RECENT TRENDS IN THE RETAIL STRUCTURE
OF CHATHAM

by

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Submitted in Fulfilment
of the Requirements of
Geography 490

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London, Canada

1977

Approved for the
Department of Geography

Date: 9 June 1977

Abstract

This study examines and evaluates the alterations that have taken place in the retail structure of Chatham since 1951. A brief discussion of the trends in retail patterns since World War II in North America lays a foundation for understanding these alterations.

The assymetrical expansion of the population, and lack of growth in the CBD have led to the construction of three planned centres in the North Side of the City. As a result the CBD has suffered a relative and absolute decline in retail floorspace.

A gravity analysis of the distribution of retail activities assesses the impact of the addition of a new planned shopping centre, in 1973. It was found that the effects on the structure as a whole were minimal, although the shopping centre nearest the new centre, did suffer a 25% reduction of retail sales.

It was found that the decline of the CBD, although serious, is not yet fatal. An equilibrium has been reached in the distribution of floorspace. The major trend through the period has been a polarization of retail activities. This is represented by establishments selling low order goods in the decentralized planned centres, and the specialization of shops in the CBD, selling high order goods.

The recommendation to the Downtown Merchants and City Planners stress the importance of preventing the development of a planned shopping centre in South Chatham, in order to preserve the viability of the CBD.

Acknowledgements

There are many people in both Chatham and London without whom this paper could not have been produced. I wish to thank some of these people now.

In Chatham, first I thank my family for their time and trouble and many long distance phone calls. Mr. Perry Borgford at the Kent County Assessment Office was very helpful. Mr. Jack Herd, with his wealth of material and insight, was my contact with the Chatham Downtown Merchants Association.

My wife Sandra deserves a special thank you for her efforts and tolerance during the difficult days of writing.

For their help with the actual production of this paper I would like to thank Miss Barbara Rosser and Mr. Bill Baird, who gave me much support and assistance with data collection and manipulation. My typist Mrs. Becky Phillips deserves acknowledgement for quickly wading through atrocious handwriting to produce an accurate copy.

Within the Geography Department I wish to thank Professor R. McDaniel and Dr. M. Goodchild for their assistance with the computer programs. For his time and advice in the early stages of research, I wish to thank Dr. D. Janelle. For the reproduction of maps which appear in this thesis, Mr. F. H. Graves and his staff. Finally, I wish to thank my faculty advisor, Dr. Roger White for his understanding and concern and most of all his encouragement.

London, Canada,
April, 1977

To Miriam Caroline Brown
a Lady
For whom Chatham was the Centre of
the World

I hope she would be pleased

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Chapter 1

Introduction

A favourite topic of the economic geographer has been the "declining CBD".

In order to study the CBD, it must be first identified. Proudfoot defines the CBD as "the retail heart of each city... Here individually and collectively, retail stores do a greater volume business per unit area than elsewhere in the city. This areal concentration is manifested by the use of multistoried buildings of which retail stores, for the most part, occupy choice street level frontage, service establishments are concentrated into upper story offices...Here retail occupance is characterized by large department stores, numerous... clothing stores, furniture, shoe and jewellery stores, and similar outlets selling shopping goods."[1]

Berry refers to the CBD as the Metropolitan Central Business district characterized by: the presence of department stores, shoe stores, specialized music, record, hobby and toy shops, grocery, clothing, jewellery and drug stores, as well as branch banks.[2] The delimitting of the CBD presents a difficult problem as there are numerous possible methods. Murphy describes these methods, ranging from economic rent method to perceptual delimitation. He prefers a Central Business Index method which delimits the boundaries by land use mapping. An index is determined for each block, which is compared to a master to delimit the CBD.[3]

No other area of the city has been studied so extensively, nor in such detail as the Central Business District. From this wealth of information, two conclusions may be drawn. The CBD has played a significant role in the history of the city and the CBD is presently suffering a general decline in the North American context. Beyond these conclusions, there is little agreement.

The reasons for the apparent decline are numerous. Central to these have been the assymetrical, centrifugal movement of the population, suburbanization, traffic congestion within the CBD, limited and costly space available for expansion in the zone of deterioration surrounding the CBD.[4]

The North American city has shown a pattern of increasing decentralization of population since World War II. The population growth from 1940 to 1950 was split at 14% within the core, and 35% in the suburbs. These same figures for the period of 1950 to 60 are 11% and 50% respectively.[5] This decentralization has led to the development of the planned shopping centre serving these outlying districts. The loss of business to the planned centres is the major threat to the CBD. Hoyt describes the retail store revolution as a circle which was completed when general merchandise and department stores, which originally acted as anchors for the development of the CBD, moved to the planned centres, where the process of development is being repeated.[6] The assymetrical growth of the city increases the distance to the market population from the CBD even more. The reason for this assymetrical growth is the incompatability of land uses such as residential and industrial,thus the suburbs develop in a directional manner.[7] The increased distance to the CBD isolates the suburbs further,giving more potential to the development of decentralized planned shopping centres.

These centres were virtually unknown prior to World War II. The first of these was the Country Club Plaza, in Kansas City, established in 1925. As a trend however they were inconsequent until 1946.[8] The regional shopping centre on an area of 50 to 100 acreas has had the greatest effect on the CBD.[9] In 94 metropolitan areas with populations exceeding 100,000 in 1960, dollar sales outside of the CBD increased by 58.3%. Within the CBD the increases were only 3.4%, since 1954.[10]

Hoyt calculates that in 1960 the CBD's in the United States SMSA's covered 47.5 square miles, the planned shopping centres for the same cities covered 52.5 square miles.[11] These figures indicate the trend of the relative and absolute decline of the CBD compared to other retail centres over the past three decades. This is affirmed repeatedly by empirical studies throughout the continent.

James Vance describes the internal dynamics of the city in terms of several processes. Inception is the original choice of site for a city, and the development of its basic spatial shape. Regularities of street pattern and distribution of populations for the future city are determined at this stage. The process of exclusion is the determination of location of activities within the city through mechanisms of economic rent paying ability. Non-central functions are excluded to the outer fringe. The process of segregation separates the functions of the city further by their shared linkages. These three processes work on the principle of minimizing the radial extent of the downtown. The process of extension is the outward growth of the city. As this happens, the former boundaries become obsolete. The processes of replication and readjustment, and that of redevelopment, are those which update the structure of the city. These work through the mechanism of vacancy, destruction and reconstruction of existing structures as they become inappropriate to the contemporary functional demands. Often the CBD is replicated by planned centres in decentralized locations. A readjustment of the system in response is inevitable. The CBD suffers from the realization that successful trade is possible outside of the core. This alters the rent structure of the city. In cities that have experienced strong external replication (many decentralized shopping centres) the CBD becomes disadvantaged to the point of collapse.[12]

Redevelopment is an attractive idea which has been used in attempts to save the CBD as outlined in the case above. Danger lies in the casual application of this process. The results are not always what the redevelopment intended. The dynamics of the retail structure are complex. A simple physical alteration of the CBD may not address the real problem. Geographers are painfully aware of the problems of simplistic cause/effect relationships as once propounded in the school of environmental determinism.[13]

The idea of saving the CBD too has been under considerable discussion. Boyce says the problem of the declining CBD is complicated by the lack of agreement as to whether the CBD should be saved. Some planners feel decentralization is inevitable and the CBD is obsolete, while others feel the CBD must remain healthy to act as a point from which the organization of the city may be determined. Boyce claims the deficiencies of the CBD outweigh its assets. The returns from redevelopment are not great enough to warrant the costs.

This author disagrees with Boyce, aligning with the idea of the need for a central organizing unit, a healthy CBD.

The Problem

The London Free Press ran a full page article on August 26, 1975, written by Mary Kehoe, that referred to several closings of major stores within the CBD of Chatham, Ontario.[14] This article brought to a head the discussion of whether the downtown was dying or not. The retail structure of the city had undergone considerable alteration since 1967, when the first of three planned shopping centres opened. The loss of business to these led eventually to the closing of the major department and food stores downtown.

The purpose of this paper is to examine the retail structure of Chatham over the twenty-five year period from 1951 to 1976, to determine the real situation as it exists today. The gravity of the situation will be assessed and possible action to minimize the decline of the CBD will be outlined.

The Data

The data used to examine the alteration in the retail structure over the twenty-five year period comes from many sources. The floorspace data is from the Kent County Assessment Office records for King Street, and each of the three planned centres. Vernon's directories for each year of interest were consulted, to determine the nature of the establishments using the buildings. To generate the distribution of households for the period, two sources were used. For 1971, accurate census data was acquired using the User Summary tapes compiled by S. P. Mitchell, of the Social Science Computing Laboratory, at the University of Western Ontario. These gave the population in numbers of households and income distribution by enumeration area for the City of Chatham, as collected by the Census of Canada, 1971. Vernon's directory was used for the other years. Here the number of occupied houses and apartments were assumed to equal the number of households. The distribution of these was then calculated on a 1/600 scale base map of the city of Chatham, on which the boundaries of the residential zones were depicted. The zones themselves are constructed of groups of enumeration areas of like characteristics.

The Huff Gravity Model was the computer program used to determine the impact of the latest planned shopping centre. The program used is the property of Professor R. McDaniel, Department of Geography, U.W.O. The data source for this model has already been cited. Other minor sources of data are the Canada Year Books, 1951 to 1976, and publications of the Chatham Development Commission.

The Study Area

The City of Chatham is located at Latitude 42° 24" N. and Longitude 82° 16" W., on the Thames River in the heart of Kent County, Canada's premier agricultural county. The city is the county seat, featuring a population of 37,803 at the end of

1975. It is the centre of the St. Clair Economic Region The county contains a population, excluding Chatham, of 65,426.

The economy of the city is tied basically to the agricultural industry, although automotive assembly plants and other industries contribute substantially to employment.[15]

The site was first surveyed in 1790 by Patrick McNiff who paced off lots fronting the River Thames in Dover East, Chatham and Raleigh Townships. The city grew from a hamlet at the junction of the Thames River and McGregor's Creek. The establishment of the site as a naval-military centre led to the first industry of ship-building. This industry and agricultural activities led to an expansion of population to a size large enough to be granted City status in 1895.[16]

The Boundaries of the Study

The City Limits of 1976 form the principal boundary of the study. These are extended however by one mile to the North to include Chatham Place Mall, which was constructed outside of the City Limits. The population of the city only was included in the analysis, the reason being that the distance to all of the shopping centres for the population of the region is relatively the same. For example, after driving 52 miles from the Sarnia area, the extra two miles to the CBD or Thames Lea mall are inconsequential. Also, the difficulties in determining the varied travel time costs for rural and urban driving were beyond the scope of this paper. Thus only the population of the city of Chatham was used in analysing the problem.

The internal boundaries of the residential zones were determined by those of the enumeration areas in the 1971 Census of Canada. The boundaries of the planned shopping centres are the actual property limits for each.

The determination of the CBD boundaries was arbitrary. The total CBD may be seen as zone K on figure 4. The CBD studied is the extent of King Street West bounded by William Street in the east and Third Street in the west. This limited CBD contains all of the selected retail functions within the actual CBD, in 1976.

The selected retail activities are basically those in the Standard Industrial Classification Manual, Revised 1971 edition, which were found in all of the centres. Some agglomeration of activities was done to minimize repetition. The definition of each of these functions will be found in the Appendix.

Organization of the Paper

Following the introduction the study examines:

1) the effects of population changes on the retail structure
2) the internal dynamics of the retail structure
3) the impact of the introduction of a single planned centre

The final chapters attempt to summarize the principal observations and make recommendations.

Footnotes

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Chapter 2

Population Trends: Their Effect on Gross Retail Structures

The retail structure of Chatham has undergone considerable change since 1951. This may be expected though, as the city itself has also developed through time. It is reasonable to assume therefore that the retail structure is dynamic, responding to the ever changing needs and distribution of the population. During the twenty-five year period covered by this study the city population has nearly doubled, from 21,218 in 1951 to 37,803. This represents an increase from 6,834 households in 1951 to 11,455 in 1976. It cannot be assumed that this growth is symmetrical; nor can one expect that the CBD would be capable of serving the increased population as it existed in 1951. In order to meet this increased demand there would be two alternatives. The total floor space dedicated to sales could be increased, either by the conversion of new properties to retail sales or reconstruction to expand those facilities already within the boundaries of the CBD. The other alternative is to increase the amount of sales per square foot through intense activity, thus meeting the increased demand. It is found that within the CBD, the latter was the predominant solution. The total area of the CBD has not expanded. There has been the conversion of non-retail space to retail within the confines of the existing facilities. An example of this is the replacement of the old federal building on King Street, with a Woolworth department store in 1959.[2] Activity may also be intensified by the conversion to higher order shops, selling more valued goods. In this manner the dollar return per square foot of retail floorspace may be increased. This method has limitations in meeting the increased demand as the potential returns are limited; every store cannot sell jewellery. There must be a full range of goods offered for sale. Since the residential development of the city has not been symmetrical about the CBD, it is logical that new facilities be provided in the areas of greatest population growth.

Since the population has nearly doubled if all other factors remain constant the shopping space too should nearly double. The sales actually should double, and since floor space is used as a surrogate it should double.

Thus in 1951 the CBD provided 401,521 square feet of floorspace in retail activities and 517,582 square feet for all activities to serve a population of 21,218.[3] If the same ratio of customers to space is maintained for the full period of study expected floorspace values for 1976 are selected retail, 715,369 square feet, and 922,149 square feet for all activities. The actual values are 862,081 and 943,936 square feet. These represent excesses of 146,712 square feet (20.4%) and 21,787 square feet (2.4%) respectively. The greatest variation lies in the selected retail activities sub total, indicating that with the increasing affluence over the twenty-five year span, these consumer oriented activities have increased proportionally more than the population. The totalled values for all functions shows much less discrepancy, only 2.4% excess over expected floorspace. Use of total values tend to obscure retail trends. Therefore henceforth all figures shall refer strictly to the selected activities.

Since King Street was incapable of providing the floorspace required by the population shift, as one might expect, other planned shopping centres developed to fill the gap. Thus in 1951 there was one major shopping centre, and in 1976 there were four. In 1976, three of these were of comparable size: King Street, the CBD, had 254,940 square feet (29.6% of total retail space in the city), Thames Lea had 278,380 square feet (32.4%) and Chatham Place Mall with 241,709 square feet (28.1%). The final centre, Nortown Plaza had 84,485 square feet (9.83%), with a severly restricted range of functions.[4]

The three planned centres are all located in north Chatham. Only the CBD is in South Chatham, at its northern most point (Figure 4). This is a major spatial anomaly to be explained. If the population growth is symmetrical, one would assume that the planned centres would be distributed evenly around the city so as to maximize their potential trade. Since the planned centres have all located in the north, it is likely that the population growth was greatest there, or perhaps some unknown factor influenced the decision process.

