PEDESTRIAN PRECINCTS IN THE CITY'S CENTRAL RETAIL AREA

by

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ABSTRACT

This study has been concerned with an examination of the validity of the hypothesis, that the shopping precinct is an efficient solution to the conflict between the pedestrian and the vehicle, in established central retail shopping areas of the city.

Efficient pedestrian circulation within the city's central retail area appears as a fundamental principle in the design of new city centres in Europe, and as an essential component of city centre redevelopment designs in North America. The problem of pedestrian access to central areas in North American cities is complicated by the extensive use of the private automobile. The demands for space produced by roads and car parks has led to a serious deterioration in the physical form of the city, most particularly at the city centre.

The city's central area contains the largest groupings of retail stores and attracts shoppers from the whole metropolitan area. This retailing function is of vital importance, to the values of the downtown property, and to the city for the revenue it produces for city services and further city development.

Excessive vehicular traffic creates congestion in the city central areas and inhibits the use of the area for the
Brisaster latifrons; B. townsendi thus becomes a synonym. Synonymy is also suggested for the Japanese species B. owstoni, in view of paleo-geographic evidence.

The gonads of Brisaster do not develop until the second year and, as the ova appear to require two years to develop to maturity, the females probably first spawn in their third year. On this basis, the first, second and third (and older) year classes were identified in the populations occurring in Howe Sound. These populations showed marked differences in their size-frequency distribution but a similar age class composition. The size differences of individuals appear to correlate with differences in the population density, larger individuals being found in less crowded areas. It is suggested that these density differences are a result of the irregular settlement of a restricted pelagic larval stage. The differences in the size of individuals can therefore be related to differences in the individual growth rate. Passive interference, both inter- and intraspecific may be responsible and two possible mechanisms have been suggested.
design factors and spatial relationships; central place theory; and the sociological and economic concepts of the land use patterns of cities.

The detailed examination of the area of investigation, as established by the hypothesis, indicates that a greater analysis is required of the city's form and central place functions before the place for the vehicle and the pedestrian can be determined.

The planning of any one particular part of the city, relative to the whole, must follow a clear policy, logically determined after all the available facts and data have been analyzed; their probable effects projected over a definite time interval; and their relationship to other factors which may be involved are understood.

It is evident, after the analysis and research conducted for this thesis, that one factor related to the decline of the central retail areas is the growing popularity of regional shopping centres. This has suggested one further area of enquiry, the degree to which shopping centres may dominate the retailing activities of the metropolitan area and the counter measures which the city must adopt to meet this challenge.
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CHAPTER I

CHANGES IN THE CITY'S CENTRAL FORM
AND CENTRAL PLACE FUNCTIONS

The Effects of Population Changes
on the Metropolitan Economy

A major redistribution of population from the cities to their outskirts, has occurred in North America, since World War II, resulting in the rapid growth of suburbs and a considerable change in the retail purchasing habits of the metropolitan community.\(^1\) The population which moved out of the central city contained a large share of the middle income consumers of child bearing years. These are the years when expenditure for raising a family and building a home are typically high.\(^2\) Among the reasons given for this move to the suburbs are:

1) Better roads, easier access, faster public transportation, more efficient public utilities.


\(^2\)Ibid., p. 45.
2) In some cities, a desire to get away from overcrowding.
3) The decentralization of some industry.\(^3\)

A major reason in Canada is the easier financing of new houses in suburban municipalities rather than older or used houses in central areas.

This suburban movement has not been confined merely to residents; retail entrepreneurs, factories and offices have also been decentralized.\(^4\)

There can be no doubt that for a growing metropolitan population, the city centre can no longer provide the full scope of those functions in which it formerly was dominant. In the centralized services, commercial, cultural, professional and administrative; or in the large range of amenities which the city formerly provided, changes are inevitable and must be accepted.

The Challenge of New Shopping Centres

Changes in the character of central area functions require analysis in order to determine their causes and for an interpretation of their effects upon the original system. In an economic sense, the process of change is an indication of the continuing need for the more efficient employment of

\(^3\)Ibid., p. 48.
\(^4\)Ibid., p. 49.
resources to meet specific requirements.

The redistribution of the population from city centres to the suburbs, with which must also be associated the trend for urban residence from the rural communities, has created a new market for local retail centres. The new shopping centres, constructed to meet this demand, have profited from the experiences in the central retail areas of the city. The concept of shopping centres is not new; the earliest and most successful shopping plazas in North America, however, have invariably been designed as an integral part of the community. This is considered as an objective in their design; there is a co-ordination between their function and the population they are created to serve. It is to the incorporation of essential elements producing convenience to the patrons, that the shopping centres owe their success. These elements include: the convenience of parking within a few feet of the retail areas; a convenient grouping of shops with associated activities; a wide range of different shops and stores, providing the shopper with opportunities for comparison of price and quality; convenience in that the shopping area is wholly designed to meet the shopper's comfort whilst making the purchases; and pedestrian activity with the necessary leisure in movement and without the fear of traffic hazards.

The central retail area of the city has at present few such comparable advantages and is prohibited from making
any by the complexities of land ownership, the layout of the streets, and the established centres of commercial and financial activity.

**The Advantages of Location at the City Centre**

Only in two particular functions can the central retail area of the city remain dominant over suburban retail areas and the new large shopping centres. These two functions are its centrality, due to the communications network, and by the wide range of shops and services which it can provide for every need. The economic strength of the centrality of location ensures the central retail area of its survival, economically, since it is located at the point at which transportation costs can be reduced to a minimum. Theoretically this is why the central business district will always remain important and why it will not fall before the competition of regional shopping centres.\(^5\) The wide range of shops and services in the central retail area also provides the shopper with the greatest opportunities for satisfaction of his demands in one trip.

Despite these advantages, the central retail area of the city is losing trade to the new suburban shopping centres,

\(^{5}\text{Ibid.}, p. 52.\)
and its function, as indicated by retail houses, appears to be more and more that of a central area for establishments catering for the demands in very specialised high quality goods. An analysis of downtown Los Angeles revealed that in a five year period a smaller proportion in volume of total retail sales were lost to outlying store competition.\(^6\)

Urban redevelopment changes in the downtown areas, where the central retail area of the city is usually located, are extremely costly.\(^7\) Despite the organization of downtown merchants and property owners into associations for promoting public interest in downtown activities, very few results appear to have been achieved which radically alter the existing situation.

Some Recent Forms of Downtown Renewal

A number of cities in North America have undertaken an original form of downtown renewal in an effort to meet outside competition from suburban centres. Of these Kalamazoo, Michigan; Toledo, Ohio; and Miami, Florida; have created pedestrian malls and precincts which restrict certain downtown shopping areas to pedestrian activity only. The City of Cincinnati has

\[^6\text{Mabel Walker, Business Enterprise and the City, New Jersey: Tax Institute Incorporated, n.d., p. 133.}\]

\[^7\text{Dynamic Retailing in the Modern Economy, National Retail Dry Goods Association, n.d., p. 175.}\]
also commenced planning similar forms of pedestrian areas in the downtown shopping district.

The City of Cincinnati has become concerned with declining property values in the core city and has been making financial assistance available for new facilities to shopping within the downtown and the older neighbourhood shopping districts. The new facilities are intended to encourage shopping within the downtown and older neighbourhood shopping districts rather than in the new shopping centres. These measures are being taken as a direct result of the rapid economic changes which have occurred from city decentralization, and Cincinnati is one of the great central cities within the United States which has suffered severely in its economic structure from this form of change. The city Planning Commission, in its efforts to secure improvement in the core area, has approved plans to turn two city squares into pedestrian plazas and to construct moving sidewalks to carry pedestrians from points outside of the central business district into the core areas. One other innovation is the termination of truck delivery services at points inside certain central business district blocks.8

The Character of Urban Renewal Downtown

The objective of changes in the downtown shopping area, therefore, appears to be in a careful re-integration of its earlier pedestrian character by the conversion of public squares to pedestrian plazas; in the creation of pedestrian malls; in the provision of pedestrian links, using moving sidewalks, between central business district and core areas; and in the termination of heavy transport at points in certain blocks of the central business district.

Other planners go much further in their designs for urban redevelopment in the central areas, suggesting the grouping of buildings into functional clusters, which would be restricted to pedestrian traffic, surrounded by public transportation loops.9

It is problematic as to whether the introduction of improved pedestrian facilities will increase retail trade within these central areas, and whether the prevention of the deterioration of city centres will be assisted by the creation of pedestrian plazas and precincts.

The hypothesis in this study, therefore, is 'THAT THE SHOPPING PRECINCT IS AN EFFICIENT SOLUTION TO THE CONFLICT BETWEEN THE PEDESTRIAN AND THE VEHICLE IN ESTABLISHED CENTRAL RETAIL SHOPPING AREAS OF THE CITY.'

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9Walker, p. 114.
CHAPTER II

THE CITY AS A CENTRE

City Beginnings

Civilization begins with the city. Lewis Mumford's description of city beginnings gives a clear pattern of human behaviour which is still current. He states:

"it begins as a meeting place to which people periodically return: the magnet comes before the container, and this ability to attract non-residents to it for intercourse and spiritual stimulus no less than trade remains one of the essential criteria of the city, a witness to its inherent dynamism."¹

This concept, the magnetic drawing power of the city as a meeting place, the periodic return of people, the mutual gains from spiritual stimulus and social intercourse, and the place which trading occupies, characterizes the present day city no less than the first communal meeting places.

There are, however, more cogent reasons for city origins and city growth which the organization and working of civilized society require. Cities do not grow up by themselves, they are set up by communities to do tasks that must be performed in

central places.\textsuperscript{2}

Modern society demands the creation of service centres, and community groupings create centripetal forces which both localize and structure the urban community as a seat of industry, commerce, administration and culture.

The City as a Central Place

As modern society increases in complexity it produces certain concentrations of particular functions at nodal points within the urban complex. A centre then comes into being as a focus for all the sub-centres created and about which the centralized services cluster.

This grouping of central services and functions at the city centre is reflected by a certain coherence in the grouping of the buildings around a focal point such as a church, a market place, a certain street, or a business district of the city. This coherence or concentration of functions forms one phase of city development which has been formalized by the definition of the term 'Concentration'.

'Concentration' has been defined as the tendency for people to cluster in cities as near as possible to each other, to their work and to the amenities of city life. It is essentially centripetal in character.\textsuperscript{3}


\textsuperscript{3}Ibid., p. 94.
The 'friction of space' is yet another term which requires definition since it incorporates many of the processes which explain urban growth and the differential segregation of populace and functions, relevant to city development.

The term friction of space is a generalized expression for the resistances to movement in space. Friction is always related to a given mode of transportation and communication. As transportation changes, the friction of space also changes. In the broad sense the term 'transportation' is used to cover all means of overcoming the friction of space. The costs of acquiring goods are of two kinds; (i) the direct monetary outlay for the article or service and (ii) the expenditure of money, time and physical and nervous energy in getting to and from the place where the article or service can be obtained. With the private automobile, which is the most popular consumer means of minimizing the friction of space, few points in the metropolitan area are really inaccessible.

The friction of space is given as the prime cause of concentration in cities at all since the services demanded can be most efficiently carried out in clustered communities at suitable locations. This applies to industry, commerce or administration, where the work is there the workers must live,

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with daily access to their place of work. The nucleus of this urban growth is the old town, which today is normally the hub of the city. It is from this hub or focus that the built-up area has steadily spread outwards, both concentrically and radially, or by the growth of physically separate centres that gradually merge with the main urban area.\(^5\)

Functional Composition of the City

The power of growth of the city depends upon its functional composition, the special relationship which exists between the two classes of occupation of its inhabitants. These two classes of occupation are referred to as primary or basic, and secondary or non-basic. Primary occupations are concerned with the function of the city, so that in a steel town or a coal town for example, the basic or primary occupations would be concerned directly with these functions. The non-basic or the secondary occupations are concerned with the maintenance of the well being of the people engaged in those of the primary nature. The relationship between the two types of occupation are complementary, one giving cause and encouragement to the growth of the other. Profits accrue to both parties creating mutual benefits, opportunities and incentives to further services and functions, especially of an

\(^5\)Dickinson, pp. 94-95.
entertainment or cultural nature.\textsuperscript{6}

Most Western cities are compact settlements engaged primarily in two, non-agricultural, occupations. As indicated in the preceding paragraph they may be divided between basic or primary, and non-basic or secondary occupations. A further and more specific differentiation may now be made by their division into two classes, industry and service. Very broadly, industry means the manipulation and the handling of goods; services are classified as commercial, cultural, professional and administrative.\textsuperscript{7}

Services require further classification, between the local services and the centralized services. Local services cater chiefly to the townspeople whilst the centralized services are concentrated in the cities in order to serve a widely scattered clientele as well as the townspeople. The levels of functions between cities vary more in variety and quality rather than in their basic character, and very generally this form of classification between the occupations is possible to apply.

Centralization and Population Distribution

With the growth of cities, population increase, the increased use of private transportation and the desire for

\textsuperscript{6}\textit{Ibid.}, p. 25
\textsuperscript{7}\textit{Ibid.}
cheaper accommodation in a less congested area, suburban development occurs. This forms yet another stage in city development and is reflected by the distributive pattern of the population and institutions in the urban area of concentration. This process of change in city structure is defined as 'Centralization' and refers to the drawing together of institutions and activities. It is the assembling of people to work and to obtain urban services rather than merely to reside in a given area.

One effect of this process of change is the emergence of the Central Business District in the heart of the city, and the occurrence of commercial sub-centres around it. The essential features of this change are the separation of workplace and residence, and the segregation of workplaces into distinct districts according to function. Through a process of competition, establishments seek out and segregate themselves in that area in which their optimum conditions are found and in virtue of which they are able, normally, to exclude others.8

The most outstanding feature of this form of city change is the concentration of functions within the central business district, which, by the economic returns resulting from being at the hub of the communications system of the city, forms the most highly desirable location for the business and services of the entire urban area.

8Ibid., p. 95.
The central business district is very small relative to the size of area of the city, in small towns it may be merely facing on to the market place or consist of a single street, but in larger cities it becomes more complex and more compact. Not only do the businesses and services concentrate there but the different services also segregate themselves into certain districts within it.

Decentralization and Population Redistribution

One further stage in city development, with the resultant changes in the location and redistribution of functions and people, must now be described. This is defined as 'Decentralization' and implies a shedding of certain of the city's activities such as industry, commerce or administration, to a distinct and separate location that functions as an independent and local, or regional, centre. This is a process which has been going on for a considerable time both around the large cities and over the wider rural area.9

A further main point to be emphasized is the redistribution of population which accompanies decentralization, the most remarkable feature of urban growth during the last fifty years. It is marked by the reduction in the population

9Ibid., p. 97.
of the city centre, owing to ever-increasing demands on space for business, the demolition of older structures, and the desire for new homes on the outskirts of the city in more pleasant surroundings and at lower costs. This form of displacement has its opposite poles in the city centre and the suburban estate, and particularly since the close of the 19th Century, the growth of business offices and the intense centralization of functions and services has resulted in an outward shift of the people.\textsuperscript{10}

Concurrent with this shift to the suburbs has been the creation of urban units within the metropolitan area such as the neighbourhood, with a grouping of local functions and the creation of sub-centres. As population increased and automobile ownership became more common, these two forces combined and produced conditions favourable to the formation of suburban shopping centres.\textsuperscript{11} The congestion of central shopping areas, the great demand for more space at this centre, the high land values resulting from the pressures for location, all resulted in a need for local facilities for convenience purchasing without the disadvantages of the main retail areas in the city. In the late 1930's and early 1940's the way was clear for the evolution of planned shopping centres which now greatly rival and challenge the facilities offered formerly by

\textsuperscript{10}Ibid., p. 128.
\textsuperscript{11}Kelley, p. 71.
the central retailing areas of the city.\textsuperscript{12}

The interplay of centrifugal and centripetal forces in the modern city is most clearly reflected in the distribution and movements of population.

In most Western cities there is a fairly general pattern of population distribution, although densities vary from one city to another. The city centre has a relatively low density, but this needs explanation, by day it is extremely densely occupied and is the heart of the urban organism, at night it is deserted and relatively few residences of a permanent nature are located there. Around the core is the most closely built-up residential area which normally has the highest overall density of population. Finally, in the suburban outskirts the density is lowest.\textsuperscript{13}

Land Use in Central Business Districts

Through the process of Concentration, Centralization and Decentralization, the grouping of functions within the central city and their further segregation within the central city in separate sectors appropriate to their role and function, the inner form and structure of the central city may be comprehended. It is the result of clearly established phases of city growth, population increase, and the related increase

\begin{itemize}
\item\textsuperscript{12} Ibid., p. 72.
\item\textsuperscript{13} Dickinson, p. 127.
\end{itemize}
in the supporting services. Population redistribution follows as a next logical phase and with this comes a further increase in functional requirements, the institution of sub-centres and the beginning of a new form of challenge to the city centre functions. These must now alter to conform with the changes which have occurred in their original role, they are no longer dominant and as a result considerable changes in activities and the related forms of land use occur. New shopping centres have already removed a very high proportion of the convenience goods sales and further challenges to the retail trades are continually being made.

