SERVICE CENTRES IN METROPOLITAN AREAS

A Study of Trends, including Aspects of Environmental Design

by

John Brine

ABSTRACT

The thesis presented is that current trends in shopping habits within affluent urbanised societies are well enough defined to significantly guide planners in the selection of optimum locations and designs for planned service centres within metropolitan areas.

Changing shopping habits and changes in the retail industry are closely inter-related. This cyclic relationship between the consumer and the retailer is further actuated by changes within the metropolitan system and by the prevailing economic situation. An appreciation of these factors may allow the optimum location and form of service centres, at any one time, to be identified. Whilst long term forecasting should be avoided, it is possible to show that through a study of metropolitan areas and their major subsidiary centres, the apparent trends in consumer behaviour and the action of the retailer, it is feasible to discuss the emerging pattern of service centres within metropolitan areas with some confidence.

The research supporting the writer's thesis includes a detailed critical appraisal of trends, over the last twenty years or so, in both consumer behaviour and the retail industry. A longitudinal series of surveys undertaken by the writer supplies further evidence of the changing shopping habits of consumers in part of a large metropolitan area. These surveys, the methodology of which is fully explained, also indicate the impact of a planned regional shopping centre within a metropolitan area.

In discussing trends in the design of service centres certain aspects of the physical environment at selected centres are critically examined, and some general comparisons made by the use of abstracted plans drawn at the same scale and by photographs. The "attractiveness" of a shopping centre to consumers may depend in part on the environmental amenity of the centre. It is suggested that this notion should be explored further by future research.
ACKNOWLEDGMENTS

The writer is very conscious of the fact that this work would not have reached completion had not assistance and encouragement been received from various individuals and organisations. So many people have been helpful that it is impracticable to compile even a representative list of names, but the writer sincerely thanks all who in some way contributed to his research.

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Finally thanks is due to the understanding of J.M.C.B., Z.M.W., N.A.P. and D.A.L.S.
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INTRODUCTION

The thesis presented is that current trends in shopping habits within affluent urbanised societies are well enough defined to significantly guide planners in the selection of optimum locations and designs for planned service centres within metropolitan areas.

It follows that the service centre itself, and the socio-economic functional area it serves, is a critical element in the development of form patterns within metropolitan regions. An awareness of, and sensitivity to, this situation is of importance to everyone concerned with decisions regarding metropolitan form.

Any discussion of changing patterns of service centres must be integral with a discussion of changes in shopping habits and changes in retailing. Changes in retailing are very closely related to changes in the urban system. As James Simmons has shown, in some detail for Chicago, changes in retailing are partly the result of the new urban and metropolitan pattern. They also partly stem from the action of the same factors which have given our urban areas their present form. To understand the retail

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1 James Simmons, The Changing Patterns of Retail Location, Department of Geography Research Paper No. 32. (Chicago: University of Chicago Press, 1964)
pattern requires an understanding of the ecology of urban living and the process of urban growth. This understanding will bring us to optimum decisions regarding the location and design of service centres within metropolitan areas, and consequently to some realistic knowledge of the factors intrinsically influencing metropolitan form patterns as they are now evolving.

Supporting the thesis this dissertation has been developed as follows:

Chapter One, The Metropolitan Area and the Intra-Metropolitan Central Place attempts to establish a conceptual and spatial framework in which the ensuing discussion of service centres within metropolitan areas can be most usefully developed. Concepts and measures of metropolitan areas are examined and the discussion proceeds to a short appraisal of urban ecology and central place theory in so far as these subjects are essential to an understanding of the intra-metropolitan central place. This Chapter presents the metropolitan areas as a dynamic spatial unit, and the intra-metropolitan central place likewise as a vital centralising element whose viability must be appreciated in time as well as in space.

Chapter Two, Trends and Techniques in Metropolitan Retailing, in three major sections critically examines the phenomena which make up the components of what may be described as the 'retail spiral', resulting from the interaction of consumer behavioural modes and the responses of the retailing industry to this behaviour. This Chapter identifies, analyses and comments upon trends in consumer behaviour, particularly those trends in consumer evident since the 1939-45 war, and the response to these trends that the retail industry has made. The notion that the
3.

interaction between the consumer and the retailer is a cyclic process is considered, and the discussion proceeds to a critical review of the techniques of site selection, demand and area estimation, reaching conclusions regarding the validity of certain techniques in the current metropolitan situation.

A series of surveys made by the writer are presented in Chapter Three, which is titled Changing Shopping Habits: A Metropolitan Area Case Study in Australia. This chapter sets out to carefully detail the methodological bases of the writer's research, and with the aid of tables and figures demonstrates what conclusions may reasonably be drawn regarding the changing shopping habits of respondents within the survey area. The conclusions reached from these surveys in relation to the evolving shopping habits of consumers and the impact of a planned regional shopping centre within a metropolitan area form an important part of the evidence supporting the writer's thesis. It is hoped that, with the findings from other research, the writer's original work will contribute in a small way towards our growing understanding of consumer behaviour in a metropolitan context.

Chapter Four, Changing Shopping Habits and New Shopping Environments, looks at other relevant studies of changing shopping habits and traces the development of new patterns of shopping behaviour, considering how these patterns influence the distribution of service centres are discussed, and the validity of out-of-town shopping centres in the British context is questioned. The environmental characteristics of new shopping developments are discussed, and it is noted, for instance, how certain recent innovations, such as the pedestrian precinct,
are now accepted as the norm in service centre developments by both consumers and shopkeepers.