Using the Thames River as a divider the population growth of North and South Chatham may be compared to determine the validity of the hypothesis.

Table 1 shows the changes in population, by residential sector, for the five year periods from 1951 to 1971 which was the last year accurate figures were available.

This population data may also be used to determine the order of construction and location of the planned centres in comparison to their relative hinterlands.

In 1951 the population of North Chatham was 2,356 households, and of South Chatham 4,478 households. In 1971 the values were 4,440 and 5,910 respectively. The north shows a net increase of 2,084 households or 88.5%. South Chatham shows a net increase of only 1,432 households, or 32%. Exceptions to these general trends are found in individual years. For example, the population increase for North Chatham in 1956-1961 was only 4.2%, much less than in any other period. Only in 1967 does the rate of increase in South Chatham approach that of the North, with a 17% value. It is also notable that South Chatham shows the only net decrease in households for any period, with a decline of 148 households between 1967 and 1971.

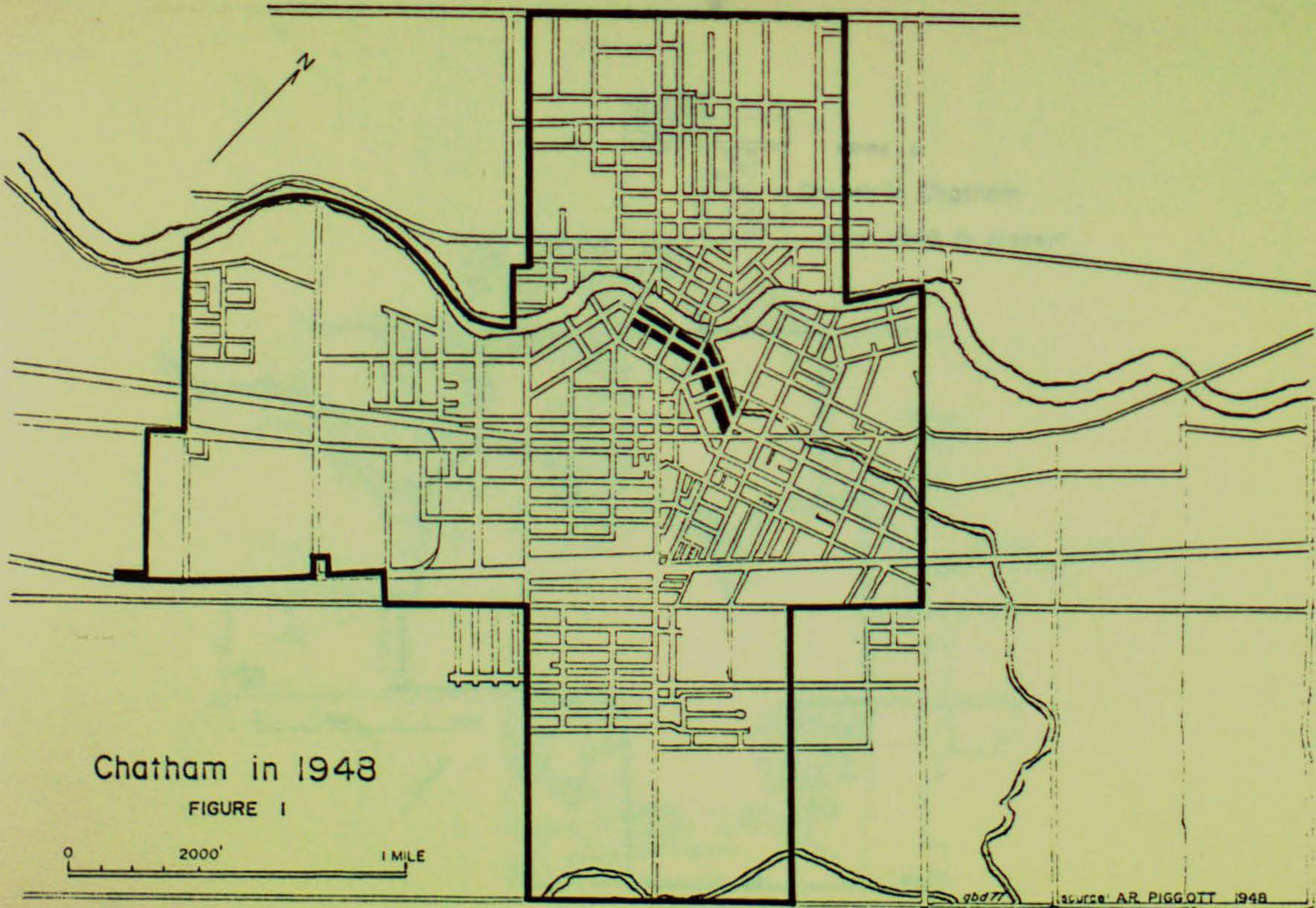
The behaviour of the individual zones over time requires some explanation as they are responsible for the total trends. It may be noticed the population zones E and G show the greatest decline in households for the 1971 period. Both of these sectors are within the industrial zone of the city which runs generally from the river south to the CNR tracks. Sectors G and E show net declines of 24 and 232 households respectively. This is due to the expansion of the industrial belt, which appropriated former residential properties. These two sectors also had the lowest average income in 1971. The areas are comparatively depressed and outmigration of inhabitants to better neighbourhoods left many houses vacant.

Zone H, also in the industrial belt, shows a net increase. The construction of housing here occurred mainly after the industrial expansion. Therefore the 19 households lost in 1951 to the expansion of the industrial belt, were replaced in the next period. The expansion of residential areas in South Chatham has been less than in the North. The growth has been for the most part an infilling of undeveloped property within the existing city boundaries.

North Chatham presents a different picture. Here there is minimal industrial activity, a remnant of pre-planned Chatham. The areas as a whole shows a greater rate of growth than the south. There are no net declines in any zones for the full time period. Only the central zones of the city, P, Q, T and N show periodic reductions of population. These are the normal replacements of the oldest units as they become unfit for habitation. It may be noted too, referring to table 2 and maps 1, 2, that zones R, V, U and O were not part of the city in 1951. The total area of these sectors is double that of the area within the city boundaries of 1951. These sectors have accounted for 1,384 households or 66.4% of the total change of 4,440 units. This may be compared to the outer zones of South Chatham which contributed 1,269 households out of an increase of 1,432 or 88.6%. The southern zones of A,B & C were part of the city in 1951. This shows again the infilling process within the south and the outward expansion of the North. This is confirmed by the greater density of streets throughout the South Chatham Residential Areas, compared to that of North Chatham. For the South to expand outward, further annexation of farmland is required. This has already occurred in the North, where the infilling process will now be dominant.

It can be seen therefore that the growth of Chatham has been directional and is likely to continue in this manner. Except for two minor outliers, South Chatham has not expanded beyond the Southern boundary of Indian Creek Road during the twenty-five year period. The isolation of the South side from the CBD by the industrial belt has perhaps contributed to its retarded growth. It appears that the factor of potential for growth, not existing population, has been the major factor in the decision process for planned centre location.

The shopping centres have all located on major arteries and intersections. Thames Lea Plaza in the North west is at



Chatham in 1948

FIGURE 1

FIGURE 2

Growth in Chatham

from 1948 to present

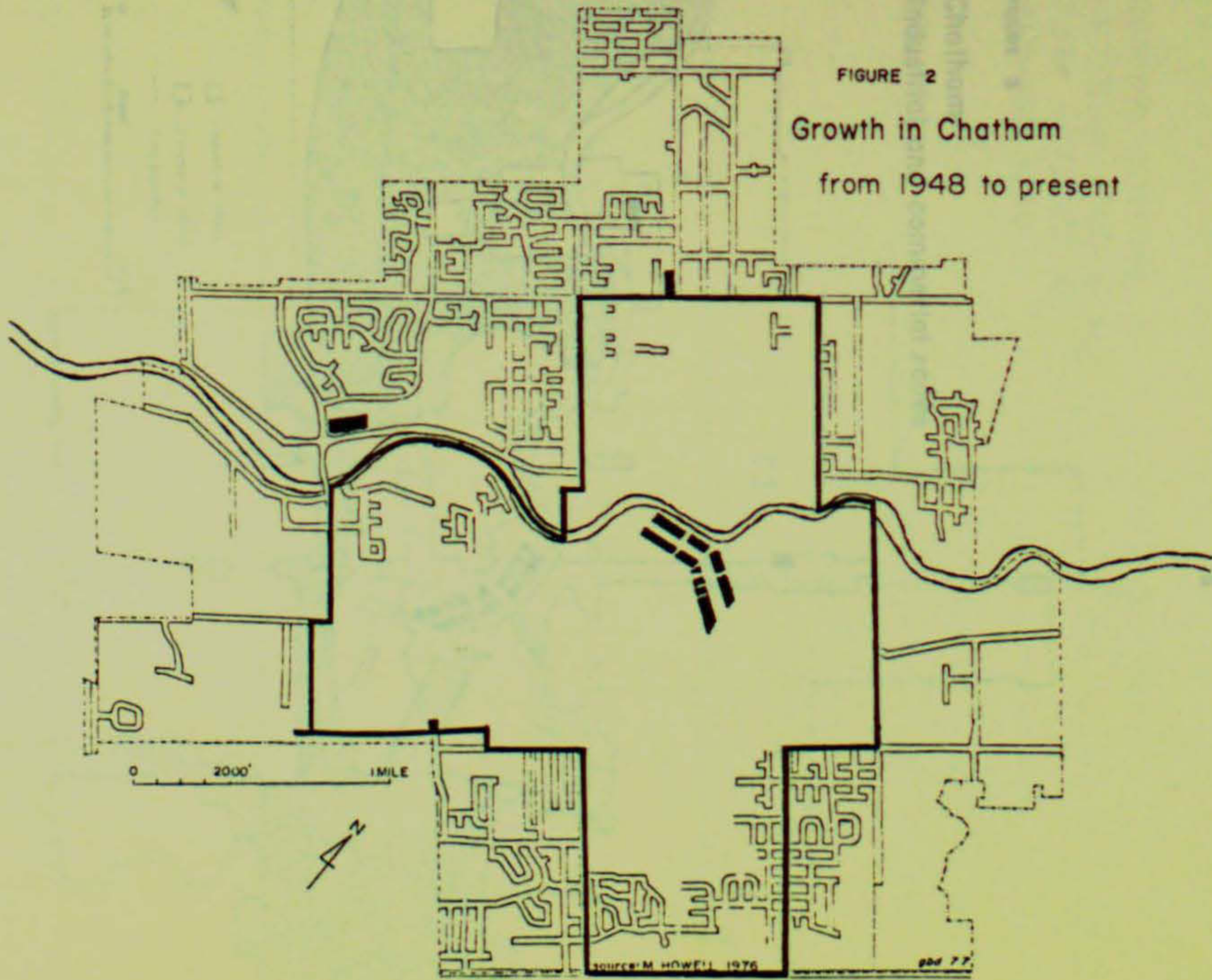
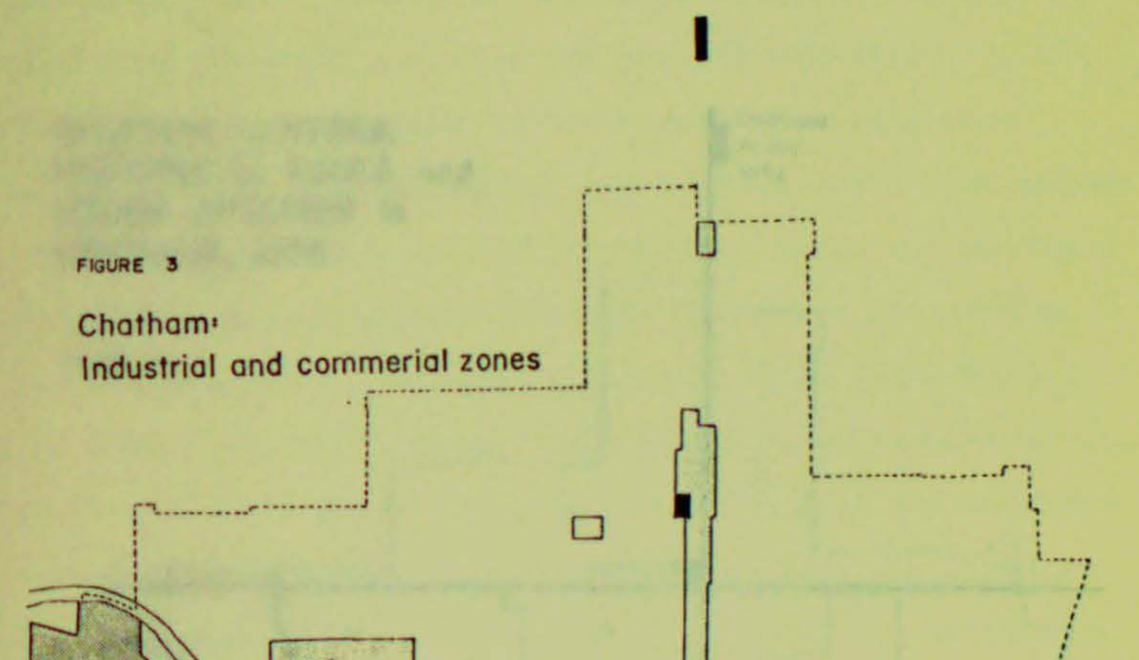
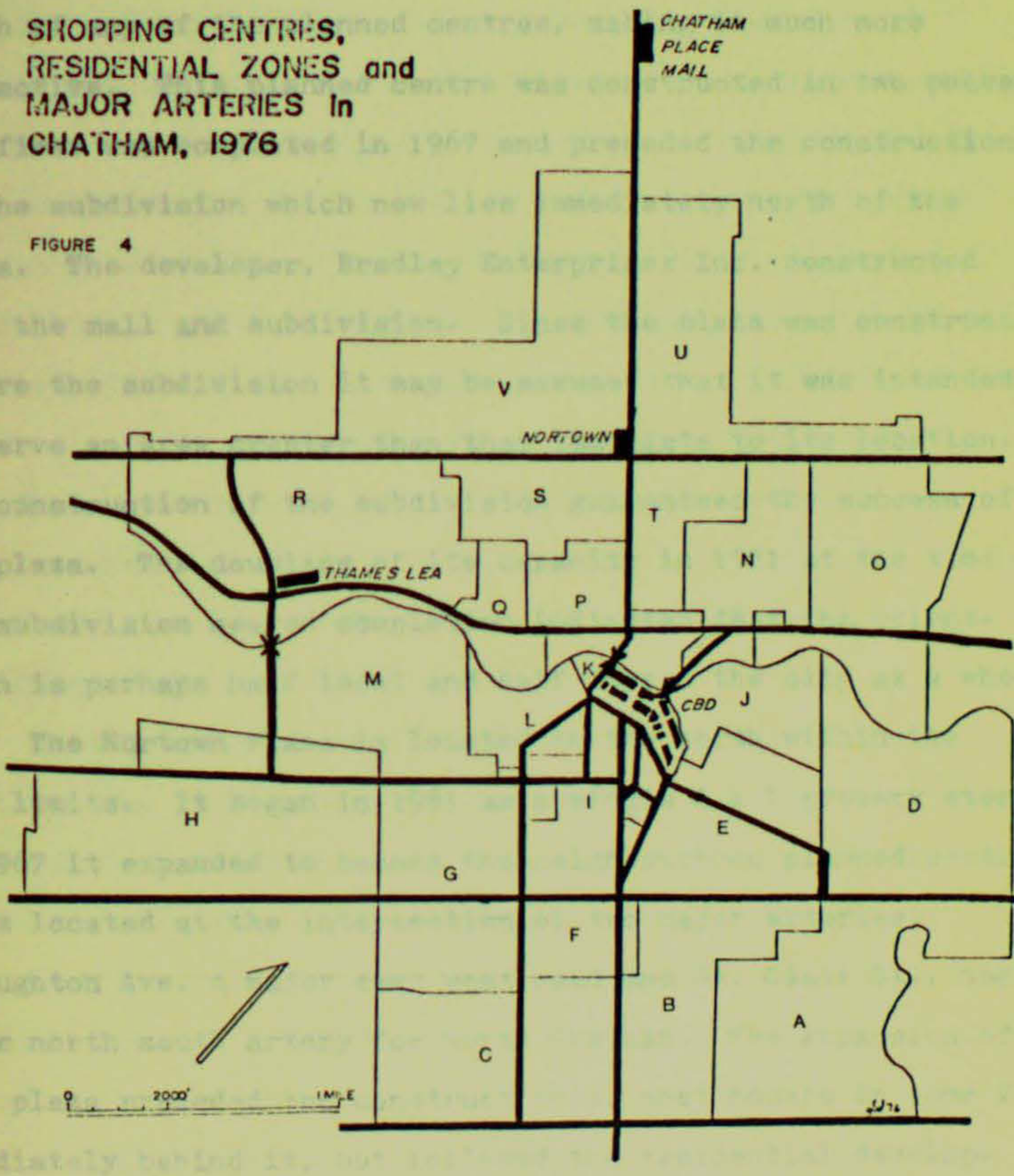