An additional factor contributing to the further decline in the importance of central areas is the provision of better transportation facilities in the suburban areas. The construction of freeways and overpasses frequently result in city centres being by-passed and movement between suburbs and suburban satellite business communities becoming more direct. In addition there is the concept of regional shopping centres serving more than one community which has its effect on the city central retail areas.

This decline in the central area is reflected by the change in land values. As an observation it is generally true that in some central areas the land values have decreased so that the revenues from taxation have been shrinking to an alarming extent.\(^\text{14}\)

\(^{14}\text{Ibid.}, \text{p. 136.}\)
The central business district of any city contains the greatest concentration of buildings and commercial activity, it is also the most congested area of pedestrian and vehicular traffic. Perhaps this is the most important factor offsetting the advantages of central location in the city, in spite of its unrivalled opportunities for choice of commodity or service. The factor of the congestion on its streets and sidewalks has, in no small measure, resulted in the diversion of much of its former business to the satellite sub-centres, with resulting loss to the central functions.

Even in the areas in which one kind of business or service appears to predominate, a great variety of establishments unrelated to the dominant use is invariably revealed by an actual count. These central activities, such as central offices, banks, retail stores, theatres and many others which serve central functions, could not operate as a group except in the central location. Other sorts of activities, however, are found there which might benefit themselves and the central activities by their removal to outlying locations.15

There is a continuing need for enquiry into the city's multiple activities in order to establish the healthy

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operation of those functions which are most suited to the changing pattern of land use within the city's central area. Enquiry into the multiple activities of the city, however, involves enquiry into several extremely important factors, all of which are inter-related in an unique manner for each city. These factors are physical, economic, social and cultural in origin, and structure theories have been formulated which attempt to describe and to account for land use patterns within the city. Such theories are the results of empirical studies of North American cities, each being internally organized, it is assumed, by an order determined predominantly by economic forces.

The theory of central area development is that since urbanism is fundamentally an economic phenomenon it follows that the internal organization of metropolitan areas has evolved as a device to ease the various frictions of economic activity. Just as specialization characterizes the entire complex economic organism, so has it influenced if not dominated the arrangement of activities within the area. There is in fact evidence of an increasing tendency for uses of a similar character to become concentrated in functional areas.\(^\text{16}\) Retailers and other land users compete for the most favoured sites in the area of their interest. Ultimately the land use pattern in a city will reflect the demands of renters

\(^{16}\) Kelley, p. 55.
and owners of sites. The end result of this market process of competitive bidding by potential users is a pattern of land use spatially organized to perform the functions which characterize urban life. ¹⁷

Three different explanations of this order have been advanced: one known as the concentric zone theory, a second referred to as the sector theory, and the third, the multiple nuclei concept. The first and last descriptions deal with the entire pattern of use areas, the sector theory, however, has been developed primarily to explain the structure of residential areas. The zonal and sector theories are used to describe changes in the basic arrangement of land use patterns, whereas the multiple nuclei approach is primarily an observation of the structural form of the urban land use pattern at a particular point in time. ¹⁸

The need for a positive re-organization of land uses at the city centre, to create a more efficient and effective physical pattern, is a principle underlying central area renewal and redevelopment planning. An appreciation of the pattern of the city's spatial structure, as determined by the researches of sociologists and economists, is of considerable value in this connection.

¹⁷Ibid., p. 56.

CHAPTER III

THE CITY STRUCTURE

Theories of Land Use Patterns of Cities

The sociologist, the economist and the political scientist have attempted to identify and to classify the land use structure of central areas. In the larger cities this structure is often complex and resistant to precise classification, however, the attempts that have been made do provide insights and an understanding of the internal structure of cities.

City structure is contingent upon the operation of ecological processes of organization which create its pattern of distribution in space and time, such as have been previously given in the definitions of Concentration, Centralization and Decentralization. The spatial patterns are integrated around those points of centralization where the largest number of individuals interact for the satisfaction of needs. Under modern cultural conditions the city's spatial structure tends to follow definite patterns modified by local geographic and cultural conditions.¹ Three different

descriptions of land use patterns have been devised to describe resulting spatial organization of urban areas. Each theory sets forth certain general tendencies of arrangements which allegedly will prevail unless modified by topographical or other disturbing influences. These descriptions indicate that urban land uses are distributed within concentric zones, sectors or multiple nuclei.²

The Concentric Zone Theory

The Concentric Zone Theory³ assumes that the modern American city takes the form of five concentric urban zones. In outline, these zones are:

Zone I The Central Business District.
Zone II The Zone in transition.
Zone III The Zone of Independent Workingmen's Homes.
Zone IV The Zone of better residences.
Zone V The Commuters' Zone

Within each broad zone are found many specialized and segregated districts or areas, each with distinct characteristics. Amongst these characteristics are:

(i) Specific Function - as in the financial, hotel or retail districts.


HORIZONTAL ARRANGEMENT OF ACTIVITIES WITHIN A COMMUNITY

Concentric Zone Description

ZONES
I. The Central Business District.
II. Zone in Transition.
III. Zone of Independant Workingmen's Homes.
IV. Zone of Better Residence
V. The Commuters' Zone.

Sector Description

Theoretical Pattern of Monthly Rent Distribution.

<table>
<thead>
<tr>
<th>Rent Range</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than $10</td>
<td></td>
</tr>
<tr>
<td>$10 - $19.99</td>
<td></td>
</tr>
<tr>
<td>$20 - $29.99</td>
<td></td>
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<tr>
<td>$30 - $49.99</td>
<td></td>
</tr>
<tr>
<td>$50 and over</td>
<td></td>
</tr>
</tbody>
</table>

Multiple-Nuclei Description

DISTRICTS
1. Central Business District
2. Wholesale and Light Manufacturing.
3. Low-Class Residential.
4. Medium Class Residential.
5. High-Class Residential.
6. Heavy Manufacturing.
7. Outlying Business District
8. Residential Suburb.

(ii) Physical Differentiation - such as skyscrapers, or the dilapidated buildings in slums.

(iii) Social Distinctiveness - with wealth in the exclusive suburbs and poverty in the slums.

These are a few of the many contrasts in the city's cultural districts. Each district is a 'natural area' for it is the product of competitive factors which draw into it appropriate functions and population elements, and repel from it those which do not fit into its scheme of specialization or culture.  

The Sector Theory

The Sector Theory holds that residential land uses tend to be arranged in sectors or wedges radiating from the centre of a city. While each community has a different pattern, rent areas tend to conform to a pattern of sectors, rather than to a pattern of concentric circles, as postulated in the Concentric Zone Theory.

The Multiple Nuclei Theory

The Multiple Nuclei Theory holds that a combination of concentric zones and sectors explains the arrangement of land uses.

4Blumer, pp. 90-91.

In many cities the land use pattern is built not around a single centre but around several discrete nuclei. In some cities these nuclei have existed from the very origins of the city; in others they have developed as the growth of the city stimulated migration and specialization. The initial nucleus of the city stimulated may be the retail district in a central place city, the port or rail facilities in a breakoff city, or the factory, mine, or beach in a specialized function city.

The rise of separate nuclei and differential districts reflects a combination of the following four factors:

(i) Certain activities require specialized facilities.
(ii) Certain like activities group together because they profit from cohesion.
(iii) Certain unlike activities are detrimental to each other.
(iv) Certain activities are unable to afford the rents of the most desirable sites.

The number of nuclei which result from historical development and the operation of localization forces vary greatly from city to city, the larger the city, the more numerous and specialized are the nuclei.©

City Structure and the Central Retail Areas

The Concentric Zone Theory supplies a clear definition of the central area of the city within which central place functions occur, namely, The Central Business District. By further definition of zones and of the districts found within each, serving specific functions, the concept of a retail district within The Central Business District may be clearly established; furthermore, such a district may then be considered as a 'natural area' having particular characteristics.

The Sector Theory affords another useful concept, namely, the arrangement of land uses and the establishments which occupy a particular area, as determined by the rental for that area. The high rentals usually found at city centres ordinarily act as determinants of the type and quality of establishments which occupy particular locations within the central retail district.

The Multiple Nuclei Theory, from its definition, affords a useful alternative to both these theories and combines very concisely the major factors determining the location of retail facilities.

In summary, it may be concluded that the concentric zones, sectors or multiple nuclei theories explaining the nature of city structure, all lead to a determination of 'natural areas' within which a dominant form of land use is established. In this connection, City Centre Retailing may be considered as a central function within the Central Business District, separate from other forms of commercial activity in other parts of the city. The natural area, within which it is concentrated as a dominant land use, requires further and more specialized analysis in order to determine both the principal characteristics and the factors essential to its continuation, as a central function.
CHAPTER IV

URBAN TRANSPORTATION

The Warnings of Swamped Towns

Organizational relationships and urban activities are continually changing, and the functional demands made upon the land use pattern, including the physical channels of movement within it, are also continually changing. For many reasons, however, it is difficult if not impossible for the physical city, and the land use pattern, to change as rapidly as do the demands made upon them. There is, therefore, an inevitable lag in the adjustment of a land use pattern to changes in the organization and the processes of urban activities. Eventually, adjustments do occur, but the pressure for change always precedes them.¹

All the movement required by the activities of a community is translated into the structure of traffic. It may be said, therefore, that the amount and nature of the movement of persons and goods to and from a group of establishments, or a specific area of the city, are affected

by the existing channels of movement serving these establishments or to the specific area. The absolute amount and nature of this movement is determined by the nature and volume of the urban activities. The diverse nature of the city's central activities and the heavy volume of traffic which it creates places a great strain upon these channels of movement, particularly within the Central Business District.

Other than in the new and expertly designed city centres, such as Harlow, Coventry, Stevenage and Rotterdam, the majority of the older city centres are unlikely to receive very rapid and comprehensive redevelopment. There are two main reasons for this situation, the first being that reconstruction has, hitherto, been made in a piecemeal fashion, without vision, foresight or interest in the overall planning required to better city centre conditions. The second reason is because traffic problems have either been completely underestimated or not understood at all, and those in authority are unable, even if willing, to make available the enormous amount of capital needed to solve the problems involved.

Such town centres will become swamped in the deluge of the ever-increasing automobile population, that is if they have not already become so. Temporary expedients, such as one-way streets, parking meters, minor road improvements, extra car parking areas, cannot prevail against this steadily

\(^2\text{Ibid.}, \text{pp. 15-19.}\)
increasing volume of automobile traffic with its demands for parking space and complete internal access to all parts of the city.

There is a vicious circle of cost which, within such swamped cities, inhibits any clear course of action aimed at solving this problem. The buildings already existing are regarded as highly valuable assets which cannot, on the grounds of cost, be destroyed. The radical solution of renewal is costly as an operation and involves the removal of buildings which are highly valuable assets. At the same time, the vicious circle shows that these valuable assets are, in fact, rapidly losing value, since the town centre itself, rather than each individual building, is so inefficient that trade falls as the automobile population increases, since a swamped town centre cannot hold any more cars. Less money then becomes available to do the much-needed reconstruction work.³

The swamped town, however, is not only just a product of a lack of foresight in planning. Many of the older towns and cities are of great architectural or historical value. Their destruction to accommodate the demands of the vehicle would be a disaster and an offence against culture. It would appear, as a partial solution, that the diversion of traffic from such city centres is essential together with restrictions to traffic access, or even the complete exclusion of motor

vehicles, rather than in their reconstruction. Cultural centres of this character present special and somewhat unusual problems in traffic control.

Finally, within the category of swamped towns there may appear, within the near future, many of the towns now in the position of meeting their traffic problems by the use of such temporary expedients as have been previously mentioned. Short term measures such as these are, if anything, a surer way of 'swamping' a town than if nothing at all were done about the physical provision of car parks since they encourage additional traffic volumes, street parking, traffic congestion and, inevitably, swamping.\(^4\)

Modern Volumes of Traffic

Of all the forces reshaping the metropolis, it must be recognized that the most powerful and insistent are those rooted in the changing modes of transportation. The use of the automobile is changing the fundamental character of the metropolitan area and in a manner which appears to threaten the future existence of city form as it is known at the present time.

Possibly the most central question, amongst the many novel and complex problems facing the city today, is whether

\(^4\)Ibid.
the city will continue to serve either as a unifying core for its surrounding metropolitan region, or whether it will be utterly fragmented. The key to this problem lies in the method, or the methods, of urban transportation.  

Two factors, of economic significance, have acted to delay the impact of the automobile upon the pattern of urban transportation. The first factor was the effect of the financial depression in North America subsequent to the World War of 1914-1918. The second factor was the outbreak of the second World War of 1939-1945.

The postwar economic opportunities of 1945, however, resulted in an unprecedented increase of private automobile ownership from the 1945 total of car registrations, numbering 25,800,000 to a total of 54,300,000 by 1956, in the United States.

One of the effects of this enormous increase in automobile ownership has been already indicated by the construction of many thousands of miles of Interstate Highways in the United States. Under the latest Federal-Aid Highway Act, motor vehicle operators will provide some $25 billion in federal taxes over the next few years to finance a 41,000 mile super highway network that will extend across the United States, connecting existing State highway systems.

6Ibid., p. 33.
7Ibid., p. 34.
The increase in automobile ownership in other Western countries has created similar demands for more rapid-speed highway systems. Extensive programmes of highway construction are proceeding in Continental Europe and Great Britain, at very great cost. Part of this cost is borne by cities and municipalities in dealing with the resultant and increasing problems of traffic congestion and parking, particularly in the older cities.

It is estimated that the United States Federal Government will spend some $100 billion on new road construction between 1957 and 1969. Of this sum, $50 billion will be spent upon the construction of high-capacity urban expressways that will either skirt or penetrate 90% of all cities with a population of more than 50,000.8

The aim of this highway programme is to relieve the downtown congestion of these cities, however, this particular objective may not be realised. In effect, the construction of new high-capacity urban expressways may well result in an increase in the very problem they are created to solve. The planners of the cities concerned question the wisdom of increasing the opportunities for reaching the downtown areas and ask, how downtown traffic congestion can be relieved if the use of the automobile is encouraged.

8Ibid.
The degree to which the use of the automobile has been accepted and has been permitted to penetrate the city, thereby altering its internal structure, may well be illustrated by reference to the City of Los Angeles. It is claimed that the core of this city, which has a long history of settlement about an established centre, has been all but destroyed by the impact of the automobile. Whereas most cities retain their core and central area reasonably intact as they develop, in the case of Los Angeles, this central form and unity has been replaced by a sprawl which covers the entire valley and coastlands. One result of this sprawl, if it is permitted to continue, will be for land used in roadways to exceed the limit set by taxpaying property in the city. Through rising costs in maintaining excessive highway construction, the other basic community services must inevitably suffer, and the lack of a mass transit system only encourages this situation to continue. Los Angeles, it should be noted, is one such city to which high-capacity urban expressway systems have been applied.

Whereas Los Angeles has been virtually spread across the countryside, as a result of unrestricted use and the encouragement of the automobile, other major cities of the United States have been more resistant to change. The dominance of the automobile, however, is still very obvious and is well illustrated by the results of traffic studies made

\[^9\text{Ibid.}, \text{p. 35.}\]
in 1955 in the twenty-five largest cities of the United States.  

In fifteen of these twenty-five cities, 60% or more of all riders entering the downtown business district arrived by automobile. In eight downtown centres the percentage of automobile riders exceeded 66%, the percentage of automobile riders for Los Angeles. In five of the eight downtown centres, Houston, Cincinnati, Kansas City, Dallas and San Antonio, automobiles carried more than 70% of all those riding into the heart of town.

In respect of Los Angeles, however, further explanation is required since the figure of 66% is for the central city only. In the metropolitan area about 95% of all travel is by automobile, which is a figure unequalled in any other large city in the United States.

Tests made of the speed at which automobiles could move, during the peak of the homebound traffic, in the same traffic study, revealed a surprisingly narrow range of differences.

Starting from the busiest corner in town and using the busiest outbound route, with the exception of four cities, all the distances covered in thirty minutes fell between 8 and 12 miles, or the equivalent of 16 to 24 miles per hour. On a comparison with the same time for public-transit vehicles, the

10 Ibid., p. 37.
11 Ibid.
homebound bus, or streetcar rider averaged only about 13 miles per hour. This comparison reveals that the automobile is still the most popular means of reaching the business districts, the question remains, however, as to how long the situation can be allowed to continue. A survey of this type may be useful at a particular time and place as an immediate method of comparison of automobile use and its popularity as against the existing means of public-transit, but its value otherwise is very limited. The central problem remains one of moving large numbers of people and goods in and out of the city centre without causing its destruction, either by the use of vehicular access routes, which dissect the city structure, or by tying up large areas of the city in accommodating parked vehicles.

