism result from confusion over 'the land'. American left wing circles in the 1930's argued that the black people had the right of self-determination because they were concentrated in the southern black belt. In the 1960's these same circles argued that the right of self-determination had been lost, since over fifty percent of the black people were scattered in urban units. The world Jewish community projects the movement to Israel as returning to the agricultural base of cooperative farms (kibbutz). In fact, it is a move to urbanized Israel. All rural movements are utopian because they require that people drop down a cultural-social-economic level and leave the civilization of industrial cities, to return to an agricultural way of life. Besides the difficulties caused by industrialization of modern agricultural life, destroying the family farm base necessary for utopian rural nationalists, it is difficult to persuade many to move 'to the land' or to keep any who might try, after they have experienced city life. How are you going to keep them down on the farm after they have experienced Kiev or Calgary?

Despite the repeated, obvious bankruptcy of 'returning', the prejudice that land is necessary for a nation is so deep that trying to return to the land is continually put forward as a solution to the urban national problem. Look at utopian efforts to give native peoples in Canada some power. The strategy repeatedly turns to attempts to give Indians increased power on their reservations, even to expand these reservations with returns of illegally seized native lands. But the native peoples do not live on reservations. The Ojibawa ghetto in Minneapolis is as large as the black ghetto of that city. Winnipeg has more Indians than many reservations in Canada. If Indians are not given national expression inside Winnipeg they are not given national



Racist Propaganda Map of 13 Original English Colonies, 1774.

Fig. 185



True Map of 13 Original English and Afro-English Colonies, 1790.

Fig. 186

**Black Colonists Represented as a Commodity —
Triangular Trade On The Atlantic During The Colonial Period**

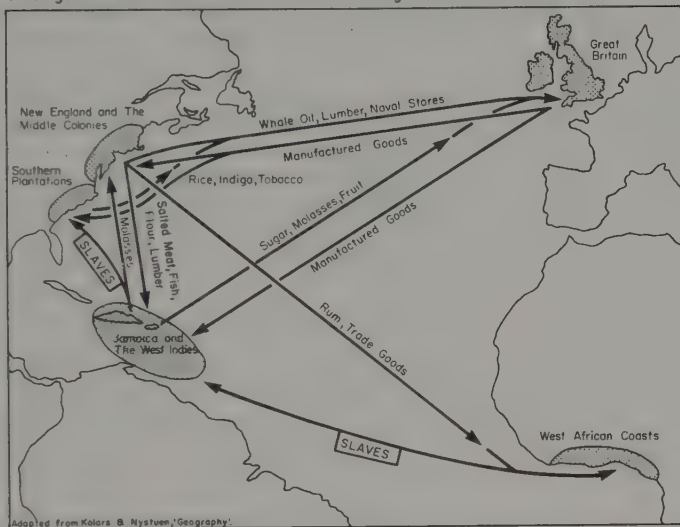


Fig. 187

ORIGINS OF BLACK AMERICANS
Sample of Slaves in South Carolina

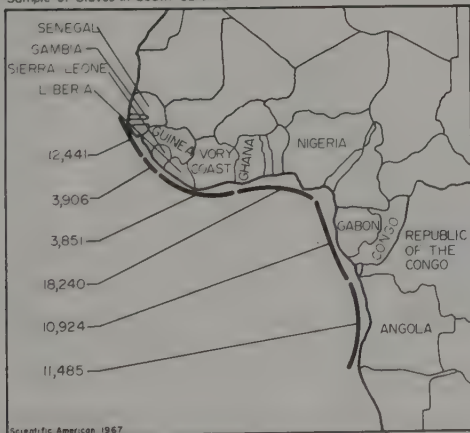


Fig. 188

expression at all. The Indian national problem is an urban geographic problem because modern Indians continue to move to the city along with everyone else.

Urban Internationalism.

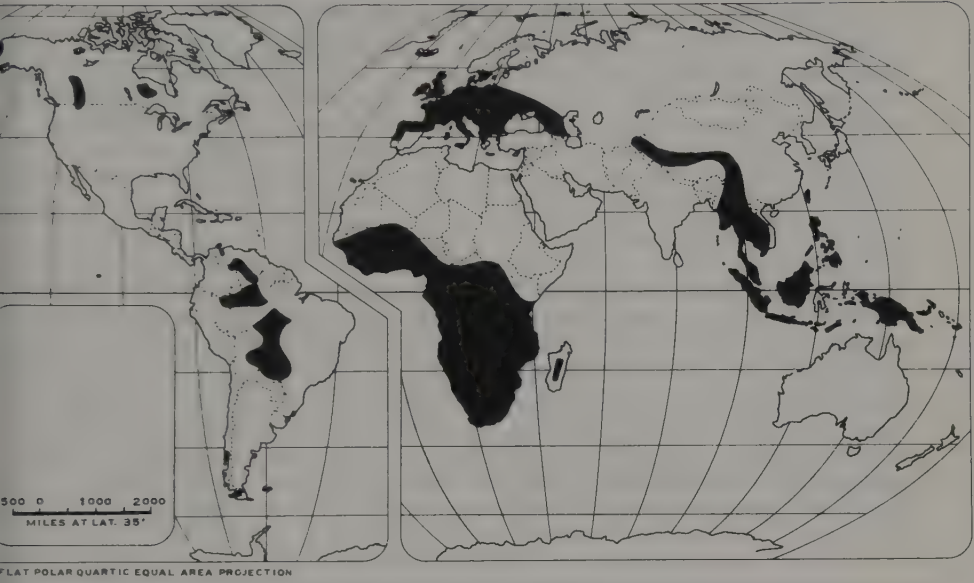
Notice, the degree of urbanization alone does not bring the objective need for urban nationalism; rather, the mixed national nature of many of the world's large cities does so. Copenhagen practically turns all Denmark into a classic city-state of ancient Greece, a modern Athens. Denmark is nothing but a Copenhagen-centered region, just as Toronto has obliterated the Province of Ontario. But Copenhagen does not mix nations and is not an international city. Toronto does mix nations and is interational. Just what is the process to achieve internationalism . . . summit meetings . . . the United Nations? There are mixings, importations other than migrations, but, to a geographer, 'one world' must mean that everyone is free to go anywhere - passports and customs would be abolished as would 'citizenship-as-a-device-of-imprisonment'. How are people going to increase their rate of travel . . . as tourists, as students, as temporary workers, as permanent migrants? It will not be as migration of farmers. It will be as the migration of the remaining farmers to the city and increasingly, as migration from city to city. Then urban nationalism becomes urban internationalism and is spatially flexible.

What would be the ultimate effect of such a pulsating geography on the nature of mankind? It tends to mix mankind. The world is more mixed than people realize. In the U.S.A., geographic propaganda teaches that there were thirteen 'original colonies'. This ignores French colonies, such as St. Louis and the Spanish colony of northern Mexico. Moreover, the thirteen colonies were not English, as propaganda maps insist. The southern colonies were mixed Afro-Anglo settlements. The typical propaganda map of settlement shows Europeans on one map; then, on a separate map of commodity flows of the 'triangular trade' slaves appear as a commodity, along with sugar, molasses, rum and other 'things'. Slaves were no more forced to settle in 'the land of the free' than Georgian English penal colonists, who also clanked in chains. Nor were slaves more forced than starving Irish, Swedes, Poles, Italians, Scots, Welsh and so on. Who did come 'freely' . . . one percent . . . English Colonial governors? The south of the U.S.A. is a mixed white-black race. Few pure white or black southerners exist. Mixing has occurred.

Black Civilization.

The mentality of the educated man, in the tradition of western civilization, is to equate civilization with white civilization. The 'known world' was the known world from the point of view of Europeans. Other people's known worlds are not considered, are presumed lost. As sidelines, the civilizations of American native

AREAS OF NATURAL POLYPHONY



g. 189

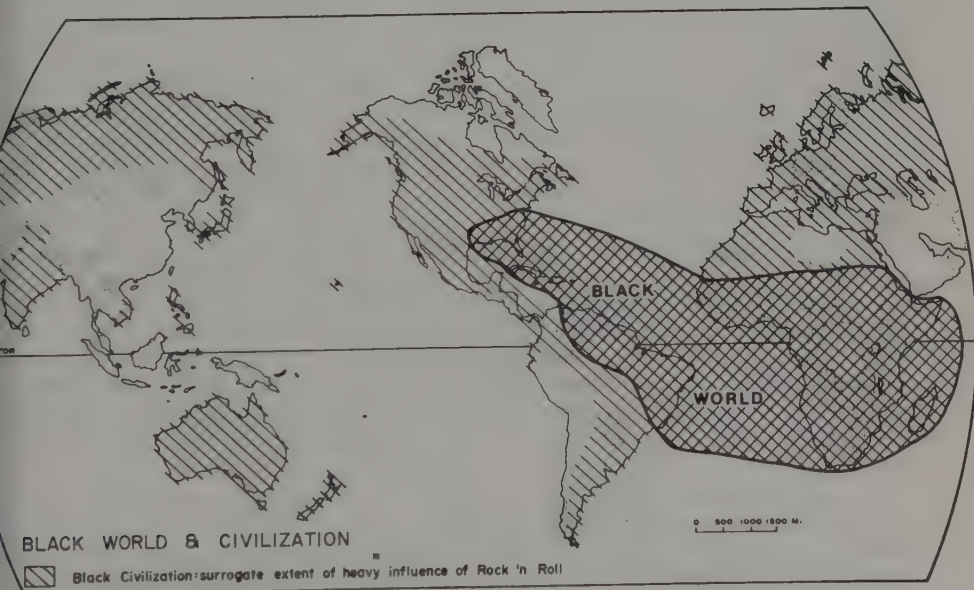


Fig. 190

peoples is taught and Chinese civilization, given some respect.

The civilization unappreciated is black civilization. Many black American scholars have undertaken work in black history. But there is no 'black geography week'; no Du Bois of geography; even black geographers do not suggest one. This civilization the black African slaves to the white European masters, is the antipode civilization that must be confronted, because, in modern times, this Afro-European mix has been most evident, therefore, most suppressed. The earlier European mix with Africa, from the dawn of time across the Mediterranean, has not been at nearly the rate of the mixing achieved since the introduction of oceanic travel, the slaving of Africa and the mixing of the Americas. European mixing with Asia was vigorous before that, especially as Chinese-related civilizations drove the whites out of Japan and eastern Siberia, all the way to Hungary, which Orientals conquered and held. The mixing of Spanish, French and Portuguese with American Indians has not been acknowledged either. Quebec is an Indian-French province biologically, Mexico is overwhelmingly Indian in racial stock (eighty percent) and culturally, only partly Spanish. Peru conquered the Spanish, the Incas prevailed over the invaders. But the great unacknowledged civilization is the black world and how it has mixed with the rest of the world.

Mankind evolved black man, in Africa, spread out from there, gradually developing minor, sub-species characteristics called races, mixing with these elements of himself, continuously. Civilization perhaps started simultaneously, in several parts of the world; but, white civilization started in Africa, in a racially mixed country. The black world is a region that includes Africa south of the Sahara, and the New Africa, of much of south, central and north America, and the West Indies. Diffusion racially and culturally, from this core area, is underestimated. With the exception of the purely visual arts, black civilization dominates the arts. Africa had one of only three major areas of harmonic singing and enjoyed the most advanced rhythms, the basis of all non-plastic art forms. The full range of arts from ballet to opera are being absorbed by black civilization; in free competition white civilization has crumbled. The music of Brazil, is the music of black Brazil. The music of the U.S.A. is the music of black America and so forth. Only China represents serious exceptions to the spread; this might be a matter of China's relative isolation from the core of the diffusion from the black world.

Racial purity, in blood, culture or money, has never existed on the planet and whatever degree of racial differences existed is now in the process of absolute disintegration. The time of maximal areal differentiation of the earth's people would be interesting to estimate. It occurred after the African genesis, when mankind was one and, before Europeans occupied the oceans. But even before the European sea conquest, the Chinese had great fleets exploring Australia and the east coast of Africa; the Arabs colonized as far