This chapter concludes with a discussion of certain selected service centres, and the question of the relative attractiveness of these centres is raised, particularly from the point of view of the environmental amenity that they offer the shopper. For the purpose of allowing some visual comparison to be made of the scale and environmental character of the various centres, a series of simple plans, at a scale of 1:2000, supplemented by the writer’s photographs, is included following this chapter.

Chapter Five, Emerging Service Centre Nodes in Metropolitan Areas, draws attention once more to the question of the metropolitan area as a whole and notes how in affluent metropolitan regions the major subsidiary centres are growing in size and importance. In Great Britain the situation of the new towns as service centres within metropolitan regions is critically discussed, and the fact that such planned communities are becoming increasingly less self-sufficient is noted. It is suggested that a more valid local government boundary structure than that which normally exists may be achieved by relating local government administrative boundaries to the areas of influence of the major subsidiary service centres. Finally, the process of sub-centring is shown to be an international phenomena in metropolitan areas. An understanding of the emerging centre structure, therefore, is a basic requirement for the most effective planning of metropolitan areas generally.

Section 6.0.0, A Note in Conclusion: Concerning the Future of Service Centres in Metropolitan Areas, considers briefly and as a whole
some of the points and conclusions previously subjected to a more
detailed appraisal. This concluding note, in extending the discussion,
makes some comment related to the future of service centres within
metropolitan areas from the point of view taken by this thesis, which,
it is believed, the evidence presented amply supports.

A bibliography of the references cited is included following the
Appendices. As a great amount has been published relevant to the
areas of interest of this study a general bibliography has not been
attempted. Consequently, many useful works are available which have
not been cited in this dissertation and may have been of some influence
on the writer. Where the source of information or inspiration is
consciously known proper acknowledgment is naturally made.

The researcher in this field will at an early stage turn to the
bibliographic study of Brian J.L. Berry and Allen Pred.1 The writer
found it not unrewarding to consider the evidence of interest in the
various aspects of central place studies by analysing the number of
papers per section per year in the Berry and Pred bibliography. This
brief analysis is presented here as Appendix A.

Of the sixteen sections in Berry and Pred, five were selected as
being particularly relevant to the writer's area of interest within the
general field of central place studies. The tabulated analysis might
reasonably be said to show that in the seven or eight years after 1949
the rate of publication of papers showed a rising interest in those aspects

1 Brian J.L. Berry and Allen Pred, Central Place Studies. A Bibliography of Theory and Applications. (Philadelphia: Regional Science Research Institute, 1961, and Supplement through 1964)
of central place study most pertinent to central places within urban areas. No special significance or importance is attached to this analysis. It is felt, however, that the emergence of the major planned regional shopping centre in the United States of America as an important node in the metropolitan landscape in the years covered by the analysis, is not unrelated.

The title of this dissertation includes the word "trends". Trends as tendencies in time, with particular reference in this study to the last twenty years. By the end of the nineteen forties Great Britain was showing the world signs of a strong recovery from the 1939-45 war. Post-war reconstruction of city centres, the working of the Town and Country Planning Act of 1947, and the implementation of the New Towns policy was watched by planners in other countries with interest and respect. In many parts of Europe and Scandinavia affluence eventually returned and has since magnified to an extent not normally envisaged in the immediate post-war years. In North America the continuation of patterns of urbanisation which accommodated the affluent life style of the middle classes continued. The more affluent parts of the Pacific, notably Japan and Australasia, have tended to follow certain North American precedents. Australia, particularly, has followed closely those aspects of urbanisation first studied by central place researchers in the United States.

It is enough to point out in this introduction that whilst the writer seeks to present an adequate overview of the service centre in the metropolitan area, particularly with regard to emerging trends in the twenty years between, say, 1949 and the beginning of 1969, the nature of the dissertation must prevent a fully comprehensive coverage.
Much of this study is concerned with trends, with changes in time. But what of prognosis? It is as well to be reminded by Michael Young,¹ in his recent assessment of the demand for forecasting, that forecasters can be embarrassingly mistaken.

Reasonable speculations, however, are essential. In discussing the analysis, interpretation and presentation of social surveys, C.A. Moser² makes the following statement:

"There is surely room in every research report for the research worker's own ideas of speculations, even if he cannot offer chapter and verse to substantiate them. In the course of his work he must inevitably develop theories and hunches, so long as he makes clear they are no more than this, it is a pity to omit publishing them with the results."

In this study it seems reasonable to make some unsubstantiated comment, but when this occurs it will be clearly indicated. Well considered prognosis is one of the skills of planning.

A further skill of the planner is the technique of communication, leading to co-operation and hence to effective teamwork. As the writer considers teamwork essential in the planning process, including as much contact and stimulation as is feasible among research workers proceeding independently on like projects, he has been acutely aware at all times

that his individual study should be related where possible to the work of others. A considerable part of the research time spent by the writer on this project in Britain has, therefore, been used in keeping abreast of current progress in the various aspects of research on service centres within metropolitan areas.

It is good to be able to report that recently a Social Science Research Council grant has been made towards a research project entitled "Major Suburban Shopping Centres - their potential and impact" which will be carried out by the research team of the Distributive Trades Research Unit of the University of Durham, under the direction of Dr. David Thorpe. This project is mentioned here as an important research team study which will investigate in a British context some of the questions considered by this dissertation.