The number of motor vehicle registrations in the United States continues to increase, the forecast is that by 1975 there will be over 100 million vehicles for a population of 220 million. Since over a half of all motor vehicle mileage is accumulated on the streets that are within city limits it is apparent that traffic congestion within the cities will increase proportionately.

\[12^{\text{Ibid.}}, \text{ pp. 38-41.}\]

\[13^{\text{Ibid.}}, \text{ p. 41.}\]
Problems of Circulation

The number of vehicles demanding space on the streets, at the peak hour rush in Los Angeles, is rising at an annual rate of 35,000. The general manager of the city's Department of Traffic estimates that to accommodate them, Los Angeles would have to construct some thirty miles of new six-lane freeway in every year.¹⁴

In the United States generally, downtown merchants are becoming increasingly interested in urban redevelopment as a means of protecting their market. They are concerned about traffic congestion and urge that the city provide facilities to enable motorists to use their cars in downtown shopping. In the smaller cities it is probable that much can be done along these lines, but in the larger cities this seems to be a very futile venture. Simple calculations of the amount of space required to provide driving and parking space for the shoppers necessary to maintain, although not increase, the sales volume in the larger downtown stores in such cities as New York, Chicago, Philadelphia, Detroit and Boston, amongst others, will indicate the impossibility of such a task. The city can never compete with the open perimeter of the shopping centre in appealing to the motorist, rather, it appears more and more obvious that the core area of the city must become increasingly

¹⁴Ibid., p. 43.
important to the pedestrian and the transit rider.\textsuperscript{15}

In practically every large city, traffic engineers are finding ways to move more vehicles through their city's streets than had been previously thought possible. It may be necessary to reserve certain streets exclusively for trucks, buses, or even pedestrians, and possibly their use could vary with the time of the day. On one downtown street in Chicago, for example, buses have been given an exclusive lane down the center, with safety islands for riders and pedestrians. Eventually, the bulk of all downtown truck deliveries may have to be made at night, or special downtown terminals organized at points short of the city centre for the loading and delivery of goods by heavy transport.

Finally, there is the question of parking, of which few cities appear to have enough. New York City, in 1954, rejected a measure that would have required most new office buildings to provide off-street parking for 100 cars as a minimum, and for 300 cars as a maximum. The reasons for the rejection of this proposal were that it would attract more vehicles to the city; it would add inordinately to building costs; and the city preferred to see land put to more productive use.

In fact it will never be possible to provide parking space in the largest cities for all the motorists who want to

\textsuperscript{15}Mabel Walker, Business Enterprise and the City, New Jersey: Metropolitan Economics Series, n.d., p. 113.
come to them. There is one very good reason for this statement, there would be very little left worth coming to, for if all New York's transit riders drove automobiles, all of Manhattan below Fiftieth street would have to be converted to multiple-deck parking garages.16

Public Transportation

Inter-urban transportation began long before the pattern of decentralization, the dispersion of people, and economic activities, occurred, and helped to set up a basis for a metropolitan area. Commencing with the horse-drawn bus, railways from the 1860's, and the ubiquitous taxi-cab, urban and suburban means of mass transport provided a basis for decentralization and dispersion, linking the outlying sections with the centres of the larger cities. The explosive effect of the automobile and the motor truck result, in part, from the increase in mobility and flexibility which they create.17

One of the important effects of the motor age has been the falling off in revenues of mass-transit agencies. This has led, in turn, to the general deterioration of mass-transit services, even with increased fares. As an example, the deterioration of San Francisco Bay area mass-transit service

16Bello, pp. 44-45.

facilities has been manifested in several ways, as:

(i) A gradual disintegration of schedules and running times.

(ii) Increased costliness of service.

(iii) A general failure to provide increasing passenger comforts commensurate with the improvements made in automobiles.

(iv) Failure to change routings sufficiently in keeping with changing demand load factors.\(^{18}\)

It is important to realize that, to the present, very little has been accomplished in the treatment of this problem, either in San Francisco or in any other major city of North America. The overall aspects of the mass transportation of persons and goods in metropolitan areas, and the various purposes for which such movements take place, require bold, imaginative and integrated action. Demands for the building of extra bridges across the San Francisco Bay, or the extra six-lane freeways in Los Angeles, however, are two examples of narrow thinking, and merely people's desires. The extent of the matter is not merely a problem of downtown stores losing business to outlying stores or to stores located in other cities. It involves the realization, as well, of the movement of goods; of the diseconomies of permitting large numbers of vehicles to carry only a few persons in each unit; and of the

\(^{18}\)Ibid., p. 241.
costliness of governmental investment in highway facilities, which may aggravate rather than alleviate problems.\textsuperscript{19}

The significance of traffic studies in major cities of the United States, in regard to their mass-transit facilities, is well illustrated by reference to San Francisco. This city is fortunate in having had well organized traffic studies conducted over several years, in particular the years of 1926, 1937 and 1947. These latter three studies, each of which is inclusive of all forms of transportation, included special surveys of traffic within a cordon area corresponding to the so-called Central Business District. From a comparison of the criteria established by these three studies, the trends in the use by the public of private and public transport facilities can be determined. All three revealed two factors of general significance from the data collected, namely:

(i) Mass transit facilities dominated in bringing people into the cordon area during the morning rush hours, and in taking them out of the area during the afternoon and evening rush period.

(ii) There was a decline in the use of the mass-transit facilities and an increase in the use of individual facilities during the rush-hour periods in 1947 as compared with 1937.

Data available regarding the 1926 study indicated the over-all importance of mass-transit facilities, especially the street

\textsuperscript{19}Ibid.
car, a small percentage of automobile use, and a higher number of pedestrians in contrast to present day travel habits. An interesting aspect of the 1947 study is the greater rate of increase in the use of individual facilities during the rush-hour periods. This means, in turn, increased driving to and from work, and corresponding increases in the demand for all-day parking facilities.\textsuperscript{20}

The major significance of the San Francisco traffic studies, related to mass-transit facilities, is their failure to keep up high standards in order to compete with improved forms of passenger transport. The superiority of private transport facilities, in particular the automobile, are due to their comfort and flexibility. Neither are clearly distinguishable features in present mass-transit facilities generally, and these forms of public transport facilities appear to suffer from a vicious spiral of price-raising in order to maintain a service of inferior quality. This is inevitably self-defeating as a policy and indicates the need for more radical reforms and a wider analysis of the problems.\textsuperscript{21}

Other faults appear in this drive for economy, by the closing of some scheduled services, which merely act as a further discouragement, and an apparent apathy with regard to extending the services to take in more of the built-up areas within the metropolitan districts.

\textsuperscript{20} Ibid., p. 286.
\textsuperscript{21} Ibid., p. 287.
Old equipment, functioning long after its originally desirable standards and dimensions have become outmoded, merely adds increasing costs by virtue of its discouraging qualities.

Old street cars with a high centre of gravity are prohibited from any increase in their designed speeds, whilst their old-fashioned interior design perpetuates discomfort, especially in regard to the narrowness of the car doors and their closing devices.

But despite the inconveniences in the modes of travel in street cars and in other older forms of public transport, many of which are still perpetuated from a variety of economic or traditional reasons, it is the continual increases in fares which have acted more strongly than any other factor in discouraging public travel.22 The declines in passenger traffic in the San Francisco Bay Area have been so rapid since the peak years of 1945 and 1946 that the main defences of the transit lines have been sharp increases in fares and serious reductions in service, especially for evening and Sunday schedules. Local fares have risen since 1947 from five cents to fifteen cents per ride, and longer rides to the city central business district have had such increases in rates that all require payment of the federal transportation tax in addition. What must be emphasized in these increases, is their rapidity which causes declines in passenger traffic, which

22Ibid.
result, in turn, in requests for additional increases in a seemingly never-ending spiral of higher and higher fares. This diverts passengers to automobile travel, increasing downtown traffic congestion.23

The City of Seattle has experienced similar problems to those of San Francisco of traffic congestion and pressure on its parking facilities in its central business district, together with a serious decline in revenue from its mass-transportation facilities. Here also it is considered that an increase in the use of public transportation into the downtown area would reduce the pressing nature of these two related problems.

Several suggestions have been made to encourage the use of mass-transit facilities, particularly by the shoppers. Amongst these suggested ways of increasing the patronage of public transportation are the following:

   (i) Reduced fares between peak times for shoppers.
   (ii) Free rides for one hour for all individuals on those evenings when all downtown stores are open.
   (iii) Downtown retailers to buy the use of the transit system for an hour in the evening to stimulate evening shopping.

23Ibid., p. 288.
(iv) The subsidy of the transit system by the city to make its use more attractive and to avoid further construction of downtown parking facilities. Whilst downtown retailers are aware of the importance of mass transportation to their future, they generally are of the opinion that the trend towards the greater use of the automobile would be difficult to reverse.

Nearly half of the people entering and leaving the central business district in Seattle use mass transportation. Reports of independent organizations indicate that the city-owned and operated Seattle Transit System is being efficiently run. Despite adverse operating terrain Seattle has one of the few systems with an overall operating speed of over 11 m.p.h. The fare structure of 20 cents for a single ride, and six tokens for $1, compares very favourable with other large cities despite high labour costs and hilly terrain. The declining patronage, however, combined with steadily mounting operating expenses have forced fares in Seattle from 10 cents, during 1941 to 1945, up to the present fare of 20 cents. The spread-out terrain of Seattle will be further aggravated by new annexations of territory, and the necessity for the extension of transit facilities to additional suburban areas is also focusing attention on the desirability of adopting a zone-fare system.


25 Ibid., p. 86.
It is considered doubtful, however, whether reduced fares during the day or free rides in the evening, for the downtown shoppers, will increase the use of Seattle's mass-transit facilities, or alter the public's preference for automobiles.  

City Mass Transportation Management

Recognition of the reasons for the deterioration in the standards of mass-transit facilities, and the resulting discouragement to their use by the general public, in no way invalidates the principle that mass-transit facilities are inescapable as the means of relieving downtown congestion of traffic.

Changes in the quality and the quantity of mass-transit facilities in most large cities are the responsibilities of two separate agencies. These two agencies are, respectively, the transit management authority and the city government, and co-operation between them is essential. Recognition of the reasons for mass-transit deterioration and for the determination of which agency is responsible for their correction is a complex process in which both of them are involved. City governments frequently create their own transit management authorities as public agencies. This procedure permits a single policy to operate and greatly simplifies co-operation.

The transit management authority is responsible for the management of the stock; improvements to stock and line equipment; the quality of the equipment; rate fixing for fare  

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26 Ibid.
stages; the speed of travel; and for the passenger facilities at the major stage terminals.

The city government is responsible for the co-ordination of zoning activities with the overall mass-transit facilities and needs of the city; the adequacy of mass-transit facilities within the city and their extension; the adequacy of local and city government legal parking restrictions; and all the problems arising from extensions to meet high-speed road systems.

The greater number of traffic studies made on the problems of downtown congestion of traffic, and the many attempts made to solve this steadily mounting problem of more and more automobiles being used in the cities, all reveal that mass-transit facilities are one of the major methods of relieving this problem. In fact the capital cities of the Western World give very clear evidence that this is the case. The Paris Metro system, the London Underground system, New York's subway system, Moscow's subway system and Toronto's new subway system, all confirm that this is an essential factor in accommodating the growing demands by the public for speedy access to and from the city's business district.

Within North America generally, however, the subway system does not appear to have been very seriously considered as a means of mass-transit, even after allowance has been made for the differences in terrain and climates. The fact that it may use a combination of underground tunnels beneath the city
centre, thus alleviating the strain on the roads, and employ existing surface tracks outside the city centre does give some good arguments for its employment.

One city which has finally decided that this form of mass-transit is the only solution to its very complex problems of traffic, is San Francisco. With many careful engineering and cost studies, the city management has finally determined upon a new rapid transit system which will cost $1.5 billion. This system will tie together the nine counties bordering on San Francisco Bay and it is planned to use a great many of the existing facilities, including the Bay bridges, which will in no way inconvenience or add to the present systems of traffic controls, and railway surface routes.

The general argument for mass-transit facilities in large cities is that the billions of dollars being used for roads and express-way systems is far greater than the sums required for investment in mass-transit systems. The main difference is that mass-transit systems generally only require high-speed equipment to keep pace with modern-day demands, although in some cases this would mean removal from city streets completely. The degree to which the long distance express-way systems are used is far less than the degree to which the comparatively short distance mass-transit facilities would be used by the city's population. Modern equipment means far more than simply gleaming new rolling stock and interior comfort, it also means automatic signal systems which
obviate the need of drivers, very rapid speeds of 50 to 55 m.p.h., express routes from outer suburbs direct to the city centre, automatic pay-turn-stiles, credit card season tickets, and a host of similar systems, many of which are currently in use in the new Toronto system. Car parks are organized at the suburb stations and in fact car use is reduced since the usual procedure is for the housewife to chauffeur the businessman to the commuter station and return home with the car. In very general terms, mass-transit systems, when operated to match the employment of the automobile, can do a far better job so far as the city worker is concerned, relieving him from the added chores and expenses of downtown car parking and the mad rush for the city exits at the end of the day.

The traffic lines from one end of the city to the other, in most cases at the end-of-day rush hour, create added hazards, waste time and money in stationary engine running. Vast areas of the city, now taken up in attempting to accommodate the increasing numbers of parked cars and in the exits and entrances to high-speed road systems, are wasted space. Inevitably, as in the case of New York, this form of land-use, which might be called land-waste, will be forced to change from the heavy losses in revenue resulting, to a more profitable employment.

The arguments against mass-transit do not seem to be very realistic, when based upon a comparison of the cost of transit by either mode of transport which appears to be an
equal expense, mile for mile. This is also very probably from the very simple reason that high quality, high-speed, mass-transit is almost a completely unknown factor in North American cities other than New York, Philadelphia, Cleveland and Chicago. As with most innovations, it requires time and education on the part of the public to accept this new system. The arguments for the mass-transit systems, on the other hand, are based upon some startlingly solid and factual results from very carefully organized traffic surveys. It is a numerically established fact that within the foreseeable future, the saturation point in North America in regard to automobile ownership will be reached. The city which is incapable of further expansion without losing its form completely, will not be able to accommodate further huge increases in automobile use. In these cases clear limits will have to be established for the automobile capacity, failing which it may be forced into the depressing cycle of events which have plagued Los Angeles, creating other and more serious problems, especially in regard to the survival of the city's centre.

One final point remains to be established in regard to the employment of mass-transit facilities for the city. With city growth, there are clear limits to the stages at which mass-transit facilities for the public can operate efficiently and beyond which it requires more investment before it can be
further developed, if the same high standards of service are required to be maintained. Depending upon the population of the city, the intensity of use of its central business district, the rate of increase of its automobile population, the degree of importance which the city has for external high-speed road systems, and the city's rate of growth, mass-transit facilities must be kept in step with these developments and both financed and organized to meet the changing circumstances of its employment.

The city's mass transit service is not in competition with other forms of transport and its function is limited to servicing the city. When it is carefully developed and co-ordinated to meet changes in city development it will be accepted as a useful and economic adjunct to other city services, requiring full public support, and the best means of urban transportation. The private automobile will then be used as a more flexible form of transport to other centres which mass-transit is not designed to serve.

Urban Transportation and the Small Towns

There are many smaller towns, and cities, for which large scale mass-transit is either unsuited, or uneconomical. Despite their smaller population, less developed city centres and business districts, they are still faced with a similar problem of traffic congestion for which financial means of solution are extremely limited. These towns pose quite
separate and special problems for which the solutions are, more appropriately, matters of design in both the road system and the town centre itself.

In regard to the town centre, the radial plan structure of the majority of towns in Europe, and the almost universal grid pattern in North America, both concentrate the majority of traffic on to the centre of the core. The generally accepted method of preventing this is to circumscribe it with a ring road to pick up the radials and the major laterals.

With most town centres the ring or loop road acts as a distributive road, around which the traffic circulates to choose the most convenient point of entry into the heart of the centre. It is not primarily the relief road for through traffic, which is generally dealt with before it gets so far into the heart of the town. 27

If the town is a very large one, then a conflict may be set up between the function of the ring as a distributive road for local traffic, and its function as a by-pass for through traffic. A solution is for new ring roads to be designed as by-passes sited quite independently of the existing routes, and at a low level so that existing roads could pass over them, although the high costs involved in some cases may be a prohibiting factor. A bus station, serving as an interchange station between long distance and local services with different

routes, should be placed as near to the ring road as possible; it is generally assumed that buses will not enter the centre, but will circulate round the ring road, dropping off passengers at positions convenient for access to the different zones.

The railway station should also be sited as closely as possible to the ring, and it is obviously advantageous to combine it with the bus station to provide a nodal point for all the traffic.

If, as is often suggested, buses must not leave the ring road to penetrate the core, it follows that everywhere in the centre must be within easy walking distance of the ring. As most people will only walk about three hundred yards, the centre will be restricted in size to a diameter of about 600 yards, or an area of 60 acres. However, it is most unlikely that the centre will suffer very much harm if buses come into it, provided that they pass between different areas of use, and not through them.  