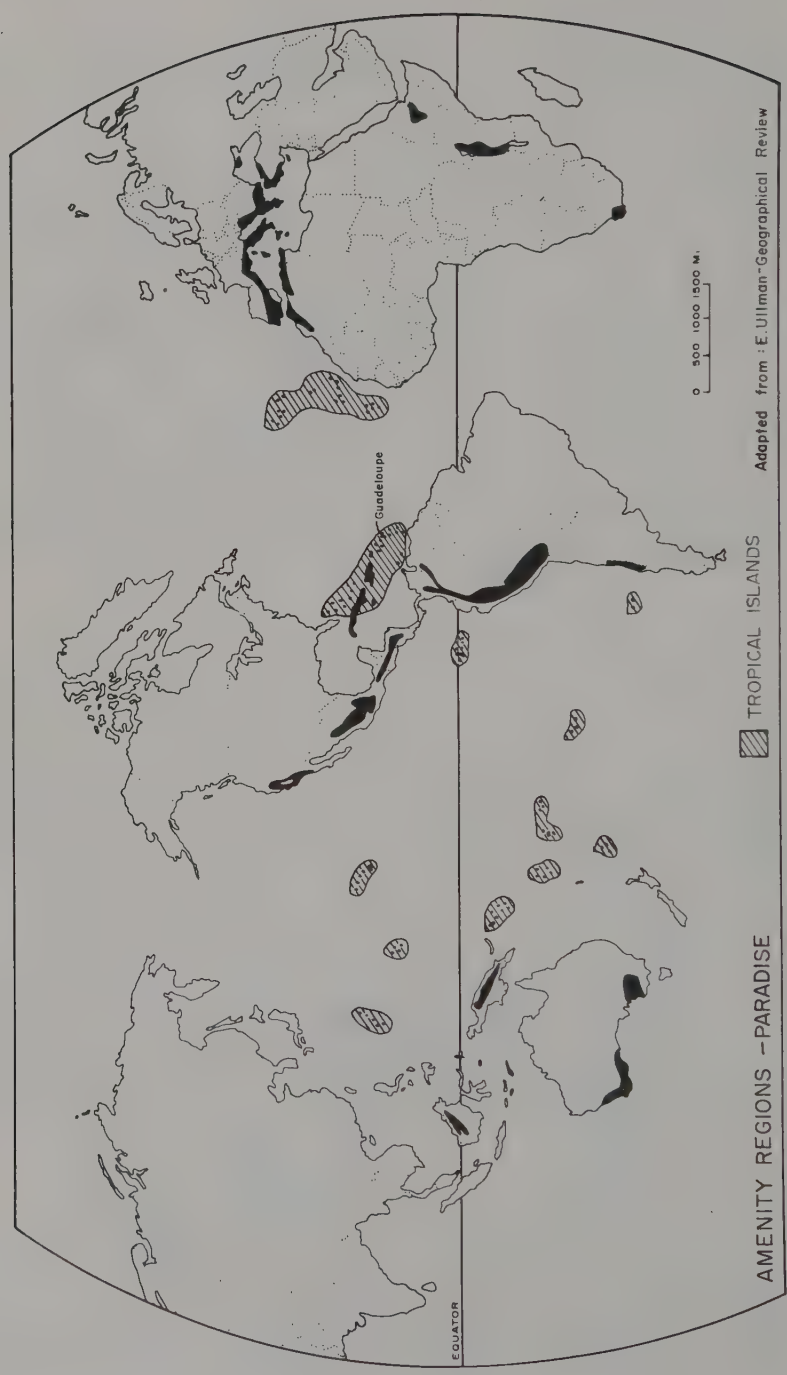


Fig. 194

the Philippines and the Polynesians, the Pacific hemisphere, half the globe. By land the Chinese were superb explorers. They constructed a superb road, more impressive than anything the Romans achieved, all the way from China to the gates of Turkey—today, mistaught as Marco Polo's route. The time of maximum human differentiation might have been considerably before what, in a triumph of the cult of the personality, we typify as Columbus's discoveries.

Is this mixing good . . . should it continue . . . should it be slowed or reversed? If the net effect of migration from one nation's cities to another nation's cities, the typical pattern of the modern world, is an international urban nationalism: if mixing, delayed by pulsating forms of dispersal and concentration, produces one world of identical people, is this a desirable outcome?

C: The Coming World.

People have the fantastic idea that we are all heading to one skin color, a sort of light brown . . . how silly. We have been intermarrying in some isolated parts of the world for tens of thousands of years and yet some people in the same village are short and others tall. In the same family brothers and sisters are often strikingly different. A great variety even after 'perfect' racial mixing is inevitable. With the Soviet children and Chinese children learning English it looks as if the global language will be English. But speaking English does not make one an Englishman. Language is not all of culture and besides speaking only one language is not inevitable either. 'One world' might produce multilingual people with English merely the common tongue. At the same time Europe and the Mediterranean basin all spoke Latin and look at the variety now.

Ultimate questions are unanswerable, even those about the geography of travel in a spatially free world. People may choose not to travel, or not to have a fixed address, or to migrate with the seasons. The answers are not clear; only a process by which people can vote with their feet is clear.

What will be the geography of 'one world' . . . where will people live . . . in what environments? Ullman (as far back as 1974, with democratic genius, notes that people (and footloose industries) are voting with their feet for the climates they would build in their homes: dry, light, around seventy degrees Fahrenheit. Tropical islands, tropical highlands and Mediterranean climates are perhaps the future home of mankind. The only other geographer to write futuristically on what he called voluntary regions is Zelinsky (in press) who lists amphibious, heliotropic (sun-seeking), montane, equine and "Forbidden Fruitlands", regions. His concepts introduce a broader range of geography but are not as mappable as Ullman's earlier work. It makes no difference that this generation of mankind insists about where future generations must live. They will live where they want to no matter

how loudly we shout at them from the grave. But to try and predict, is not to dictate; to try and project current trends into the future is sound enough science. So where do 'jet set' Torontonians and other 'jet setters' go for vacations? Exploring a sample 'jet set' space for mass human use produces interesting results.

In rejecting new towns earlier in the book, as utopian escapism, obfuscation of the real problems of misgovernment, it must not be assumed that a vacation in the country is written off. People, especially inner city children, need the countryside to refresh themselves. It is not yet clear how mankind relates to other living things in the environment, but everyone feels 'the peace and quiet' of the countryside. It would be foolish to wait for total scientific proof before accepting the high likelihood that the countryside environment is restorative. More pugnaciously, if it is good enough for the rich it is good enough for the poor. If the rich find a mid-winter vacation in the Caribbean good, so will the poor. By assuming 'Toronto is where Torontonians go', then Toronto is an international city. Typically Toronto thinks of itself as international and cosmopolitan because of all the various cultures, races and national groups walking in the streets and announcing their presence in restaurant signs and so forth. But Toronto is international in a second, more profound sense. Torontonians are in other people's cities and on their beaches. At any given time thousands of Torontonians are overseas. But a map of where these touring Torontonians live in Toronto, shows bias against inner city residences.

In a concrete attempt to construct a spatially, and in other ways, integrated tropical paradise beach, the French West Indies was selected, out of Ullman's theoretical considerations. The French West Indies was considered because at that time (1970) Detroit black geographers were in close contact with Quebec geographers and white English speaking geographers. The three groups, black, French and English had so hated each other over the centuries; it seemed that any other group could get together, if that trio could. Of the three major, French-speaking, black islands, Haiti seemed politically impossible leaving only Martinique and Guadeloupe. Guadeloupe had less tourist development, therefore was expected to be more open to a seemingly far-fetched idea, the establishment of a mixed orphanage on a fine tropical beach.

The expedition was a physical delight and eventually Anse Cannot on the island of Marie Galante was discovered and mapped. But the human geography was a disaster. Imperialism is normally thought of as some abstraction, as military occupation followed by economic looting. To a geographer the process can be more graphic. If the port facilities can take almost nothing into the exploited

country but have superb modern equipment for removing things, like oil, iron or bananas; then it is clear which way things must be flowing. The port for Anse Canot, Port Louis, is as good a physical proof of white exploitation of black people as can be found in the world. To get goods into Port Louis a little 'out-board-motor-on-a-fishing-boat' is used; but to take goods out, a huge, deep sea float, super automatic sugar loader is used. The French may have been for ending exploitation in Quebec; they had no such intentions in black Marie Galante. The children are too poor to own underwear. In short order, gendarmes ordered the explorers to vacate under threat of force. One cannot have paradise in a human hell, no matter how nice the weather. Physics and human geography cannot be separated. The 'jet set', yes; the 'jet black set', no. Only part of Toronto is welcomed in Guadeloupe.

II: Children and Machines.

What is killing us? Geography produces three sets of maps which appear irrefutable; yet their errors are reflected in life three schools of thought, backed up by political organizations, armies, and other apparatus.

A: Evidence that Machines are Healthy.

The first set of maps establishes that machines are mankind's friend. On the world scale, industrialized countries are wealthy and countries with low infant mortality rates. However, not all heavily industrialized countries have low infant mortality rates. The U.S.A. has a high rate relative to its industrialization. But only industrialized countries have low rates, indicating industrialization as necessary, if not sufficient, for child protecting spaces. This effect of the presence of machines can be seen in nations. In the 'manufacturing belt' of North America, a Canadian-American international region, standards of living are higher on the average than those in the two nations in general and infant mortality rates are lower. So the first set of maps produces the impression that machines are man's best friend.

B: Migration.

Hagerstrand's geographic model of the spread of innovation assumes a consciousness is required, that the innovation is spread by a conscious act of conversion to some new thought. Simpson's (1944) models of the spread of species assume no consciousness; the species merely spatially expanded without comprehension. The spread of the human species appears mixed between these two models. Various human migrations, such as those of Europeans starting in the 16th century, were self-conscious, even scientifically planned migrations. The initial spread of the species from our 'African Garden of Eden' was undoubtedly purely 'animal' in the sense of no innovative consciousness. The flow of babies from white Europe was partly planned in the form of colonies and perhaps also

THE MANUFACTURING BELT-Region of, High Income

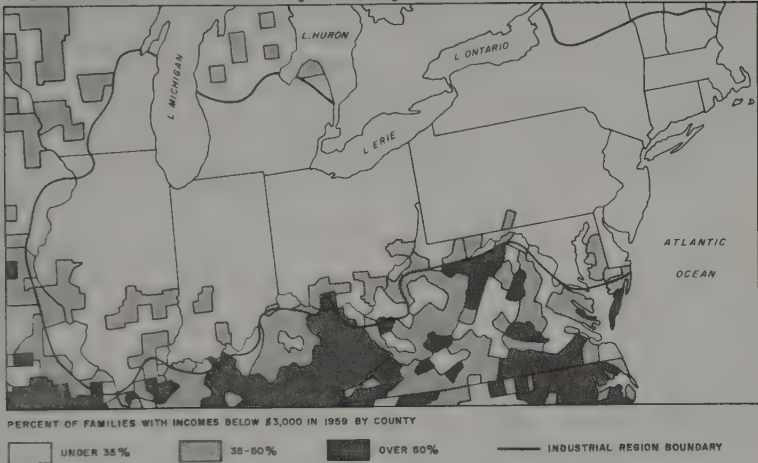


Fig. 196



Fig. 197

just spontaneous, 'moving over' as space became crowded, a mixture of conscious and unconscious spread.

Looking at the change of racial distribution, the white race has not always been expanding over others. Whites at one time extended into Asia and held such places as Japan, where, gradually driven back, they now exist as a remnant racially mixed group, on 'native peoples' reserves . . . the Ainu. The extent of this 'roll back' of whites is seen by comparing the location of the whites in Asia in early post-Pleistocene with their location in 1492.

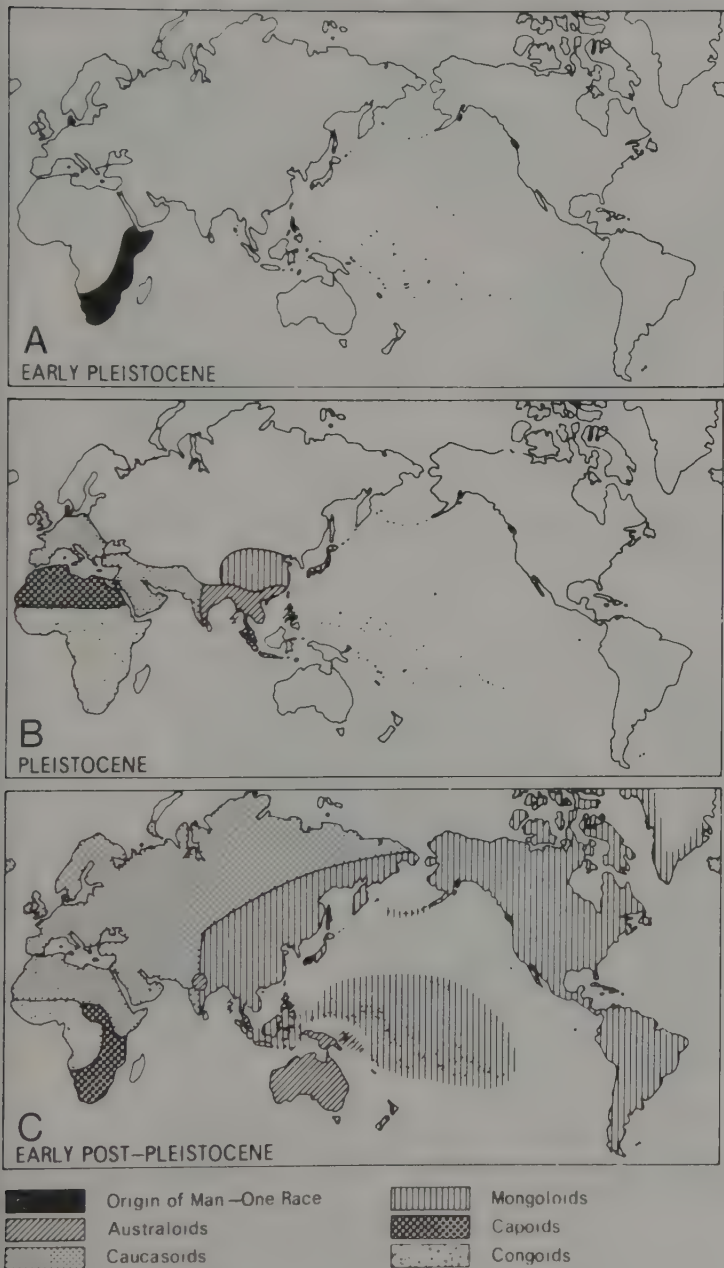
The White Menace.

The overwhelming racial expansion has not been the 'yellow menace' but the white one. Between 1600 and now, blondism increased from three percent of the world's population to twelve. While the human race in that period increased, as Hulse (1955) points out, by only six times, British stock outbred the rest by expanding fifty times! Those regions of the earth with high populations represent high civilizations - black and yellow regions as well as white ones. One cannot support large populations without advanced civilization. The global map of the incidence of genocide is essentially the map of hunters and gatherers. Only the agricultural people were saved from being slaughtered by the whites and, saved through being slaved. It was cheaper to kill hunters and gatherers and bring in slave farmers, than to try to educate hunters to agricultural practices. How this global slaughter and enslavement by a population explosion of whites is viewed as the spread of civilization, enlightenment, or humanism, is only explained as the triumph of perceived self-interest over reason and evidence.