But many aspects remain for fresh study and appraisal, and it is felt appropriate to comment in the final section of this dissertation on emerging lines of research which can be fruitfully followed by research teams.

As a planner, the writer is concerned that academic research related to his profession has practical implications which may be recognised and made use of in the planning process. With regard to the field of study covered in this volume, it is suggested that the more completely the forces contributing to the process and form of metropolitan development are understood the more efficiently and realistically the planning of service centres in both location and detail can be achieved.

This work of critical assessment and research by an individual architect/planner would hope to make some small contribution towards this understanding.
CHAPTER 1

THE METROPOLITAN AREA AND THE INTRA-METROPOLITAN CENTRAL PLACE
# THE METROPOLITAN AREA AND THE INTRA-METROPOLITAN CENTRAL PLACE

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SECTION 1.10 THE SCOPE AND INTENT OF CHAPTER 1.

The opening chapter of this dissertation is necessarily of a broad scale, as it attempts to establish a conceptual and spatial framework within which the following discussion of service centres within metropolitan areas can be most meaningful.

Consequently, the main concepts examined are:
- The Metropolitan area, as a dynamic spatial unit.
- The Service Centre, as a major central place in classic central place theory, and more particularly for the purposes of this study, as an intra-metropolitan central place.

The behaviour of the people who live within the metropolitan area is briefly discussed in the section entitled Urban Society. A later Section will look specifically at the behavioural modes of consumers, and at this stage our main concern is with the general development of urban ecological theory and what effect the physical environment may have on behaviour patterns.

As most studies of service centres have approached the subject by attempting to rank the centres examined in accordance with the convenient reference frame of central place theory, with its accepted hierarchical arrangement of central places which obediently nest within the area of influence of higher order centres, some comments are made on classification and ranking studies.

From the following discussion and critical appraisal of metropolitan areas, urban society, and central place studies within the metropolitan frame, it is hoped to reach a realistic understanding of the basic dynamics of metropolitan living. Against this background the interaction of the consumer and the retail trade, which forms the subject for the second chapter, may best be viewed.
SECTION 1.2.0 METROPOLITAN AREAS

1.2.1 THE URBANISING WORLD

Melvin M. Webber has caused us to take fresh bearings when assessing urban regions. The previously accepted concept of a rigid geographical space, often centred to a focus, may be superseded by Webber's "non-place urban realm". This implies more than a many centred urban region, but rather a world scale network where Cost/Distance and Time/Distance frictions are minimal. We may all participate to some extent in this world space with its non-Euclidian reference frame. The most effective participants, however, are those leading politicians, industrialists, professional consultants, academics, entertainers, and so on, whose life style assumes an intelligent use of the available media of communication, and not a little money. For the citizen of average affluence this is a realm in which there is no pressing need for active participation, and to which there is an appreciable cost barrier. Thus, world citizenship is a fact and at the same time an un

reality.

Discussing the probable development of patterns of human settlement, C.A. Doxiadis has projected urban growth to the stage

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where "Ecumenopolis" occurs.

"a continuous network of settlements covering the entire earth, with many centres of different magnitude connected by many branches of varying importance, within which large and small areas of natural landscape with different degrees of man's intervention will be incorporated."

Doxiadis is speculating, perhaps provocatively. Similarly Webber is stimulating us into a new way of considering urban systems.

The reality of the present metropolitan situation has been examined lucidly by Peter Hall in his analysis of "The World Cities". Of the seven major metropolitan areas he describes, two, Randstad and Rhine-Ruhr, have polycentric urban regions. With the remainder of the world cities, it is remarkable how the original central areas have persisted in importance over time, functionally pre-eminent. This persisting dominance of the traditional centre is subjected to further consideration later in this study.

1.2.2. A METROPOLITAN SETTLEMENT AREA

In seeking to establish a realistic reference frame within which a reasonably clear concept of the term metropolitan area might be expressed, the writer finds himself in closest agreement with the idea of the "Metropolitan Settlement Area", recently put forward by G.A. Hoekveld.

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1 Peter Hall, The World Cities (London: World University Library, 1966)

Interestingly enough, Hoekveld’s concept is based on an assessment of the quality of life and life style in much the same way as Webber measures involvement in the “non-place urban realm”.

For Hoekveld, the Metropolitan Settlement Area may be defined as a combination of settlements which because of their development are so closely connected with the metropolis that the use of the “possibilities of participation” in metropolitan life and of metropolitan “assets” is part of the way of life of most of the inhabitants: The metropolis is within their “scale of life”.

Having based his definition on participation, Hoekveld stipulates a minimum population of 500,000 inhabitants for his metropolis. Like most other commentators, he considers 500,000 inhabitants constitute a qualitative as well as quantitative minimum. Other settlements, besides the nucleus town itself, are usually incorporated in the urban area. Beyond this, at some distance from the urban area, further settlements are incorporated. These are not physically adjoining the urban area but in other respects are very much involved with it.

This concept of a Metropolitan Settlement Area is system based rather than geographically based relying on evidence of physically continuous dependencies. The writer considers that such a concept is appropriate when Metropolitan Areas are considered, and accepts this definition for the purposes of this dissertation. In the following sections some other definitions of urban form patterns are discussed.