A ring road should not be allowed to define the shape of a town centre if the topography is unsuitable, and if there are wide variations in traffic densities between one radial road and another, then the ring must be modified to some other line such as a loop. Much depends upon the amount of through traffic which is drawn off before it gets to the ring.

\[28\text{Ibid.}, \text{pp. } 53-54\]
If the ring road is modified it may penetrate to the city centre and cease to be a ring altogether, however, there must always be a principal distributive road system which circulates between the main areas of the groups of buildings.

One solution to the possible conflict that may arise out of the requirements of through traffic, and the need for an undisturbed central core, is to provide through roads either above or below the normal street level. This form of solution, however, is both expensive and aesthetically very unattractive, creating a gloomy environment from its overshadow and structural appearance.

If the town is sufficiently large, with zones within it which are clearly separable by function, some sub-division at the city centre into a series of precincts may be possible. This scheme is permissive of a secondary road system within the city on which buses and other heavy traffic may pass, between the precincts. However, only if the city centre is sufficiently large should such sub-division be created and it is of paramount importance that they be reasonably large and few in number, otherwise, the internal road system will be broken up into a chaotic structure creating worse traffic congestion.29

29Ibid., pp. 56-57.
Problems of Internal Access Within the City

The problems of internal access and circulation within the city have, so far, been indicated although not developed to provide a complete understanding of the factors involved. The functions of pedestrian areas require analysis and a correct placing of the limits to which vehicular penetration of the city may be permitted in order that pedestrian activity may continue without hazard or interference. It is not realistic to expect a complete absence of vehicular activity within the city, however, its degree of penetration has been permitted to the point where normal pedestrian circulation is all but inhibited from movements between points greater than a few hundred feet.

The degree of accommodation to which city organization has been willing to provide for the automobile appears as a clear error, when the resulting restrictions upon free movement for the pedestrian is considered. Added to this is the form to which the structure of the city has been forced to adhere by virtue of the road system, whereas this would appear to be originally a convenience for pedestrian movement it now appears as a series of very short blocks to which access is arduous and even dangerous.

There have been many proposals for rectifying this situation, and for returning some semblance of balance and
order to the different modes of travel and the correct functional employment of areas within the city centre.

The idea of precinct planning has revolutionized the attitude of many designers to the re-planning of many existing town centres. Instead of concerning themselves with driving roads through built-up areas just for the sake of road widening, or to obtain vistas of important buildings, or re-organizing quiet streets and by-ways into formal classic piazzas, or of opening up spaces such as cathedral squares, they seek to discover the functions and the inherent character of the different building groups, and to incorporate these groups in the plan as a series of precincts around which the traffic is made to circulate. This approach is altogether more human and more intimate than hitherto; and no less functional, for the normal method of circulation within a group of buildings is by foot. Suitable roads are selected as the traffic channels between the building groups, and are widened and linked up as necessary. Having defined the precinct, all internal roads that give through access, or which do not serve a useful purpose, are closed and given over to the pedestrian, to building space, or to car parking. The conflicting building uses are removed from inside the area, and a new layout is devised to form spatial settings for the existing and new buildings, to give priority to the pedestrian. It has to be observed that, in the process of bringing the pedestrian into his own, due regard is made for the need for vehicular access
to the buildings. The more static spaces and the more pedestrian ways between the building groups the better, but never at the sacrifice of service roads to buildings.  

The Redevelopment Plan for Downtown Fort Worth

The word 'precinct' is often used to mean a space in which motor cars are strictly excluded, and certainly in so far as a shopping precinct is concerned, that is its exact meaning.  

A radical solution for the preservation of the central city, in Fort Worth, Texas, has been put forward by Victor Gruen, an architect who is well known for his proposal and design for the large shopping centre, Northland, ten miles north of Detroit. The scheme for Fort Worth is, in brief, to turn the central city into a pedestrian mall, by adopting the popular features of the suburban shopping centre, and by keeping the automobile out. The public will enter the city by driving up to the edge of the business centre, on a wide perimeter expressway, and park their vehicles in large car park areas. From this point all movement will be on foot, except for those who are unable to walk, or are unwilling, and for whom small, slow moving electric shuttle cars will be provided. One other suggestion is for moving sidewalks to remove the need for any form of wheeled vehicle within the city whatsoever.

\[30\] Ibid., pp. 57-58.  
\[31\] Ibid., p. 59.
The area which would be closed off and redeveloped, preserving all important buildings, would embrace practically all of the present centre of Fort Worth, lying between two railroad lines and the Trinity River. The area is roughly fifteen blocks square, and six large parking garages would project into the redeveloped area so that no garage would be more than three or four minutes walking time from the city centre.

All delivery trucks would travel underground leaving the ground level free of exhaust fumes, the noise of vehicles, traffic lights and other control devices, and the hazards which arise from mixing vehicles and pedestrians on the same level.

If carried out completely, this plan would take some fifteen years and cost over $100 million, of which some 10% might be borne by private investors and redevelopers. It is considered that the balance of the money for this project would come from two sources, namely, revenues from the garages, and the other facilities in the plan, inclusive of the taxes anticipated from the increases in property values.

The plan is based upon the estimated needs of 1970, when Fort Worth and its tributary suburbs will have a projected population of some 1,200,000 people. Provision is made for parking 60,000 cars, or some 12,000 more spaces than now exist in the downtown of Los Angeles.
One item of very great significance to the entire plan is the inclusion of rapid-transit facilities, without which the 60,000 parking spaces would soon prove to be inadequate.

The entire project assumes that at least a half of all people travelling to the heart of the city will choose to travel by express bus. This poses some very complex problems, not the least of which is the determined fact that approximately 17% of all Fort Worth travelers now use public transit. It does not seem very probable that the solution to downtown parking problems can be made on an anticipated great revival of mass transit, or the reversal of the nationwide trend in travel habits.32

The basic criticism of this entire project must be that the city centre is not merely a shopping centre, it is also a cultural centre, an administrative and public service centre, and above all a centre where the contacts and daily experiences enrich the inhabitant by their very complexity and variety. The plan for Fort Worth appears no more than a giant Regional Shopping Centre, almost sterile in its qualities and devoid of any risk or chance of change by the very nature of its almost antiseptic design. The very limits to public transport themselves seem to be such as would be met within an area designed for invalids or old people, from whom every semblance of risk or real life qualities must be removed. In conclusion

32Bello, pp. 45-48.
it must be emphasized that although the city centre is in urgent need of protection, it does not require sterilization.
CHAPTER V

THE CENTRAL RETAIL AREA

The Structure of the Central Business District

A study made in 1935 by the United States Department of Commerce\(^1\) used terminology which is useful when considering the structure of central business districts. The terms are, "inner core," "inner belt," and "outer belt." The inner core of the central business district is typically the point at which all intracity traffic converges, the centre of specialty goods, shopping activity and the home of the large department stores. In the inner belt are found communication agencies, banks, law offices, political, recreational, religious, and other services. The inner core and belt comprise the heart of the retail structure and also of these other activities as well. Through these offices the manifold activities of the community are directed and integrated. The special function of the principal service centre is that of dominance or control.

The first two elements, the "inner core" and the "inner belt," of the central business district typically include the

largest stores, both in floor space and in sales volume. There are some convenience goods retailers located in the central business district, but the large department stores and specialty goods stores are the magnets which draw customers from the entire metropolitan area to shop "downtown." The inner core of the central business district has the highest concentration of pedestrian traffic in its relatively small area compared with any other part of the city. Because of the high land values in the central area only the high volume retailers or the low volume, high quality or price establishments, such as Jewelry shops, can ordinarily compete for premium locations in this area. In the inner belt immediately surrounding the core, land values are lower and pedestrian traffic less. The separate but related functions of government, finance, professional services, cultural, entertainment and wholesale activities are found here. The third area of the central business district which can usually be identified is the outer belt. This is generally made up of the less desirable commercial structures and dwellings, and some residential areas that have run down and are on the verge of becoming slums.
Three Analyses of City and Metropolitan Area Retail Facilities

The retail structure of large cities and their surrounding areas may be identified by any one of several systems. For the purposes of locational analysis three examples will be given of the classification of retail facilities within the metropolitan city areas. The first is attributed to Duncan and Phillips who identify a central or main shopping district, secondary or outlying business or secondary shopping centres, neighbourhood business streets, and scattered individual stores or small clusters of stores. These authors maintain that in their general arrangement or disposition of facilities, the retail structures of metropolitan areas are similar. A five-fold classification of types of store locations found in most metropolitan areas is suggested by Brown and Davidson. Their classification includes central shopping districts, secondary shopping districts, string street locations, neighbourhood clusters, and isolated locations. The third classification is attributed to Hoyt and Weimer who


classify the retail structure into business districts, outlying business centres, and isolated outlets and clusters.

Of the three types of retail structure classification, given above, that due to Hoyt and Weimer provides a more simplified and generally applicable method. Inevitably, from reasons of topography, geography or the development of later forms of communications, such as the railways and new roads, each city has unique groupings of retail activities and the metropolitan areas surrounding the city centre provide a wide range of groupings of retail establishments with separate characteristics. The simpler the method of categorizing the structure of retail facilities, the easier is the task of analyzing the retail activity associated with the location. The structure of retail facilities has a complementary order in the shopping patterns of the metropolitan community. These early patterns of shopping areas of the city were established about the organized city market areas, later additions were the result of the rapid growth of the urban and suburban areas on the fringes of the city during the first half of the 19th century. The changes in the patterns of shopping activities at the present time are due to the increased use of the automobile and the development of satellite shopping centres which rival the city centre in the provision of many of their goods and services.
A Suggested Three Tier Shopping Pattern for the City and Metropolitan Area Shopping

A suggested three-tier system of shopping complementary to modern shopping patterns is made by Burns which it is considered will not only give more convenient shopping but will also satisfy conditions for selectivity and the other important characteristics of the three retail areas within the metropolitan area, of which the highest tier is the city's central retail area.

The upper tier is the town or city centre, and depending upon the size of the town this centre will have a greater number of establishments catering for high quality and specialized types of goods. In the large city the great bulk of the shops will be either departmental stores, variety chain stores, or individual shops which are highly specialist either in price range or goods sold, or both. The centre will probably contain a few grocery stores but in the main even the food stores will tend to be fairly specialized. Such specialization may be made by a grocer in large premises carrying an enormous variety of goods and specializing in deliveries, or a fruit merchant with expensive imported items and catering for specialized tastes. The centre will need to have a great diversity in price range, quality, and services offered, but in the main, the facilities offered in the centre will be those

which serve the whole town and which could not satisfactorily be located in a suburban centre. It is not possible to be very precise on the population limits, but one would expect that a city with a population of more than 150,000 could develop a specialized town centre with some supporting district centres.

The second tier of shopping will be found mainly in the large city and is formed by a series of large suburban centres. These centres are not groups of ten or a dozen shops but really substantial centres of 100 to 150 shops and even more. They should serve districts of about 20,000 to 40,000 population, depending upon geographical and other considerations. The aim should be to serve as large an area as possible with as large a number of shops as possible.

The third tier of shopping is formed by a large number of individual shops, mainly in the form of 'isolated' or 'corner' shops, situated at locations convenient for customers living within a short distance of about one or two street blocks.

This system, it is claimed, will satisfy the basic sociological and economic requirements of shopping as fully as one can reasonably expect.

This suggested three tier shopping system does not include small clusters of shops, such as the neighbourhood centres, frequently found in commercial strips along most main suburban thoroughfares. Burns claims that such small clusters of shops are not efficient and should be replaced by either the
larger, second, tier or by one store of the 'isolated' or 'corner' type associated with the third tier.

It should be noted that this suggested three tier system of shopping is more suited to conditions of retailing in Great Britain than in North America, where there is a current trend towards the development of regional shopping centres serving a number of municipalities. New York State, for example, uses this latter approach and the regional shopping centre, presumably, would be considered in the third or highest tier in the pattern suggested.

Motivations for Downtown Shopping

Analysis of the motivations for downtown shopping reveals many of the reasons for the relative popularity of the Central Retail Area of the city. C.T. Jonassen, of the Department of Sociology, Ohio State University, conducted research into the factors affecting shopping satisfaction in the City of Columbus, Ohio. From the replies to the questionnaires issued it was possible to determine the major advantages for downtown shopping. Here it should be noted that about 90% of all shopping-goods trade in Columbus is done in the downtown section. The greatest advantage determined was

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that this section of the city had the largest variety of goods, 51% indicated this as the most important advantage. The next most important advantage was, "can do several errands at one time," with 15.2% making this their second choice. The advantage ranking third was "cheaper prices." It was therefore concluded that the most often perceived advantage of the downtown area is the larger selection of goods and the next most important is the belief that one can do several errands there at the same time. Cheaper prices are also an important factor, 11.5% making it their first choice, 11.0% their second choice, and 6.3% their third choice.

The disadvantages considered most important in downtown shopping were the difficulty in parking; 44% making this item their first choice, 18.2% making it their second choice, and 7.2% making this their third choice. The next most important disadvantage was that downtown was "too crowded," with 12.8%, 18.7%, and 13.7%, making it their first, second and third choices respectively. The third most important disadvantage was the "congested traffic," with 9%, 20.8% and 17% making this their first, second and third choices respectively.

This particular analysis goes much further into the factors involved when considering the relative importance of each of the replies received. These investigations cover the considerations of educational categories, family income groups, the influences of distance and location of the shoppers from
downtown, the differences in the age categories, the rural and urban backgrounds of the respondents, and the differences between the sexes. The conclusions from this very systematic analysis are revealing of clear trends by the majority of the persons interviewed. It was established that in Columbus the downtown shopping centre had a decided advantage over the suburban shopping centres. The most important advantage for downtown was that it had a larger selection of goods. The second most important advantage was that people thought they could do several errands at one time, and the third, that prices were cheaper downtown. The most important disadvantage downtown was the difficult parking, next in importance was the crowded conditions found there, and third, traffic congestion.

Further analysis indicated that 90% of people found parking very difficult downtown; about 71% were seriously concerned about the cost of parking, and 81% found the traffic very congested. Yet only about 9% indicated that they would let these difficulties deter them from using their cars for shopping downtown. It was found that travel time, distance and location were not important factors in determining shopping satisfaction. It is apparent that the downtown section of Columbus still possesses a number of highly important advantages that determine its dominant position in the retail shopping-goods trade of the city.
These findings have relevance to conditions current in most cities of similar size and population. The city of Columbus, Ohio, has a metropolitan area of some 36 square miles with a population of 715,400 persons as at 1961. The dominant functions of the city, as measured by the survey made downtown, are concentrated within the central business district. The bulk of the retail trade in Columbus is done in the central business district. Here are located the greatest numbers of retail stores, large department stores, governmental agencies, law offices, offices of medical specialists, insurance firms, banks, professional offices, municipal offices, cultural and recreational centres, and a few convenience goods stores. Despite the disadvantages of the city centre it still remains evident that its popularity for the shopper is higher than any other centre.

But considerations must now be made of the disadvantages specified in this analysis. The traffic congestion, the crowds, and the considerable difficulties of downtown parking are all indicative of the environment which is, unfortunately, almost an accepted adjunct to downtown shopping. The modern retailer views shopping as a social activity performed by people gathered primarily for a duty but not necessarily an unpleasant one. The central retail area of the city, however, can not be appraised merely as a place for economic transactions, although this is the main reason for its existence. Victor Gruen, the shopping centre architect responsible for the projected design
for the Fort Worth, Texas, city centre, recognizes the dual role of modern shopping centres as community centres with employment, cultural, social and recreational functions besides their primary function of a shopping facility.\(^7\)

The desire for social enjoyment and the need for additional amenities during the shopping tour, is indicated by the popularity of the new shopping centres in the suburbs of most major cities. These centres are designed to provide an environment within which the retail function is conducted under the most agreeable conditions possible for the shopping public, and in particular are very conducive to customers making all their entire purchases within the same area. This is also the major aim of all downtown large departmental stores who attempt to create a similar atmosphere within their floor space, although arranged on different levels.

There is need for an improvement in the internal order and the environment within the central retail area, which will provide for the dominant function of retailing and for the comfort, convenience and enjoyment of the principal participants, the shoppers. This involves the determination of the spatial requirements and the areal limits for the principal land use of retailing and the retailing function. The dominant factors involved are shops and the shopping public, and added to

this must be the considerations of those adjuncts essential to the creation of the environment necessary for successful retailing for which additional spatial requirements are needed.

In addition to serving as centres for exchange, the early market places fulfilled important social functions. Each Greek city had a designated market place, the agora, which served not only as a market place, but for civic, political, judicial, and festive activities as well. Market places, before and since that time, have performed these functions in a wide variety of cultures. Present day market places and shopping centres in the city are not unlike the market places and fairs of past eras. They must also be viewed as a part of the way of life of the people using them.  