Dealing with the 'white explosion's' demographic geography, three stages are discernable, all following the same geography of diffusion. Global norms were from the beginning of time, low densities, high birth rates and high death rates. The first change that occurred initially in Europe and now has spread out to much of the earth, was the drop in the death rate, especially of children. This great liberation from the misery of massive child deaths was a miraculous blessing to the first generation who experienced it. The children lived! The second, 'explosion' phase of high birth and low death rates normally lasts no more than one or two generations. The third stage is the drop in birth rate which stabilized the population but at a much higher level.

If Africa, southeast Asia and Latin America are denied their population explosion, how can Europe be reduced to its normal population proportions? Can we ever re-achieve a three percent blondism rate? . . . Or, since blacks are rarest, they are the most valuable and, we need more to restore the world racial balance. Yet the optimism of human expansion is twisted into viewing the successful expansions as necessarily doom-filled. The

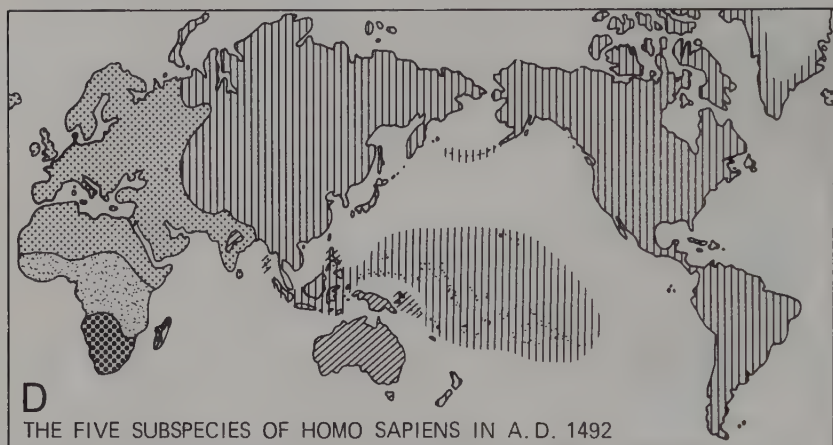
The Spread and Racial Differentiation of Homo Sapiens



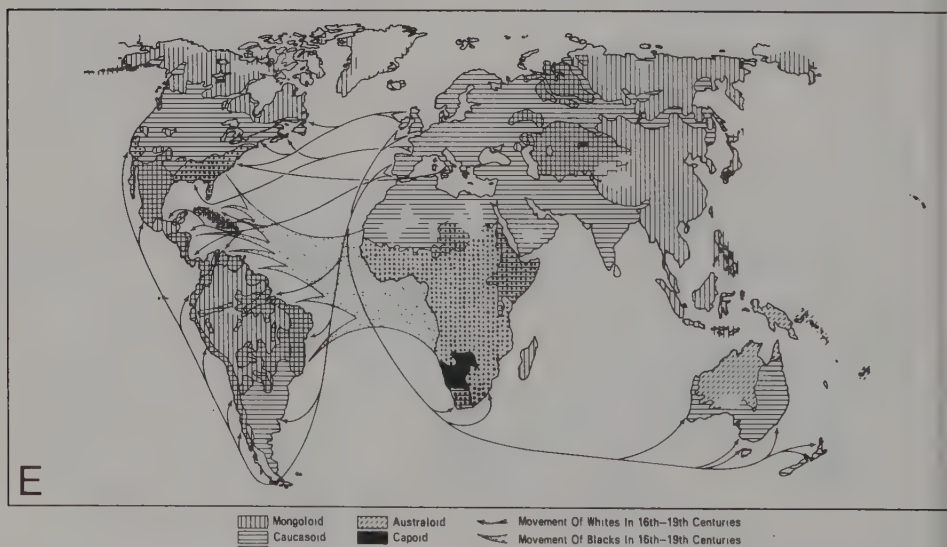
Source: Coon, C.S., 1962, "The Origin of Races." New York.

Fig. 198

The Spread and Racial Differentiation of Homo Sapiens



Note: The species started as one race probably black, gradually spreading and producing minor sub-species and mixing intensely especially after the introduction of ships.



Source: Coon, C.S., and Hunt, E.E., 1966, "The Living Races of Man and untitled insert Map in Map of World Nationalities (Moscow, G.U.G.K. 1961).

Fig. 198

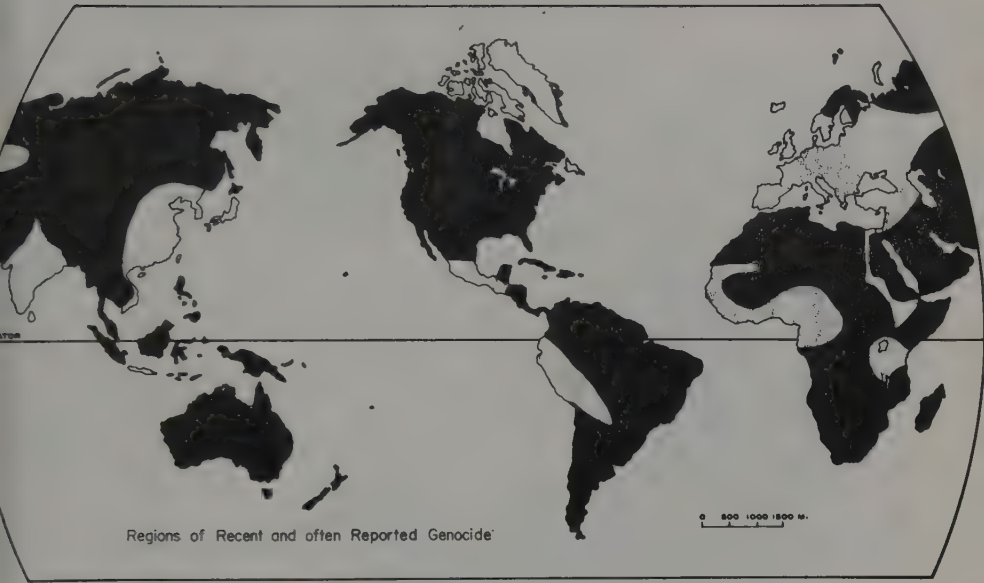


Fig. 199

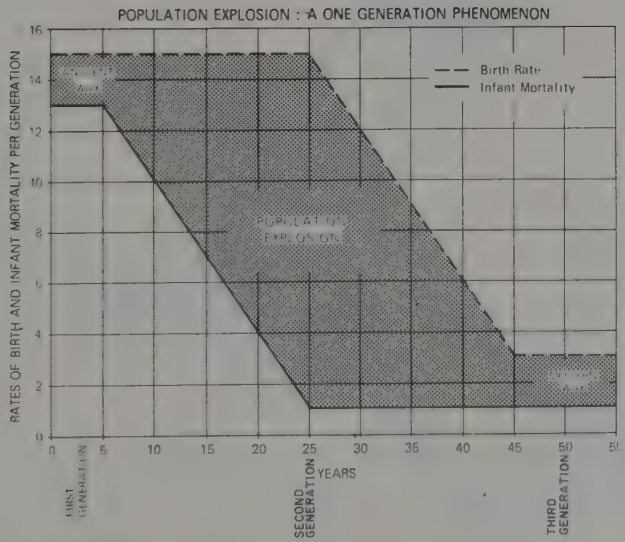


Fig. 200

WORLD CHILD PERCENTAGES, 1973



Source: F. Barrett,

CHILDREN (0-15 Years) as a Percentage of Total Population

- 20-24%
- ◻ 25-29%
- ◻ 30-34%
- ◻ 35-39%
- ◻ 40-44%
- ◻ 45-49%

krruptcy of the 'population explosion' philosophy can be seen from the passionate insistence that the world is coming to an end. Starting from the premise that resources are finite and non-renewable, Wolfe (1972) argues that:

"They (British scientists) are referring to a specific moment in time when the machinery of this incomprehensibly complex world, a world with perhaps seven billion people in it, simply stops. But it is not simple; it cannot be simple; it must involve agony and convulsive, universal battle on a scale that we cannot imagine." (brackets added)

Wolfe goes on to espouse a conscious decision to refrain from reproduction. The logical conclusion if everyone were to follow the course of action he prescribes would be elimination of the species.

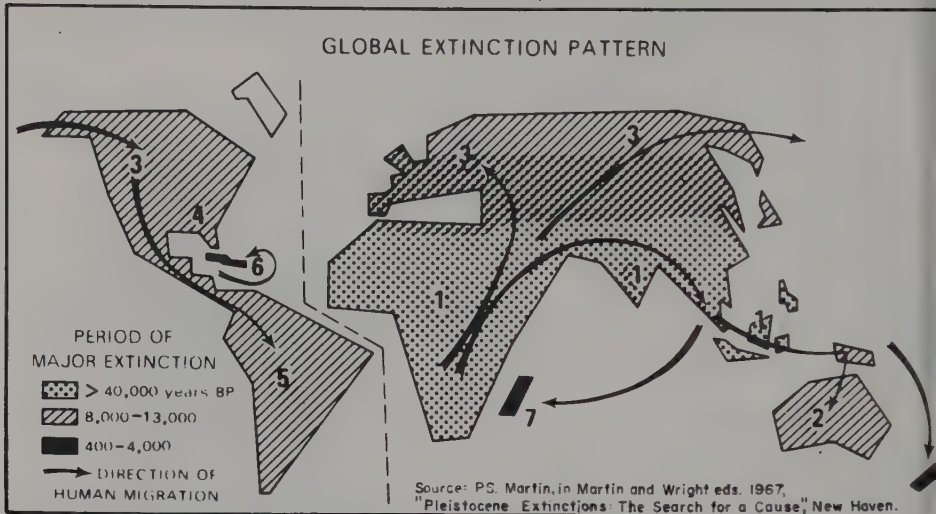
"When the nuclear scare was at its height, in the beginning of the 1960's some practical-minded people built themselves concrete fallout shelters in their basements, and today they are perhaps a little shamefaced at having done so. What equivalent for a shelter can we suggest? Only one: not to have any children, a gray prospect indeed. If we cannot save the world, we can at least save from entering into it those whom we would love and for whom we would bear responsibility."

These arguments ignore the experience of history as regards the greater rate of discovery of new resources compared to exhaustion of old ones.

After restoration of racial and continental natural proportions, zero population growth seems reasonable. More important it seems to be inevitable, in that it appears to be the third and stable stage, rapidly spreading from western Europe to encompass the globe. Zero population growth has no relationship to zero population. Zero population growth is to ensure continued population to prevent annihilation. Wolfe's acceptance of self-speciecide is against the nature of Darwinian laws. Wolfe is wrong. Peaceful machines have been the savior of children. More can be constructed. We must cling to the life of life, to the children.

III: Survival.

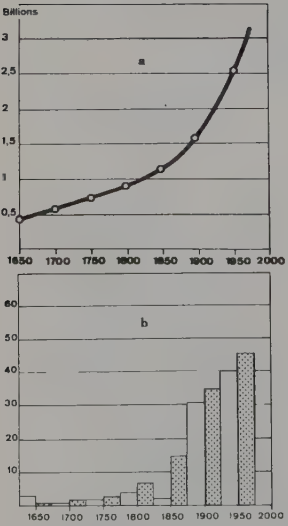
The second set of map and graph evidence as to what is killing us, indicates that mankind is deadly and vicious; that his spread is a blight to all life, foreshadowing his collective suicide. The map of the Pleistocene extinctions proves that as mankind spread from his birth-place in Africa, many other species perished in his path and, were eventually eradicated as man reached South America. Other maps show various species perishing



Note: The numbers refers to the order in which mankind occupied the earth's surface. The sequence was identical with sudden extinction of more than 200 large animal generations.

Fig. 202

Increase of Specicide with Increase Human Population



a) The increase in human population over the last three hundred years.
 b) The number of exterminated mammals forms (white bars) and bird forms (dotted bars) eliminated over the last three hundred years.

Source: Extinct & Vanishing Animals - V. Ziswiler

Fig. 203 a

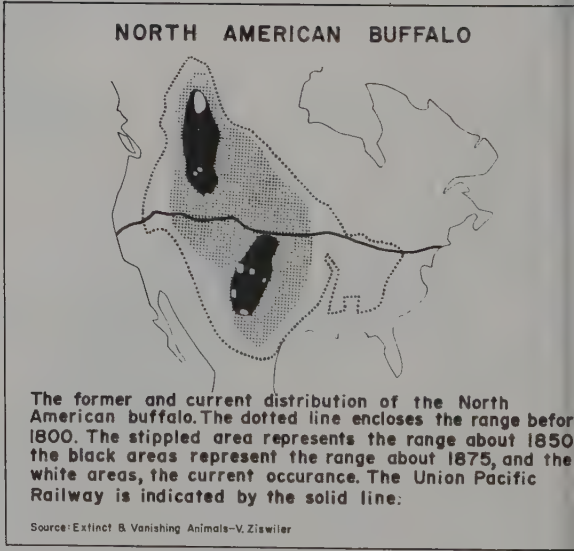


Fig. 203 b.

relative to mankind's presence. The more men, the more specicide. A continental, infra-red, areal photograph, taken from a satellite shows that where mankind is most present - in cities, so is death.

A: Machines as Killers

The third set of maps introduces a seeming dilemma. It indicates that machines, not men, kill life. Strip mining, (which has turned over one-percent of the surface of the U.S.A.), obviously destroys environment. Less obvious, (as explorer Vander Velde points out, in conversation), is that it destroys human cultures. Cultural geographers typically assume that cultural spaces are enduring; that one culture replaces another, in sequent occupancy; that some culture always occupies the space. Yet, strip mining strips away the culture. The strip mining culture is the last. If such machinery as 'The Gem of Egypt' (a gigantic strip mining machine, christened by its owners), can deculture a landscape, perhaps depopulate it forever, then we had better pause. We have worse machines than 'The Gem of Egypt'.

The last piece of evidence in this third set is one map from a set showing high infant mortality rates around nuclear reactors, produced by Sternglass (1972). Petkau (1972 - reported in Sternglass, 1974a), describes a biological mechanism which explains:

"surprisingly large biological effects of small protracted amounts of radiation on single cells and large human populations...."