FIGURE 3

Chatham:
Industrial and commerial zones





SHOPPING CENTRES, RESIDENTIAL ZONES and MAJOR ARTERIES In CHATHAM, 1976

FIGURE 4

the intersection of Grand Ave., the major east west artery for Central Chatham; and Keil Drive, a major north south connection. Keil features one of three bridges over the Thames, thus giving Thames Lea the best accessibility to the South of any of the planned centres, making it much more attractive. This planned centre was constructed in two phases. The first was completed in 1967 and preceded the construction of the subdivision which now lies immediately north of the plaza. The developer, Bradley Enterprises Inc. constructed both the mall and subdivision. Since the plaza was constructed before the subdivision it may be assumed that it was intended to serve an area greater than that immediate to its location. The construction of the subdivision guaranteed the success of the plaza. The doubling of its capacity in 1971 at the time the subdivision neared completion indicated that the orientation is perhaps half local and half toward the city as a whole.

The Nortown Plaza is located in the north within the city limits. It began in 1961 as a single A & P grocery store. In 1967 it expanded to become the neighbourhood planned centre. It is located at the intersection of two major arteries, McNaughton Ave. a major east west road and St. Clair St., the major north south artery for North Chatham. The expansion of this plaza preceded the construction of most houses in zone V, immediately behind it, but followed the residential development of zones U, S and T. This indicates that the plaza followed the normal development pattern for planned centres, meeting the needs of an established population.

Chatham Place Mall is the most recent and controversial of the planned centres. It too was opened in two phases, with a third expansion expected before 1980. This mall is outside the city limits on highway 40. St. Clair Street becomes highway 40 at the city limits and leads to Wallaceburg and other minor communities to the north. Chatham Place is a community centre, accessible to both the northern communities as well as all of Chatham. In size it is presently comparable to the CBD and Thames Lea. Chatham Place has no immediate population. Although the rapid expansion of zone V and construction of the mall are coincidental, the developers of each are not related. Multi malls, a Toronto conglomerate with presumably no other local financial interests, has built Chatham Place. The subdivision is the work of several local developers.

Both Chatham Place and Nortown are well connected to South Chatham by the direct route provided by St. Clair Street. Two bridges over the Thames are located at the termination of St. Clair, giving good access to the South side.

King Street West, the CBD, is the oldest and largest in the total area of the shopping centres. As the CBD it provides a greater range of stores and services than the other centres. It is centrally located on the South side of the River Thames at the apex of most of the major arteries of the city. The

CBD features complete north-south and east-west connections through St. Clair St., Grand Avenue, Wellington St. and Queen St. It is also located at the site of 2 of 3 bridges over the Thames. These factors make it the most accessible of all the shopping centres (as indicated by table 4) The customer orientation of the CBD was originally to all of Chatham. In intent it still is; however, with the occurrence of the new planned centre, the actual orientation of the CBD has been altered. The allocation of population to the four shopping centres will be discussed in full detail in Chapter 4.

An examination of the effects on the CBD of the construction of the other three centres is the main thrust of this paper. The next chapter deals in detail with the internal dynamics of the retail structure of the city. The response of the existing retail structure to the injection of new planned centres is examined through store mix and vacancy rates within the individual centres.

Table 1.1

Distribution of Retail Floorspace By Activity in Chatham, 1951, 1956, 1961

	CBD 1951	CBD 1956	CBD 1961
Food	37,687	26,593	27,863
Gen. Merch.	117,113	119,360	118,283
Shoes	11,026	13,896	15,089
Mens Wear	19,570	17,957	26,205
Ladies Wear	33,306	32,494	40,056
Dry Goods	8,868	10,632	9,255
Hardware	12,888	20,583	27,523
Furn. & Appl.	24,404	30,267	28,496
Drugstore	9,991	9,320	11,590
Books	9,791	10,791	11,413
Restaurant	14,822	22,079	17,884
Jewellery	6,050	7,271	10,903
Retail	27,458	10,077	18,398
Liquor	3,650	3,650	2,612
Hair Style	10,946	12,004	11,241
Bank & Trust	18,558	22,992	23,616
Finance	7,789	4,575	8,076
Services	26,606	21,086	24,990
TOTAL	401,521	509,625	458,069
Entertainment	38,597	44,220	37,240
Hotels	23,090	23,090	14,190
Medical Prof.	14,340	11,107	9,229
Other Prof.	14,367	5,470	4,299
R.E.,Ins.,Travel	10,698	12,908	11,312
Government	13,981	7,871	3,700
Motor Vehicles	8,277	8,277	8,277
TOTAL	421,871	622,478	546,316
Vacant	5,320	3,104	16,813

Source: Vernons Directory of Chatham 1951, 1956, 1961
Kenty County Assessment Office

Table 1.2

Distribution of Retail Floorspace By Activity
in Chatham, 1967

	CBD	Thames Lea	Nortown	Total
Food	18,417	21,939	25,316	65,672
Gen. Merch.	117,639	78,525	23,800	219,964
Shoes	18,250	1,630		19,880
Mens Wear	22,004		1,910	23,914
Ladies Wear	21,829	1,230		23,059
Dry Goods	5,400			5,400
Hardware	12,303			12,303
Furn. & Appl.	29,903		2,490	32,393
Drugstore	7,214		3,407	10,621
Books	11,953			11,953
Restaurants	13,446			13,446
Jewellery	10,496	922		11,418
Retail	24,780	975	1,284	27,039
Liquor	2,612			2,612
Hair Style	9,918	1,422	1,490	12,830
Bank & Trust	28,634	4,776	2,690	36,100
Finance	5,700			5,700
Services	17,138	1,845		18,983
TOTAL	377,636	113,264	62,387	553,287
Entertainment	37,240			37,240
Hotels	14,190			14,190
Medical Prof.	16,039			16,039
Other Prof.	3,600			3,600
R.E.,Ins.,Travel	7,877	1,900		9,777
Government	3,200			3,200
Motor Vehicles	8,277	6,685		14,962
TOTAL FLOORSPACE	468,059	121,849	62,387	652,295
Vacant	17,144		7,100	24,244

Source: Vernons Directory

Table 1.3

Distribution of Retail Floorspace By Activity in Chatham, 1971

	CBD	Thames Lea	Nortown	Chatham Place	Total
Food	17,017	46,464	25,316	32,668	88,797
Gen. Merch.	118,133	172,465	23,800	126,052	314,398
Shoes	13,839	8,039	2,940	5,529	24,818
Mens Wear	14,824	7,157	1,910	9,269	23,891
Ladies Wear	14,575	6,225	1,284	16,186	22,084
Dry Goods	6,640	3,045		5,435	9,685
Hardware	7,135	4,960		1,687	12,095
Furn. & Appl.	33,412		1,960	5,243	35,372
Drugstore	5,550	3,555	3,407		12,512
Books	12,470	1,000	2,850	3,602	16,320
Restaurants	12,260	6,049	4,250	4,834	22,559
Jewellery	8,760	922		1,869	9,682
Retail	33,522	3,685		4,316	37,207
Liquor	1,562	7,371			8,933
Hair Style	7,063	1,422	1,490		9,975
Bank & Trust	19,843	4,776	2,690	2,319	27,309
Finance	13,410				13,410
Services	6,662	2,245	2,204	3,338	11,111
TOTAL	346,677	279,380	74,101	222,341	700,158
Entertainment	37,240				37,240
Hotels	14,190				14,190
Medical Prof.	13,023				13,023
Other Prof.	4,211				4,211
R.E.,Ins.,Travel	3,250	1,900		2,857	5,150
Government	2,650				2,650
Motor Vehicles	8,277	6,685			14,962
TOTAL	429,518	287,965	74,101	225,198	722,607
Vacant	14,779	1,504		2,851	16,283

Source: Vernons Directory of Chatham 1971
Kent County Assessment Office

Table 1.4

Distribution of Retail Floorspace By Activity
in Chatham, 1976

	CBD	Thames Lea	Nortown	Chatham Place	Total
Food	8,037	46,464	31,160	32,668	118,329
Gen. Merch.	44,283	172,465	25,800	135,774	378,322
Shoes	11,828	8,039	2,940	5,529	28,336
Mens Wear	16,544	7,157	1,910	9,269	34,880
Ladies Wear	17,642	6,225	1,284	14,385	39,536
Dry Goods	8,358	3,045		7,122	18,525
Hardware	4,829	4,960		1,687	11,476
Furn. & Appl.	24,417		2,200	5,243	31,860
Drugstore	5,550	4,500	3,407	5,983	19,440
Books	8,554		2,850	3,602	15,006
Restaurants	14,297	6,049	4,250	4,834	29,430
Jewellery	9,704	922		1,869	12,495
Retail	26,587	2,740		7,137	36,464
Liquor		7,371			7,371
Bank & Trust	26,741	4,776	4,990	2,319	38,826
Hair Style	5,543	1,422	1,490	950	9,405
Finance	11,237				11,237
Services	13,356	2,245	2,204	3,338	21,143
TOTAL	257,507	278,380	84,485	241,709	862,081
Entertainment	32,740			973	33,713
Hotels	14,190				14,190
Medical Prof.	7,653				7,653
Other Prof.	3,710				3,710
R.E.,Ins.,Travel	11,354				11,354
Government	2,650	1,900			4,550
Motor Vehicles		6,685			6,685
TOTAL	329,804	286,965	84,485	242,682	943,936
Vacant	87,624	1,000	1,960	1,878	92,462

Source: Kent County Assessment Office

Table 1.5

Distribution of Number of Establishments
by Activities in Chatham

	1951	1956	1961
Food	18	11	11
General Merch.	8	8	7
Shoe Stores	7	9	10
Mens Wear	13	10	11
Ladies Wear	19	23	22
Dry Goods	6	5	2
Hardware	7	9	6
Furn. & Appl.	7	10	8
Drugs	6	6	5
Books	2	4	3
Restaurants	10	12	11
Jewellery	5	6	8
Retail	15	12	10
Liquor	2	2	2
Barber & Beauty	9	11	11
Bank & Trust	8	8	8
Other Financial	3	5	7
Services	18	11	11
TOTAL	163	162	153
Vacant	3	3	12

Source - Vernons Directory 1951, 1956, 1961

Table 1.6

Number of Establishments for Total Retail Structure By Functions

(1967)

	King	Thames Lea Mall	Nortown	Total
Food	7	1	2	10
General Merch.	7	1	1	9
Shoe Stores	10	1		11
Mens Wear	12		1	13
Ladies Wear	14	1		15
Dry Goods	3			3
Hardware	7			7
Furn. & Appl.	6		1	7
Drugs	4		1	5
Books	4			4
Restaurants	9			9
Jewellery	8	1		9
Retail	12	1	1	14
Liquor	2			2
Barber & Beauty	10	2	2	14
Bank & Trust	9	2	1	12
Other Finance	6			6
Services	12	1		13
TOTAL	142	11	10	163
Vacant	9		2	11

Source - Vernons Directory 1967

Table 1.7

Number of Establishments for Total Retail
Structure By Functions

(1971)