1Webber, loc.cit.
1.2.3 THE CONURBATION

Patrick Geddes was seeking an extension of our urban terminology when he coined the word "conurbation".

"Some name then for these city regions, these town aggregates, is wanted. Constellations we cannot call them; conglomerations is, alas, nearer the mark at present, but it may sound unappreciative; what of "conurbations"? That perhaps may serve as the necessary word, as an expression of this new form of population-grouping, which is already, as it were subconsciously, developing new forms of social grouping, and of definite government and administration by and by also."

This quotation from Geddes seminal work of 1909 leaves little doubt that to the sociologist/planner, as Geddes may most conveniently be described, the word Conurbation signified social grouping and dependence more than contiguous physical structure.

For the Britain of sixty years ago, Geddes identified seven conurbations outside of Greater London: Clyde-Forth, Tyne-Wear-Tees, Lancaster, West-Riding, South Riding, Midlandton and Waleston. Significantly, all apart from London were coal field based.

By the year 1932 C.B. Fawcett's conception of the word conurbation was much more rigid than that which had been held by Geddes.


It may be that the interest in quantitative techniques by geographers, which developed significantly in the inter-war years, reorientated the interest Patrick Geddes had aroused in the subject away from social linkages to the more quantifiable physical aspects.

In 1940, however, the report of the Barlow Commission commented that Fawcett had "overemphasised the pattern of bricks and mortar" and was relatively unconcerned with the inter-relation of the centre and the periphery through commuting and daily contact.

By 1951 the Registrar General had recommended conurbations for census purposes, and had defined six of them in Britain: London, South-East Lancashire, West Midlands, West Yorkshire, Merseyside and Tyneside. A recognition of the phenomena Geddes had observed was becoming widespread, for in 1950 the United Nations population commission had suggested that tabulation should be made for agglomerations, or clusters of population living in built-up areas.

In the mid nineteen fifties, official publications provide evidence of the difficulty at that time of reconciling a clear definition with what in fact was a situation closer to Geddes' concept of the term conurbation.

"...each conurbation should be an aggregate of local authority boundaries. Three other factors should be taken into account; first that the conurbation generally should be a

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1 Barlow, Report of the Royal Commission on the Distribution of Industrial Population, Cmd. 6153 (1940), p 6
continuously built up area, but on the one hand should not include ribbon development and on the other should not necessarily exclude a built up area separated by a narrow strip of rural land from the main built up area to which it was strongly attached for employment and other reasons; second that a local area should be considered for inclusion in a conurbation to whose focal centre it was strongly attached as a centre for work, shopping, higher education, sport and entertainment; thirdly that some consideration should be given to population density."

Earlier it had seemed sufficient to equate the term "conurbation" with "urbanised area".

The 1961 Census showed that, taking the seven conurbations of Britain together, their population in 1961 was almost identical to their population in 1951. 18,685,530 to 18,678,035. It was known that many of the central cities of these conurbations had had falling populations since the early 1930's. In the period 1951 to 1961 the population of Liverpool fell by a further 5.5 per cent, the population of Manchester fell by a further 6 per cent, and the London county area fell by a further 4.6 per cent. The population of Great Britain as a whole at the same time increased by about two and a half million people.

Superficially, it could be said that the main objectives of the Barlow Report were being achieved. This was in fact not the case, as

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1 Registrar General, Report on Greater London and Five other Conurbations, (Her Majesty's Stationery Office, 1956), p xv
the official figures registered changes in population within relatively fixed administrative areas, and all the conurbations were in fact spreading beyond their census boundaries growing in area. Whilst population statistics for the central parts of the conurbations remained relatively static or showed some actual decline, some great increases were taking place on the edges of the conurbations. The West Midlands conurbation experienced a growth in population of 4.3 per cent in the years between 1961 and 1961, within the official conurbation boundary. But outside this boundary, in the administrative areas immediately adjacent, a population increase of 26 percent was experienced in the same time period.

This organic vigor of the British conurbations was commented on by Sargent P. Florence, who claimed that the growth and persistence of the large conurbations was mainly due to three sets of economic advantage.

1. The close proximity of a large market of consumers.

2. The large urban "productive" unit at a favourable spot with low cost utilities, a pool of labour, multiple localisation and linkages between industries.

3. The hierarchical centre supplying specialist services.

Speaking at the same occasion as Sargent Florence, J.R. James emphasised that from a planning point of view the conurbation cannot be looked at separately from the region it dominates:

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"The only valid concept is the city region which effects a marriage between the built up core and the area which comes under its direct social and economic influence and which is shaped and held together by its system of communications."

In concept, if not in official definition, the influence of the major urban area was being seen again as Geddes had seen it.

1.2.4 URBANISED AREAS AND METROPOLITAN AREAS IN THE U.S.A.

The American Bureau of Census both recognises and uses the terms "urbanised area" and "metropolitan area." The latter represents the demographic and economic entity.

The urbanised area embraces the urban fringe outside and contiguous with the central city. Minimum criteria are:

1. A central city of at least 50,000 population.
2. Population density in the fringe of 2,000 persons per square mile or a minimum population of 2,500.
3. Other land uses associated with the central city.

More emphasis, however, is placed on the metropolitan area; firstly, because they are more stable units and secondly because the components are also administrative units which makes statistical manipulation a good deal easier. The metropolitan areas are, therefore, functional units based largely on the pattern of journey to work.