His point is that dose rates of radiation have been ignored; that their examination indicates that:

"completely contrary to the case of genetic damage to the cell nucleus, the dose required to produce cell membrane damage decreases rather than increases as the dose-rate declines."

As Sternglass says, Petkau's discovery could explain:

"... an increased sensitivity of living cells to low levels of chronic as compared to acute doses of radiation."

That is, radiation of the nature emanating from nuclear reactors.

Sternglass (1974a) underlines the significance of Petkau's discovery:

"These results have very serious consequences for the expected biological effects of low-level, protracted radiation...."

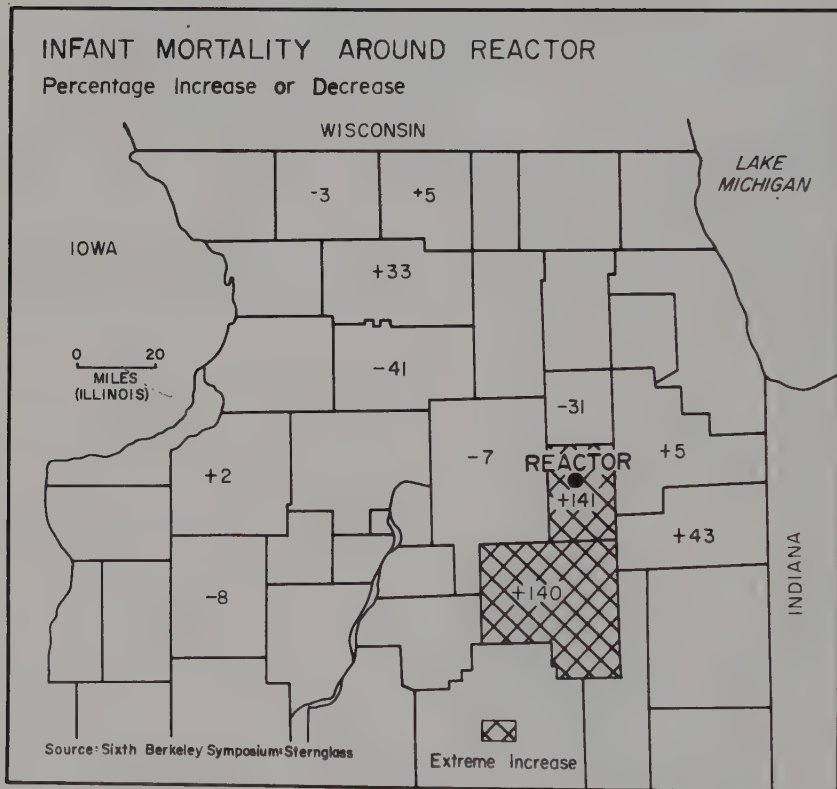


Fig. 204

(1) Present estimates of risk to large human populations from low-level radiation used for setting levels of permissible radiation have been based almost entirely on studies of human or animal populations exposed to external radiation at high dose-rates greater than 1 millirad per minute in the course of diagnostic and therapeutic medical radiation, or by direct nuclear bomb radiation produced in a matter of a few seconds....

(2) The differences in risk estimates that result from not taking dose-rate effects into account are as large as 100 to 1000 times, thus leading to a serious underestimate of the health effects to be expected from protracted occupational or environmental radiation for which the dose rates range typically from 10^{-7} to 10^{-4} rads per minute..."

In a letter to The New York Times, Sternglass (1974b) makes clear the significance of recent investigations.

"These studies now explain the earlier findings of surprisingly large health effects on human and animal populations exposed to low levels of fallout as an indirect chemical effect of radiation of cell membranes rather than in terms of a direct action to the genes in the nucleus of the cell. They indicate that we were misled by the studies of genetic effects of the brief flash of radiation at Hiroshima and Nagasaki and the short exposures during medical X-rays. These underestimated the likely effects of distant bomb fallout or small routine releases from nuclear reactors by some one-hundred to one-thousand times." (underlining added)

Machine Aggressions.

A geographer can see machines as aggressive in several ways. If we listened to sounds, at a place, we would notice, especially in cities, that the noise level is rapidly going up and, the mix of noises, percentage-wise, rapidly changing. The increased noise in the environment is that of machines. Their percentage of noise is overwhelming human noises and the remaining 'natural' noises. We can observe the same changes in the mix of smells, colors and touch. The surface of the earth is beginning to stink of machines, glisten with machines, have a machined touch to it - smooth, dead and polished. Compelling geographical evidence of the nonpassivity of machines is the spaces they occupy relative to the spaces mankind and nature occupy.

The most 'hopeful' evidence of the self generating 'will power' of machines arises from growing understanding of their effects, especially among urban people, in areas where machines are most dense. Rural people understand the helplessness in front of machines

too, by witnessing, for example, the strip mining of prosperous agricultural land.

A War on Machines.

In cities, the uprising against machinekind has almost reached the state of moving from seemingly unconnected, spontaneous resistance, to war; perhaps war equipped with scientific understanding of the war. Since the turn of the century, so many machines that have turned into disasters have been constructed and maintained in the city, that faith in machineism, worship of mechanical contraptions as solutions to all human ills, is collapsing. The automobile is a widely understood disaster. What started as a super horse and buggy, an instrument of spatial freedom, has turned into a runaway. Automobiles are freer and freer; pedestrians, more and more confined by them. Streets have become deadly spaces, spaces that divide neighborhoods; noisy, noxious barriers. The freer the machine, the worse. Snowmobiles rip up the forest and threaten the remaining game. Bringing people to high biomass spaces, letting them move through space by bicycle, canoe or on foot, is not the same as running over the earth's surface with two dimensional transportation machines.

The more spatially free the machine, the less spatially safe the people. Airplanes thunder a roar of territorial dominance, injuring ear drums. Machines have evolved a long way from Charles Lindberg's 'Spirit of St. Louis' to jumbo jets. The most spatially free machine, the thermonuclear missile, is the deadliest; also, the most likely to go off by itself. If these, highly self-triggering devices, were to have an accident that killed their masters, 'it would not count, because it would be a mistake'. With the thermonuclear missile, the 'passenger' is another machine, a hydrogen bomb, not even a single human technician. It is a long way from the horseless carriage, designed to serve the driver's whim, to a machine-carrying machine. These are side-effects caused by machines. They become dominant effects, beyond the will of humans who originally designed them.

Machines can kill off the species directly. We can construct what the planet would be like after the radioactive demise of our species. All other mammals, birds and coniferous trees would be gone. Huge lakes and bays of the ocean would represent what had been Earth's cities, pulverized by hydrogen bombs, pitting the earth, lunar topography. The dust would alter the sunlight and, in turn, the climate. But an atlas of what (was) our planet would not be a geography, for a geography requires the presence of man. Other scientists might have an interest in such a planet; biologist zoologists, astronomers and others; but Earth, after man, would be of little interest to geographers as Earth before him. Geography provides not only evidence that man is in such war with nature that his existence is threatened; geography also is a powerful tool in the species' struggle to overcome the threat.

B: Doom Through Radioactivity.

Geographic evidence of potential eradication is at two scales, global and urban. The map of existing radioactivity is spatially predictive. It is unclear how long more intense dusting of the planet would take to eradicate the species; but the geographic progression of the dying out, starting with the northern middle latitudes, is clear. The map also proves that the radioactivity, not the explosive force of nuclear devices, contains the threat to life. The explosions merely produce an aerosol of radioactivity. Missiles are irrelevant. They merely cross-haul the radioactivity, exchanging Soviet for American, carrying coals to Newcastle. The winds are the delivery system and it is impossible to construct an anti-wind wind.

Transportation as a Biological Domain Changer.

At the global scale the specific role of machinekind in the crisis is apparent. When mammals return to the sea, when they change their geographic domain drastically, it is a biological event. When mankind returned to the sea it is exceptionally ascribed to something less than a biological event. About the 15th century, mankind became both terrestrial and oceanic, an exceptional species in the extent of his spatial domain; exceptional in that he did not evolve his collective person in making the spatial change, but evolved instead, a machine called a boat. The boat played a biological role. Today mankind has become a three dimensional species, the only truly volumetric species. This means that the machine, the space ship, has again played a biological role. Further, a volume, by definition, can only be contained by surfaces; therefore, the earth's surface is the boundary of mankind. Different national states occupy the entire surface of the earth simultaneously. There is no territory in which enemies can retreat from each other. The role of machines in destroying the species' subgroups territoriality is a biological event, with potentially doomful consequences.

Patriotic Treason.

A series of cases establishes the treasonable nature of radioactive weapons; treasonable in the sense of deliberately seeking to destroy one's native land. A fanatical American general's view of war, even a fascist American general's view, might converge with a fanatical Soviet general's view of war, even a communist Soviet general's view. But assume a N. American geographic perspective. Assume the U.S.A. drops an atomic bomb on the U.S.S.R. The first map shows what can happen. Radioactivity, the deadly 'pollution', is carried by the winds against which the species has no defense, back upon America.

This difficulty was noticeable to even American generals,

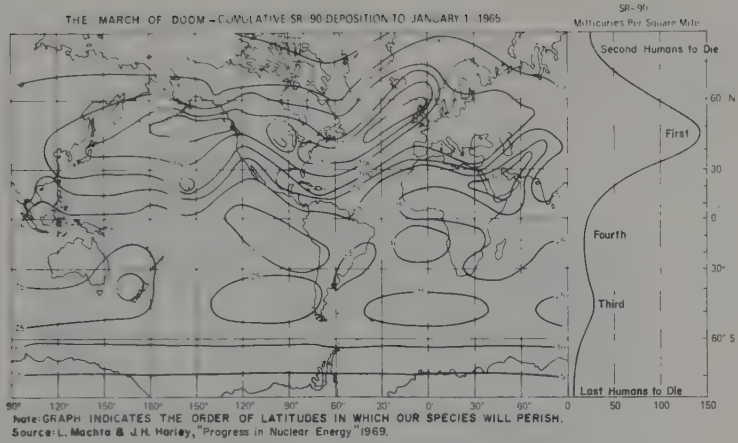


Fig. 206

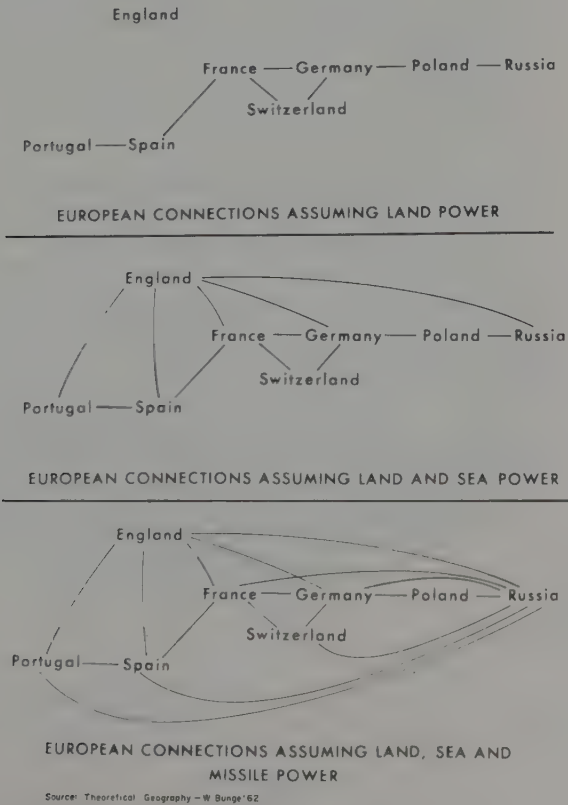


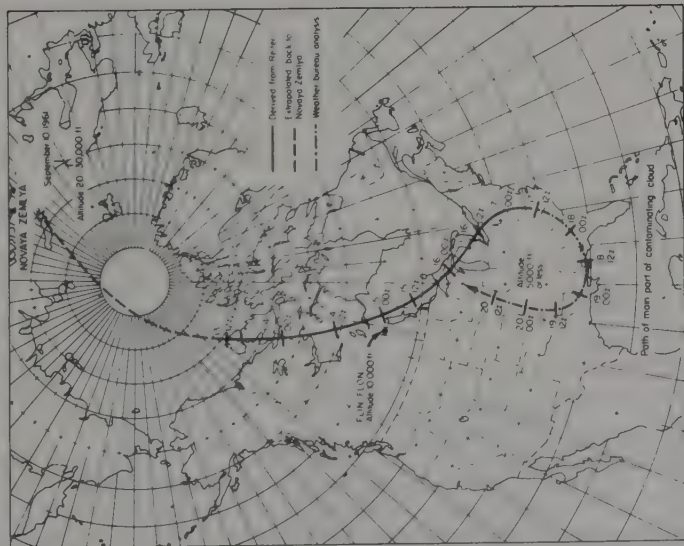
Fig. 207



The Three-Dimensional and Two-Dimensional World Powers

FIG. 208

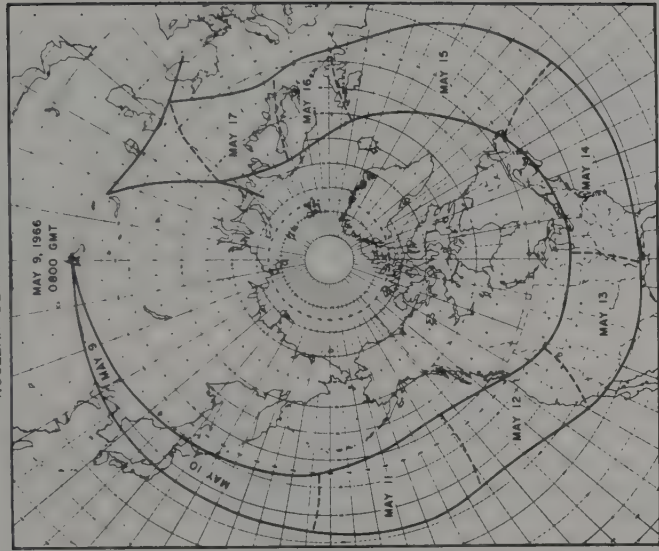
Potential Fallout on America of It's Own Radioactivity



Source: Machto, Health Physics, 1963.
 A suggested path of nuclear debris from the upper troposphere over Novaya Zemlya on Sept. 10, 1961 to eastern U.S. on Sept. 16, 1961 based, in large part, on the analysis of Prof E REITER

Fig. 209

EDGE OF DEBRIS FROM THE FIFTH CHINESE NUCLEAR DETONATION



Source: Machto & Telegades, Health Physics, 1970, Vol. 19.