	King	Thames Lea	Nortown	Total
Food	5	2	2	9
General Merch.	8	2	1	11
Shoe Stores	8	3	1	12
Mens Wear	9	2	1	12
Ladies Wear	11	3	1	15
Dry Goods	4	1		5
Hardware	5	1		6
Furn. & Appl.	7		1	8
Drugs	3	1	1	5
Books	4	1	1	6
Restaurants	7	2	1	10
Jewellery	7	1		8
Retail	19	3		22
Liquor	1	1		2
Barber & Beauty	9	2	2	13
Bank & Trust	8	2	1	11
Other Finance	7			7
Services	6	2	1	9
TOTAL	128	29	14	171
Vacant	11	1		12

Source - Vernons Directory 1971

Table 1.8

Number of Establishments for Total Retail Structure By Functions

(1976)

	King	Thames Lea	Nortown	Total
Food	4	2	2	8
General Merch.	7	2	2	11
Shoe Stores	6	3	1	10
Mens Wear	6	2	1	9
Ladies Wear	10	3	1	14
Dry Goods	7	1		8
Hardware	3	1		4
Furn. & Appl.	4		1	5
Drugs	3	1	1	5
Books	4		1	5
Restaurants	7	2	1	10
Jewellery	6	1		7
Retail	17	2		19
Liquor	1	1		2
Barber & Beauty	7	2	2	11
Bank & Trust	9	2	2	13
Other Finance	9			9
Service	6	2	1	9
TOTAL	116	27	16	159
Vacant	6	1	1	8

Source - Vernons Directory 1975
Kent County Assessment Office

Table 2

Distribution of Households By
Residential Zones in Chatham 1951-71

Residential Zone	1951	1956	1961	1967	1971
A	28	109	213	357	615
B	249	479	545	704	545
C	47	72	131	286	395
D	82	69	75	78	60
E	971	1049	1116	1227	995
F	265	369	362	369	400
G	573	572	596	679	475
H	100	142	123	157	160
I	856	795	792	807	830
J	372	375	332	376	270
K	358	309	305	308	225
L	385	321	308	292	480
M	192	343	398	418	460
South Side	4478	4902	5269	6058	5910
N	722	922	757	868	780
O	78	150	181	204	290
P	490	474	495	517	530
Q	169	162	191	269	350
R	53	111	162	253	595
S	289	374	450	469	575
T	370	448	465	557	515
U	147	271	281	317	390
V	38	207	261	358	415
North Side	2356	3119	3243	3812	4440
Chatham	6834	8121	8539	9870	7110
Population	21,218	22,262	29,826	32,424	35,317

Source: Vernons Directory 1951, 1956, 1961, 1967, 1971
Census of Canada 1951, 1956, 1961, 1966, 1971

Footnotes

1. Vernon, City of Chatham Directory. Hamilton: Griffin and Richmond Co. Ltd. 1951, 1956, 1961, 1967, 1971, 1975.

2. Ibid.

3. a) Ibid. and
   b) Kent County Assessment Office, Records, 1976

4. Ibid. 3b

Chapter 3

Internal Dynamics of the Retail Structure

The purpose of this chapter is to examine the internal dynamics of the retail structure, focussing especially on the CBD. The variables of store mix and vacancy are discussed in terms of floorspace and location. An attempt is also made to assess the possible mechanisms behind these factors.

Store Mix

Brian Berry defines the goods sold in market centres as low or high order, depending on their ability to attract customers over distances.[1] Low order goods are those which have a limited range of attraction, high order goods attract over long distances. Using Berry's hierarchy of order of goods the selected retail activities are divided into two groups of 9 functions each. The low order goods are: general merchandise, food, hardware, furniture & appliances, restaurants, hair styling, banks & trust, finance, and services. The remainder are high order. Thus jewellery, a high order good, will draw customers over much longer distances than foodstuffs which are low order goods. It is the mix of the function versus high order functions which is the main impact of the decentralization of the retail structure of Chatham. To follow the trend individually by function would be tedious and wasteful. The periodic alteration of the individual sectors of the structure can be seen on tables 1.1 - 1.8 .

The general trend has been a decline over the 25 years of low order functions as the CBD became more specialized. The reason that these low order goods move out are numerous.

The most basic of these is that the function cannot draw customers over long distances. Therefore it may be hypothesized that as time passed and the population of Chatham expanded, the average distance to the CBD increased. As a result, the low order function in the CBD could not compete with those located in the decentralized planned shopping centres. This would lead to reduction of the floorspace dedicated to lower order functions within the CBD, and increase of the same in the planned centres.

To examine this, the percentage of the lower order goods were calculated for the CBD, and the planned malls as they appeared. This study examined approximate 5 year intervals between 1951 and 1976: 1951, 1956, 1961, 1967, 1971 and 1976. The results are as follows: 61.6% low order goods, 54%, 56%, 60.7%, 66% and 57% respectively. The pattern is somewhat obscure but the increase and drops of the percentage of low order goods seems to correlate inversely with the difference between expected and actual retail floorspace for all of the shopping centres (Table 4). Where the real exceeds the expected, the value for low order goods drops. When the actual is less than the expected floorspace the percentage of floorspace for low order functions increases. This may be due to the competition for space. As the space in the CBD becomes reduced over time, (Table 1.1-1.8) the laws of supply and demand may force the low order functions out of the CBD, as they cannot raise the high income per square foot of which the high order functions are capable. If the supposition is extended, the CBD should show a more specialized character in functions, as the retail structure meets and then exceeds the expected sales. The value for 1976 is 57% low order shops. This is a year when the expected sale has been exceeded by the present amount.

The difficulty with this argument is it is unrealistic. The supply of floorspace is not perfectly inelastic. The CBD could have replaced its lost buildings and filled its vacancies, if there had been a genuine shortage of space. Another reason must be found for the reduction of sales space in the long run for low order goods.

The solution is found in the validation of the hypothesis. In 1976, 79.5% of the stores in the planned centres are accounted for by the low order goods. This is a reduction from 1967, when 93.5% of the planned centres were low order goods. However this does not invalidate the hypothesis. Quite to the contrary, the original shops in the planned centres were low order, drawing on the local population for business. The shopping centres were not large enough yet to support high order activities, which have higher threshold customers. The percentage of low order goods was reduced for these over time, but this is due to the increase of the presence of shops featuring high order goods, as the planned centres grew.

According to Hoyt , the retail activities of clothing, department and general merchandise, and drugstores were the leaders in the development of shopping centres. These activities were first to give rise to the CBD and now recently they have initiated the planned shopping centre. An examination of the brief interval of 1967 to 1976 seems to reaffirm these assumptions; this type of store has been part of the development of each of the three planned shopping centres. These also have been reduced in number within the CBD, as a result of this decentralization. Drugstores especially show this pattern. While in 1951 King Street featured 9,991 square feet dedicated to the sale of drugs, this number increased to 11,590 square feet in 1967 when the first planned centres were opened. The result of these openings led to a disadvantaged position for competition for the CBD causing the footage to reduce to 5,550 square feet in the two most recent periods. In the case of general merchandise stores too, a peak was reached previous to the development of the planned centres. This value was maintained until the most recent period, when a tremendous drop occurred, as a result of the relocation of the major department and variety stores into the planned centres. This is fully examined in the next chapter.

Specialty Predominance in the CBD

As a result of the decentralization of the lower order functions, the CBD has been left with a depleted range of activities. These are typified by the predominance of the retail specialty shop. These shops feature such high order goods as women's clothing, jewellery, shoes and non-classified specialties such as florists and music bars. The major mechanism for the apparent increase in the presence of these stores has been the actual reduction of the presence of the general merchandise store. The facts are that the CBD has been left with only the specialized functions. These functions have not overwhelmed the others.

The specialty functions however are not merely remnants of a once thriving CBD. These stores turn the greatest profits per square footage of all the selected types. They have remained viable in the face of decreasing patronage of the CBD. These stores have in fact all reported steady increase of sales for the full twenty-five year period.

Vacancy Rates

The pulse of a shopping centre may be felt through the examination of the vacancies in it. There will usually be some vacancies due to the steady turnover of retail establishments over time.

Murphy describes the zones of assimilation and zones of discard for CBD.[3] The latter are characterized by high vacancy rates.

However, if vacancies suddenly increase throughout the centre and remain at a high level, the shopping centres must be experiencing difficulty. The reason vacancies remain unfilled is that there is no demand at that site for the size of the store which vacated.

The vacancies in the planned centre have always been less than in the CBD (Tables 1.1-1.8). Vacancies have increased in the last period over that of 1971 for these centres, however. The planned centres are new, and have no aging zones of discard. Therefore the trend of vacancies for all of the city's shopping centres may be related to other factors. This appears to reaffirm the existence of an excess of retail capacity as calculated in the previous chapter based on the 1951 population to floorspace ratio. If the retail structure is dynamic, there will be a lag between the change and response of the system. The floorspace may be seen as a line oscillating with a continually reduced deviation as time passes. The time since the last increase of floorspace, by the addition of Chatham Place Mall, has been relatively short, therefore the readjustment of the system has not proceeded too far. Thus the deviation is great. It is expressed through vacancies. Over time this will be reduced as the population catches up to the supply of floorspace, or the reduction of total floorspace by the levelling of unused properties. Because the CBD is the oldest, it is likely that it will experience any clearance of excess square footage within its zone of discard.

The latter has been the case in Chatham's CBD; the eastern zone of discard expanded over the period. It extends from the east to west end of the CBD, toward the west. The stores here were among the oldest, dating to the 1880's.[4] Having outlived their usefulness, many were declared unfit for habitation and condemned. This resulted in the steady increase of the vacancy rate from 1951 to 1967. With the destruction of these unused stores, the vacancies were reduced by 1971. The problem however has been in the most recent period, 1976, when the vacancies increased 496%, from 14,779 to 73,350 square feet. This staggering amount is the result of the closing of the major department and food stores: Eatons, Woolworth, Zellers and Metropolitan, and Loblaws. These closings were a direct result of the rise of the planned shopping centres. If the vacancies caused by the migration of low order stores to the planned centres are subtracted from the total the value is -9480. The vacancies are more than accounted for by these closings.

There has been, therefore, except for this case, an eradication in 1976 of the vacancies within the CBD. This shows that the CBD is healthy except for the closing of the large stores. This does not make light of the situation however. These general merchandise stores are the major magnets for business for any shopping centre. The viability of the CBD without them can be questionable. The evidence however, indicates that the remaining establishments are doing an exceptional business. This may be due to the distribution of the planned shopping centres.

Since all the planned shopping centres are located in the North of the city, they provide the greatest distance to be travelled for the residents of south Chatham. These centres also feature low order goods, and therefore their attraction is not over a great range of distance. In the case of the southern resident, the CBD provides an intervening opportunity for the long trip to the planned centres. The goods offered by the general merchandise stores are supplied by the individual retail types. The trips to buy food will not be drawn either to the north as there are two large grocery stores in South Chatham (these stores are located as individually established and therefore will not be mentioned). However these stores would serve the interests of the CBD by preventing the move of the weekly grocery trip to the Northern planned centres. This will prevent the residents from combining shopping with grocery trips to the Northern centres. Therefore the CBD has remained viable, despite the losses of its major department and grocery stores, through its locational advantage. This hypothesis that the CBD is predominant in sales to South Chatham will be examined in greater detail in the next chapter, the gravity analysis.

If the hypothesis proves true, then the downtown merchants are faced with the necessity of preventing the development of another planned centre, in South Chatham. This would destroy the advantage of centrality the CBD has, and reduce its viability.

Table 3

Actual and Expected Floorspace
Calculated from 1951 Ratio of
Population to Floorspace

	Actual	Expected	Difference
1951	401,521	401,521	0
1956	509,625	421,277	+ 88,348
1961	458,069	564,415	-106,346
1967	553,387	613,579	- 60,292
1971	700,158	668,325	+ 31,833
1976	862,081	715,369	+146,712

Sources: 1) Field Collected Data
2) Vernon's City Directory 1951-71
3) Kent County Assessment Office
4) Chatham Development Commission
5) Canada Yearbook, 1951-76

Footnotes

1. B. J. L. Berry, Geography of Market Centres and Retail Distribution. Englewood Cliffs, N. J. : Prentice-Hall Inc. 1967. pp.14-15.

2. H. Hoyt, 1966. "The Retail Store Revolution" in Murphy, R. E., The American City, An Urban Geography. Toronto: McGraw-Hill Book Co., 1974. p.327

3. R. E. Murphy. The American City, An Urban Geography. Toronto: McGraw-Hill Book Co., 1974. pp.367-368.

4. Kent County Assessment Office, Records, 1976.

Chapter 4

Gravity Analysis of the Impact of A New Planned Shopping Centre

The gravity model is a mathematical expression of the relative attraction of competing shopping centres. It generates probabilities of interaction between the shopping centres (destinations) and the residential zones (origins) they serve depending upon the size of the destinations and the distance to them from the origins. It was developed in 1929 by W. V. Reilly. David L. Huff improved the model by injecting parameters of population and income for the residential zones. This enables the model to predict probable sales from each destination to each origin. The Huff Gravity Model is expressed as:

$$E(A_{ij}) = \frac{\dfrac{S_j}{T_{ij}^{x}}}{\displaystyle\sum_{j=1}^{n} \frac{S_j}{T_{ij}^{x}}} \cdot C_i \cdot B_{ik} \quad \text{(For all i's)}$$

Where:

$E(A_{ij})$ = the expected annual sales potential for shopping centre j with respect to a given product class from each of the i^{th} residential zones.

S_j = square footage of floorspace at shopping centre j

T_{ij} = travel time from origin i to destination j

x = a parameter weighting the attractivity of a good over distance

C_i = number of consumers (households) in each origin i

$B_{(ik)}$ = annual amount of income budgeted by consumers at i, for purchase of goods "k" [1]

The model is operated by determining the destination, delimiting their boundaries and calculating floorspace. Floorspace is used as a surrogate measure for annual sales, as it is more readily available. The area of study is then subdivided into residential zones which are representative of the populations they contain. The time required to travel from the origin to the destination is then calculated for each pair of origins and destinations. Values for income and population for each of the residential zones are then determined. The time factor is weighted by the exponent x. This weighting is determined empirically. It is based on the ability of a given order of goods to attract customers over distance. A high order good has a relatively low exponent x, thus minimizing the effect of distance. The inverse is true for low order goods; the exponent is large, shortening the range over which the goods attract customers. Huff ranges the values of x from 1.5 to greater than 3, depending upon the geographical character of the study area and the order of the good.[2] If travel is difficult due to the topography of the area the exponents will become relatively greater, giving distance more emphasis. The model is usually operated on a computer as the calculations are tedious and time-consuming.