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CHAPTER VI

MARKET TYPES AND SPATIAL NEEDS

Classic Examples of Retail Areas

Markets seem to have developed wherever people were free to exchange their goods. Whether the histories of ancient Greece or Rome are examined, records of markets in various stages of development are found.¹

If, in the economy of the 5th century B.C., the agora can be properly called a market place, its oldest and most persistent function was that of a communal meeting place and, as usual, the market was a by-product of the coming together of consumers who had many other reasons for assembling than merely doing business. In its primitive form the agora was above all a place for a palaver; and there is probably no urban market place where the interchange of news and opinions did not, at least in the past, play almost as important a part as the interchange of goods. Not until automation and the impersonality of the supermarket were introduced in the United States in the mid-twentieth century were the functions...

of the market as a centre of personal transactions and social
tainment entirely lost.\textsuperscript{2}

The agora in time became an indiscriminate container
of retail activities, ceremonies, and negotiations of all
forms and types not greatly different from the later Roman
Forum. The 4th century poet Eubolus observed that one found
everything sold together in the same place at Athens: figs,
witnesses to summonses, bunches of grapes, turnips, pears,
apples, givers of evidence, roses, medlars, porridge, honey-
combs, chick-peas, lawsuits, allotment machines, irises, lamps,
water-clocks, laws and indictments.\textsuperscript{3} This is also indicative
of the variety of central place functions, as found in the
present day city centre, and in particular that of central
area retailing.

The Roman Forum is, yet again, an interesting example
of an open space originally intended for social intercourse,
the place of assembly and a common market place. Doubtless a
temple was an early and essential part of the Forum, for the
market peace, which was so necessary to free exchange, was
thereby preserved by making the area itself sacred. The
Forum was not simply an open square. As it developed in Rome,
it was rather a whole precinct, complex in layout, in which
shrines and temples, the halls of justice and council houses,

\textsuperscript{2} Lewis Mumford, \textit{The City in History}, New York:

\textsuperscript{3} \textit{Ibid.}, p. 150.
and open spaces framed by stately columns played a part. As succeeding emperors added directly to the Forum, ever larger crowds were drawn to the centre for shopping, for worship, for gossip, for taking part, as actors or as spectators, in public affairs or in private lawsuits. Here in the Roman Forum was the centre of public life not merely for Rome itself, but for the Empire. 4

During early medieval times in Europe, the greatest economic privilege, that of holding a regular market once a week, the neighbouring peasants, fishermen and craftsmen, assembling for exchange, depended upon both physical security and legal sanctuary. So, as in ancient Greece, those who came to market were protected, during the marketing hours, by the Market Peace, now symbolized by the market cross of the market place. Here a new class in society, the merchants, received protection against theft and arbitrary tribute, and began to settle down permanently, at first just outside the walls. When they became permanent members of the town corporation, as free citizens, a new era began, which helped reopen the old highways and waterways. 5

With the coming of capitalist enterprise, the older social and physical forms of the market did not entirely disappear in the Western World. The open air shop, the outlet

4Ibid., pp. 221-222.
5Ibid., p. 251.
for the workroom to the rear, tended to disappear and the new type of shop took shape behind glass windows, greatly enlarged to cover the whole front and to serve as a centre of display. Buying and selling became not merely an incidental traffic in the conveyance of goods from producer to consumer: it became one of the principal preoccupations of all classes. Shopping furnished excitement: it afforded a special occasion for the lady of the house to dress up, to sally forth, to exhibit her own person.6

The expansion of the market has been one of the most characteristic attributes of the commercial regime: it is involved in the whole scheme of substituting vicarious satisfactions for direct ones. By the eighteenth century, the public markets and producers' shops of the medieval town were being converted into specialized shops under continuous operation. In Paris, in 1844, a modern department store opened, with some two or three hundred employees on its staff, and at about the same time similar enterprises commenced in Berlin and Chicago.7

In the early part of the nineteenth century, glass-covered shopping arcades were established in every commercial city. These new structures had the special merit of taking shopping off the crowded street, with its confusion of vehicles

6Ibid., pp. 434-435.
7Ibid., pp. 437-438.
and noise: an admirable example of functional planning. Though most of these shopping arcades are still in existence, it is only with the creation of urban shopping centres, built for the accommodation of motor traffic, that this conception has been brought back in a modified form.\(^8\)

It is of interest to note that Ebenezer Howard, in his first outline of the Garden City, planned to build such an arcade and even wished to have the whole shopping area under glass.

Shops and Modern Shopping

Modern shops and shopping habits are the outcome of the trend towards specialization in the merchandising methods developed during the 18th century. The city merchants at first combined house, workshop and store in one building unit. Stores were residential in character and the shopping streets of any city up to the 19th century very clearly reflected this small scale system of production, retail merchandising and living. Buildings were uniform in size, style and character, and the shopping environment and the streets were very noisy by virtue of the horse drawn traffic over the cobblestones.

From 1800 onwards, the rapid growth of manufacturing transferred industry from the farm and the shops to the

\(^8\)Ibid., pp. 438-439.
factory. The increasing utilization of railroads and boats enabled distribution of products on a large scale and the city shops lost their factory function and became simply outlets for manufacturing and wholesaling.

The small General Stores were challenged by the mail order houses and finally, in the 19th century, the Department Stores developed the concentrated traffic of the city shopping district. Big stores of this latter type require ever increasing amounts of floor space. They combine the rapid handling of great quantities of merchandise and crowds of customers under one roof.

Department stores based their trade upon two typical machine made products, dry goods and ready-to-wear clothing. Additional items have been added over the years which cater to the demands for custom-made, quality products. These quality items are usually sold on special sales floors in separate shops. In this manner the department stores cater to customers' desires for quiet surroundings within which they may make a more careful examination and selection of goods, without being overwhelmed by the large quantities and display of produce.

The small shops have made a return as specialty centres and have concentrated upon making their interiors highly attractive and comfortable areas for quiet shopping. They have so developed as to become a big challenge to the large stores by the degree of personal attention they are able
to offer. In many cases they have combined to pool their buying power and to minimize their operating and advertising expenses, forming groups clustered about the exteriors and occupying the ground floors of large new buildings in the city and, more especially, in new regional shopping centres.

All stores have now realised that the right merchandise at the right price is not enough, they must also have facilities for the comfort and the entertainment of the customer as important inducements.

The study of modern shopping habits has been developed, by the experts in retailing, to the point where they can influence the customer's buying through a very careful arrangement of the produce displayed within the stores. The goods on sale in stores may be divided, very generally, into three main types, Impulse goods, Convenience goods, and Demand goods. The Impulse goods are luxuries which are usually purchased as a result of a sudden desire by the customer; the Convenience goods are staple items of standard quality, use and popularity such as drugs and food; the Demand goods are clothing, furniture and household equipment. Goods on sale in any store, however, will be largely Demand in character with a generous assortment of Impulse and Convenience items added. Local habits may shift the emphasis on the type of merchandise from one group to another, however, the economic success of a store depends upon how well it can
stimulate Impulse buying.⁹

Typical Shops and Stores

The main street of most cities presents a bewildering variety and number of shops and stores. All of them, however, take their place when grouped according to the merchandising as one of three basic types of store. The three types are: Specialty Stores, with a limited range of related merchandise; Variety Stores, which depend upon diversified merchandise for their existence; Department Stores, which are the retailing giants, the centres for display, sales and the distribution of shopping goods, the focal points in the social and civic life of the city.

The Specialty stores have a limited range of related merchandise, or a single type of service, and may be limited in either price or volume trade. In all cases, and organizations, the specialty shop limits itself very closely to one type of merchandise or service.

The Variety stores depend upon diversified sales for their existence and offer the customers the convenience of shopping from a wide range of merchandise under one roof. They give the minimum personal service to the customer and depend upon a quick turnover and a greater number of

transactions than in other types of stores. Some operate almost entirely on self-service and self-selection of almost every type of 'hard' or 'soft' good, such as: furniture, foods, drugs, sporting goods and cameras, hardware and appliances. Such stores require bold store fronts, signs and displays; convenient traffic routes for customers and goods traffic; quick business transactions; and must be very flexible in their operation.

The Department stores, by their size and location, influence shopping habits and generate automobile and pedestrian traffic patterns and the visual character of the area which they serve. Downtown they can help to fix or to change the retailing pattern of the area. Their merchandising scope includes every type of shopper's goods and their internal organization can be divided between seventy sales divisions and thirty service departments, all of which may be further sub-divided. The Department stores carefully differentiate between types of customer, types of goods, and the local shopping environment. Other types of specialty goods and specialized qualities depend upon the type of town served. They combine all forms of service sale, personal, self-help, and intermediate. Customer services cater for credit accounts, special consultants for various types of purchase such as outboard engines, power craft, wedding and christening ceremonies, auditoriums and flower displays.
Apart from their retailing function there is a great deal of non-selling activity associated with internal organization such as artists for window displays, servicemen, tradesmen and repairs to plant and buildings.

Department store specialization is of three types, volume, general merchandise and fashions. Volume specialization covers a great range of size and type of merchandise, price ranges which depend upon whether the articles are sold from counters or from different shops within the store. Expensive items, such as furs, are usually sold from a special shop within the store and are so organized as to give a more personal service to the individual customer.

General merchandise is a compromise between the Volume and the Specialty item. There is a blend of self-service and personal service organized as 'small stores' within the main store, each of which tries to give every department a separate character. There is less reliance on the visual impact and more on the individual series of sales departments.

The Fashion stores have their chief emphasis on the women's accessories and apparel, and have a much more limited merchandising programme than either a volume store or a general merchandising store. Their sales floors should be quietly dramatic in their decor and there is a series of specialty shops each in its own alcove, with a great deal of
personal service. There is restraint in the architecture within the store, conducive to a high quality retail custom trade.

Competition between the Department stores is very intense and changes in location are rapid within the larger cities, such as New York. Over eight major stores in the downtown of New York went out of business in a few years because of outmoded plant and sales policies; a failure to relocate when their areas began to decline in prestige; and from a failure to re-invest by expanding in the suburbs.\textsuperscript{10}

The shopping environment within the central business districts all over North America, in general, follows an obsolete pattern inherited from the days of former horse transport, with usually a confusion of traffic movement and congestion which frustrates all efforts to employ the downtown facilities. To a large degree this is due to the use of the automobile and to the road pattern which continues to focus all movement towards the city centre. A new road system is required which will also cater for the parking of vehicles without undue distance separating the motorist from his automobile. Shopping is one of the major downtown functions, every customer becomes a pedestrian before he enters a store, but with the advent of the automobile the pedestrian has lost

\textsuperscript{10}Mabel Walker, \textit{Business Enterprise and the City}, New Jersey: Metropolitan Economics Series, n.d., p. 112.
many of his rights. The downtown shopping trip has developed into a hazardous and nerve-wracking duty, and it is only due to the rich potential for purchasing that the city centre can survive, despite these disadvantages.

The downtown markets are extremely important centres, with a rich source of trade from all incomes, a high pedestrian traffic, a large number of people who either work or live in the downtown, suburban shoppers, and a continual stream of transients and sidewalk traffic, all of whom are potential customers for the downtown trade. The average central shopping district, however, is handicapped by the fact that it is an unplanned collection of shops and stores, theatres and amusement centres, office buildings and hotels, the individual location of all of these separate commercial enterprises is largely determined by chance and by the limited opportunities for purchases of downtown real estate by any one proprietor. The mutual advantages that might be gained by every business enterprise through logically interrelating the location of different activities, such as trade, amusements, services, business and transportation are almost completely lost.
Spatial Needs for Retail Areas

An indication as to the changing pattern required in the central retail area of the city is given by reference to the new shopping centres in North America, the new Town Centres in the New Towns in Great Britain, and by the post war developments in Holland and Sweden. An interesting example of the advantages of spatial order, about the principal function of retail shopping, is provided by the first suburban shopping centre with a pedestrian mall, constructed at San Diego, California, during 1943, and known as the Linda Vista Shopping Centre. This was the first suburban shopping centre with a pedestrian mall, a ring of shops and stores, and an outer ring of parking space. Although the project has certain deficiencies, regarding the 'urban feeling' of a city shopping street, it does provide an environment within which the shopper is encouraged and may take pleasure in the duty of shopping, without the interference of traffic, and in congenial conditions which permit of price comparison. This suburban shopping centre established a new style from which larger and more recent shopping centres are profiting. The new centres have solved the inter-related problems of automobile traffic, parking areas, truck traffic, pedestrian traffic and the specialized problems of large groups of stores. The store locations are worked out along their shopping concourses so as to group related shops by trade classification. The most
LINDA VISTA, CALIFORNIA, SHOPPING CENTRE

KEY

1. Pedestrian Precinct.
2. Perimeter Parking.
3. Future Extension.
4. Stores.
5. Shops.

powerful traffic generators, such as the department stores, are sited at key locations so as to encourage comparison shopping and to maintain an even flow of pedestrian traffic through the entire centre. All shops and stores are in direct contact with pedestrian traffic on the pleasant, covered, walk ways, landscaped plazas and gardens.

The new Town Centres of the New Towns in Great Britain also provide interesting examples of city centres based upon the pedestrian precinct principle and, despite earlier doubts on the practicability of this principle, the city centre of Stevenage was constructed along pedestrian lines. The design of most of the New Towns tend towards a central area for the town centre, which contains the civic offices, public areas, office areas and the central retail areas. The town centre is enclosed by an inner ring road and access to the centre is obtained through short streets which leave the inner ring road and penetrate a limited distance into the town centre. These streets terminate in car parks which are intended to serve the shoppers and others having business there.

There are, however, some difficulties involved in the creation of a pedestrian town centre, and the considerations which apply can be conveniently summarized as follows:

**Advantages of the Pedestrian Town Centre**

1) Parking of vehicles is provided at definite points so that hunting for kerb space, which itself materially contributes to road congestion, is avoided.
"PLATE III"

STEVENAGE, TOWN CENTRE

KEY


2) Office workers within the centre have reasonable quiet.
3) Shoppers and others searching for particular goods and services within the centre can concentrate on their search without danger of collision with traffic.

Disadvantages and Difficulties of the Pedestrian Town Centre

1) Unless covered malls and parcel pick-up points are provided, it is inconvenient in wet weather and for invalids when visits have to be made to different parts of the centre. It is also inconvenient to have to carry parcels long distances.
2) It is difficult to arrange the layout so that service roads to buildings do not interfere with pedestrian ways.

A New Town affords the opportunity, when it is built on a comparatively clear site, to apply the pedestrian principle much more fully, and indeed this is the objective in most of the New Towns. Stevenage is one good example; however, it is not yet possible to say with absolute certainty that the thorough application of the pedestrian principle to town centres is correct. It has often been remarked that the motorist is a lazy animal, who often prefers to expend enormous time and trouble in finding a parking space the shortest possible distance away from his destination, even risking a fine in doing so, rather than to park with ease and comfort a short walking distance away. It is thus conceivable that a pedestrian town centre might suffer in comparison with others because of this limitation. There is of course a limit to the physical size of a single pedestrian precinct

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beyond which splitting up into two or more related units becomes necessary. If accessibility to the parked car is to be maintained it can even be argued that this is so with a town as small as 60,000 population.\textsuperscript{12}

Rotterdam,\textsuperscript{13} its city centre destroyed as a result of World War II, developed a reconstruction plan for an area of 900 acres, of which some 600 acres were reserved for streets and open spaces. It was completed in 1946 and by 1956 a large area had been rebuilt.

The Lijnbaan is a two-storey pedestrian shopping precinct running north to south down the core of the city, parallel to Coolingel; a main thoroughfare upon which is situated the Town Hall, the General Post Office and the Stock Exchange. Large department stores, shops and banks lie between the precinct and Coolingel.

The precinct is terminated on the south by more department stores and on the north by a theatre and a cinema. The area to the west is designed as a large scheme of eight-storey flat blocks, the upper floors of which are seen from the precinct. This provision of a large, independent flat block in the heart of the city is an unusual one. In the daytime it conflicts with the central area character of business and entertainment, but at night the many people living on the spot keep it lively.

\textsuperscript{12}Ibid., pp. 147-149.

"PLATE IV"

ROTTERDAM, LIJNBAAN

KEY

2. Parking.  5. Restaurant.
3. Flat Scheme.  6. Garden.

The precinct intersects a grid of streets at right angles to it, with the effect of dividing it into a sequence of pedestrian spaces from which there are views of traffic.

The whole composition is to one master design based on the same construction and materials and the same module. The shops are two storeys, with a basement and the reinforced concrete structure was designed to give the shopkeeper a wide variety of internal arrangement, numerous changes of level being possible.

Wide overhanging canopies, suspended from the first floor, providing clerestory lighting to the shops, emphasize the shopping view and give protection from the rain. Transverse canopies give a sense of local enclosure and intimacy.

The precinct is furnished with planting showcases and sculpture and an open air café is an attractive feature of one section.