Fig. 210

when conducting nuclear tests within their own country, as shown from the pattern of fallout on the second map. The dilemma of explaining how, in getting ready to defend one's country from external aggression one poisoned fellow Americans became so acute that 'patriotic poisoning' was reduced. The third case, from a Chinese general's perspective, overkills the point with a geographic overlap. The radioactivity from one source can pass over a country once, then circle the planet, which is both finite and round, and overlap one twice or more. The 'we' and 'they' of radioactivity warfare begins to blur. A fourth case has not occurred to generals. Assume that China and the U.S.S.R. engage in a hot war. Many would see this as two 'theys' killing each other off. But if 'they' pollute the atmosphere with radioactivity 'we' get the fallout. There are no 'they' and 'we' in nuclear warfare, just mankind.

C: The Deadly Dilemma.

The three sets of maps discussed in parts II and III of this chapter seem to be in contradiction. Machines are necessary to lower infant mortality rates. But the industrial regions of low infant mortality are producers of and targets for missiles. This seems to indicate that humans must have machines; but, machines are killing us. The other dilemma is that the nature of mankind seems deadly to the point of collective self-destruction. Destroying machines to save ourselves has, at least, the ring of possibility; going back to nature is an illusion; destroying mankind to save mankind is contradictory. What can one do?

PATRIOTIC POISONING

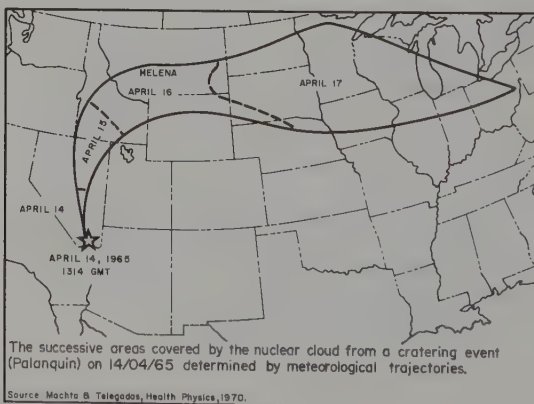


Fig. 211

CONCLUSION

SAVE THE CHILDREN

Geography is the integrating science because it puts things together that are in fact together in space. Subject matters, not usually considered together, do come together spatially. Geography can study what other sciences consider 'unrelated fields'. The three crucial forces are nature, mankind and machinekind. The conversation between nature and mankind is the conversation of biology. The conversation between mankind and machinekind is the conversation of political-economy. By looking at all three in space together, we can examine the deepest questions of human existence. Is the innate nature of mankind to kill? Or, is there here another causative agent, something we can cure?

What is a solution to the crisis of survival? The answer is the same at all geographic scales from Christie Pits to Toronto to Canada to North America to the planet earth. The solution leaps in and out of these scales. Mankind is not killing off all life; rather machinekind is. Since mankind needs machines, there appears to be no solution. But there is. Not all machines kill. Some machines, the tools, are designed to weed out, are selective in their killing or do not kill. Other machines, the weapons, are designed to kill. Weapons are more deadly to life than tools. La Rocque (1974) informed the American Congress that "... the combined raw megatonnage of both countries (the U.S.S.R. and U.S.A.) is equal to 1.2 million bombs of the type that destroyed Hiroshima in World War II." (brackets added). He also pointed out that, "The United States has a capacity of hitting every Soviet city of more than 100,000 population with 36 bombs while the Soviets can hit every U.S. city of that size with 11 bombs."

I: The Education of Urbanites to Global Dangers.

Survival is a global issue. Putting it backwards, doom, non-survival, cannot be achieved without the entire planet being depopulated. But, the level of spatial hierarchy immediately below the global, proves to be urban; large cities. The freest, deadliest and most modern machines, thermonuclear missiles, are aimed primarily at cities and, are produced by technology in cities. The great concentration of machines is in cities. So the urban scale of the geography of human survival is the scale immediately below the planetary scale. In advanced industrial nations, where machines are most worshipped, the nation is not a nation at all, in the sense of a two-dimensional area on a map, but rather a collection of cities. In advanced nations, both machines and men are concentrated essentially at points - cities; only nature remains two dimensional. Those clustered in the dense agglomerations,

urban settlements, must see the dangers from machineism. Missiles are produced in cities and cities are the targets of missiles. In cities, humanity will see the dangers of machineism or perish.

A: From the City to the Stars.

How can the metropolis be won to see the common danger to the species? For a start the evidence of potential urban destruction can be visualized with maps. The first shows the rings of destruction from a 'minor' Hiroshima type explosion, centered on Toronto's C.N. tower. The second ring depicts the Thünen area of death by pulverization. Fringing is the ring of fire and of radiation at the edge. Further realism is added by dropping more than one such device. Another visualization of machines is a mapping of the skies over Toronto; they contain various space machines passing over the city.

HYDROGEN BOMB RING MAP

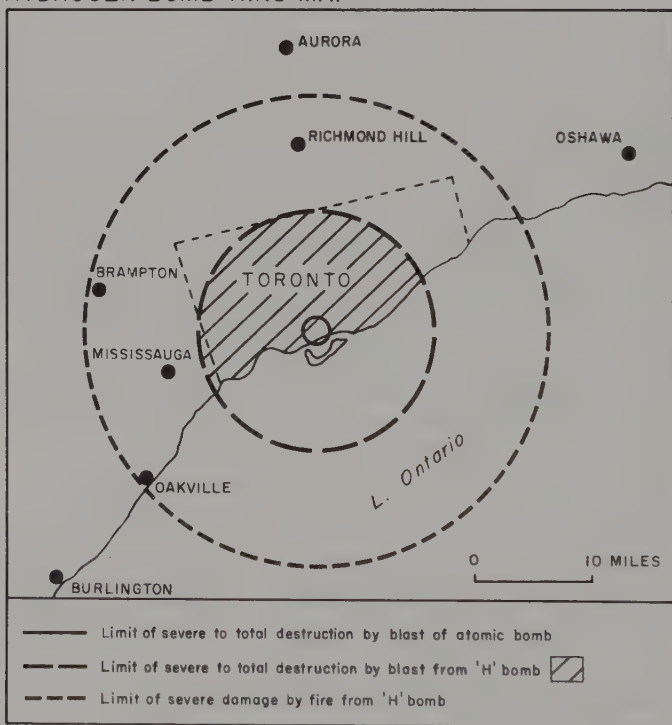
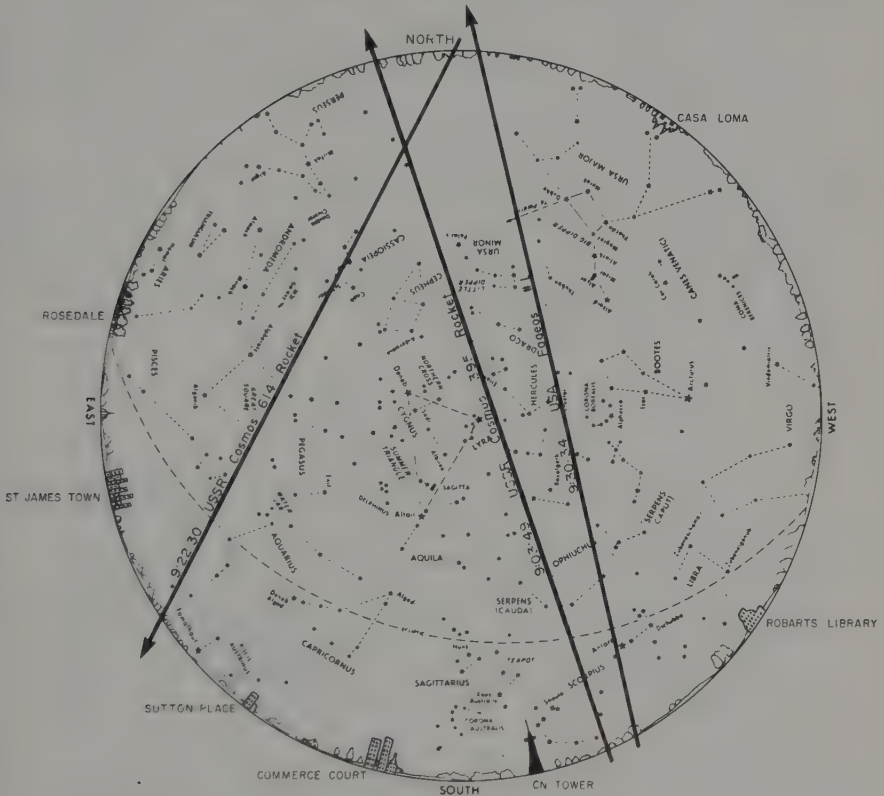


Fig. 212

Source: Based on the Hell Bomb by W. L. Lawrence '51

The entire world is under surveillance by the U.S.A. and the U.S.S.R. 'The enemy' ('our' machines) is up. No territoriality remains, no interiors of countries except deep holes in the ground, where we bury what we really cherish, gold, missiles, and Presidents, leaving the children exposed. The surface of Toronto, along with the rest of the world, is under the military occupation of the Americans and the Russians. The map of the 'sputniks' flying over Toronto can be confirmed by citizens peering at dusk or dawn

Rockets etc. in Half an Hour of Toronto's Sky, Sept 17, 1974, 9:00-9:30 p.m.



Note: The sky view, lying on one's back, on the roof of the Park Plaza Hotel, adjacent to the McLaughlin Planetarium, on a clear night.

Fig. 213

into the sky with binoculars. The rings of destruction maps have an old fashioned, nostalgic quality. Similar maps, published by such agencies as Civil Defense, proved that no defense, civil or uncivil, was possible. If the terror of machines gone amuck is lessening, while the power of machines is growing, a dangerous political gap is developing. Nuclear war protests have virtually disappeared, while the presence of nuclear war devices grows and accelerates.

Fighting machineism, at the scale where globe and city converge, has become a problem in the political suppression of scientific certitude. Presidents and Chairmen, ignoring or unaware of the species' geographic three dimensionality, ignorant or unaware that the enemy is up, are geographically lost. It seldom occurs to a modern, big city mayor to look up; Up there seems not to be his responsibility. Yet, the mayor of Hiroshima faced a tremendous urban renewal responsibility one morning.

Consider what thermonuclear weapons could do to the Detroit-Toronto axis. The explosions alone, quite apart from the real killer - the radioactivity, could blow out the plug of Niagara Falls, while destroying the industrial concentration there; could lower Lake Erie and dig new lakes and bays in place of Detroit, Toronto, and other cities in between. So much for nuclear geomorphology!

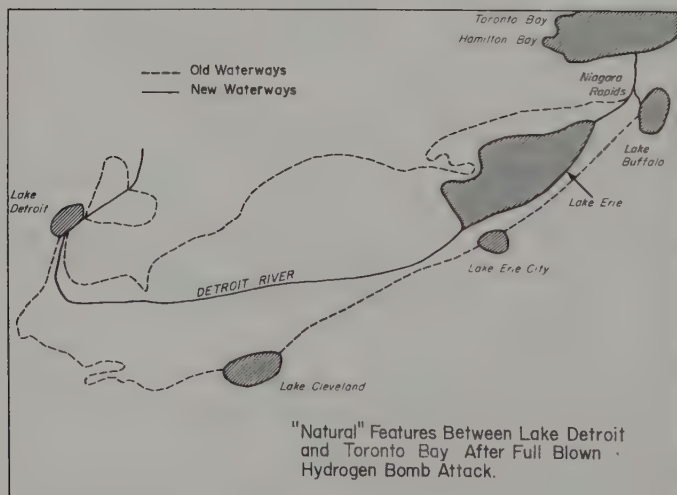


Fig. 214

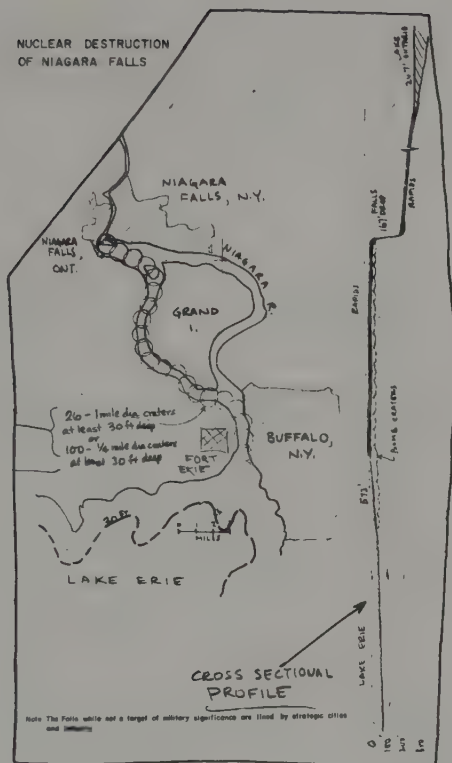


Fig. 215

B: The Proper Place for Nuclear Reactors

Nuclear energy seems to be the best hope of sustaining the global shrinking of high infant mortality regions. Men, like other life forms, consume energy. If nuclear energy is incompatible with the human environment, as the latest findings imply, then where is the energy to come from? There appears to be no place to locate reactors. The Pickering reactor might be covering Toronto with radiation. Where is a safe location for Toronto's reactors?