In this study accurate data was available only for the year 1971. This was acquired from the 1971 Census of Canada. Data for the seventy-two Enumeration Areas within the city of Chatham, giving the total number of households and total household income in each area, provides values for C_i and B_i .

It is beyond the scope of this paper to examine the individual functions in this manner. Thus the total floorspace was used against total income rather than scaled proportions for each function. Data on floorspace was acquired from the Kent County Assessment Office. The data was available only for total building area. It is assumed that the ratio of sales space to total area remains constant, so that the error is eliminated. This may slightly skew the data in favour of the CBD, as the many smaller stores will likely have more total storage space than the large stores of the planned centres.

For this study the 72 Enumeration Areas were grouped into 22 larger residential zones A to V. This grouping was done in such a manner so as to make the zones both compact and genuinely representative of the economic status of the population they contain. Thus zone U, with an average income of $12,984.62 ideally should not contain a household with an exceptionally low income.

The use of the Huff model in the year 1971 provided the opportunity to assess the impact of the opening of a new planned shopping centre on the retail structure. In 1971 the population of Chatham was 35,317, served by three shopping centres. In November of 1973, the Chatham Place Mall opened for business. At this time the population was 35,364. The difference between the two years is only 47 people or 14 households. It can be assumed then with such a minor variation, that the distribution of population and income for both years was identical. By assuming this it is possible to calculate gravity model solutions for three and four shopping centres in relation to a static area of service. In this way the impact of the additional planned centre can be ascertained.

Since there is no suitable empirical data existing for the Chatham area, it was impossible to accurately determine the exponent x. Instead an arbitrary constant of x = 3 was chosen due to the predominance of shops selling lower order goods in the dispersed retail structure of 1971. This is slightly less than the value assigned by Huff to clothing in Los Angeles, where congestion makes travel more difficult. For this reason the value was reduced to the nearest whole number.

The travel times were calculated by using a 1/600 scale map of the city, on which the centres of the residential zones and shopping centres were plotted. The shortest mileage by road for each pair of points was then determined. The mileage values for the pairs were then converted to travel time by an estimated average speed of 25 mph. This average speed was determined empirically by 9 random Thursday afternoon trips across the city by 3 drivers: a male 55 years old, a female 50 years and a male, 23 years old. The times and mileage were averaged to 24.82 mph which was rounded to 25 mph.

The population and income distribution as well as floorspace figures and travel time are found in table 4 . It can be seen that the CBD has two distinct advantages over the planned centres, centrality and size. The CBD is central to the population, giving it the lowest total travel time from all residential zones. Since the exponent on time is 3, tremendous weight is placed on the travel time. Therefore the advantage of centrality for King Street is considerable. As well in 1971 the CBD still maintained its dominance in size, exceeding the floorspace values for the other planned centres. This also increases the attraction of the CBD under the assumption of the gravity model. In descending order of floorspace the three shopping centres were King Street (49.5%), Thames Lea Plaza (39.9%) and Nortown Plaza (10.6%). When all four centres are used the distributions are 37.6%, 30.3%, 8% respectively, and 24.1% for Chatham Place. By looking only at the floorspace the distribution of sales should be in the

Table 4

Travel Time In Minutes From Residential Zones To Shopping Centres (1971) with Allocations of Floor Space By Shopping Centres and Distribution of Total Income By Residential Zone

	Number of Households	Average Income	Gross Income	Time to King in minutes	Time to Thames Lea in minutes	Time to Nortown in minutes	Time to Chatham Place in minutes
A	615	10,861.78	6,680,000	4.14	8.86	7.04	8.50
B	545	10,601.83	5,778,000	3.22	7.77	6.01	7.43
C	395	14,620.25	5,775,000	4.43	7.19	6.37	7.83
D	60	8,280.00	4,968,000	3.29	7.60	5.98	7.44
E	995	7,140.70	7,105,000	1.41	6.56	4.07	5.35
F	400	9,480.00	3,792,000	2.66	5.82	5.64	7.10
G	475	7,137.05	3,390,100	3.72	6.14	5.91	7.37
H	160	10,270	16,110,001	2.86	7.01	8.50	9.96
I	830	7,433.73	6,170,000	1.70	4.91	3.44	4.90
J	270	11,007.41	2,972,000	1.43	5.73	4.10	5.56
K	225	4,916.40	1,106,200	.20	5.52	2.67	4.13
L	480	9,443.75	4,533,000	1.50	4.04	3.52	4.98
M	460	11,697.83	5,381,000	3.12	1.98	6.27	7.73
N	780	8,882.76	2,576,000	1.84	4.89	2.48	3.95
O	290	9,167.31	7,150,500	3.12	6.39	5.13	6.59
P	530	8,989.06	4,764,200	1.28	2.97	2.13	3.59
Q	350	9,525.71	3,334,000	2.52	2.05	2.83	4.30
R	595	11,800	7,021,000	4.36	1.07	3.60	5.06
S	575	8,984.35	5,166,000	3.41	3.51	1.47	2.93
T	515	12,570.87	6,474,000	2.15	4.91	1.53	2.99
U	390	12,984.61	5,064,000	3.37	6.19	1.41	2.16
V	415	10,739.76	4,457,000	4.38	4.34	1.53	2.73

Sources: (1) Empirical Data

(2) Census of Canada, 1971

(3) Kent County Assessment Office

same order with the same values. When the time factor is accounted for this may be changed.

The first iteration of the model, (Table 5.1) deals only with the three centres existing in 1971. The solution verifies the expected decreasing order of sales as determined by floorspace. The gross sales for each centre are: CBD $71,679,428 , Thames Lea $18,640,029 and Nortown $14,797,193. The CBD accounts for 68.3% of all sales in Chatham however this is greater than the expected value. This is the result of the weighted time factor.

Looking within table 5.1 it is possible to determine the major marketing areas for the three centres. The spheres of greatest influence for each shopping centre are indicated by the highest sales in each zone thus: the CBD dominates zones A-L,N, O, P and T . Thames Lea dominates zones M, Q and T and Nortown dominates zones S, U and V. Therefore the CBD is dominant for all of south Chatham except zone M. As well sales in the central and eastern zones of North Chatham go mainly to King Street. Thames Lea Plaza makes the most sales to the western zones of North and South Chatham. Nortown Plaza dominates to the northernmost zones. The importance of the location of the bridges can be seen by the example of zone M. If the bridge did not exist, the pattern of spheres of influence would be shifted. Zone M would be reassigned to the CBD; to balance the shift, equal volumes of sales would rotate from the CBD to Nortown by a shift of dominance for

Table 5.1

Expected Sales at Three Shopping Centres
By Residential Zones in Chatham 1971

Residential Zones	King Street W. CBD $	%	Thames Lea Plaza $	%	Nortown Plaza $	%
A	5,934,150	5.2	487,898	0.5	257,953	0.2
B	5,299,800	5.1	303,973	0.3	174,222	0.2
C	4,581,930	3.9	863,660	0.8	329,413	0.3
D	4,512,380	3.8	295,001	0.3	160,616	0.2
E	6,986,990	6.2	55,912.2	0.1	62,096	0.1
F	3,449,270	3.3	265,383	0.3	77,345.3	0.1
G	2,750,530	2.2	492,958	2.4	146,616	0.1
H	1,515,710	0.2	82,952.5	0.1	12,341.1	0.01
I	5,824,900	5.0	194,832	0.2	150,265	0.1
J	2,909,180	2.6	36,440.5	.03	26,383.1	0.02
K	1.106,060	1.1	42.3956	0	99.365	0
L	4,285,360	3.8	176,761	0.2	7,088.2	0.1
M	1,287,490	1.2	4,059,600	3.9	33908.2	0.3
N	6,326,590	5.5	271,623	0.3	552,290	0.5
O	2,255,910	2.1	211,618	0.2	108,476	0.1
P	4,288,610	4.1	276,660	0.3	198,933	0.2
Q	1,259,120	1.2	1,884,850	1.8	190,024	0.2
R	125,594	0.1	6,847,720	6.0	47,689	0.05
S	1,172,200	1.1	866,192	0.8	3,127,610	3.0
T	3,898,170	3.4	263,756	0.3	2,312,070	2.1
U	1,250,880	1.2	162,668	0.2	3,650,450	3.5
V	651,314	0.1	539,528	0.5	3,266,160	3.1

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Table 5.2

Expected Sales at Four Shopping Centres

By Residential Zones in Chatham, 1971

Residential Zone	CBD $	%	Thames Lea Plaza $	%	Nortown Plaza $	%	Chatham Place Mall $	%
A	5,567,630	5.3	457,762	0.4	242,020	0.2	412,592	0.4
B	5,057,630	4.8	290,083	0.3	166,261	0.2	264,031	0.3
C	4,195,300	4.0	790,784	0.8	301,617	0.3	487,299	0.5
D	4,295,980	4.1	280,853	0.3	152,913	0.1	238,253	0.2
E	6,914,700	6.6	55,333.7	0.1	61453.5	0.1	73,512.6	0.1
F	3,346,600	3.2	257,484	0.2	75043.1	0.1	112,870	0.1
G	2,578,010	2.4	462,040	0.4	137,420	0.1	212,627	0.2
H	1,494,360	1.4	81,784	0.1	12167.3	0.01	22,692.4	.02
I	5,681,250	5.4	190,028	0.2	146,560	0.1	152,163	0.1
J	2,878,430	2.7	36,055.4	0.03	26104.3	0.02	31,408.4	.03
K	1,105,980	1.1	42.3925	0	99.3578	0	80.555	0
L	421,551	0.4	173,880	0.2	69,726	0.1	73882.6	0.1
M	1,274,630	1.2	4,019,050	3.8	33569.5	0.03	53754.6	0.1
N	5,983,390	5.7	256,888	0.2	522,329	0.5	387,896	0.4
O	2,129,010	2.0	199,714	0.2	10.2373	0.1	144,907	0.1
P	4,179,240	4.0	269,605	0.3	193,860	0.2	121,493	0.1
Q	1,200,590	1.1	1,797,230	1.7	1,811,191	0.2	154,988	0.2
R	124,678	0.1	6,797,820	6.5	47,343,990	0.04	51157.1	0.2
S	953,466	0.9	704,558	0.7	2,543,990	2.4	963,988	0.9
T	3,408,740	3.2	230,640	0.2	2,021,780	1.9	812,835	0.8
U	780,986	0.7	101,562	0.1	2,279,160	2.2	1,902,290	1.8
V	469,561	0.4	388,970	0.4	235,472	0.2	1,243,750	1.2

Huff Gravity Model Computer Solution

zone T and on to Thames Lea Plaza by a shift of sales from zone S. This steppingstone path will minimize the total distance increase.

This is the gravity model interpretation of the actual retail structure for 1971.

The second iteration (Table 5.2) synthesizes the 1971 distribution of the retail structure with four shopping centres. The general impact is an 8% reduction of sales for all of the existing shopping centres. The impact of the weighted time factor is visible again, in the unexpected distribution of sales. Despite a floor space equivalent to three times that of the Nortown Plaza, Chatham Place ranks fourth in sales. The attraction of this large floorspace is greatly hampered by the remoteness of the site. As a result the only changes in dominance are the transfers of zones V and S to the sphere of Chatham Place Mall. This exponential decay of customers over distance is so great that the Mall can exert a direct loss of dominance over only the relatively short range of 2.75 minutes of travel time. Thames Lea and Nortown suffer sales reductions of 5% and 4% respectively. These losses are most severely felt by Nortown where they constitute a 25% decrease in sales. It may be expected that vacancies will increase in the Nortown Plaza in the 1976 retail strucutre. This is found to be the case. Nortown experiences a 1960 square foot vacancy, (table 1.4) - this was a former Furniture and Appliance Store. This store moved to Chatham

Place Mall where its floorspace was increased.

The model does not predict the tremendous increase of vacancies in the CBD. This is because the model examines only the gross floorspace for all retail activities. General Merchandise and Food Stores account for 82,810 square feet of the 87,624 total, or 94.5% of the CBD vacancies. These two types of stores account for 33% of the 604,574 square feet of floorspace of all the planned centres, or 201,782 square feet. In 1967 the square footage was 149,580; the difference is 52,202 square feet. This adds credence to the theory that the major food and deparment stores which offer low order goods have been forced to decentralize to serve the now expanded residential area. The stores which closed - Eatons, Woolworth, Zellers, Metropolitan and Loblaws - have been replaced by counterparts in the planned centres. These two retail types in the planned centre are Woolco, Zellers, K-mart, Stedmans, Loblaws, Food City and A & P. It is significant that the closing of Woolworth, Zellers and Loblaws in 1973 followed the construction of the new stores in the planned centres. These are obviously planned moves staged over a ten year period. In each case, the new store has been larger than the old store in the CBD.

The next chapter discusses the future ramifications of this move on the CBD and retail structure.