Vallingby, a new town in Sweden, is part of greater Stockholm and not more than half of its workers will be employed in the town; it is, therefore, a satellite rather than a new town. The town centre is the heart of a neighbourhood of some 20,000 people, but it also acts as a centre for a group of suburbs totalling some 80,000 people. The centre is built over a railway and the station is a key
KEY

1. Offices and Shops. 5. Welfare Offices.
   Restaurant.

building in the scheme. Shops and offices are incorporated in the building and it faces the town's main square—a few minutes after leaving the train one is in the heart of the town.

The central square and some of the shopping streets are limited to pedestrians, the parking belts being placed on the perimeter. As well as the station block, two other large building groups straddle the railway; they accommodate shops, offices and restaurants. On either side of these are smaller business, entertainment, and civic buildings. The central square is large and the buildings surrounding it are comparatively low, giving a rather open effect more in scale with the surrounding towers than a normal town centre. More urban in character is the pedestrian shopping precinct between two of the large blocks. Its narrow width, two-storey height and deep canopies make it intimate and friendly, and the shop fronts and signs add to the liveliness.

The ground to the south-west of the centre rises steeply, and a group of community halls and a cinema facing the main square are skilfully planned up the slope. The upper levels with their rocky outcrops and informally planned housing provide interesting views down into the centre. The floor design is one of the most interesting in Europe. Formed almost entirely of granite sets in blue, grey and dark red, it is in a wide circular pattern which, in places,
embraces the carriage-ways and the circular fountains in the main square. Existing trees are incorporated in the design and the detail design, such as fountains, seats and lamp standards, is excellent.\textsuperscript{14}

The present centre may be functionally divided into three part-centres; the shopping centre, the cultural centre and the social centre. The shopping centre comprises about seventy shops in all branches, including two department stores. The shops cover an area of 16,000 square metres with a storage area of 3,000 square metres. The shopping centre is erected on a 300 x 100 meter concrete platform. Under this are three tunnels, one for the underground railway and two for the transport of goods. The cultural centre comprises established church, non-conformist chapel, library, study premises, youth centre, cinema and the civic hall 'Trappan.' Vallingby has two elementary schools and a secondary school is being built whose auditorium is to be used also as a theatre.

The social centre is housed mainly in the two white and blue social-service houses and includes, inter alia, medical and dental centres, maternity welfare centre, health insurance, welfare board office, board of pensions, labour exchange and a club room with canteen for local pensioners.

\textsuperscript{14}Ibid., pp. 162-164.
The Vallingby Centre is the given centre for the 25,000 residents, but its capacity is such that in reality it serves approximately 80,000 persons in western Stockholm.

The Vallingby area has been called an ABC-town which gives the inhabitants possibilities of work (arbete), housing facilities (bostader) and a well developed centre (centrum). In shops and factories, in offices and restaurants 8,000 persons are now employed. The population of Vallingby is 25,000 persons.

These four international forms of centres are remarkable for the similarity of the main design factors incorporated within each scheme, namely: (1) the pedestrian is given the dominant place, (2) the private automobile and all service vehicles are prevented from penetrating into the heart of the central areas, (3) the shopping function of the central retail areas is given a high priority, (4) a restoration of the social environment by spatial design and layout of shops, offices and social-cultural centres about the city's central area.

The most important feature of all four centres is the re-grouping of central place functions within larger areas, produced mainly by a new street layout. This new road system keeps the automobile still functionally useful, restores the place of the pedestrian, groups the central retail, civic, social and cultural areas within the reach of
the pedestrian, without their becoming exposed to traffic hazards, and all at very little increase in the spatial needs for each.

Large scale city centre reconstruction has so far been limited to those cities making recovery from war damage, although Stockholm and Philadelphia have both made great progress in reconstructing large areas within the framework of their older city limits. Almost invariably the new designs have, as one of their principles in improving central areas, aimed at creating better groupings of functions and creating at the same time a spatial relationship which accommodates the pedestrian. The spatial needs are not necessarily any greater than before, but the functional grouping of related activities, and their location within the original area, provides that very element of social and cultural association with a particular central place function so badly missing from our present city centre environment.

Spatial needs for city centres do not require that the city centre limits be extended to enclose an area any greater than that at present. What is required is a better use of the same area, which may require extensive surveys to determine the locations of the specific function for a particular area.
CHAPTER VII

DESIGN FACTORS

Central Area Redevelopment

A central area which has been adequate for the demands placed upon its services and land area does not suddenly become grossly inadequate; the pressure on services gradually builds up as population increases until it becomes uncomfortably great. The effective programming of central area redevelopment, however, encounters greatest difficulty when the redevelopment of specific areas is planned. In consequence, City Government is frequently compelled to abandon long range planning for the redevelopment of city central areas from the complications arising from costs and site acquisition, political influences, and from a lack of planning legislation, essential before site acquisition is possible. Planning is therefore restricted to those limits which the law very clearly specifies and within which it must be contained.

Internal congestion, within the central area of the city, occurs from the increasing use of motor vehicles and the greater use of the city's central services. Pedestrian activity soon becomes restricted from this congestion and a
serious decline in the retail trades located there has now become generally apparent in most large North American cities. The effect becomes very marked when property values within these central areas declines, resulting in considerable losses to the city government from reduced tax revenues. At this point the city government is compelled to examine carefully the basic problems and to effect remedies in order to protect downtown property values.

Radical changes in the property values, functions and character of land uses in the central areas of the city, are almost invariably a reflection of the increased pressure upon the existing services which the city provides for the community it serves. Whether this is a metropolitan or a regional community, the whole object of the city centre is to function as a central place within which those particular central services are located which are essential for their maintenance.

In order to function as a central place, the city must have specific properties which permit it to fulfill that function. The most important of these are its geographic centrality, its accessibility for vehicles and pedestrians, ample parking spaces and a high measure of compactness. This last point is of special importance because visitors to the city centre usually wish to call at a large number of places during a single visit. However central and easily approached the centre may be, its efficiency will be greatly diminished if
it is so spread out that considerable time has to be spent in moving from one destination to another within it.

It may be stated reasonably that the more compact the area of the city centre the better, always subject to the requirements of the number of stores and the size of stores required, of daylighting, car parking, and vehicular and pedestrian circulation. Intensive development of land within the city centre is therefore a positive virtue, and high buildings may have a definite functional value. City government therefore may be compelled to engage upon long range planning in order to meet existing and future problems arising from the results of downtown traffic congestion and the increasing heavy losses to its revenues.

The necessary legislation may very well be lacking for a city government, determined upon central area redevelopment, and by which it may intervene, control and specify the precise area and its limits for each particular function in the downtown. In addition to legislative sanction, the city government will require considerable financial resources with which it may purchase that property needed to effect redevelopment changes contemplated within the central areas. But not all of these changes will necessarily result in specific areas being used for new building construction. Basic to most changes contemplated within the central areas is the transport network, the roads, the parking areas and the by-passing of external traffic which merely wishes to cut through the city to reach a
destination on the other side. New construction therefore may be limited to cutting new roads, constructing bridges and by-passes, or inner ring roads, to syphon off the external traffic before it reaches the centre. In addition to this new construction there is the high probability of much clearance and demolition of old buildings for the new road system planned. It is this building clearance which may result in the creation of the right conditions for a better grouping of central area functions about existing nodes.

Probably the most effective manner in which city government can prepare for a better functional grouping of its services is by conducting careful analyses of its central area and by determining the physical limits to particular areas within which specific central place functions are dominant. Following upon these analyses, careful zoning combined with changes in street design may produce a more concentrated employment of these areas, resulting in their becoming functionally more efficient, and also paving the way to a simpler scheme of redevelopment. But basic to any such change must be the establishment of a stronger linking together of functions within each such area, and the reduction of traffic hazards lying between them. It is not intended that the end result will be a clear cut separation of areas and individual functions, but a more homogeneous grouping of the dominant functions within each such area. The eventual aim is the restoration of true centrality in the location of central
place functions for the entire city. Pedestrian access to each such area and within it, is an essential ingredient of this plan and the study of central area land uses must be made with the objective of drawing together the miscellany of small pieces of land on which a heterogeneous grouping of establishments are huddled. This is a direct result of the continued employment by the city of an outmoded land pattern with which most cities are, to some degree, unhappily burdened, a souvenir from earlier days when the city size was adequate for a much smaller population and the modes of transport were both limited and slow.

In the case of the redevelopment of an established city centre almost invariably the existence of many important, well established land-uses and buildings, such as a cathedral, a university, or an historically important site, will dictate the use of zoning adopted to an extent which dominates any theoretical pattern sought. It is, however, important that whatever use zoning is adopted should be drawn up with the need for appropriate harmony between spatial relationships fully borne in mind.1

The difficulties of converting an existing city centre into a pedestrian precinct were mentioned in the preceding chapter and this conversion still appears as a most desirable objective. Many users of the city centre, and particularly

those on shopping expeditions, wish to move about freely, making numerous short calls at different destinations, and to be able to concentrate on their shopping, in particular on the displays in shop windows, and all without having to avoid traffic and seize opportunities to cross the road. It may be said in fact that the motor car and the shopping area are almost as incompatible as fast-moving traffic and the residential area.²

Other uses in the central area may not be handicapped as much by vehicles as are shops, but from the point of view of the office worker, especially, freedom from the noise of large volumes of traffic is very beneficial, and within the more intensely built-up city centre the reduction of exhaust fumes is of benefit to all.³

In general, the larger the city centre the greater the difficulty in converting it into a pedestrian precinct, but numerous varieties of compromise are possible. It may be practicable to convert the major shopping area itself into a pedestrian precinct, since it is that part of the city centre in greatest need of this, leaving the remainder with a more formal street pattern.⁴ In such cases, where conversion of the city centre to a pedestrian precinct is possible, public transport

²Ibid.
³Ibid.
⁴Ibid.
will have to be excluded from the centre itself but it should be provided with entrances and exits, on roads designed as short loops from the perimeter, in order to permit the public to continue using the mass-transit services in preference to automobiles. As a further application of this principle, the short street which has little purpose as a thoroughfare, and may further complicate a street pattern, may be closed off at each end to form a short mall.

The very form of some city centres frequently suggests one particular remedy by the construction of an inner ring road within the city and surrounding its core, and if this arrangement can be made it is usually unnecessary to carry out any drastic or premature redevelopment within the valuable sites of the centre itself, the roads of which become local roads only. It may even be possible to create a pedestrian precinct by closing some of these roads to vehicular traffic, although it will still be necessary for all properties to have vehicular access for the delivery and collection of goods.\(^5\)

In the case of very large towns and cities, no single simple device such as a ring road can be expected to cure their difficulties, but it is an eminently satisfactory device for towns of moderate size.

\(^5\)Ibid.
The Elimination of Incompatible Functions

Certain uses are either wholly inappropriate in the city centre or have a doubtful claim to a place. In order to preserve the principle of maximum compactness and accessibility in the city centre it is necessary to try to confine its uses to those which really should be there, even though the presence of others may not be harmful, and this requires a careful establishment of priorities.

There seems to be no place for residential uses within the city centre. A home which has shops, offices and other central area uses immediately joining it must inevitably lack a good deal of the components of a really satisfactory neighbourhood environment. Noise, traffic, and lack of outdoor space are the most obvious drawbacks. Manufacturing industry has no place in the city centre since its requirements for labour, as well as the transportation of heavy goods by trucks and railway, introduce those very elements which are destructive to a satisfactory city centre environment.

Mass transport for the public requires particular consideration both for its function as a public service, readily available at stages along its route, and for terminal points at major centres for purposes of passenger collection. Clear areas must be reserved at major points of access and exit.

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6Ibid., p. 152.
7Ibid.
in the city centre for large numbers of the public requiring this service. Short loop roads should be constructed for all public transport to terminate within the central areas and away from the main stream of traffic, possibly in the form of cul-de-sacs leading off from the inner ring road about the city centre. The garages for such transport, however, must be considered as areas of industrial use and located, appropriately, in the industrial zone.

Large stadiums, sports arenas and similar areas for those functions attracting large crowds pose difficult problems of location. In the major cities their presence is essential for the degree of revenue which they provide to both the promoters and the city business houses and retail areas. Conditional upon the size of the city the internal areas given over to these land uses must be consistent with the degree to which it is used. It is probable that a place for the large enclosed halls for exhibitions, indoor sports and shows can always be found, but the larger areas given over to open air sports activities would probably be better located at a fringe area of the city and less likely to disrupt the functional order of city centre services which may thereby be the better integrated.

Institutions such as Hospitals, Research Centres, Retail Department Store Warehouses and Depots, should not be permitted within any of the central areas. Major retail houses, however, will have to provide some reserve areas at
the rear or to the sides of their premises to permit the servicing of their establishments and the loading and unloading of supplies.

The success of central areas and their uses, very particularly shops, depends upon a large number of people visiting the centre for a specific purpose and being induced to expend money on purchases which they had not originally contemplated. This is, in major part, due to the large displays of merchandise in the shop windows of retail establishments which are located in close proximity to other forms of central area services. The office worker is one example of this type of customer, and the large number of women employed in office work in the city constitute a high percentage of the lunch hour shoppers in the department stores' fashion departments. Although a concentration of shops and quasi-shopping uses within one area of the city ought to be sufficient to secure such trade opportunities, the shops may, for example, suffer some slight diminution in trade if the entertainment centres are segregated from the shopping areas rather than being mingled with them, since people on their way to entertainment centres will not pass by so many shops and be induced to make casual purchases.\(^8\)

The uses which are needed within a city centre have been listed and classified as follows: (1) shops and similar

\(^8\)Ibid.
'shop-like' uses, (2) professional and commercial offices, (3) uses associated with entertainment and culture, (4) civic headquarters and municipal offices, (5) hotels, (6) churches and other religious centres. The object of such a classification is to permit the linkages between them to be worked out within the physical arrangement of the city's central area. It must be observed that although these uses are rather generally described, they are exclusive of activities which might be considered as disruptive functions requiring a location in a separate land use area.\(^9\)

**Space Allocation in Central Areas**

The assessment of land use and space within the central area of the city is a matter of very great difficulty since it is an area of investigation within which very little research has so far been undertaken.\(^10\) The standards also depend upon the basis of area to be allotted to each separate land use. One method suggested is to determine existing floor space ratios for each function within the city and to proportion the floor space index for each type of use. The floor space index standards proposed by the Ministry of Town and Country Planning in Great Britain are as follows:

(1) Shops 1.5, (2) Offices 2.0, (3) Wholesale warehouses 2.25,

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\(^9\)Ibid., p. 150.

\(^10\)Ibid., p. 153.
(4) Light industry 1.5. These are based upon the relative amounts of vehicular and pedestrian traffic which each land use is expected to generate. A much higher proportion is to be expected in shops rather than offices and this is reflected in a lower floor space index for the former. ¹¹

The pedestrian city centre principle has already been suggested, however, this cannot be fully applied to the centres of very large cities since their greater physical size requires allowances for the complicated vehicular movements within them. The principle in a modified form can, nevertheless, be applied by a careful segregation of uses into zones and the creation of a separate pedestrian precinct for each, worked into a road pattern. One very important factor must now be considered, which is contingent upon the acceptance of some measure of vehicular penetration to such precincts and within the city's central area generally. With vehicular penetration accepted, by which is meant predominantly the private automobile as apart from the use of public mass-transit services, space allowance must be made for parking. The space allotted for car parking requires the areas selected to be completely accessible and to be fully employed throughout the major part of the day and night. The night time uses may be due to both service and private vehicles, however, the location of many areas which have no such dual use will

¹¹Ibid., p. 155.
inevitably result in wasted space and in dislocation of the principle of space-allotment and land-use economy.\textsuperscript{12}

The location of larger car parks in the form of towers to serve the many areas of shopping within the city is one further problem. The fact that these are essential has been reluctantly accepted by most large cities in North America. Philadelphia, however, has solved the space allocation and the aesthetic difficulties by facing these problems and subjecting them to bold treatment, locating the high car parking towers at the entrance to the city centre.\textsuperscript{13} Their siting is such as to permit pedestrian movement between the major areas of shopping and the car parking towers without an undue time being spent on the journey. In addition, by the use of good architectural design, attention to location and topography for each site, the prospect of these towers should not be unpleasing and in fact will create an interesting approach to the city's centre.

Design Factors in Regional Shopping Centres

With the acceptance of the principle of a pedestrian precinct for the central shopping area, the central retail area of the city, much of the foregoing can be further

\textsuperscript{12}Ibid., p. 157.

implemented in the planning and organization of this one specific area. The removal of disruptive functions, the floor space index and space allocation for separate functions in the central areas, and the grouping of associated land uses are all of relevance in the further development, or even the complete redevelopment, of this area if the conditions permit.