This book's recurring theme has been: put machines in their place - separate them from children. If automobiles, elevators, factory machinery - all are spatially incompatible with children; if nuclear reactors, the hope for nearly free, inexhaustible energy, are incompatible with **children**; then, separate reactors from the Earth. If nuclear energy is, more or less, locally produced sun energy; if Earth's natural shield - ionosphere, ozone and other layers - is missing, so that the environment in which our species evolved is being altered, by placing little suns, in the form of nuclear reactors, on the wrong side of the shield; then place these reactors on the shield's outer side. Orbit reactors, place them on the moon; use beams to transmit the energy; but, at all costs, do what is necessary. Separate the most

deadly, necessary machines, the greatest distance from the children. This extends one of this books general; spatial principles, constant from the smallest scale, Christie Pits, to the scale of the earth. The most machine filled space, is up, above the planet's cities; it is the most deadly space. At least replace the weapons hanging there with peaceful nuclear producers.

Cosmology.

At one time, geography and astronomy blended in the science of cosmology. There is some need to revise that classic science. Besides questions of pedagogy, of making mankind aware of his three dimensionality through sky maps of orbiting material, surficial boundaries, nuclear geomorphology and other devices, geography must try to reach even politicians with the news that 'the enemy' is up. Politicians are more lost today, relative to the three dimensionality of mankind, than mariners believing in a flat earth were. There are practical engineering questions to be developed for peaceful use of the skies. If it is necessary to orbit nuclear reactors, the only place they can be made to stand over one location is at the equator, synchronised with Earth's orbit. The problems are interesting in their mix of astronomy and geography, their cosmology; and, hopeful, in that men might turn the heavens, now full of military hell, into a source of heavenly energy, the stuff all life must have. Removing the weapons from the sky above our planet and replacing them with life giving tools is an optimistic geographic alternative to the current content of that space. Glaser (1973) has worked out much of the engineering specifics of the problems in using solar energy as opposed to nuclear; but, the cosmology is identical. Transportation geography has neglected some important recent modes, such as the "ion shuttle", as Glaser chides.

COSMOLOGY OF ENERGY

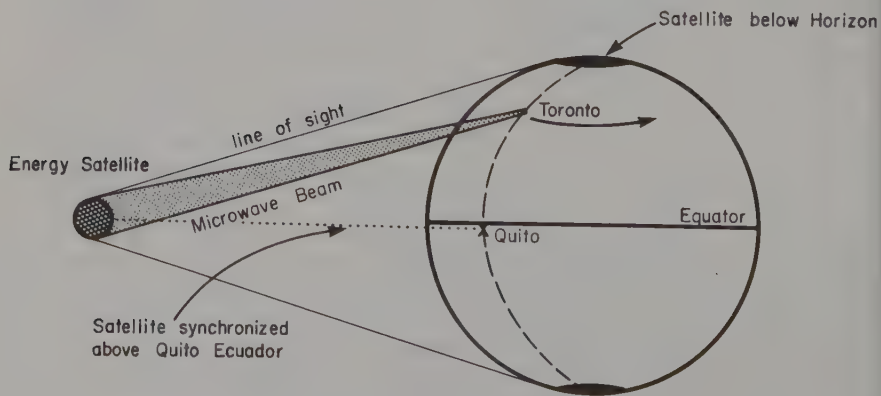


Fig. 216

Source: Adapted from P.E. Glaser, "Science" 1968, Vol. 162.

"We have made giant strides in transportation since the Mayflower landed the Pilgrims at Plymouth Rock in 1620. Over the next few decades we should be able to develop a space transportation system which can take the satellite from Earth and place it in a low Earth orbit, where we can assemble its various components and proceed from there into synchronous orbit.

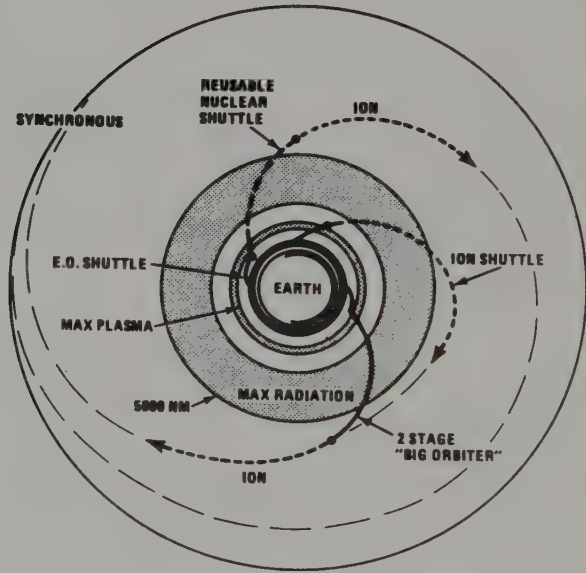
We visualize that the space transportation system will be based on a second-generation Shuttle with returnable boosters, which when combined with a Space Tug using ion engines, will give us the capacity we need to place large payloads into synchronous orbit." Glaser (1973)

The U. S. Navy operates a space surveillance system."It involves a three station, five hundred mile long fence or complex, in the southeastern U.S.A. and a similar complex in the southwestern U.S.A. Each complex has a transmitter in the central station, to illuminate satellites as they cross the fencecomputations can be made of the satellite's orbit inclination, lengths of the major and minor axes, as well as predictions of next time of pass, east-west position and altitude." (Steyer and Freitag, 1960.)

Imagine the degree of surveillance sophistication now - fifteen years after the above report. At that time, an object which penetrated the fence was immediately recorded - approximately three thousand objects of major size, some passing several times, were recorded daily. Imagine a similar screen built along the Canadian-American border. Results would be similar. Spy satellites, weather satellites and others from several nations - all cross the border, into and out of Canada, without so much as a nod from a border guard. While there may be no ' One World' on Earth's surface, there certainly is, above it.

Note: All transportation machines restrictively imprison human travel at some range. An airport which brings the planet's cities close together is, at the scale of human travel, around the airport, a barrier, even to a highway. Similarly, automobiles imprison pedestrians. We should study the caging effect of all transportation devices, treating the study as an engineering question, rather than as an anti-transportation device crusade.

Potential Transportation Modes



AFTER GLASER, 1973.

Fig. 217

The World's Longest Unprotected Border

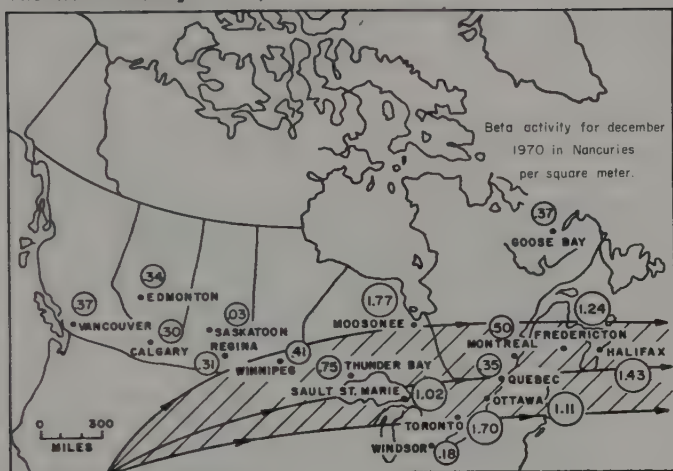


Fig. 218

INFANT MORTALITY TREND IN CANADA AFTER WWII

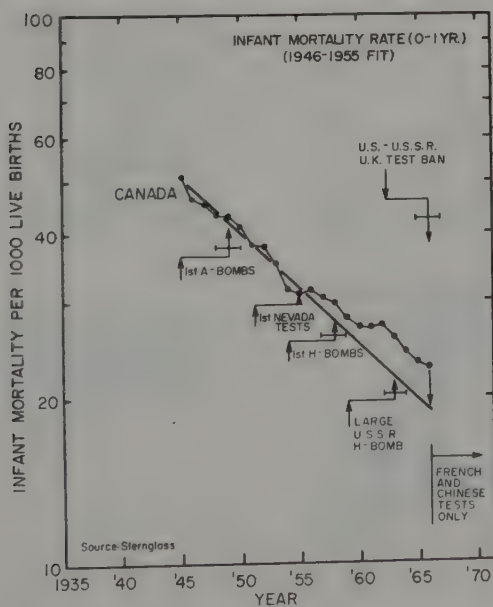
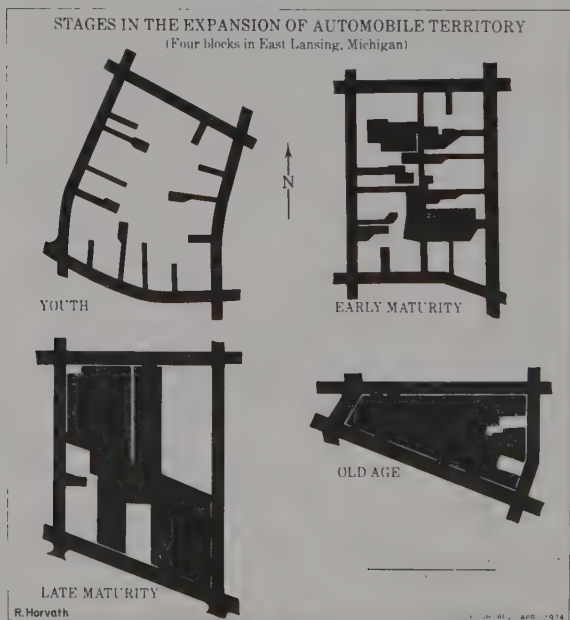


Fig. 219

Horvath (1974), studying the evolution of automobile spaces in Detroit and Lansing, dealt with one kind of machine space, increasingly viewed as malignant. Humans share the machine spaces in inner-city Detroit - drivers, passengers, pedestrians, office workers and others. A high concentration of human biomass exists. By comparison, in outer space, except for a few space-men, the space above Earth is filled with lifeless machines.

At the beginning of this book we hypothesized that five spatial elements, reflecting three major orders of space, form a continuum. The three major orders of space were nature, mankind, machinekind. Expanding the human order yielded five orders of space - life, children, women, men and machines. With the exceptions of the unexpected number of male gardeners in the Upper Gerrard Ravine and the few male-female groupings in Christie Pits, the hypothesis of the continuum was supported. If the ordering was broken, especially mixing children with the right hand side of the ordering, pernicious spaces resulted, as injury and death to children indicated. The machine spaces above Earth are virtually pure machine spaces the like of which exist nowhere on Earth in form so pure. Even highly automated plants have a higher association with human biomass. Yet, the spaces above the planet, the purest machine spaces, threaten children most. Child spaces and these purest, deadliest spaces, must remain separate. We must never allow missiles to descend to Earth and mix with children.



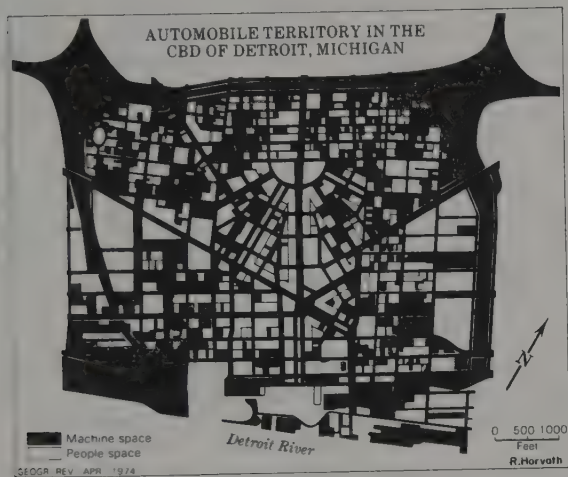


Fig. 221

11: Machineism versus Lifeism

Advanced industrial countries and "Third World" countries differ significantly in their attitudes toward nature and machinekind. The enemy in the "Third World" is still viewed as nature and machines, as the enemy of the enemy, the ally. People in the "Third World" cannot get enough machines; they cannot disperse them fast enough - tractors over farmland, trucks down the roads, and so forth. The view that machines can secure too great a victory over nature, that overkill can occur, that nature can be smashed, is incredible to the "Third World."