Footnotes

1. D. L. Huff. "A Probabilistic Analysis of Shopping Centre Trade Areas", <u>Land Economics</u>, 39, 1963. p.88

2. Ibid. p.87

Chapter 5

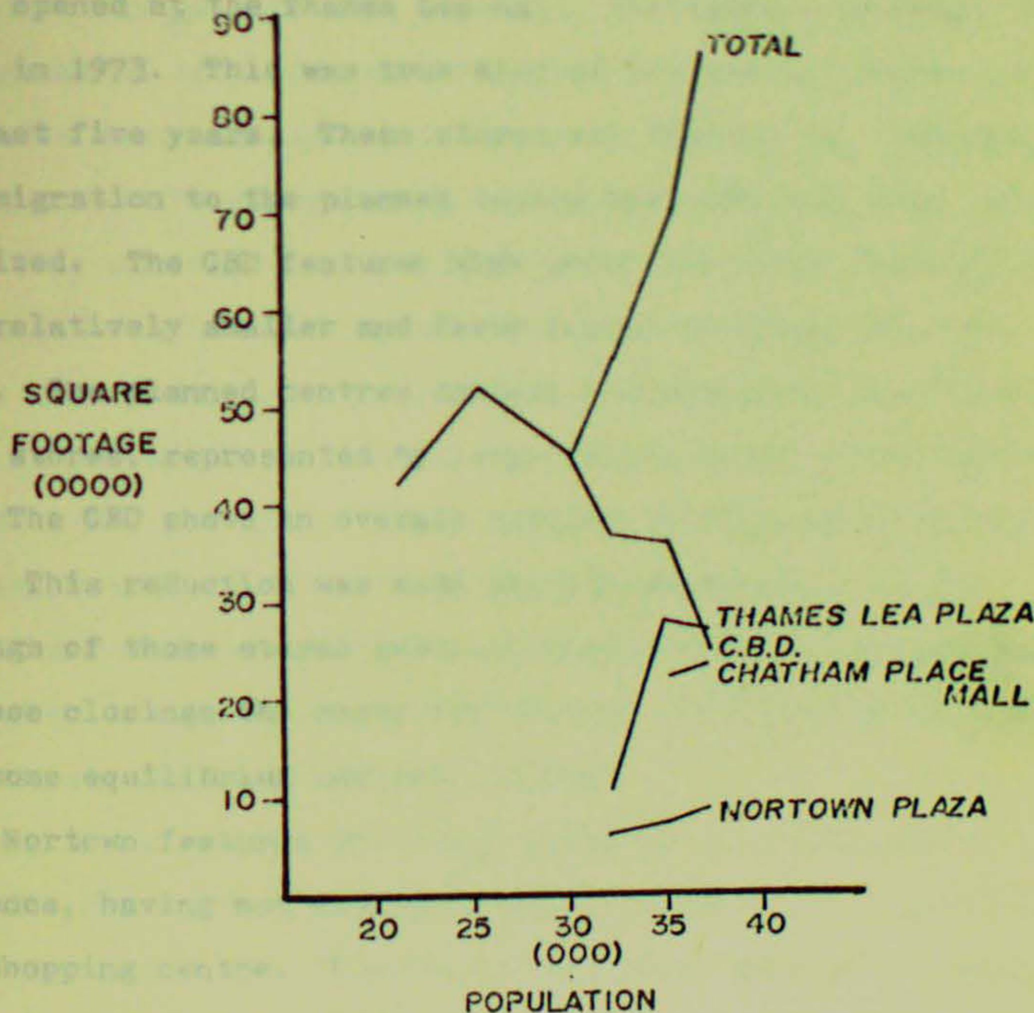
Expected Short Run Developments

The purpose of this chapter is to attempt to outline the likely developments in the retail structure in the near future. The basis of this lies in the data and the trends discovered previously. These predictions have in part been affirmed by a tour of the study area, four months after the end of the period of study which indicated the vacancies were being refilled with viable businesses.

If the retail structure of the city of Chatham experiences no further additions, an equilibrium with the population distribution should be achieved. Figure 5 graphically traces the past trends of variations of floorspace for each of the shopping centres as well as the total, against the rise of the population. The overall trend has been an exponential increase in the floorspace over the twenty-five year period. This has been the response of the retail structure to the increasing standard of living since 1951. The major additions of floorspace have accrued from the construction and expansion of planned centres in North Chatham since 1967. These centres have developed partially at the expense of the CBD. This was inevitable however, as the low order retail establishments in the CBD were unable to properly serve an increasingly distant and dispersed population (Figure 2). The large volume department and grocery stores in the CBD were forced to respond to this development,

CHANGE IN RETAIL DISTRIBUTION OF CHATHAM

FIGURE 5



gbd

by decentralization of their activities. This was evidenced as early as 1956, when the single A & P located at the site of the Nortown Plaza. In 1963, the building housing the A & P in downtown Chatham was vacant.

This trend picked up pace. In 1967 a Zellers department store opened at the Thames Lea mall, the Zellers downtown vacated in 1973. This was true also of Loblaws and Woolco in the last five years. These stores all feature low order goods; then migration to the planned centre has left the retail structure polarized. The CBD features high order specialty shops with only relatively smaller and fewer stores carrying low order goods. The planned centres contain predominantly low threshold, large stores, represented by large volume sales at low prices.

The CBD shows an overall decline in floorspace through time. This reduction was made particularly severe by the closings of those stores previously mentioned. Just previous to these closings the curve for the CBD had flattened indicating that some equilibrium had been reached.

Nortown features the least variation over its period of existence, having not expanded beyond the size of a neighbourhood shopping centre. The Thames Lea plaza grew in two phases, from neighbourhood to community size. At this level its curve too, flattened.

Chatham Place Mall was built as a community sized centre. The expansion it received in 1975 and that to come before 1980, do not significantly increase the floorspace. Therefore its curve levels off.

Thus the curves for each of the shopping centres have levelled except for that of the CBD. In this case however, the decline had levelled previous to the major drop of 1976. If this drop is considered a single isolated occurrence, then the curve may be extended, at the lower level, in the same configuration as before the reduction. If this is true then it can be seen that an equilibrium has been reached. The distribution of floorspace among the four centres should remain relatively constant in the next few years. This steady state may be altered however, by alteration in the population and income distribution.

At present there are two major areas of construction of houses within the city. These are in zones C and V. The rate has been greater in zone V, as seen in chapter 2.

These residential constructions are assumed to balance each other to make prediction simple. If this is the case then the steady state should remain as it is today for the economic short run.

The CBD therefore will maintain its level of floorspace at approximately 250,000 square feet. This may increase slightly in response to the population increase in zone C. The other shopping centres too, may be expected to remain constant; the growth in zone V will be absorbed by the already planned expansion of Chatham Place Mall.

Conversely zone V may be said to blunt any impact on the rest of the retail structure, by the increase at the mall. This is substantiated by the distance decay figures for Chatham Place Mall, produced in the preceding chapter.

The only possible development which may be foreseen that might severely alter the retail structure, would be the construction of a new planned centre in South Chatham. This would strike a deadly blow to the CBD, as it would rob it of its last stronghold of dominance. There is substantial opportunity for a new centre in the South.

A present population of 21,303 (using 1971 ratios) in the South, with growth in a high income district, C (table 4), should present quite an attractive opportunity to an entrepreneur. At present there is no evidence of such an entrepreneur. This however does not mean that one does not exist. A downtown businessman recently remarked that, "Soon some new stores will have to be built. We (the Downtown Merchants Association) are becoming hard put to find locations for all of the prospective businesses." This shows that the downtown is viable, but also indicates that there exists a possible demand for central or southern locations. This is a genuine threat to the CBD.

The merchants of King Street should make every effort possible to prevent this occurrence. The best course would be to convince the City Government of the disastrous effects it would have on the CBD. Since the commercial property taxes paid by the downtown merchants constitute a considerable portion of the tax base, the threat is to the city as a whole. As well, a decaying downtown is an expensive liability which the city could ill afford. It is better to legislate a preventive law and keep the downtown viable, so it will maintain itself.

The plans to revitalize the downtown begin to unfold with sewer work this summer. The face lifting and reconstruction are to follow over the next few years. This indicates a commitment on the part of the city to save the CBD. This investment must be protected by the prevention of development of a southern planned centre.

Chapter 6

Conclusions

The purpose of this chapter is to outline the prominent conclusions and draw attention to the implications of these conclusions, for the City of Chatham planners.

Synthesis of Conclusions

The most prominent conclusions from the study of the retail structure of Chatham for the last twenty-five years are:

1) The retail structure of the city is in dynamic equilibrium with the distributions of the population and spending power.

2) The planned centres developed as a response to the lack of expansion of the CBD as demand for facilities featuring low order goods at shorter distances from the expanded population centres increased.

3) The planned centres have grown partially at the expense of the Central Business District. This is evidenced by the direct losses of establishments from the CBD to the planned centres.

4) The retail structure has polarized. The CBD has developed into a centre featuring high order goods. The planned centres are dominated by stores with large volume sales of low order goods.

5) The CBD reached its peak of floorspace well before the first

opening of a planned shopping centre. This indicates that the decline of the CBD was due to more factors than just the competition from the planned centres.

6) The major theoretical market for the CBD is now found in south Chatham.

7) Due to the exponential decay of its customer attraction over distance, as measured by travel time, the impact of Chatham Place mall on the CBD has been minimal.

8) The CBD has remained a viable shopping centre, due to its centrality, despite the serious losses of activities to the planned centres.

Implications for City Planners

The study indicates that the hue and cry regarding the failing of the downtown has been somewhat substantiated. The CBD has suffered a serious setback, with the losses of its major department and grocery stores. Though severe, this blow has not been fatal. The specialization of activities within the CBD is in accordance with the theory put forth by Vance, that the city develops two downtowns, one for business offices, the other a metropolitan specialty shopping district. This study has dealt only with the latter retail shopping district.

The outlook for King Street is not as blea k as it superficially appears. Its central location and high connectivity to the entire city will continue to give the CBD advantages over the planned centres. These attributes make the CBD of Chatham attractive to many activities which would not be viable elsewhere. The importance of these activities to the city make the CBD irreplaceable. As Mr. Jack Herd of the Downtown Merchants Association suggested, an appropriate title for this thesis may have been, "The Downtown that Wouldn't Die". The advantages offered to the city by a healthy Central Business District are more than worth the costs and efforts to revitalize and protect this essential part of the Retail Structure of Chatham.

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APPENDIX

INDUSTRIAL CLASSIFICATIONS

wholesalers of air conditioning equipment except those primarily engaged in handling the small window-type of air conditioning unit which are included in Industry No. 621 – Wholesalers of Electrical Machinery, Equipment and Supplies.

Wholesalers of Metal and Metal Products, n.e.s. – Establishments primarily engaged in wholesale dealing in metals and metal products not included in other wholesale industry. Establishments included here are those primarily engaged in handling products such as structural shapes and plates, bars, rods, sheet metal, wire and wire products, pipe and tubes. Included also are establishments primarily engaged in handling non-ferrous metals and metal work, as well as those primarily engaged in handling metal concentrates and ores. Establishments primarily engaged in wholesale dealing in metal machinery and equipment are classified in either Industry No. 621, Industry No. 622, or Industry No. 623; in hardware, plumbing, and heating equipment, in Industry No. 624; and in building materials, in Industry No. 626.

Wholesalers of Lumber and Building Materials – Establishments primarily engaged in dealing in lumber, plywood, millwork, and planing mill products; metal siding, sash and doors; roofing materials; sand, gravel, brick, tile, cement and other building materials, whether their sales are chiefly to business or household consumers. Also included are establishments primarily engaged in wholesale dealing in glass, paints, varnishes, wallpaper, and other decorating supplies. Establishments primarily engaged in mixing and delivering ready-mixed concrete are included in Industry No. 355 – Ready-Mix Concrete Manufacturers.

Wholesalers of Scrap and Waste Materials. – Establishments primarily engaged in assembling, breaking up, sorting and selling all kinds of scrap, junk, and waste materials such as iron and steel scrap, other metal scrap, waste paper, rags, rubber, bottles.

Wholesalers, n.e.s. – Establishments primarily engaged in wholesale dealing in a commodity or class of commodities not elsewhere classified, such as toys, novelties, and fireworks; amusement and sporting goods, photographic equipment and supplies; alcoholic beverages; industrial chemicals, laundry soaps, detergents and cleansers; farm supplies (feeds, fertilizers, seeds), pulpwood and other forest products; musical instruments and accessories; jewellery, clocks and watches; books, periodicals and newspapers; second-hand goods except machinery and automotive equipment or scrap and waste; and other miscellaneous commodities such as leather and leather goods, cordage, twine, brushes. For purposes such as the Population Census, this industry also includes manufacturers' agents not otherwise reported, as well as jobbers, wholesalers, importers, and exporters not otherwise reported.

Major Group 2 – Retail Trade

Establishments included in retail trade are those primarily engaged in retail dealing, i.e., buying commodities for resale to the general public for personal or household consumption and in providing related services such as installation and repair. In general, retail establishments are classified by kind of business according to the principal lines of commodities sold and services provided. Processing which is incidental or subordinate to the selling activity is sometimes carried on in retail stores, e.g., tea blending or spice grinding in food stores. Ancillary units are associated with some kinds of retail establishments, e.g., warehouses or garages operated by department or chain stores.

Establishments such as farm machinery dealers and dealers in farm supplies which sell to the farmer as a farm operator are considered to be in wholesale trade but those which sell to farmers as household consumers, e.g., food or apparel stores are included in retail trade. Similarly, lumber and building materials dealers, fuel dealers and sellers of office furniture, machines and equipment; industrial machinery; commercial and professional furniture, machinery and equipment, are classified as wholesale because they sell mainly to other businesses.

631 **Food Stores.** – Establishments primarily engaged in retail dealing in bread and other bakery products, candy and confectionery, dairy products, fresh fruits and vegetables, groceries, meats, tea, coffee, spices, health foods or other specialized food lines. The type of retail store known as a "delicatessen" is included. Establishments primarily engaged in preparing and selling food specialties (fried chicken, doughnuts, pizzas, soft ice cream and the like) for off-premises consumption are deemed to be restaurants and included in Industry No. 886, Restaurants, Caterers and Taverns. Retail bakeries included in this industry are those that sell mainly purchased goods. Bake shops which sell mainly products of their own manufacture are included in Industry No. 107 – Bakery Products Industries. Establishments primarily engaged in pasteurizing and bottling fresh milk are included in Industry No. 104 – Dairy Products Industry, even though they sell the milk at retail. Thus, the retailers of milk included in this industry are those that buy and sell pasteurized milk.

642 **General Merchandise Stores.** – Establishments primarily engaged in retail dealing in a wide range of commodities including apparel, dry goods, furniture, home furnishings and appliances, food products, hardware, etc. At least three of the main lines of apparel, hardware, and house furnishings should be carried with no one line exceeding 50 per cent of total sales. Included in this industry are stores known as department stores, variety stores, and other general line stores; in the latter group are country general stores where food is often a large item, and city general merchandise stores where no food is sold.

652 **Tire, Battery and Accessories Stores.** – Establishments primarily engaged in retail dealing in new or used tires, tubes, batteries, and other automotive parts and accessories. Some establishments included here are known as "home and auto supply stores." Installation, repair and replacement may also be done by these establishments, but establishments primarily engaged in automotive repair are classified in Industry No. 658 – Motor Vehicle Repair Shops, and establishments primarily engaged in tire retreading, recapping, rebuilding or vulcanizing are classified in Industry No. 619 – Wholesalers of Motor Vehicles and Accessories.

654 **Gasoline Service Stations.** – Establishments primarily engaged in retail dealing in gasoline, lubricating oils and greases. These establishments are sometimes known as filling stations or service stations. They may do some repair. Included are establishments primarily engaged in washing and polishing automobiles, as well as establishments primarily engaged in providing motor vehicle towing service.