Known officially as Standard Metropolitan Statistical Areas, they are defined as having:
1. A central city of at least 50,000 population.

2. The areas to be grouped within the central city must have
   a. 10,000 non-agricultural workers or contain 10 per cent of the non-agricultural workers working in the metropolitan area.
   b. have at least two thirds of their employed population in non-agricultural work.

3. Have at least 15 per cent of the employed population working in the central city.

It is to be noted that 50,000 is the base level in population for the central city for both urbanised areas and metropolitan areas. Thus the term "metropolitan" as used in American studies clearly does not imply great size, and is at variance with the writer’s usage of the term, when a minimum population of 500,000 or so is envisaged.  

The main criterion listed above is that of commuting to the central city by a minimum of 15 per cent of the employed population. From this a succinct definition has been produced as follows:

"A standard Metropolitan Statistical area is an integrated economic unit with a large volume of daily travel and communication between the entire city and the outlying parts of the area.”

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1 See Section 1.2.2 Hoekveld, Loc cit.
The results of an international study of urbanisation were published in 1959¹ and used three simple minimum criteria for selecting metropolitan areas:

1. An urbanised area not less than 100,000 population.
2. A central city of not less than 50,000 population.
3. Administrative units contiguous with the central city must have two thirds or more of their employed populations in non-agricultural occupations.

On this basis the study showed 58 metropolitan areas in the United Kingdom.

1.2.5 THE CONCEPT OF METROPOLITAN COMMUNITY

Discussing the planning of Greater London, D.L. Foley² points out that the concept of "metropolitan community" has been very little used in Great Britain. Foley considers that the concept of "conurbation" most usually used in this country

"...does not provide a sense of (or faith in) community structure that is implicit in the metropolitan community concept."³

This lack of faith in community structure that Foley senses the term "conurbation" has come to imply may arise primarily from the fact

¹The Centre for International Urban Research, A study of the World's metropolitan areas, (Berkley: University of California Press, 1959)


³Ibid., p 57
that, previously, easily quantifiable physical attributes have been associated with the term. That this is probably not consistent with Geddes' own interpretation has been mentioned above.

L. P. Green\textsuperscript{1} has defined a metropolitan region as

"a region of intense movement of people, goods and services between residential areas and industrial and commercial centres whose existence and structure are largely a function of communications and whose boundaries are determined by the degree of human contact"

This is most certainly a qualitative, community acknowledging definition.

In defining metropolitan Lancashire (with Manchester as the central city) Green chose a standard of 16.8 per cent commuting to form the inner region. This inner region uses almost the same standard as the U.S. Bureau of Census figure mentioned above, and in this instance almost coincides with the boundaries of the conurbation.

Taking an outer region where the commuter rate exceeds one per cent of the total occupied population, Green found his standard covered the whole of the south east Lancashire conurbation and added to it an area to the south and east. This marked the extreme outer limit of the cities influence and did not involve any intense movement, such as found in the inner area. For example, of the total working population within the provincial metropolis, 98 per cent were from within these extreme outer limits but 91 per cent were from within the inner metropolitan region.\textsuperscript{2}

\textsuperscript{1}L. P. Green, \textit{Provincial Metropolis}, (London: George Allen and Unwin, 1959) p 27.

\textsuperscript{2}Ibid., p 127
Additionally, Green noted that the contribution of the outer zone was 24,644 workers or only 2.3 per cent of the total occupied population of the outer zone.

Allowing that the fall off in the rate of commuting is rapid with increasing distance, and that only a small amount of movement in this case takes place to the central city from outside the official conurbation, this type of study is useful as a broad approach to regional organisation, and the concept of metropolitan community a valid concept to hold.
SECTION 1.3.0 SERVICE CENTRES

1.3.1 SOME DEFINITIONS

Before discussing the intra-metropolitan central place at some length a few concepts should be introduced. The idea of a metropolitan area has been established above, and some simple statements as to the meaning of the term "Service Centre" would seem appropriate at this stage. It should be noted at the outset that the hierarchical distribution of service centres as central places in geographic space is the major postulate of classical central-place theory, as laid down by the German scholars, the geographer Walter Christaller\(^1\), and the economist, August Lösch before the 1939-45 war. The terminology used by Walter Christaller in 1933 has been well re-presented, in a partly modified version, by Hans Carol\(^2\) in 1960, and in addition, his seminal study is now available in English translation.\(^3\)

For the purposes of this study,

A service centre is a focal point where shopping, entertainments, cultural and professional services are provided.

A service area is that area served by the service centre, and the area from within which people seek the services of a particular centre.

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\(^1\)Walter Christaller, *Die Zentralen Orte in Süddeutschland* (Jena: Fischer, 1933)


The service population is the number of people who use the centre. They are normally only a proportion of the total population living within the service area. This proportion varies according to the local circumstances, and usually it increases with proximity to the centre.

These concepts were introduced in Great Britain by several geographers following the central place studies of Walter Christaller. Notable early British contributors in this field have been A.E. Smailes, F.W.H. Green, H. Bracey and J.B. Fleming.