Although the parallel cannot be carried too far, there are great similarities between the functional grouping and order of the shop types and retail activities within the city's central retail area and a regional shopping centre. In the site planning of the latter, there are many details which could be applied with great profit to the retailing function of the central retail area. Elements in the site planning for the regional shopping centre include: (1) An adequate amount of car parking, arranged in a basic pattern such as a herringbone, an angle or a perpendicular, for ease in getting from the access highway to the shops and within walking distance. The act of parking is intended to be simple and trouble-free, (2) there must be a complete separation of customer traffic and circulation from truck service traffic, (3) circulation within the site area should be possible so as to prevent shopper's cars from pulling out on to the access streets whilst shifting between parking spaces, (4) the arrangement of store locations must be such that their relative compactness is maintained, both for the distribution
of their relative powers of attraction and for eliminating poor store locations and difficulties in parking, (5) there must be a good selection made of a pattern for the building arrangement that will best achieve the greatest interplay among the stores, (6) attractive areas must be provided for pedestrian customers only.14

Undoubtedly, the introduction of all these new elements into present day shopping habits has been one of the major causes of the success of the larger regional shopping centres. The provision of facilities aimed to please the shopper, and sorely needed at most city central retail areas, is one of their major achievements and a clear indication of the environment which must be introduced into the retail areas at the city centre. Not the least in the creation of these new shopping facilities and amenities is the reservation of areas within the shopping centres which have as their major purpose the relaxation and refreshment of the shopper, similar sites can be distinguished in the ground plans of the New Towns in Great Britain, the Lijnbaan Centre at Rotterdam and the New Town Centre at Vallingby.

Tenant types in regional shopping centres are dependent somewhat on lease negotiations with the department store. Without the department store, or until there is a

department store, the centre is not a regional centre. The matter of proper tenant selection and location in a regional centre is both complicated and essential. In the big centre the merchandising plan must place small tenants in the path of pedestrian circulation between the larger magnets; the department store; the junior department or specialty store; the variety store; and the quality restaurant; the supermarket in a regional centre takes a secondary position.

The shopping centre developer must ensure that the centre is laid out in such a way that the maximum benefit is obtained from the pedestrian traffic which the department store creates. If the department store is not located so that other stores will benefit from the foot traffic, to and from the department store, then the centre proprietor loses the very thing for which he pays in negotiating the department store lease. The centre proprietor must be sure that the physical plan for the shopping centre is such that there will be a maximum benefit to all stores from the pedestrian traffic created by the department store's drawing power. A regional centre must include all the items in popular demand and be self-sufficient. This requirement underlines the importance in store grouping. To create 'self-sufficiency' means that in addition to the magnets, the department stores, there must be a full range of merchandise available to the shopper, including everything found downtown. This completeness also means
competition within the centre. Competition between merchants is good for the centre and good for the merchants, and also good for the customers. It keeps the merchants active to new lines of merchandise and, besides, gives the public the comparison they want to find when shopping. In brief, the regional centre should provide the equivalent of another downtown when it comes to completeness. It is important therefore, that the volume of the selling space is proportional to the estimated volume of sales determined by the market analysis for the centre's estimated catchment area of customers. ¹⁵

The arrangement of store locations is a matter for experts, who are able to balance the types of merchandise, sold by each establishment, so as to create the market environment which is best suited to the estimated volume of the centre's sales. Whether to bring the stores of one kind into close relationship, for convenience and competition, or whether to separate them, and to spread pedestrian traffic and the demands on car parking space, are questions which can best be solved by such sales experts. ¹⁶

The importance of these shopping centre planning considerations is that they reflect the precise forms of retail centre groupings which must have pedestrian oriented facilities in order to succeed.

¹⁵Ibid., pp. 283-284.
This lead, provided by the regional shopping centres, has influenced the cities of Kalamazoo, Michigan; Toledo, Ohio; and Miami, Florida. The creation of malls and pedestrian precincts within their downtown areas has produced improvements to both their retail trade and the city traffic circulation system. All of these innovations, however, are only components of large scale municipal renewal schemes. In the main, this renewal appears to consist of the re-grouping of existing retail stores on the main streets, about malls and precincts, produced by closing these streets to through traffic; the provision of a new transport system, involving the cutting of new roads from the city centre to join high-speed expressways outside of the central area of the city; the provision of better mass-transit facilities within the city; the construction of large car-parking areas outside the city centre; and car-parking towers within the city, to serve the central business district generally. All of these are planned improvements, intended to encourage and to accommodate increased use of the city central area as a main shopping and service centre for the metropolitan region which it serves.
CHAPTER VIII

PRACTICAL ACHIEVEMENTS IN PEDESTRIAN MALL
AND PRECINCT PLANNING

A New Pattern for City Central Retail Areas

Within the core and the inner belt of the city there are usually several nodes of retailing business scattered about one particularly dominant retail area. Although each such node is physically separated from the others, there is no great loss to its retail function provided that the distance separating it from the larger retail store is not too great. A more serious problem is the internal separation which occurs between shops within each such nodal area by roads which carry intermittent and light flows of vehicular traffic, and which give little relief to circulation even at peak periods of traffic movement.

This dispersion of minor retailers within the central business district prohibits the efficient growth of business by the separation of complementary activities and by reducing the trade areas of competition. Frequently this results in one side of the road becoming an area of dominant activity whilst the other side remains relatively dormant, and in some cases neither side is able to overcome the effect of separation by the road.
This dispersion of retail activity throughout the city in separate nodes is not necessarily a weakness in city structure, provided that some form of radical redevelopment within each such node is possible, although this may not always be necessary. This is one very good reason for the creation of malls and pedestrian precincts, aimed primarily at increasing the functional usefulness of the retail establishments by grouping them about one central retail area.

The redevelopment involves three factors; (1) a revised traffic circulation system, (2) the provision of parking accommodation, (3) radical changes in the land use, of those areas immediately adjacent to the retail establishments, to accommodate the pedestrian shopper.

Innovations such as these cannot be made as isolated forms of improvements. The changes in land uses associated with that area must be integrated to include all the factors which will be involved. It is for this reason that malls and pedestrian precincts are not devised as ends in themselves but as components of the municipality's overall renewal programme. The regrouping of land uses and the modifications to the road network within the city centre are characteristic forms of physical changes essentially imposed upon the city by the demands of present day use.

Three examples of North American cities which have already initiated city centre redevelopment, incorporating pedestrian malls and precincts within the overall city
redevelopment schemes, are discussed below. These illustrate the practical advantages to be gained, improving accessibility, efficiency and effectiveness, by increasing the area for pedestrian use.

The City of Kalamazoo,\(^1\) Michigan is a rapidly expanding metropolitan area serving southwestern Michigan, midway between Chicago and Detroit. Since 1950, the city has tripled its size and is now 24.4 square miles in area with a population of approximately 85,000 people. The central business district of Kalamazoo serves a trade area of roughly 250,000 people, but economic studies within the regional trade area indicated a steady erosion of the business district's dominant position. This loss of trade was due to the greater attraction of the outlying areas of the city, compounded by increasing traffic congestion at the city's centre.

After careful planning studies,\(^2\) the recommendation was made to close two blocks of Burdick Street (see Plate No. VI) between Water and South Streets to vehicular traffic and develop it into an attractive pedestrian mall. Detailed plans regarding additional on and off-street parking facilities, traffic flow and mall design were finalized. Two blocks were involved, the north block of Burdick Street, 264 feet in length,

\(^1\)Central Business District Profile, Kalamazoo. Downtown Kalamazoo Association, Kalamazoo Chamber of Commerce, Kalamazoo City Planning Department, n.d.

\(^2\)Kalamazoo 1980 Plan, Kalamazoo, Kalamazoo County Chamber of Commerce, Kalamazoo, Michigan, n.d.
"PLATE VI"
KALAMAZOO, MICHIGAN.

DOWNTOWN PLAN - 1980

Adapted from Kalamazoo City Planning Department Pamphlet, Central Business District Profile, 1959.
and the south block, 660 feet long with a sixty-six foot right-of-way.

Attractive features of pedestrian interest were constructed including a combined shrub and flower garden with a reflecting pool and also a vine covered special vehicle barrier wall at either end of the block. In both blocks the features were located to permit access to emergency vehicles. In the centre of the longer block other features included were: a children's play area; a colourful shelter; and a combination of pools, fountains and coloured lights.

The servicing of the stores fronting the mall has been well organized. In the longer block, stores and shops can be serviced from alleys at the rear or from side streets. Deliveries to and from the stores in the north block are, of necessity, made from the ends of the mall at off-peak hours in the morning and evening.

The results of the creation of the malls in Kalamazoo have been very favourable. The pedestrian traffic within them has increased by 30%; downtown parking lot patronage has increased approximately 14%; sample surveys indicate a 7% to 12% increase in the number of out-of-town customers using downtown store charge accounts; rental rates have increased, especially near or on the mall; stores on both sides of the mall are now in great demand as retail locations; three million dollars worth of building permits were issued in the mall area during the first year of its completion; gross sales for all
downtown stores showed an increase of 15% during the first year of its operation; the mall stores showed an even higher increase in sales than the total percentage for downtown.

The total expenses involved, including the cost of plans, land purchases and construction, amounted to $130,000.00. The returns in publicity from newspapers, television and magazine articles on this pedestrian mall are considered to be well over twenty million dollars. The mall has paid for itself many times over in the publicity which Kalamazoo has received, and in addition is proving to have been an extremely valuable contribution to restoring trade interest to the city centre.

Toledo, Ohio, has a metropolitan community of some 514,200 persons and covers an area of some 36 square miles. Between 1947 and 1957 the numbers of persons entering the downtown declined by 23%, and the numbers of bus-passengers dropped by almost 50%. Planning studies indicated that a drastic redesign of interior streets was required to minimize congestion in moving cars from access highways to parking areas; to effect the removal of through traffic from downtown streets; and to achieve the separation of pedestrian and vehicular traffic wherever possible.

Based upon a proposed plan for the redevelopment of downtown, involving land use changes, and improvements in the

DOWNTOWN TOLEDO

PROPOSED LAND USE

circulation pattern and parking, all in the proper relationship, the proposed public projects included improved access to and within the downtown area through the development. The malls were considered to make the area more attractive and convenient to the pedestrian and to be components in a new traffic system, aimed at separation of the pedestrian from the vehicle.

The malls in Toledo are intended to act as links between the main downtown parking areas and the shopping destinations. The 'shoppers' mall will include segments of Adams Street and Madison Avenue (see Plate No. VII), and the part of Superior Street between Jefferson Avenue and Jackson Street. In this mall the shopper can wander at his own pace within an aesthetically pleasing atmosphere. He will not impede automobile traffic, nor will his safety be threatened by the cars. Another pedestrian mall will be provided on Ontario Street. When these street segments are closed to ordinary vehicular traffic, there will be provision of lanes for the movement of emergency vehicles. Experimental malls were established on two blocks of Adams Street and two blocks of Madison Avenue between Huron and St. Clair. These malls were located in streets that are proposed for permanent malls in the downtown plan. The experiment showed that the closing of certain core streets does not greatly increase the problem of moving vehicles. The present excess capacity of many streets in the core is the reason that closing these segments of Adams Street and Madison Avenue proved feasible. The provision of malls in these streets
is not an attempt to rehabilitate a declining section of the downtown but rather is a means of enhancing the central and most intensely used parts.

In addition to these malls, a few segments of other existing streets will be vacated in order to consolidate blocks into larger sites. This will be the case in the sites set aside for the housing redevelopment and the municipal auditorium which is provided for in the plan for the downtown. The effects of the malls and the consolidation of blocks is to create superblocks. These superblocks will channel vehicular traffic on to somewhat fewer streets. As a result there will be fewer intersections and less congestion.

The effect of these malls, both upon the improved traffic circulation and the increased trade in the downtown of Toledo, are so far not available. The fact that they are considered as part of a wider plan for the redevelopment of the downtown area of the city, which will include the creation of superblocks with added pedestrian facilities, indicates the trends of centre redevelopment.

Miami, Florida, has a city area of some fifty square miles and serves a metropolitan population of over 1,296,993 persons, as at 1960. The very obvious decline of the Miami central business district gave reason for concern regarding the future of the area and for the possible decline in city centre attractiveness for business and commercial retailing interests.
"PLATE VIII"

MIAMI, FLORIDA.

TRAFFIC CIRCULATION, MAJOR PROPOSALS.

Studies, surveys and final reports produced a plan for a 'Magic City Centre' aimed at a revitalization of the downtown together with comprehensive planning measures for the entire city redevelopment. The plans envisaged a careful programming for the next twenty-five years and some aspects were projected beyond this to cover extensive roadwork on State and Federal Highways.

Basic to the planned improvements and redevelopments to the Miami downtown were the separation of pedestrian and vehicular traffic; improved access for vehicle parking; increased facilities for the pedestrian; improvements to the public mass-transit system, regrouping and the provision of central area sites for the retailing stores to improve their function within the central business district.

Traffic circulation improvements (see Plate VIII) include the following: the prohibition of on-street parking on downtown thoroughfares; the restriction of loading and unloading activities to the hours of light traffic flow, and eventually their confinement to a central loading dock within the central business district; the increase of the carrying capacity of streets by reduction of the number in the Miami downtown and the re-routing of traffic along thoroughfares without traffic signals or intersections.

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Among the proposals for increasing the safety of the pedestrian and the comfort in shopping is the complete separation of the pedestrian and vehicular traffic. Shoppers will drive via the expressway loop and one-way feeder streets through to a parking garage or lot near their destination. They will then proceed on foot via ground level malls and a system of elevated walks and plazas to their objective.

One of the most important provisions of the plan is the conversion of downtown Flagler Street (see Plate No. IX) from a primary traffic artery to a pedestrian shopping mall. The new concourse will be a broad, landscaped promenade stretching from a huge transportation terminal on the west to Biscayne Boulevard and Bayfront Park on the east. It will be the 'grand avenue' of the central business district and the most attractive and important shopping section in the metropolitan area. On holidays such as Christmas and New Year the Flagler Street Mall will feature colourful decorations and elaborate displays. It will be the showplace of Greater Miami.

A second shopping mall in the downtown area on Miami Avenue, from South Second Street to North Fifth Street, will be a landscaped pedestrian promenade bordered by stores and offices. It will have a landscaped pedestrian promenade bordered by stores and offices, but with a somewhat different character and appeal. It will be less formal and more intimate, complementing rather than competing with the larger and more exclusive stores in the downtown area. Shelter will be provided by multi-coloured
awnings suspended in checker-board pattern over portions of the concourse and the area will be attractively lighted at night.

By providing Pedestrian Malls and Shopping Precincts, together with those amenities and facilities which are principal features of shopping centres, efficient conditions are created for shopping and in this way the central retail area can recover much of its former attraction for the public. One further important result may follow from a carefully organized plan for city centre renewal. The provision of a central place, with its central services, functional areas and buildings, well grouped in an attractive setting, will help to restore the identity of the citizen with his city. This can act as a more powerful magnet to the public than any item which a purely commercial centre can provide.
CHAPTER IX

SUMMARY AND CONCLUSIONS

Summary

The present day trend of the population from the city to the suburbs has resulted from average increased economic levels and a desire by the populace to better their residential environment. Added to this is the fact that the city centre can no longer meet adequately all the demands placed upon its services from a very much greater population. The problems arising as a result of changes in the nature of functions of city central places, however, need analysis and corrective action in some cases in order that the city may retain a healthy environment for all the central place functions demanded of it and for which it exists.

This movement of the populace from the city has given cause for satellite service centres to be created in the suburbs to meet the increased demands for these central services, which the city can no longer supply adequately to its greatly enlarged metropolitan population.

New suburban shopping centres are an active threat to the city's retail centres downtown, as they provide better facilities for retailing and are designed to complement the use
of the motor vehicle. Although there are certain deficiencies in city services, indicated by the rise of the rival retail shopping centres, the central business district still has very strong commercial advantages from its location at the centre of a well established communication network and through the advantages of minimum shipping transport costs. Despite this, downtown's gross retail sales percentages are generally still declining and the changes in its retailing functions indicate that it is becoming more and more specialized in the type of goods it is marketing.

Several cities in the United States have attempted a renewal of their downtown central retail areas by creating better access facilities for shopping and by increasing the efficiency of the pedestrian areas at the city centre. This is achieved through the construction of malls and pedestrian precincts, and by preventing penetration to the city centre by heavy goods transport vehicles, which are terminated at off-street depots, for loading and unloading, before reaching the city centre.

The planning of renewal in some cities has also included the functional grouping of buildings, related by type of service, around areas wholly for use by pedestrians. The overall character of city renewal changes is intended to achieve greater consideration for the pedestrian within the city; a regrouping of functions to support the retail functions; and a new city centre road system to facilitate the movement of traffic, whilst
at the same time restricting it from further dissecting the city's central area.

The grouping together of people to form a large community creates a demand for a central place to be established for those central services essential for the community to become settled and economically structured, and in order that the community may develop administrative, commercial and cultural activities. Cities have developed as a result of social and economic forces grouping together in mutual support, and most cities have passed through certain phases in their physical structure as a result of these forces. The terms employed for these phases are: Concentration, which produces tightly knit groups of mutually supporting activities; Centralization, which results in the drawing together of institutions with the tendency for the people to assemble at central places for work within the city centre but not for residence at these places; and Decentralization, when some of the city's activities become detached as separate areas for industry, for commerce, for administration or for pleasure and relaxation.