A: Educating and Learning From the "Third World"

Two sets of attitudes toward education are, "tell them" and "let

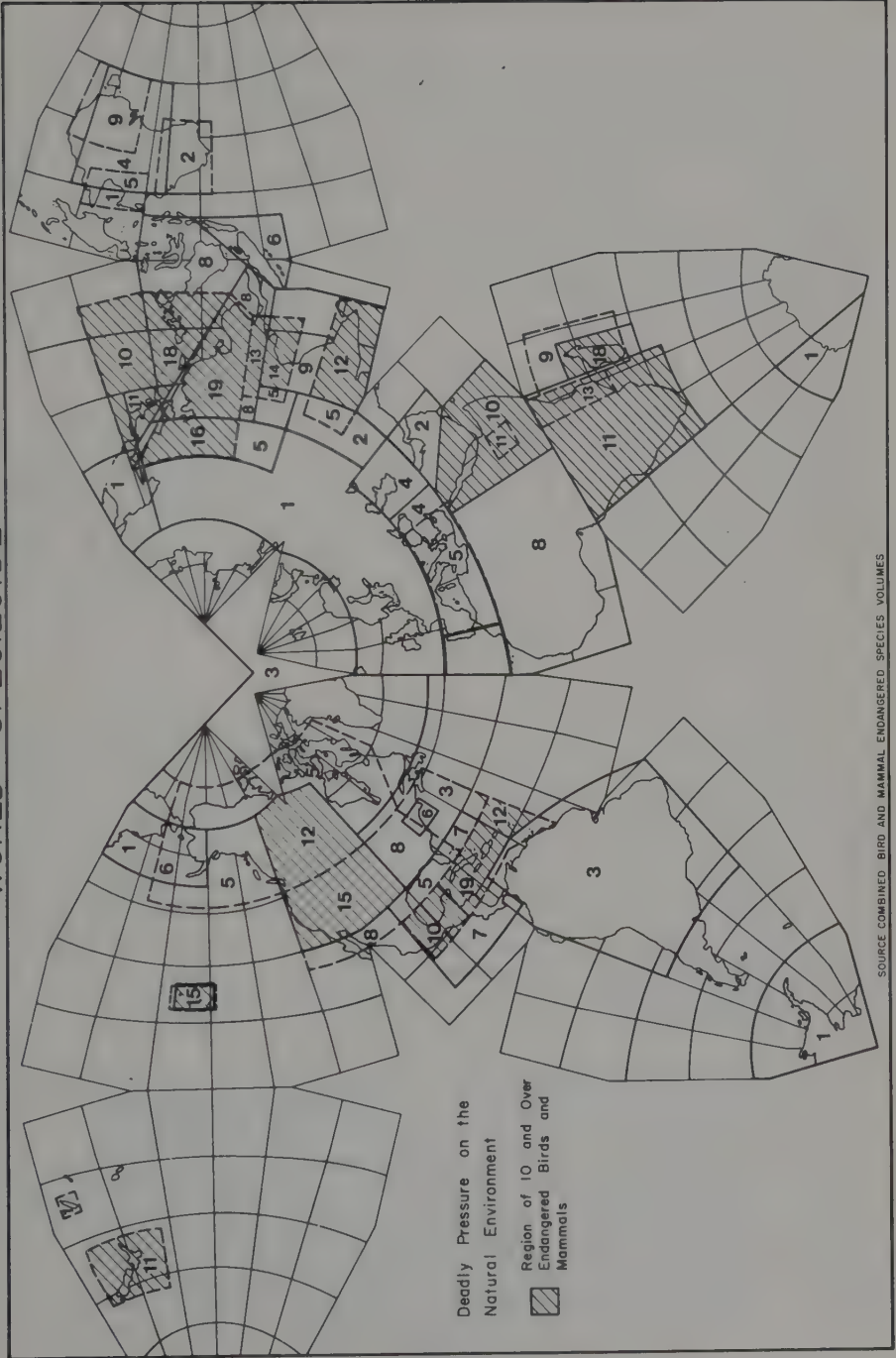
them learn for themselves'. The first is elitist and utopian. If the 'third world's' experience lies in insufficient machines, then to warn them now would meet with hostility. But men can communicate through science; they can take evidential instruction from each other. Every emerging 'third world' city does not have to repeat every error of a Los Angeles or a Detroit. Man-in-nature must be understood to mean machine-in-nature. Man fits in nature quite well. A world map of endangered birds and mammals is a map of the regions still industrialising. Where industrialization has taken place, as in western Europe, species are not endangered. They are already dead.

Respecting Nature.

The primary lesson of 'third world' machineism, the open-ended love of machines, is not that education will avoid repetition of 'first' and 'second world' mistakes; but rather, that the 'third world' has something to teach the 'first' and 'second'. The 'third world' is what the 'first' and 'second' were like until recently. Industrialized-urbanized portions of the globe achieved an uncritical attitude toward machines by the very processes operating now in the 'third world'. The 'third world' teaches the 'first' to understand itself; teaches unity with 'primitive' peoples whom the 'third world' is now destroying and, the 'first' destroyed, so long ago. When nature was overwhelming it had to be cooperated with, understood, even loved. Now, the most modern men are back to, if not 'nature worship', at least 'nature respect'; are trying to record the ancient wisdoms accumulated during mankind's long history; and during much of that ten thousand years the machine portion of mankind has been confined to only a small part of the world. Most of the earth's surface was in primitive, nature-relating geographies, until only about a hundred and fifty years ago. 'Forward to nature'; naturalize the machines by humanizing them. This is not a call for destruction of machines, excepting weapons, but for their improvement and for geographically putting them in their proper places.

Environment Versus Imperialism.

Confusing mankind's double symbiosis, as absolute biological dependence on both machines and nature, by emphasis on either nature only, or machines only, makes geographers appear absurd. Greenland is not a barren waste because of imperialism. The island is overwhelmingly one big glacier and no amount of social enlightenment is going to allow corn to grow in the middle of it. But propagandists on the other side of the question are equally misleading. The current American economic crisis, reflected in food prices, cannot be blamed on drought in Nebraska. India's starvation like America's poor, is a matter of social organization, not climate.



SOURCE COMBINED: BIRD AND MAMMAL ENDED ENDED SPECIES VOLUMES

Fig. 222

Machine and Natural Orders.

Order and neatness in industrial societies is machine order. Trees in the forest do not line up like rows of soldiers; but, in many reforestation projects they do. Duke Redbird (Ojibwa philosopher, in conversation, 1974), points out that nature is ordered; not a machine order, but, a natural order. Redbird attributes the absurdity of military forests to the influence of the Greeks with their geometric definition of regularity. It seems more likely that Greek geometries arose from the ascendancy of tools-weapons, of machines. Archimedes did not separate the theory from the practice of the production of war machines. Farmers in Iowa, who line up their wood lot trees in perfect rows, also line up their corn in perfect rows. They lined up the corn to be able to cultivate, and, until recently, to cultivate in both directions 'cross-cultivating' or 'cross checking'. The cultivator required the corn to be so placed that the machine could function. The geometries of machines are very limited. Wheels require nearly flat planes upon which to turn; thus, the machined surface of roadways. In pre-machine cultures, corn was not lined up. Not mankind, but machinkind is geometrically neat. The industrial world, not the inhabited world, produced landscapes of 'unnatural' configurations: straight lines, level planes, constant curves, spirals the same kind of landscaping of the earth's surface as found internally in machines.

At the logical level, these few configurations are those that are self-polishing. Rub two irregular surfaces together, randomly rotating each, and they will mutually polish each other into plane surfaces of zero curvature. Gears, spirals, spheres, cylinders, spindles, just a handful of shapes have these peculiar properties of being self-polishing. To give a second example, take a lump of clay and spin it between two planes - such as extended hands - and also move the lump up and down while spinning. This will produce a cylinder, not a statue of a man on a horse. Machines need these self-polishing characteristics of their parts, for the parts to fit into each other; a gear into a gear, for example, rather than a gear into a statue of a man on a horse.

In response to the same laws of geometry, the machines need a landscape external to themselves, with the same geometries as those internal to the machines. Looking at aerial photographs of landscapes around the world tells nothing about whether mankind is present. The natural man, the pre-machine man uses and fits into the natural order as Redbird points out. Randomness, not inefficiency prevails. If the natural order had existed more efficiently, in the form of Greek geometries, it would have produced those geometries out of the laws Darwin discovered; indeed, occasionally they occurred, such as the spirals of shell fish or the hexagons of bee

hives. What is exposed by comparing aerial photographs of the patterns of the earth's surface is not the human habitat, but the machine habitat. Where machines prevail, for their efficient operation, the landscape is machine ordered. Rather than attribute all this to the Greek turn of mind, it would be more humanly modest, therefore more reasonable, to assume that the Greeks began to codify the new, machine order, growing up all around, barely predating such machinists as Archimedes.

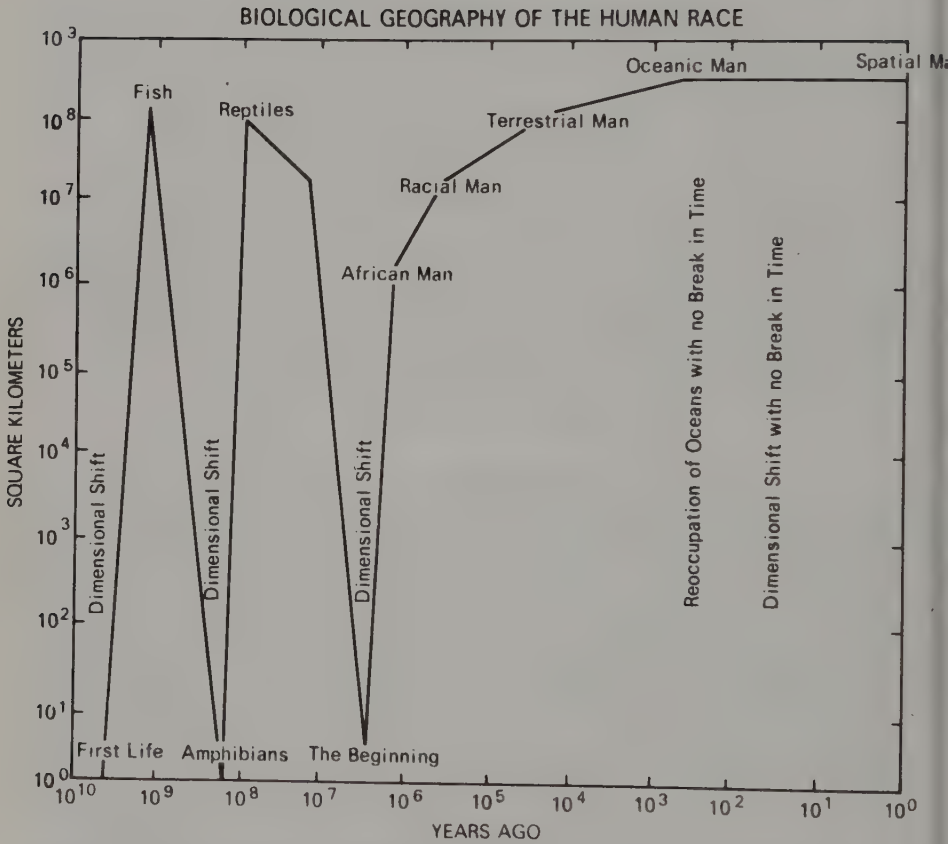
For all the 'third world's' wisdoms, their passion for industrialization without limit, their equating machines and progress, is the same mistake that most of the industrialized world is now beginning to question.

B: The Deflating Role of Science.

Science has been the great humiliater of humanity. Science is the ultimate mirror on the wall. Humanity has found truth in science not vanity. The pain that accompanies each scientific revelation of the modesty of the species' reality is often turned back on science. Science is hard. But if the evidence of science is accepted, the pain will dim and the power that the insight brings makes the species more secure.

Tools and His Man.

The humiliation accompanying the finding that the earth was not the center of the universe, led to contempt for the planet's place. Another humiliation, suggested here, is destruction of mankind's deceit over his relationship with machines. It is apparent, once the shock of loss of imagined power is accepted, that machine-kind is not passive, as such phrases as 'man and his tools' imply. We have evolved perhaps not at all since caveman days; yet, progress accelerates. To lay this solely in the hands of culture, as the evolution of civilization, becomes unsupportable, in face of the prospect of the species potential destruction. In a biological crisis, biological Darwinian laws must be looked to for explanation. Short of ultimate evidence lies much intermediate evidence. The ages of mankind are defined by his tools, not by his human characteristics: Stone Age, Bronze Age and so forth. Geography provides a compelling pattern of facts which indicate that, unlike other species, great changes in the biological domain of mankind, (such as his return to the sea and his three dimensionality) are unaccompanied by biological changes. The machines, in this case, those devoted to transportation, clearly play biological roles. Examine the characteristics of machines. Are they inanimate? Are they unthinking? Are they unevolving? Are they non-self-reproducing? Only the last question receives a qualified 'no'. They are not yet totally self-reproducing; but, automation is rapidly changing that 'no' to 'sort of'.



Source: Geography of Human Survival-W. Bunge'73

Note: The revolutionary change in domains—the reoccupations of the oceans and the dimensional shift to a volumetric species in Darwinian time proves transportation machines play biological roles.

Fig. 223

Mankind sought to modernize everything through progress, defined as machine progress, as opposed to human progress. Has the machine city that mankind produced, turned out the way that we intended? It is reasonable to assert that, if airplanes need more room to land, or cars more expressways, then the destruction of homes will result. What is running whom in the city? The conceit that man owns his tools, that a smaller subgroup called capitalists own the tools, must be surrendered. How did machinekind gain such power relative to mankind?

C: The Evolution of Machinekind.

If, in fact, the machines kill other species and, the machines might kill us, why have men hated men rather than machines? How can machinekind, which we are taught, is man's creation, be man's enemy? Mankind has a symbiotic relationship with machines. Man in his pre-human form used machines (artifacts). This process converted the ape into man. Man was not a full blown species accidentally discovering machines. Evolution does not operate through accidental discovery, but, through survival. Man owes his very existence to machines. They are his creator, just as he is their's. The machines expanded the brain and opposed the thumb to the hand. In turn, the brain and hand shaped the machines. The result of this dialectic has been to produce a more machine-like-man and a more man-like machine. To save labor, man produced himself in the machines, to the point where the reproduction has been nearly total. The property of life itself is being transferred to machines, as machines reflect human self-reproduction, through the production of automated machine tools. Even decision making powers over men have been produced in machines; even will power, determination, judgment. As man continues to be more deeply reproduced in machines, the machines acquire life and death power over man. Since the birth of computers storing information on radioactivity, machinekind is directly threatening to destroy mankind. Everything monstrous in men, such as the desire to torture, is also reproduced in machines, such as 'instruments of torture'. Therefore if some men wish to doom mankind by igniting the radioactivity, then some machines wish to doom mankind by igniting the radioactivity. A wish, even a death wish, can be programmed. It would seem reasonable to advocate the destruction of the machines to save man; but, mankind and machinekind made and sustain each other; so mankind cannot destroy machinekind without destroying himself. He can survive without machines, only in his pre-human form; and evolution is a ratchet that never slips backwards. Only one possibility of survival exists. Mankind must totally humanize himself, to totally humanize machines.