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3 H. Bracey, "Towns as Rural Service Centres: an index of centrality with special reference to Somerset". Transactions of the Institute of British Geographers, publication No. 19 (1953)

1.3.2 CENTRAL PLACE THEORY

Central place theory has as its most fundamental conclusion the proposition of a hierarchical arrangement of service centres. As B.J.L. Berry, H.G. Barnum and R.J. Tennant\(^1\) have stated,

"Central place theory is the theory pertaining to the spatial aspects of retail and service business. Among these spatial aspects are the location and groupings of central functions, the consequent size and spacing of central places, consumer travel behaviour, and the size, shape and arrangement of trade areas."

In this way classical central place theory begins to provide a scientific basis for understanding the geography of retail and service business. Regularities in facts may be predicted from the theory put forward by Christaller,\(^2\) and the work of the economist August Lösch, in independent derivation, has made the theory explicit.

Because of the many regularities which have appeared in the last thirty or so years from the results of different researches, many investigators have concluded that a central place hierarchy is a fundamental feature of the geographic organisation of economic life. Empirical regularities emphasized by these investigations include:

1. A hierarchy of urban centres and business districts within cities.

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\(^2\) Christaller, op.cit. (1933)
28.

2. Trade areas encompassing similar total demands for centres of any given level of the hierarchy.

3. "Nesting" of lower order trade areas within the trade area of centres occupying higher levels of the hierarchy.

4. Even spacing of centres of the same levels where the major economic base of the these centres consists of central place functions.¹

When the concepts of "threshold" and "range" are understood, these regularities are emphasized by central place theory. This in turn allows a clear statement to be made of the relationships between the regularities noted and the spatial structure which, together, they create. The concepts of "threshold" and "range" are essential to the development of the theory.

Differentiation between centres in size and extent of establishments occurs because shops performing various functions have separate threshold or entry values. These are determined by the frequency with which their goods are purchased, and any one city might support a large number of establishments whose goods are purchased often, such as grocers, but relatively few higher - order establishments which people visit on average less frequently, such as jewellers.

The different thresholds result in a hierarchical system of central places, as all of the grocers shops are not located in the same centre as the jewellers. The lower order shops, those visited most

frequently, aim to serve only a portion of the city's population, and therefore tend to disperse so as to be close to their potential market. In contrast the higher order establishments serve the whole city population and need to be located at the most accessible point.

All establishments have what is termed an outer range value, which is the maximum distance a person can be expected to travel to purchase only the goods sold by that establishment. The less frequently a good\(^1\) is purchased the further most people are prepared to journey for it. Low order establishments are dispersed through the suburban areas, therefore, to reduce peoples' travelling time to reach them, while the higher order establishments tend to concentrate in a few, very accessible, large centres.

The hierarchical system of central places is produced therefore by the interaction between the threshold value of the separate establishments and the outer range limits of a good. The goods most frequently purchased by the local population will result in the formation of a large number of centres containing establishments selling these goods, and forming the lowest order in the hierarchy.

A smaller number of larger centres will occur next in the hierarchy, providing the lowest order functions for their immediate neighbourhoods plus certain other functions which serve a market consisting of an amalgamation of several lower order market areas. The hierarchy may contain several higher orders still, each with its own characteristic additional functions, culminating in the single highest order centre, usually located at the most accessible point in the city, which offers the complete range of functions that the city and its hinterland can support.

\(^1\)The term "good", developed in marketing terminology, refers to one category of merchandise.
1.3.3 RURAL AND URBAN SERVICE CENTRES

No centre can be dealt with in isolation but must be examined in relation to the centres around it. We have seen that, normally, the smaller the centre the fewer the specialised services provided, and thus the shorter distance people are prepared to travel to use these services. The sphere of influence of the smaller centre is, therefore, smaller.

With the base year 1933, A.E. Smailes\textsuperscript{1} made a study of the urban hierarchy of England and Wales which was published in 1944. This classification was based on the range of facilities offered in the central areas of cities and towns. At this time Smailes noted that two significant gaps appeared in the available data, namely a record of bus services and statistics of retail trade. These gaps were later filled by the map of Local Accessibility, (Ordnance Survey 1953) relating to bus services in the winter of 1947-48, with its associated analyses by F.W.H. Green\textsuperscript{2} and W.I. Carruthers,\textsuperscript{3} and by the Board of Trade Census of Distribution, notably those of 1950 and 1961.

Carruthers\textsuperscript{4} has recently published a thorough analysis of the 1961 data relating to the more important shopping centres in England and Wales. As with the earlier studies referred to, Greater London has been left out of the national survey, and for the time being we will avoid discussing the pattern and process of service centres in Greater London

\textsuperscript{1}Smailes, loc.cit.
\textsuperscript{2}Green, loc.cit.
\textsuperscript{3}W.I. Carruthers, "A classification of Service Centres in England and Wales, Geographical Journal Vol. 123 (1957)
here. A review of the various studies of the urban hierarchy in England and Wales has been made by R.D.P. Smith, who concluded that from the time of Smale's study centres of all types had remained remarkably stable in their distribution and in their relative status. Figure 1, from the Ministry of Housing and Local Government Classification of Major Service Centres in England and Wales, includes the most important London sub-centres ranked in the national order system.

Where new populations have required new small and medium sized service centres, as in the case of Bracknell, Harlow and Stevenage New Town Centres, for example, these have normally proved successful as new central places in the urban hierarchy. But, as Smith points out, the town centres at Peterlee and Newton Aycliffe have remained no more than large village centres. This does not mean that they have not reached their planned potential, but rather that within their regional context they are only required to operate with a restricted sphere of influence. Smith speculates as to whether the old order of service centres will change drastically with increasing mobility and the possible advent of the "out of town" shopping centres. So far there has been little evidence of changes of this type in Great Britain, although some major new developments are of large scale.  