After these phases of city structure have occurred, the city itself becomes separated within into general locations for specific central area functions, one of these being the central retail area. Despite this form of separation of central area functions or land uses, the areas are not precisely separable and much inefficiency occurs through the incorrect intermixing of central functions, many of which are not complementary to each
other. Competition occurs between central area functions for land use, with social and economic results which have been formalized by investigations of land uses in the city made by sociologists, economist, political scientists and geographers.

Of the theories put forward identifying the separation of the city into distinct areas, with each area having specific social and economic functions, the most widely known are the Concentric Zone Theory, the Sector Theory, and the Multiple Nuclei Theory. Each theory aims at identifying specific patterns of development of the city's central areas, each with its distinct functions and characteristics such as physical differentiation in the types of buildings; specific districts, such as financial district, the retail district and the hotel district; and social distinctions with wealthy residential districts having extensive parks, gardens and landscaped terraces, whilst poor areas of residence are associated with few or no gardens. The basic deduction made from all these theories is that different types of 'natural areas' occur within the city, each as a dominant form of land use to which a special function and characteristics may be allotted.

The volumes of traffic generated by city central functions are excessive for the existing street patterns and any further encouragement to vehicular traffic increase may well result in the city becoming so congested with vehicular traffic that no part will be accessible. Temporary expedients for car parking or street widening are pointless, modern traffic
volumes are so high, and the popularity and the influence of the automobile upon the city's form is so great that unless some more comprehensive planning is provided, cities will lose their form altogether. This is becoming apparent in many cases, particularly Los Angeles, due to the degree of accommodation provided for car parking and vehicular access. The solution, however, lies in improved mass transit facilities and in an improved circulation system within the city, with restrictions on the use of the automobile for employment only to centres and areas which cannot be served by regular mass transit routes. Tests of automobile speeds relative to mass transit speeds indicate that there is little advantage in time to be gained in using the automobile for the journey to and from work in the city's central areas, during the peak traffic hours.

Improved mass transit may only be possible for large cities or groups of large cities, however, the smaller cities may still suffer from the effects of over employment of the motor vehicle within their restricted central areas. An improved land use pattern for a situation such as this can only be provided by an improved road system including by-pass routes around the city's perimeter, and inner-ring roads to circumvent the actual city centre. One further solution is to form malls and precincts within the city, exclusively for pedestrian use, thereby reducing the complex pattern of small inner roads, whilst at the same time providing more land at the city centre which will be suitable for restoring a central grouping and a functional
order to retail establishments situated there.

Of all the central place functions within the city, few can be more productive of downtown traffic generation than the central retail areas with their high appeal to the shopper from all over the metropolitan area. The plan for Fort Worth provides an interesting example of an extreme movement towards complete pedestrian domination of the city, but since it appears to treat the city as one massive shopping centre, this commercial approach negates the value of the plan, in particular, by limiting the other forms of communication and the contacts essential for a true cultural centre to develop.

The hierarchy of retailing establishments and their activities in the city and metropolitan area may be classified through many systems. The basic reason for such classification is to analyze the retail activity associated with location. From such an analysis the shopping habits of particular sections of the metropolitan community can be determined. Taken over the whole metropolitan area, this can reveal the shopping habits of the whole community. Market analysts employ this technique in order to determine market areas for the volume of goods to be sold within each area from the type of retail establishments associated with each location.

Shopping habits permit a further study of the importance of the various types of shops and the reasons for the degree of attraction which each shop has for its customers. From the relationship of shop types and the merchandising associated with
each shop type, the grouping of shops in a complementary manner can be determined. This provides better competition opportunities and satisfies more customers. A case can therefore be made for improved shop groupings and for the elimination of many scattered and small retailing areas which are incapable of providing shop owners with a fair opportunity for development.

The reasons for shopping downtown, when taken together, provide the best summary of those factors which give the central retail area its unique attractive quality over all others in the metropolitan area. These reasons indicate that the city's central retail area has the widest variety of goods and services, prices and different kinds of establishments that can be found at any one location. It also provides the shopper with an unique opportunity for performing many shopping and business duties at one time and in one central area. The major disadvantages at present are: the lack of social amenities for leisurely shopping; the added hazards of parking traffic; the discomforts of congestion on the streets from other pedestrians; and the lack of visual amenity which makes shopping a nerve-wracking duty. These disadvantages reduce the retailing opportunities of the area and it is these problems, therefore, which must be eliminated, changing the shopping duty to one without strain, and with ample provision for rest and refreshment during the shopping tour.
Markets have very ancient connections with areas of social intercourse and exchange. The agora and the forum both provide classic examples of early retail market functional areas. They can not be regarded as being merely retail areas for they were primarily social centres and the marketing function of retailing of goods was very secondary in nature. It is unfortunate that the environment of present day market and retailing areas provide no such stimulus and they have become locations for quick transactions giving little or no opportunity for social enjoyment to accompany the purchase. Among the reasons for this situation are the pressures upon the space available and the emergence of the many types of specialized trading techniques, aimed at very high volumes of goods being sold with a minimum of staff overhead expenses. Stores with high volume sales techniques are the self-service store, the chain store and the large department store, which generally combines all forms of service. The small shops at the city centre are able to retain their trade by specializing in high quality goods and by providing a more highly personalized service. An examination of the variety of store types normally included, in city centres, provides evidence of there being three basic store types: variety; specialty and department stores. Each caters for a particular type of retail customer and concentrates upon a special type of merchandise and merchandising methods.
Basic to this analysis of store types and characteristics is the clear establishment of the fact that shops can be organized to complement each others' activities and to create a very healthy selling environment; on the other hand, neglecting these distinctions produces conflicts and reduces an area's sales potential and environment, to the prejudice of all. Stagnant areas of retail shops occur from incorrect siting of the shops, many of which, from their isolated positions, cannot attract customers and require better grouping and access opportunities for increased customer traffic.

Important spatial needs in central retailing areas are shown to be those required for the shopper and the grouping of retail establishments. Such land use is a prominent feature in the new towns in Great Britain, Sweden and Holland, and they are also basic to the success of the new shopping centres in North America. The spatial needs of retail areas are also shown very clearly to be no greater than before, particularly in the case of towns reconstructed after war damage, but by concentrating the smaller areas and consolidating them into one or two larger areas they become functionally more efficient. This method provides a better opportunity for operational efficiency within the same total area and is also fundamental for creating new opportunities for retailing. By providing the retailing establishments with sufficient land to form a central area upon which they may focus, a better environment can be produced for the shopper.
Due to present day population pressure upon the city's roads and central services, they are becoming overtaxed, and congestion of all services is inevitable unless redevelopment occurs. Redevelopment of city centres requires finances and legal sanction and both of these are usually limited. Pedestrian activity increases as population demands on central services grow, but as vehicular traffic increases the pedestrian activity is further inhibited. The result is a decline in the use of the downtown and a decline in retail sales, and this is reflected by lowering property values and reduced revenue to the city. A city, however, must remain as a centre for the region and the demands upon its services will always continue. One important asset in redevelopment schemes is the necessary maintenance of good regional links and road networks for the city's transportation and communication systems. These are essential for the prosperity of the whole community and their redevelopment often provides the opportunities for the clearance of certain city areas, which further assists in the overall redevelopment scheme for the city.

The changes produced by a new road system often provide opportunities for a better grouping of related functions at the city centre, and particularly in those natural areas containing specific central area functions. Through such means pedestrian precincts and malls can be created at the city centre, providing a nucleus for an overall regrouping of central place
functional areas; aimed at increasing the pedestrian facilities, giving better access to shopping facilities, and restoring a true central place character to the city centre. Very large cities pose problems with regard to developing such a system, but it is possible to create many pedestrian precincts within the large city, sited within different districts.

City redevelopment requires a very careful analysis of land use, and particular care in ordering the location of the central area functions, so that there will not be any inhibiting influence upon the function and development of any one of them. Generally this is difficult since many dominant forms of buildings are already grouped within certain areas and cannot be removed nor can their use be altered. This requires a very careful programming of future developments, many of which will be of a long term nature, in order that opportunities to alter their land use are not lost.

In newly developed areas, regional shopping centres provide an excellent example of efficient functional grouping of retail establishments about well planned areas for pedestrian access, with the car parking facilities and shopping amenities which are not usually provided in the downtown area. Caution must be used in making any such comparison, however, since the downtown area cannot operate in the same manner as a regional centre, and this is because it is not operated to suit
the policy of one owner, but is the centre of many complex values also. The dispersal of retail functions in the downtown is therefore to be expected and does not greatly reduce the retailing opportunities, provided that the dispersion is not accompanied by further fragmentation. Fragmentation implies small retail areas becoming further divided up by main roads into short lengths of street, which are basically useless for attracting good customer traffic. What is required is a restoration of pedestrian access to the area and within it, between the shops. This is achieved by closing off the vehicular approaches and by turning the road space into a central place, an area about which the retail shops can become regrouped and create an environment more suited to their basic purpose. Retail areas such as these, occur in most large cities, but few city governments have so far made any gesture towards such radical forms of central area redevelopment, either from the lack of legal sanction or from the high costs.

Achievements in this direction have been made with success in Kalamazoo, Michigan; Toledo, Ohio; and Miami, Florida. All such changes are very boldly made, about established centres of retail trade within the city's central areas. But these changes are made in areas forming well integrated components in a larger scheme of things, a very clearly balanced and comprehensive city redevelopment scheme. All such changes are conditional upon the redevelopment
planning being based upon three very important factors: (1) reorganization of land uses, as for example the roads becoming plazas and malls for pedestrian use, together with rehabilitation, (2) the provision of ample automobile parking accommodation, (3) a new city centre road network.

Two other factors emerge from the implementation of this policy of closing small side roads and the creation of malls and pedestrian precincts. The first is that through a more concentrated use of fewer roads, vehicular speeds and the volumes of traffic increase. Less traffic lights and less intersections means less stops and less cross-traffic to impede cross-city movement. The second factor is that the architectural improvement of the city is given a greater opportunity by the increase in the central place areas provided. Miami, Florida, has taken the fullest advantage of the opportunities offered to turn one of its central thoroughfares into a grand avenue with every form of flowering plant; trees; colourful arrangements of awning and street decorations; and all ordered so as to take advantage of the physical proximity of the seashore. Other street decorations and social facilities, such as ornamental gardens, garden benches and a children's playground, are also included in the scheme for the malls at Kalamazoo, and similar improvements to the city centre's environment are projected for Toledo.

These serve to indicate that the creation of malls and plazas for pedestrian use are not only improvements to the
functional efficiency of the central areas of the city, but also permit the return of some of the social charm and character to the city, both of which are sadly lacking in most North American centres.

Conclusions

Detailed examination of the area of interest established by the hypothesis, namely, the provision of improved pedestrian facilities for shopping in the central retail area of the city, has required an analysis of each of the factors involved. These have revealed that the central retail area is a 'natural area' of the city with a particular land use which requires careful consideration of the social and economic factors which are involved. These factors require improved pedestrian access to the retail establishments located there, an efficient grouping of the establishments, and the provision of certain amenities and facilities complementary to its functional efficiency as an area for social and retail activities.

These demands go far beyond the construction of a pedestrian mall or a precinct and involve analyses and the reorganization of land use and the removal of improper uses together with a planned order of rehabilitation, redevelopment, conservation and renewal. Studies are also required to be made of the following related subjects: the system of road
communications, not only within the city but at its periphery and junction with main highways; the need for greater employment of mass transit systems within the city and the suburbs; the provision of parking space for the automobile within the city; grouping and order in supporting retail establishments, to create greater functional efficiency; the relationship between each type of retail establishment and the necessity of correctly locating them, so as to produce a stronger retailing environment in the central retail area of the city; the methods of market analysis employed in order to estimate the sales volume for shopping centres; and the actions taken by the major retail houses to protect and maintain their own share of the volume of sales required to keep them functioning in the downtown area. In addition, it has been found necessary to examine the architectural considerations required for producing the social and aesthetic elements which have appeal for the shopper within the shopping centres of North America, and the new town centres in Great Britain, Holland and Sweden.

The virtual disappearance of the social element in city centre marketing areas may indicate a further weakness in the existing structure of the central retail functions of the city. It is also indicative of the need for a more compatible grouping of similar central place functions in closer proximity to each other, so as to produce greater competition of the amenities offered. But this implies a greater degree of control
and planning in the land uses within the core of the city, than is the case at present.

All of these conclusions lead to the need for an even wider analysis of the city itself; of the present groupings and locations of all city centre functions, and of their relationship to the existing road communication system both within the city and external to it. This larger study is seen to be the basis of city renewal plans, such as those for Kalamazoo, Toledo and Miami, where the plans for renewal commence with a review of the major arterial roads and external highways which bring in traffic and are essential adjuncts to city progress. The relationship of the city's inner traffic circulation system to these highways is then conditioned by the location of the central place functions, within the central areas of the city. City redevelopment within the core and the surrounding areas appears to follow similar principles in the cases noted, and they make provision for improved and larger areas for pedestrian movement, which includes the construction of malls and pedestrian precincts. In addition each such innovation is considered as a component in the revised traffic circulation pattern within each city.

All such city redevelopment plans have certain details in common. The existing central retail areas are strengthened by grouping them as one whole area, solely about the retail shopping function, and by the provision of more pedestrian facilities. The planning designs are bold and do not consist of
small, piece-meal 'touching up' of the areas involved but are clear decisions, and the physical changes to the city are also clearly related components in a master scheme.

The original hypothesis is therefore to be understood as a statement which is limited to physically evident symptoms of central area 'malaise' and must be considered as only a beginning to a further and a wider enquiry, and which has been indicated in part by the areas of research required for this thesis, as stated at the beginning of these conclusions. Further enquiry must be concerned with the study of central place functions of the city and the economical employment of land and land use at the city centre.

The study of the regional shopping centre has provided information on a most important subject and has given an indication of the dangers inherent in a policy permitting the development of satellite centres, clustered about the periphery of the city. These centres have a positive attraction for the automobile-oriented shopper and pose direct and serious threats to the security of the retail trade centre within the city central area. These retail centres, within the central area of the city, are the main magnets which draw the metropolitan shopping population. Their continued patronage is essential if the city is to realize more financial support for its responsibilities in maintaining other services. But the discomforts attendant upon present-day downtown shopping further reduce their appeal for the shopper, and with this,
also can only reduce the city's revenue. It is clear that city redevelopment is directly related to the maintenance of the popularity of its central functions, of which the central retail area is a component. Without measures being taken to ensure their long term security, the menace of external and rival centres of retail trade will continue to further weaken the city's present dominant position.

It would appear to be essential to make a full examination of the extent to which the suburban shopping centre may be expected to expand, and the probable limits to which the city's economic strength may permit this to occur. It also appears to be very necessary to examine the countermeasures which may be taken in order to meet the challenge from this form of organization. At present the situation is developing into a rivalry between the new large regional shopping centre and the city centre for the domination of the retail trade within the metropolitan area. In the future it is possible that this will extend even further, perhaps also for dominance within the whole economic region of which the city is at present the centre.

The validity of this study lies in the examples given of the developments within cities in North America and in Europe, where the restoration of the pedestrian character of the city centre has been made, either by a completely new design or by the consolidation of central place areas into pedestrian shopping malls and precincts. The principle is
accepted and is being followed in the greater number of large city redevelopment schemes, again, within Europe and North America. The examples of such cities has been given as Philadelphia in the United States and Stockholm in Sweden.

The limitations of this study are indicated by the absence of any arguments which would negate the principle of pedestrian dominance of the city's central retail area, or that it is necessary and essential to the restoration of the strength in the economic position of the downtown area. Only in the case of Los Angeles has it been possible to point to one example of a major city where the downtown is almost non-existent, and where pedestrian activity within the city centre is comparatively limited. It is generally admitted, however, that this is an unique case and that within the foreseeable future this situation will not continue. For one dominant reason, if for no other, the high cost of road maintenance is making very heavy inroads on city resources and severely limiting the financial basis of many of the other services the city is obliged to provide.

The investigation which has been necessary for this thesis, to develop an argument for the original hypothesis, has uncovered a great many other and related subjects, all of which require much further study and analysis in order that the significance of their principles may be fully appreciated. It has not been possible to develop them further without introducing a greater emphasis on one particular topic and
creating an imbalance in the arguments presented here.

It must be concluded finally that the present form of city development, and the economic base on which this generally depends, does require that city central area functions remain dominant. Intrinsic in this requirement is the demand that the city central retail areas remain areas of great economic strength and stability. One clear means of attaining this lies in the encouragement of the shopper by the introduction of pedestrian facilities, through malls and precincts, designed to restore the highest possible measure of comfort and convenience in the use of the downtown shopping areas.
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