656 **Motor Vehicle Dealers.** – Establishments primarily engaged in retail dealing in new and used automobiles and trucks. Such establishments usually have departments engaged in motor vehicle repair and often include service station facilities. Establishments primarily engaged in motor vehicle repair are classified in Industry No. 658 – Motor Vehicle Repair Shops; establishments primarily engaged in providing service station facilities are classified in Industry No. 654 – Gasoline Service Stations.

658 **Motor Vehicle Repair Shops.** – Establishments primarily engaged in the repair of motor vehicles; auto body work and

painting, front end alignment, frame straightening, brake repair, carburetor repair, ignition system repair or exhaust system repair. Repair shops owned and operated by concerns for their own use and not offering their services to the general public are excluded. They are classified with the main establishment. Establishments (filling stations and service stations) primarily engaged in retail dealing in gasoline and oil are classified to Industry No. 654 – Gasoline Service Stations. Establishments primarily engaged in repairing tractors and farm implements are included in Industry No. 622 – Wholesalers of Farm Machinery and Equipment.

Shoe Stores. – Establishments primarily engaged in retail dealing in men's, women's, children's, and infants' footwear of leather, rubber, or other materials. Establishments primarily engaged in boot and shoe repair are classified in Industry No. 871 – Shoe Repair Shops.

Men's Clothing Stores. – Establishments primarily engaged in retail dealing in men's and boys' overcoats, suits, work clothing, haberdashery and other apparel and furnishings. Establishments primarily engaged in custom tailoring, including tailors working alone without paid employees, are also classified here.

Women's Clothing Stores. – Establishments primarily engaged in retail dealing in women's coats, suits, dresses, lingerie, hosiery, millinery and other apparel and accessories. Establishments primarily engaged in dressmaking (including dressmakers who work at home or in the homes of their employers) are classified in Industry No. 879 – Miscellaneous Personal Services.

Clothing and Dry Goods Stores, n.e.s. – Establishments primarily engaged in retail dealing in children's clothing, a combination of men's, women's and children's clothing, i.e. family clothing stores, or dry goods, piece goods, and notions.

Hardware Stores. – Establishments primarily engaged in retail dealing in any combination of the basic lines of hardware, such as tools and builders' hardware. Establishments primarily engaged in retail dealing in housewares and cutlery are classified in Industry No. 676 – Household Furniture and Appliance Stores.

Household Furniture and Appliance Stores. – Establishments primarily engaged in retail dealing in new or used household furniture and furnishings including floor coverings, curtains and draperies, linens; china and crockery; housewares and cutlery; stoves, radios, television sets, and electrical appliances such as washing machines, refrigerators, vacuum cleaners and toasters. Antique shops are included.

Radio, Television, and Electrical Appliance Repair Shops. – Establishments primarily engaged in the repair of radios, television sets, and similar equipment or in repairing household electrical appliances.

681 **Drug Stores.** – Establishments primarily engaged in retail dealing in drugs, pharmaceuticals, toilet preparations, cosmetics, and drug sundries. Included are establishments primarily engaged in filling prescriptions, or in selling proprietary and patent medicines, as well as specialized herb stores, primarily engaged in making up and selling herbal medicines.

691 **Book and Stationery Stores.** – Establishments primarily engaged in retail dealing in new or used books and stationery.

692 **Florists' Shops.** – Establishments primarily engaged in retail dealing in plants and cut flowers. Establishments operating nurseries and greenhouses which sell mainly their own products through their own retail stores are included in Industry No. 019 – Miscellaneous Specialty Farms.

694 **Jewellery Stores.** – Establishments primarily engaged in retail dealing in new or used jewellery, watches and clocks. Many such establishments have a department engaged in watch, clock and jewellery repair.

695 **Watch and Jewellery Repair Shops.** – Establishments primarily engaged in watch, clock and jewellery repair or jewellery engraving. Many such establishments also sell some jewellery and watches.

696 **Liquor, Wine and Beer Stores.** – Establishments primarily engaged in retail dealing in liquor, wine and beer. Many of these establishments are government liquor stores, or are stores operated by groups of wine growers or breweries. Establishments that sell liquor by the glass for consumption on the premises are classified in Industry No. 886 – Restaurants, Caterers and Taverns.

697 **Tobacconists.** – Establishments primarily engaged in retail dealing in tobacco, cigars and cigarettes.

699 **Retail Stores, n.e.s.** – Establishments primarily engaged in retail dealing in eye-glasses and related optical goods but excluding those who also do optometry work, which are included in Industry No. 824 – Offices of Paramedical Personnel (Practitioners). Included also are establishments primarily engaged in retailing such commodities as house trailers or mobile homes, prefabricated houses, art goods, souvenirs, musical instruments, motor cycles, bicycles, sporting goods, photographic supplies, luggage, leather goods, pets, magazines, newspapers, ice, second-hand merchandise n.e.s. Included are establishments primarily engaged in repair of luggage and leather goods, fountain pen repair, musical instrument repair and bicycle repair. Pawnshops are also included. Establishments primarily engaged in retail dealing in second-hand automobiles, furniture, jewellery, books, or household appliances are included in the same industries as those dealing in these products new.

DIVISION 9 – FINANCE, INSURANCE AND REAL ESTATE

Major Group 1 – Finance Industries

Banks and Other Deposit Accepting Establishments. – Establishments primarily engaged in carrying on a banking business or a similar deposit accepting (savings) function. Included in this industry are the Bank of Canada, chartered banks, savings banks including the provincial savings banks, trust companies, mortgage loan companies, savings certificate companies, credit unions and caisses populaires.

703 **Other Credit Agencies.** – Establishments primarily engaged in extending credit to business and to consumers except establishments in Industry No. 701. Included in this industry are export finance companies, sales finance companies, consumer loan companies, business financing companies and other credit agencies. The Industrial Development Bank and the Farm Credit Corporation are in this industry.

Security Brokers and Dealers (including Exchanges). – Establishments primarily engaged in facilitating the exchange of securities (primarily long term certificates of ownership or indebtedness such as stocks and bonds). Included are brokers who act as agents in the exchange of securities which have been traded before but who take no title to property in the typical transaction, and dealers who buy and hold inventories of new securities until they are sold. The exchange or market at which the securities are traded is also included. Examples of establishments to be included are grain exchange, stock exchange, investment dealer, commodity futures broker, investment broker, foreign exchange establishment, security underwriter, investment analyst, investment counsellor.

Investment and Holding Companies. – Establishments primarily engaged in operating investment companies or investment trusts, mutual funds closed-end investment funds and investment syndicates; holding companies; personal corporations as defined by the Income Tax Act and other investment groups and miscellaneous financial institutions except those holding no assets.

Canadian Offices of Canadian-Incorporated Companies Classified as Non-Canadian. – This class is provided for head offices or other ancillary units maintained in Canada by companies incorporated in Canada but carrying on no appreciable operations in this country. (Financial statements and other non-Canadian data on these companies are given the code 999 in order to distinguish them from data on the Canadian economy.)[1]

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[1] **Canadian-Incorporated Companies Classified as Non-Canadian.** – This class is provided for foreign business corporations and other companies incorporated in Canada whose assets and operations are almost exclusively non-Canadian. Such a company may have a small headquarters in Canada.

Major Group 2 – Insurance Carriers

721 **Insurance Carriers.** – Establishments primarily engaged in underwriting insurance contracts of all kinds.

Major Group 3 – Insurance Agencies and Real Estate Industry

735 **Insurance and Real Estate Agencies.** – Establishments primarily engaged in dealing in insurance but which do not underwrite, and establishments primarily engaged in dealing in real estate, i.e. renting, buying and selling for others, managing and appraising real estate for others. Included in this industry are establishments, such as insurance adjusters, primarily engaged in providing services to insurance companies and to policyholders as well as combined insurance and real estate dealers.

737 **Real Estate Operators.** – Establishments primarily engaged in owning and operating real estate or in developing or improving unimproved real property. Included in this industry are operators of non-residential buildings, apartment buildings, trailer sites of a "permanent" nature such as those near mines or construction projects, other dwellings, and owners of agricultural, forest, mining, railroad, public utility and other kinds of real property which are rented out to the operators. This industry includes establishments primarily engaged in sub-dividing and developing real estate. This industry does not include establishments primarily engaged in operating hotels, rooming houses, camps, trailer camps or other lodging places which are included in Industry No. 881 – Hotels and Motels, No. 883 – Lodging Houses and Residential Clubs or No. 884 – Camping Grounds and Trailer Parks.

DIVISION 10 – COMMUNITY, BUSINESS AND PERSONAL SERVICE INDUSTRIES

Major Group 1 – Education and Related Services

Kindergartens and Nursery Schools. – Establishments primarily engaged in providing beginning education for children usually between three and six years of age. Kindergartens and pre-kindergartens which are operated as part of an elementary school or school system are not separate establishments and should be included in Industry No. 802 – Elementary and Secondary Schools. Day nurseries, which provide care but not education for pre-school children are classified in Industry No. 828 – Welfare Organizations.

Elementary and Secondary Schools. – Establishments primarily engaged in providing education at the elementary and secondary school levels. This industry includes school boards or boards of education operating primary or secondary school systems as well as private, public or sectarian schools at those levels. Included also are correspondence schools primarily engaged in offering general elementary and secondary education, and schools for handicapped children. For purposes of the Population Census, the industry description "school" not otherwise defined is coded to this industry. If schools on military bases or Indian schools are separate establishments, they are included in this industry.

Schools of Art and of the Performing Arts. – Establishments primarily engaged in providing education in such fields as music, drama, dancing, and fine and applied art. Such schools as the National Drama School, the National Ballet Studio, and the Banff School of Fine Arts are classified here. Such "schools" as those teaching ballroom or popular dancing where the emphasis is on recreation rather than on education, should be classified in Industry No. 849 – Miscellaneous Amusement and Recreation Services.

804 **Vocational Centers, Trade Schools and Business Colleges.** – Establishments primarily engaged in providing vocational education below the post-secondary level, except those operated by a board of education as part of the regular school system. Trade schools, business colleges, schools for nurses' aides and nurses' assistants, schools of barbering and beauty culture, and correspondence schools except those in Industry No. 802 – Elementary and Secondary Schools are included.

Art schools and schools of the performing arts are classified in Industry No. 803. Industrial schools, by whatever name they are known, that are corrective or reform institutions are classified in Industry No. 931 – Provincial Administration. Correspondence schools operated by provincial departments of education as separate establishments are classified in Industry No. 802. Riding academies, judo schools and other schools primarily engaged in sports instruction and physical fitness activities are classified in Industry No. 849 – Miscellaneous Amusement and Recreation Services. Driving schools are classified in Industry No. 899 – Miscellaneous Services, n.e.s.

805 **Post-Secondary Non-University Educational Institutions.** – Establishments primarily engaged in post-secondary non-university education. High school graduation is normally a requirement for admission. Diplomas or certificates may be awarded but academic degrees are not. This class includes junior and community colleges, CEGEPs (in Quebec), normal schools and teachers' colleges, bible colleges and technical institutes. Art schools and schools

of the performing arts should be classified to Industry No. 803 - Schools of Art and of the Performing Arts.

Universities and Colleges. – Establishments primarily engaged in operating universities and degree-granting colleges requiring for admission at least high school graduation. Included in this industry are also such institutions as professional schools, theological colleges and seminaries. Included also are the Royal Military College and other service colleges.

Libraries, Museums and Other Repositories. – Establishments primarily engaged in operating libraries, museums, art galleries, archives, zoological gardens, botanical gardens, and similar repositories. This industry includes government-owned institutions such as the National museum, Public Archives, War Museum, provincial museums, municipal museums.

Education and Related Services, n.e.s. – Establishments primarily engaged in providing education or related services not elsewhere classified. Language schools, child and vocational guidance centers, and institutions for educational research should be classified here.

Major Group 2 – Health and Welfare Services

Hospitals. – Establishments (usually institutions) primarily engaged in providing medical, surgical, and/or obstetrical care for in-patients, and which are licensed or approved as hospitals by the federal and/or a provincial government. This industry includes general and allied special hospitals, psychiatric, tuberculosis, and other hospitals, but excludes institutions providing personal nursing care and accommodation only, which are included in Industry No. 822 – Related Health Care Institutions. Also excluded are institutions providing basic custodial or domiciliary care only, which are included in Industry No. 828 – Welfare Organizations.

Related Health Care Institutions. – Establishments, such as nursing homes and infirmaries, primarily engaged in providing nursing care and accommodation only for in-patients. Institutions providing basic custodial or domiciliary care only, such as homes for the aged, blind or senile, are classified in Industry No. 828 – Welfare Organizations.

Offices of Physicians and Surgeons. – Establishments of qualified and registered physicians and surgeons primarily engaged in the private practice of medicine, whether general or specialist, and whether in individual or group practice. Included are offices of psychiatrists, obstetricians, radiologists, pathologists, ophthalmologists, anaesthetists, etc. Excluded are offices of psychologists (Industry No. 824), optometrists, (Industry No. 824), opticians (Industry No. 699), osteopaths (Industry No. 824), chiropractors (Industry No. 824), and dentists (Industry No. 825).

Offices of Para-medical Personnel (Practitioners). – Establishments of qualified and registered para-medical personnel primarily engaged in rendering health and allied services whether in individual or group practice. Included are establishments of osteopaths, chiropractors, optometrists, registered nurses, midwives, practical nurses, etc. Excluded are offices of physicians and surgeons (Industry No. 823), offices of dentists (Industry No. 825), and offices of faith healers (Industry No. 831). Also excluded are diagnostic and therapeutic services not elsewhere specified, including laboratories and clinics (Industry No. 826).

825 **Offices of Dentists.** – Establishments of qualified and registered dentists primarily engaged in the private practice of dentistry, whether in individual or group practice. Excluded are establishments of dental mechanics which are classified in Industry No. 391 - Scientific and Professional Equipment Industries.

826 **Diagnostic and Therapeutic Services, n.e.s.** – Establishments primarily engaged in rendering diagnostic and therapeutic services not elsewhere specified. This industry includes such organizations as the Victorian Order of Nurses, Red Cross Blood Transfusion Service, and St. John Ambulance, as well as laboratories (dental, medical, X-ray, etc.), providing professional analysis, diagnosis or treatment service to the medical or dental professions or to patients on prescription of a physician or dentist. Also included are group health associations except those offering health insurance to their members, which are classified in Industry No. 721 – Insurance Carriers.