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2 Smith cites, for example, Woolco's first British store, at Oadby, near Leicester.
FIG. 1. CLASSIFICATION OF MAJOR SERVICE CENTRES, ENGLAND AND WALES.
(Ministry of Housing and Local Government, 1961, based on the provision and use of Central Area shopping facilities.)
SECTION 1.4.0 URBAN SOCIETY

1.4.1 THE PRINCIPLE OF LEAST EFFORT

It has been recognised that social and economic groupings reflect the area over which the attraction of a service centre extends. An understanding of the ecology of urban living, therefore, will help us attain an understanding of the processes of urban growth, the retail pattern, and the service centres themselves.

Today planners assume the importance of the sociologist and human ecologist in the planning team, as today planning is expected to come from the approach of an interdisciplinary group. Consequently, it is well to be sometimes reminded, as we have been recently by Donald L. Thompson,¹ that it is only since after the 1939-45 war that urban research has become almost by definition interdisciplinary. Thompson is of the opinion that the work of the behavioural scientist, G.K. Zipf,² shows that the latter's failure to appreciate the interrelatedness of urban activities posed a severe limitation to the general application of his approach.

¹Donald L. Thompson, "Future Directions in Retail Area Research", Economic Geography, Vol. 42 (January 1966) pp 1-18

²G.K. Zipf, whose main contribution is towards the development of systems theory and steady-state concepts (Berry, op. cit., pp 76-78), introduced the rank-size rule to explain the steady-state situation within a growth process. His demonstration of this was made in National Unity and Disunity (Bloomington: Principle Press, 1941).
Zipf's success at systematizing certain aspects of his empirical investigations into social behaviour led him to conclude, in this second major work, \(^1\) in a somewhat naive hope for the universal application of the unifying Principle of least Effort.

"...the systematization of social science is only in its early stages. With this systematization we shall be able to make predictions, as well as to organise our social structures with a view to making life more agreeable for all concerned. In short, a systematic social science will make possible an objective social engineering. There is a further practical consequence of the establishment of the Principle of least Effort with its attendant systematization of Social Science. It will provide an objective language in terms of which persons can discuss social problems impersonally, even as physics is a language for the discussion of physical problems. The lack of an objective social language is responsible to no small extent for the widespread mental confusion about social problems today."

Twenty years on we are not hopeful for any one panacea in our attempts at the social organisation of inextricably inter-related urban activities.

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1.4.2 URBAN ECOLOGY

In the development of retail research it would have been absurdly convenient if Christaller's hexagonal theory and Zipf's "Principle of Least Effort", which might have been expected to explain a consumer's choice of shopping location, together provided a complete description of what actually takes place.

Similarly, a consideration of urban form would be simplified if habitat factors were the sole determinants of social behaviour. Writing at about the same time as Zipf (1949), Amos Hawley\(^1\) made clear that whilst human ecologists had overstressed the relationship of the varying external conditions on the forms of man's existence there was nevertheless

"...a tendency for human behaviour to reflect in one way or another the physical characteristics of the area in which it occurs.\(^2\)

This opinion seems to be supported in general by Walter Firey's\(^3\) Boston study, and to have been accepted as one of the bases for an orientation to the analysis of social behaviour by R.E. Park.\(^4\) As has been noted in the article by Thompson\(^5\) previously referred to, however, the ecological classification is inherently so broad as to preclude its use

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\(^1\) Amos Hawley, Human Ecology, (New York; Ronald, 1950)

\(^2\) Ibid., p 89

\(^3\) Walter Firey, Land Use in Central Boston (Cambridge Mass.: Harvard University Press, 1947)

\(^4\) R.E. Park, Human Communities, (Glencoe: The Free Press, 1952)

\(^5\) Thompson, loc. cit.
in meaningfully classifying research on spatial structure.

"Although some ecological concepts have a geographic character, their pertinence to people and group behaviour make them essentially sociological". 1

1.4.3 NEIGHBOURHOOD IMAGES

The neighbourhood unit has often been described as a planners convenience, and when the concept has been used to justify the creation of a new physical entity where little regard is paid to social relationships, criticism is normally justified. But despite the pioneering study by Ruth Glass 2 in Middlesborough, which showed that social interdependencies were indeed complex and paid little heed to hard edged boundaries, planners have generally managed to plan new communities with some success using the concepts of service population, service centre, and sphere of influence as a guide. By using social theory and the results of empirical study alone it would be almost impossible to translate neighbourhood units into spatial terms. Significantly, there has been a traditional reliance on the movement patterns of the primary school population to establish the conventional planned neighbourhoods' form and scale.

Where a neighbourhood centre has been established in the traditional way with its shops, church or churches, pub, community centre, clinic and doctor's surgery, it is obvious that each of these facilities optimally serve a specific number of people and have a specific catchment area. There

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is a compromise solution when each of these facilities is established at one geographic point.