In what sense is the species dehumanized? The equivalent of economic exploitation is biological self-domestication. In societies that suffer from this condition, machines dominate men, because men have enslaved each other, dividing each other into oppressed and oppressor; and in so doing, becoming the singular unnatural species whose natural enemy is himself. Exploitation is not

simply mass theft; it is self-domestication, perhaps the collective, fatal disease of mankind. If machines are necessary for life, then, if some men own all the machines, these men own the lives of men who own no machines. The machineless men are slaves, domesticated, half-men in bondage to the masterly machine-owners. Man allows machines to poison his own environment because his species self-hate smothers his machine fear. Man is distracted. This war on himself is conducted by two different types of men, using two different types of machines, which have caused each other to exist. Men that cluster with the machines called tools are called workers. They are numerous. Men that cluster with the machines called weapons are called the police and the standing army. They are few, but crucially placed. A great biological antagonism exists between these two types of men, since tools make food, and weapons steal it.

How could self-domestication of the species possibly start, since all men, like all turtles, are created equal? As machinekind and mankind evolved each other, they domesticated many species. As the rope evolved, then the horse could be domesticated; with the hoe, the radish could be domesticated. But with the iron sword, mankind himself could be domesticated by those men called slavers, using those machines called weapons. Therefore, to make man human means to eliminate the machines called weapons; and this can be done only if all men own the machines called tools; otherwise, the weapons are necessary for the 'owners' of the machines to protect 'their' property. Common ownership of the machines is survival. If this is bad news for those who think they own the machines, the good news is that in a biological crisis of survival, at that level, there is no guilt, individual or class. Left wing dinosaurs did not engage in war with right wing dinosaurs which lead to their eradication. Since the entire species faces annihilation, the entire species has a common interest around which a camaraderie might be built.

D: Balance.

The hypothesis central to this book is that mankind stands in a position of commerce, between nature, on one hand, and machinekind, on the other. Lean too far either way in the commerce and the species is in danger. Throughout most of human history, the danger lay in the power of nature, over man, relative to machines. Clearing forests, draining swamps, irrigating, domesticating crops and animals, coping with illnesses and pests; these struggles were overwhelming and development of machines gave mankind increased strength over the forces of nature. Such a history and prehistory develops a momentum. The very word 'progress' came to mean machines. The development of increasingly sophisticated means of production was viewed as the advancement of mankind itself, the engine of progress. To be 'liberated' meant to be liberated from the possibility of starvation and the drudgery of farming and food

gathering. Tools-weapons (machines) provided a possible escape. But evidence is accumulating that piling up more and more victories over nature is causing nature to collapse. Overkill is causing nature to find revenge through weakness, just as killing too many of one's slaves leads to the destruction of one's livelihood.

What is the real killer? The machines designed for that purpose. Mankind do not live in balance with both machinekind and nature. This need for a balanced commerce can only be realized by first separating machines from mankind. Words like 'technology' blend the two - men and machines - and obfuscate the fundamental commerce. By seeing machines as not being in man's pocket, like his watch, it becomes clear that men run themselves on time, obeying that watch, to make the trains work. It becomes clear that the drudgery of assembly line work is bending humans to machine needs. Men mechanize themselves to serve the needs of machines more efficiently.

Machineism, the open-ended worship of machines, must be defeated. The opposite of machineism is lifeism, which places mankind's survival as central and relates nature and machines toward the perspective for human survival. Man in-nature-and-machines must be in harmony, but, must also be fiercely partisan for our race.

III: No More Space.

The horror of human life is that humans are their own 'natural' enemy. Where did we go wrong? Increasing numbers of scientists have been asking this question, usually in a time-process frame. The geographic probe looks for the answer in space and the 'where' in the question becomes a question of in what spaces do we go wrong. The primitive literalness of the geographic quest provides compelling evidence, with a potentially high political impact, because visual evidence seems to be more compelling than invisible time-process evidence. If mankind is innately murderous, the most deadly of life forms, increasingly deadly; then the results should be clearest in spaces of human concentration. But if other spaces contain 'the death', then there is hope. It would not be the innate nature of mankind to destroy all, and, most unnaturally, for mankind to destroy himself. If the spaces of death prove not to be human, then, there is not only hope, but a plan. This book proves that death occurs where concentrations of dehumanised machines, especially weapons occur. These weapons spaces, must be destroyed quickly. This is not a logical dictum alone, nor an ethical dictum alone; it is both and more; it is a natural dictum, because mankind is the only species that can understand the laws that govern him, specifically, Darwinian laws.

Darwin discovered that species exist for their own sake. They strive to survive collectively, as a species, with or without

a nervous system. For a species to commit specicide is natural. But for a species to commit self-specicide would be the ultimate, Darwinian, unnatural act. It would be a bitter irony if the only species to understand Darwin, became the only one to violate his law: species struggle for collective survival. The ultimate unnatural region must be one in which a species eradicates itself. Its opposite, the ultimate natural region, is one in which the species preserves itself. So, the construction of natural regions becomes operationalized as the construction of the regions in which the species prospers.

A: Personal and Racial Wars.

What is the spatial hierarchy of deadly quarrels? In relatively small personal spaces (family or neighborhood) quarrels occur; and in barbaric societies, such as the U.S.A., the difficulty of the life imposed by a pathological social system leads to much homicide. Racial quarrels usually need considerably larger numbers of people and more space. These typically are of city size. Detroit has had five racial wars: 1837, 1863, 1919, 1943 and 1967. It required federal intervention in all five cases to subdue the blacks; so, they were not entirely self-contained by the city. The State of Michigan forces and the National Guard, were routed by the blacks in a full pitched military battle on the west side of Detroit in 1967. Under headlines reading "LBJ Asked for More Troops," and "City Begg Army to Get Tough," the July 27th, 1967 Detroit Free Press, four days after hostilities broke out, reported:

"At 2:30 p.m. Gov. Romney conceded at a press conference that daylight sniping on the West Side was the worst it has been since early Sunday, when a blind pig raid sparked the riot."

"Many weapons are in the hands of the West Side insurgents. Many were stolen from pawn shops in the initial stages of the rioting."

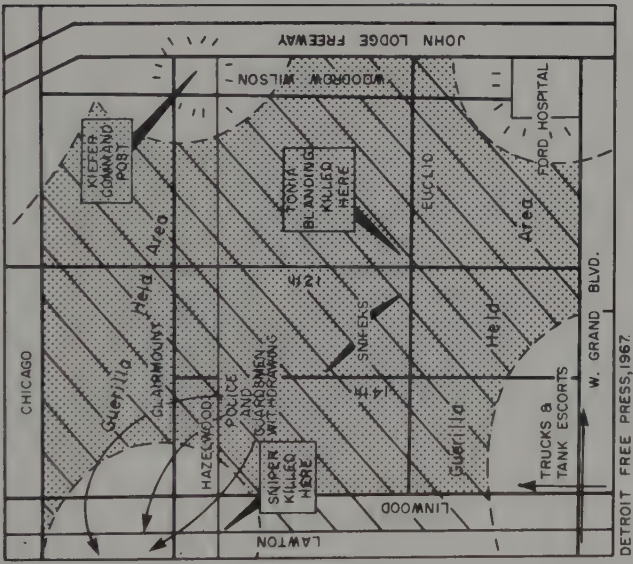
"With the appeals for more federal help went tacit admission that the police and guard have lost much of their capability to deal with the trouble."

"Shortly after dark Tuesday, police and guardsmen withdrew from the Hazelwood area through a hail of rifle and shotgun fire, after two policemen had been seriously wounded by snipers."

"Control of the area, north of Grand Blvd. did not return to law enforcement officers until several hundred guardsmen were brought up in trucks with tank escorts."

Some may wish to remember Prague, or even Budapest, but others

DETROIT REBELLION, 1967



Guerrilla Held Area

Fig. 244

will remember Detroit.

B: National Wars.

National wars are at the level of at least two nations and often involve more than two. Two-nation wars seem unusual. Also, as we climb the hierarchy of deadly quarrels, the number to die increases. Big deadly quarrels are more deadly than little deadly quarrels.

The latest round of war in the Middle East was almost geographically perfect: men and machines destroying each other in the middle of the desert. They killed or injured barely any children and they did not even trample the grass. If it were possible to promote a war in the middle of Greenland ice cap, then the space would be even more ideal. The difficulty with the generals and their radioactive contraptions is the possible spatial contamination of all the atmosphere, turning the earth's surface into a region of total death.

C: Class Wars.

Class warfare seems to be at a higher areal scale than national warfare. Despite the breakdown of various internationals, both of the right and the left, communists tend to be on one side of international disputes and international finance on the other, in recurring global struggle. But the ultimate scale is not two worlds, exploited and exploitive; the ultimate scale is the eradication of the children, and, therefore, the species. The ultimate contradiction is, therefore, not between capital and labor, or the means of production alienated from the means of distribution, but rather between weapons and children. The weapons, radioactive ones, threaten the globe as a unit whole. The absolute contradiction that threatens existence, since there is no life after death for our species, is the contradiction between weapons and children. Doom can be delivered by machines gone wild, by the effect of their lack of humanization.

D: The Doom War.

The possibility of doom can be seen as a 'point of no return' transformed to a 'region of no return'. Mankind is now killing other species at the rate of one every three or four months. This accelerating specicide can be projected across time, to the point in time where the life of mankind itself is doomed, due to the damage beyond human tolerance, of the general biological system. This 'point of no return' can also be viewed as the number of people who can be killed without killing all people. It is easy to kill a few people without endangering all: but reversing the problem, a point of no return becomes evident. It is impossible to kill everyone in the whole world except just one person. To kill 3,500,000,000 minus 1 requires a delicacy in kill systems that does not exist. The more killed, the less selective the form of

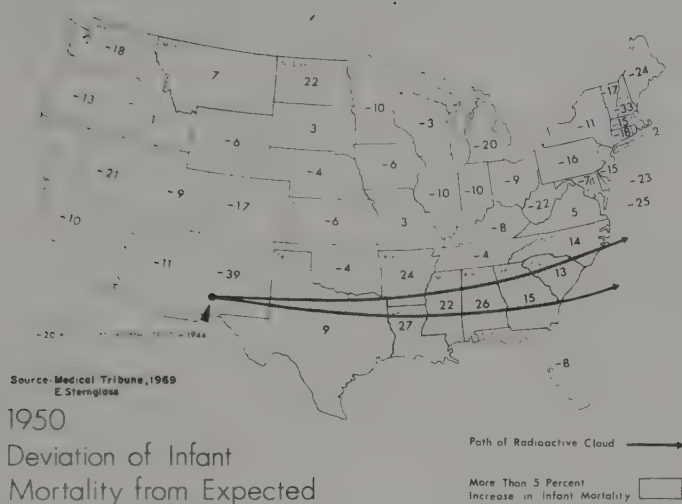


Fig. 225

Strontium 90 in Human Bones in United States by Age Groups and Years

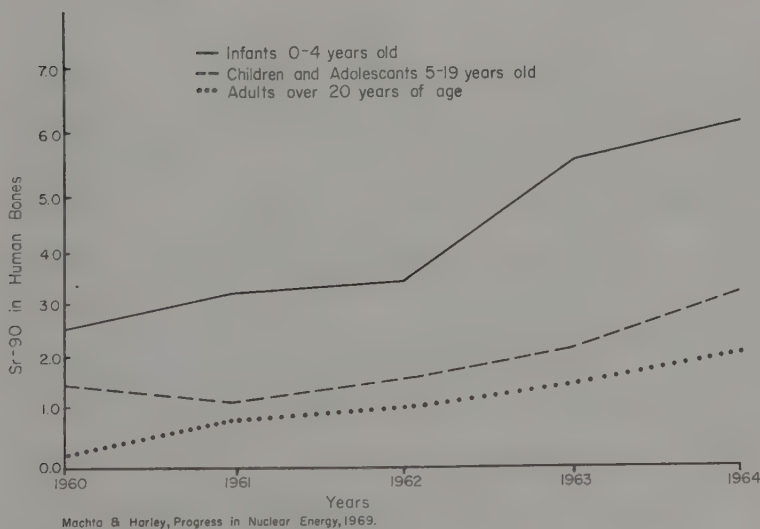


Fig. 226

death, such as radioactivity. Working back, the larger the number not to be killed, the greater the possibility of achieving the saving, till a number is arrived at in which the number to be saved, would be saved. This is 'the point of no return'. Kill more than this number and all will be killed.

How large a region of species decline can the earth tolerate? If the environment of a region is pernicious to children, to the point where the environment is not species sustaining, the species is not threatened, providing that the region is not too large. Regions of the earth's surface, such as the Greenland ice cap, have always been negative regions of life support. But if the regions of death become large enough, then the remaining portion will not support life. There exists a regional size of no return in the region of death to children; if an environment unable to support children, becomes too large, the planet will become a single region of death. The geographic strategy this reasoning suggests, is to find regions in which children are endangered, and shrink them, in intensity and size, to zero space.

The historic perspective is one of infinite time for the species and evokes patience; the geographic perspective is that the species is out of living space and evokes action. If living space were infinite we could poison our nest and move on, like shifting cultivators. Our planet is a tiny space ship. In time we might find others. In the literal space of our lives we will not. We have no further room in which to kill each other without killing ourselves.

IV: Solution.

Children in the 1930's knew that Buck Rogers and Flash Gordon came from Planet Earth, not from warring countries on our planet. Today we would expect space travelers from other planets to be from planets, say Mars, not from countries on those planets. We would be appalled by the thought that a spaceman would land on earth to try to enlist our support to destroy the portion of his planet not in his country. We are a three dimensional species, space explorers, yet we hate each other at all scales: personal, national, racial, religious, class, even inside our trades, like geography; evidently without limit; evidently without even excepting the children of our enemies. The conclusion of this work is the solution, that for survival reasons, for Darwinian reasons, there must be no war or doom on children. To save life, save the children!

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