827 **Miscellaneous Health Services.** – Establishments commonly referred to as voluntary health associations primarily engaged in promoting health and health services other than diagnostic and therapeutic, such as the Canadian Hospital Association, Canadian Public Health Association, National Cancer Institute, etc. Excluded are professional or trade associations such as the Canadian Medical Association and Canadian Nurses' Association which are classified in Industry No. 891 – Labour Organizations and Trade Associations. Establishments providing prepaid health insurance whose subscribers are supplied health services by independent physicians or hospitals under contract, are classified to Industry No. 721 – Insurance Carriers.

828 **Welfare Organizations.** – Establishments primarily engaged in providing basic domiciliary care only (no treatment or personal nursing care), such as homes for the aged, blind or senile, boarding houses for the aged, day nurseries, shelters, etc. Also included are voluntary welfare organizations such as the Canadian National Institute for the Blind, Canadian Welfare Council, Community Chest and United Appeal Organizations. This industry excludes custodial institutions for delinquents or criminals, i.e. corrective institutions which are included in Division 11 – Public Administration and Defence.

Major Group 3 – Religious Organizations

831 **Religious Organizations.** – Establishments primarily engaged in providing facilities for holding religious services or for the promotion of religious activities. Faith healers are included. Establishments maintained by religious organizations primarily for educational – health, charitable, publishing, or other purposes are classified according to principal activity in the appropriate industries.

Major Group 4 – Amusement and Recreation Services

841 **Motion Picture Theatres.** – Establishments primarily engaged in operating regular motion picture theatres and outdoor motion picture theatres. Also included are other motion picture exhibitors not elsewhere classified.

Motion Picture Production and Distribution. – Establishments primarily engaged in the production and the distribution of motion pictures. Included are film exchanges, motion picture libraries and booking agencies as well as establishments engaged in processing and reproducing standard motion picture films.

Bowling Alleys and Billiard Parlours. – Establishments primarily engaged in operating bowling alleys or billiard and pool parlours. Such establishments may also sell meals, refreshments, drinks, cigars and cigarettes.

Golf Clubs and Country Clubs. – Establishments primarily engaged in operating golf facilities open to the public on a fee or membership basis. Secondary activities may include curling rinks, skeet-shooting facilities, dance and drink facilities, etc. Excluded are driving ranges and miniature golf courses which are included in Industry No. 849 – Miscellaneous Amusement and Recreation Services.

Theatrical and Other Staged Entertainment Services. – Establishments primarily engaged in the production and/or presentation of theatrical and other staged entertainment. Theatre companies, opera companies, road companies, orchestras, bands and pop groups as well as own account entertainers are included in this industry.

Miscellaneous Amusement and Recreation Services. – Establishments primarily engaged in operating amusement parks, carnivals, circuses, fairs, and exhibitions except trade fairs. Also included are amusement concessions, dance halls, and studios, race track operations, and subsidiary services, recreational clubs, gymnasiums, athletic clubs, arenas, stadiums, and the operation of other spectator sports; professional and amateur athletic services, playgrounds, community centers, curling rinks, skating rinks, riding academies, swimming pools, boat and canoe rentals, ski facility operators, rifle ranges, driving ranges and miniature golf courses, juke box and pinball machine operators, and other amusement and recreation services not elsewhere classified. Establishments primarily engaged in renting theatres, auditoriums or halls such as dance halls and other amusement facilities are included in Industry No. 737 – Real Estate Operators.

Major Group 5 – Services to Business Management

Employment Agencies and Personnel Suppliers. – Establishments primarily engaged in listing employment vacancies and in selecting, referring and placing applicants in employment. Included also are establishments primarily engaged in supplying personnel temporarily or permanently on contract. Employment placement services operated by governments are included in Division 11.

Computer Services. – Establishments primarily engaged in providing computer facilities on a rental or time-sharing basis, and such ancillary activities as programming, planning and systems analysis, etc.

Security and Investigation Services. – Establishments providing personnel for detective and investigation services, patrolling, guard, armoured car, and burglar alarm services. These services are mainly for businesses, but may be offered to individuals.

Offices of Accountants. – Establishments primarily engaged in the provision of auditing, accounting, or bookkeeping services. This industry also includes firms of chartered accountants and self-employed bookkeepers, accountants, and auditors.

Advertising Services. – Establishments primarily engaged in placing advertising in various types of media such as newspaper, radio, television, on a commission or fee basis; preparing and presenting outdoor poster displays and billboards; advertising on subway cars and buses; and other advertising services, such as aerial advertising, circular and handbill distribution, shopping news service, window dressing, display service. Media representatives, sign-painting shops, own account commercial artists, and direct mail and door-to-door advertising firms are also included in this industry.

863 **Offices of Architects.** – Establishments engaged in the planning and designing of buildings and structures, regardless of size, form, or function.

864 **Engineering and Scientific Services.** – Establishments primarily engaged in the provision of engineering, chemical, and metallurgical services, or in operating research laboratories. Included are individuals in private practice in professional groups such as the following: chemical engineers, chemists, civil engineers, electrical engineers, geologists, mechanical engineers, metallurgists, mining engineers, surveyors and draftsmen. This industry includes establishments primarily engaged in aerial survey work and those primarily engaged in technical operations such as seismographic surveys.

866 **Offices of Lawyers and Notaries.** – Establishments primarily engaged in the provision of legal services, advocates, barristers and solicitors in private practice, notaries public and patent attorneys.

867 **Offices of Management and Business Consultants.** – Establishments primarily engaged in providing business and management consulting services. Offices of consulting economists, personnel management consultants, actuarial consultants are classified here. Engineering and mining consultants are classified in Industry No. 864 – Engineering and Scientific Services. Market research consultants are classified in Industry No. 869 – Miscellaneous Services to Business Management.

869 **Miscellaneous Services to Business Management.** – Establishments primarily engaged in the provision of services to business management not included elsewhere. Such services include market research; interior decorating, industrial designing, dress, costume and fashion designing, statistical and economic intelligence service; stenographic, duplicating, addressing and mailing service, telephone answering service, and the services of accident prevention associations, credit bureaus, collection agencies, customs brokers, appraisers and adjusters except insurance adjusters.

Major Group 6 – Personal Services

871 **Shoe Repair Shops.** – Establishments primarily engaged in repairing boots and shoes (cobbling). Establishments primarily engaged in custom shoe making are classified in Industry No. 174 – Shoe Factories.

872 **Barber and Beauty Shops.** – Establishments primarily engaged in providing barber facilities and/or hairdressing services.

873 **Private Households.** – Private households which employ workers on or about the premises in activities primarily concerned with the operation of the household. Households classified in this industry may employ individuals such as cooks, maids, and butlers and outside workers such as gardeners, caretakers and other maintenance workers. Included also are private households carrying on economic activities and not classified elsewhere, for example, those having lodgers or boarders, but not primarily a lodging house, or those selling some produce but not included in the definition of a farm.

874 **Laundries, Cleaners, and Pressers (except Self-Service).** – Establishments primarily engaged in the provi-

sion of laundering service, including hand laundries, power laundries, dry cleaning, hat blocking, dyeing and cleaning, rug and carpet cleaning, valet service and repair of clothing, diaper and linen rental service, towel and coat supply service, uniform service and linen supply. Included in this industry are own account laundresses.

Self-Service Laundries and Dry Cleaners. – Establishments primarily engaged in the provision of coin-operated automatic laundry and/or dry cleaning facilities for the use of the public.

Funeral Services. – Establishments primarily engaged in the provision of undertaking services. Ambulance service and the sale of caskets and funeral accessories may be carried on as subsidiary activities. This industry includes funeral directors and morticians. Also included are establishments which operate cemeteries and crematoria.

Miscellaneous Personal Services. – Establishments primarily engaged in the provision of personal services not elsewhere classified. This industry includes establishments such as shoe-shine parlours or stands, health studios, reducing salons, turkish baths and massage parlours; clothing and costume rental shops, own account dressmakers and dressmaking shops; fur cleaning, repair and storage service, checkrooms and parcel rooms, dating and escort bureaus, babysitting service, and hunting, fishing and tourist guide service.

Major Group 7 – Accommodation and Food Services

Hotels and Motels. – Establishments primarily engaged in providing full-year and/or seasonal lodging facilities on a daily basis, whether licensed or non-licensed. Restaurants and food service may be carried on as a secondary activity. Included in this industry are motels, tourist courts and cabins, guest homes and tourist homes.

Lodging Houses and Residential Clubs. – Establishments primarily engaged in providing room or room and meals mainly on the basis of a period of time longer than a day. This industry includes rooming and boarding houses; lodging houses, and hotels operated by membership organizations and not open to the public such as fraternity and sorority houses, and residential clubs.

Camping Grounds and Trailer Parks. – Establishments primarily engaged in the operation of trailer campsites, tourist camping grounds and parks. Included in this industry are hunting, fishing, and recreation vacation camps which may provide accommodation, supplies and equipment. Dude ranches are included in this classification. Establishments primarily engaged in operating trailer sites of a "permanent" nature such as those near mines or construction projects are classified in Industry No. 737 – Real Estate Operators.

Restaurants, Caterers and Taverns. – Establishments primarily engaged in preparing and serving meals and/or beverages. Included are establishments primarily engaged in preparing food for consumption in or around the premises, establishments primarily engaged in catering and establishments primarily engaged in selling meals to take out (Chinese food, box lunches and the like). Establishments primarily engaged in preparing and selling food specialties (fried chicken, doughnuts, pizzas, soft ice cream, and the like) for off-premises consumption are included.

Major Group 8 – Miscellaneous Services

891 **Labour Organizations and Trade Associations.** – Labour organizations and trade, business, professional and other membership organizations representing groups of employees, employers, trades or professions, including boards of trade, chambers of commerce, manufacturers' associations, etc.

893 **Photographic Services, n.e.s.** – Establishments primarily engaged in portrait and commercial photography, film developing and print processing of films. Establishments engaged in processing standard motion picture films are classified in Industry No. 842 – Motion Picture Production and Distribution.

894 **Automobile and Truck Rental.** – Establishments primarily engaged in the rental of passenger automobiles or trucks without drivers.

895 **Machinery and Equipment Rental.** – Establishments primarily engaged in the rental of machinery, equipment, furniture and fixtures.

896 **Blacksmithing and Welding Shops.** – Establishments primarily engaged in hand forging, blacksmithing and horse shoeing. Establishments primarily engaged in welding are included. Establishments primarily engaged in automobile repair or in farm implement repair which also do some blacksmithing or welding are classified in Industry No. 658 – Motor Vehicle Repair Shops, or Industry No. 622 – Wholesalers of Farm Machinery and Equipment.

897 **Miscellaneous Repair Shops.** – Establishments primarily engaged in harness repair, locksmithing, gunsmithing, lawn mower sharpening, knife and scissors sharpening, armature rewinding and electric motor repair, oil burner service and other repair activities, not elsewhere classified.

898 **Services to Buildings and Dwellings.** – Establishments primarily engaged in services to buildings such as window cleaning, disinfecting and exterminating services, janitorial service, floor waxing and office cleaning, chimney cleaning, etc.

899 **Miscellaneous Services, n.e.s.** – Establishments primarily engaged in providing services not elsewhere classified. Included are political organizations, fraternal and social organizations, such as Rotary Clubs, Kiwanis Clubs, Masonic Lodges, Knights of Columbus and Odd Fellows, community organizations such as YMCA, SPCA, Boy Scouts, Girl Guides, general services such as [illegible] cleaning service, translating service, interpreting and driving schools. Included also are auctioneers selling tangible properties belonging to others on a fee basis, and self-employed individuals such as artists, [illegible] journalists, naturalists, playwrights, poets, [illegible] writers, etc.

DIVISION 11 – PUBLIC ADMINISTRATION AND DEFENCE

This division covers establishments primarily engaged in activities that are basically governmental in character, including defence establishments. From the viewpoint of type of economic activity, establishments engaged in such activities as enacting legislation, enforcing and administering the law, collecting public revenues, and controlling the disbursement of public funds, are clearly governmental in character and [illegible] with [illegible] branch of economic activity. Defence [illegible] tained primarily for the protection of the state are [illegible] same general category. In addition, public administration as an industry contains establishments primarily [illegible] in serving as internal service agencies of the public [illegible] For example, the government printing bureau, [illegible] maintaining public buildings, providing char services, and recruiting and selecting government employees; government statistical bureaus, government research agencies. Government-owned establishments primarily engaged in activities assigned to other industries are classified in those industries along with similar establishments owned by non-governmental bodies. The industrial classification of an establishment does not depend upon its ownership.

Major Group 1 – Federal Administration

Defence Services. – Establishments of the Canadian Armed Forces and civilian agencies primarily engaged in providing defence services. Included in this industry are air bases, military camps and barracks, naval dockyards and the Department of National Defence. Establishments primarily engaged in civil defence activities are included in this industry. In classifying individuals in the Population Census by industry it should be noted that civilian employees of the Department of National Defence are included here.

Other Federal Administration. – Establishments of the Federal Public Service, RCMP, and government boards and agencies primarily engaged in activities associated with public administration. Establishments such as the Bank of Canada, CBC, and government agencies engaged in manufacturing, transportation, communication and health services are classified to the appropriate industries.

Major Group 2 – Provincial Administration

931 **Provincial Administration.** – Establishments of provincial governments primarily engaged in activities associated with public administration. Establishments owned or operated by provincial governments and primarily engaged in such activities as generating and distributing electric power, communication, liquor sales, health services, education services, are classified to the appropriate industries.

Major Group 3 – Local Administration

951 **Local Administration.** – Establishments primarily engaged in public administration at the local level. Included are municipal, metropolitan or regional government departments and agencies as well as county, township, village and other local government administrative agencies. The departments and agencies included in this industry are those primarily engaged in performing services that are essentially of a public administration character. Excluded are establishments engaged in transportation, communication, health services, educational services, water supply or other activities included in other industries.

Major Group 4 – Other Government Offices

991 **Other Government Offices.** – Establishments in Canada of Commonwealth or foreign governments primarily engaged in governmental service activities such as consular, diplomatic, and legation activities. Commonwealth and foreign establishments engaged in activities such as air transportation, cable and wireless service, or any other activity included in other industries are classified to the appropriate industries.

DIVISION 12 – INDUSTRY UNSPECIFIED OR UNDEFINED

Unspecified or Undefined. – This class is provided for the use of the Population Census and other surveys obtaining information from individuals. It includes those having an activity included in the labour force but not specified in the returns with sufficient precision to be assigned to a particular industry.