When higher density living than was developed in the Mark I new towns\(^1\) is being proposed, valid alternatives in the way of arrangement of community facilities may be considered. Such patterns were schematically developed in the London County Council proposals for Hook new town, and are being actually implemented in Cumbernauld and Skelmersdale. The planners in these instances have avoided most predetermination of communities by adopting a system which provides a framework around which the community life of the town may grow and change. Each community function is allowed to develop in its own appropriate catchment area, and the resultant randomness of distribution is clarified for the town dwellers by the linking footpath systems. Now successful such pedestrian systems are is currently being tested by research, but it seems reasonable to assume that comprehensible and effective linkages are being established between facilities and dwelling areas in these pedestrian orientated new towns, perhaps reinforcing a more realistic community structure.

In spite of arguments based on the observation that, with the motor car, most arrangements based on the idea of socialising through propinquity alone are out of date, there is evidence that most people perceive a local physical unit much smaller than the planners arbitrarily defined population unit of 7,000-10,000 people. T. R. Lee\(^2\) suggests that the

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\(^1\)The British New Towns known as "Mark I", with designation dates, are as follows: Basildon (1949), Bracknell (1949), Corby (1950), Crawley (1947), Cwmbran (1949), East Kilbride (1947), Glenrothes (1945), Harlow (1947), Hatfield (1948), Hemel Hempstead (1947), Newton Aycliffe (1947), Peterlee (1948), Stevenage (1945), Welwyn Garden City (1945).

model size of perceived units in Cambridge is about 75 acres, or 2,500 people. But in this case, even though the area involved was initially part of a village that had been absorbed by modern Cambridge, each person when asked to draw a line on a map enclosing their neighbourhood enclosed a different area which was not coincident with the ostensible boundary of the district as shown on maps.

1.4.4 THE NEIGHBOURHOOD PERCEIVED

There may be some overlapping between the territorial neighbourhood, as described by Lee, and the perceptual neighbourhood or district as explored most fully by Kevin Lynch\(^1\). By districts Lynch means those relatively large city areas of which the observer can visualize the extent and which for him have some common character. They can be recognised internally, and occasionally can be used as external reference by a person proceeding towards or by them through the city.

Lynch is conscious of the importance of urban images as seen over time.\(^2\)

"City perception is in essence a time phenomenon, and it is directed towards an object of very large scale. If the environment is to be perceived as an organic whole, then the clarification of parts in their immediate context is only an elementary step."

D.L. Thompson\(^3\) briefly discusses imagery and retail area research, indicating that further studies in this direction could be quite

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\(^2\) *Ibid.*, p 158

\(^3\) D.L. Thompson, *loc. cit.*, p 12.
profitable in explaining some consumer decision making. That the builders of new planned shopping centres are aware of the importance of the "imageability" of their centres is fairly obvious, and will be discussed further in a later chapter.

1.4.5 THE PHYSICAL NEIGHBOURHOOD AS AN ACTIVITY CONDITIONER

That the physical or empirical neighbourhood conditions the activity patterns of those who live within its defines is accepted planning theory. Thus road patterns, open space systems and the minimum distance young children may conveniently walk to school are carefully considered at the detailed design stage of the planning process, and are kept in mind during the structure planning stage when the form of the neighbourhood and its relationship to the town as a whole is being proposed.

If anything, the lack of strongly supporting evidence that such well considered and physically defined neighbourhoods are better perceived and enjoyed living environments than less clearly imageable living areas should give planners cause for concern. Happily, there is some recent evidence that through the establishment of a "congruent and expressive system of forms" the city designer can significantly influence the achievement of a more meaningful environment. Using the computer mapping technique - SYMAP - Carl Steinitz has made a study of Boston which in many instances reveals similarities to the "imaged" responses recorded in Lynch's more limited study of the same city.\(^1\)


\(^2\)Kevin Lynch, *op. cit.*
There is some evidence, then, that the physically perceived parts of the city, through the "Paths", "Edges", "Districts", "Nodes" and "Landmarks", to make use of Kevin Lynch's terminology, communicate to the observer something of the type of activity in a particular location; something of the relative activity intensity; and something of the significance of places perceived.

Joel Smith and George L. Maddox\(^1\) showed conclusively, however, that physical barriers recognised as such by respondents were not in themselves useful for predicting the location of many facilities which are commonly used by city people. They concluded that:

"The problem of explaining the choices in facilities related to certain common activities of urban dwellers, for example, would seem to require other than an ecological approach in the Park tradition."

In their research, and with a sample of 574 people, Smith and Maddox studied the grocery shopping, petrol buying, drugstore, restaurant and beauty parlour using habits of their respondents to see if it was possible to determine the relationship between the location of a person in a spatial area defined with reference to physical boundaries and the use of facilities inside or outside that area for selected common activities.

\(^1\) Joel Smith and George L. Maddox, "The Spatial Location and use of selected facilities in a Middle-Sized City", Social Forces, Vol. 38, (1959-60) pp 119-124
It was found that the rates at which facilities outside the neighbourhood were used by those sample members who defined their neighbourhoods as being in the largest areal categories did not vary with the number of barriers used in defining the neighbourhood. Thus, whilst persons who used three or four barriers are defining a natural area or even a larger area than the natural physical neighbourhood area in which they lived, they did not use the facilities in these areas any more than did those persons who defined their neighbourhoods as large areas which were not natural areas.

We may note, from the studies cited, that there is little evidence to support a claim that neighbourhoods condition adult activity patterns because of their physical form. Recent research is encouraging further investigation, however, and there seems to be some likelihood that the perception and enjoyment of environment and the consequent better appreciation of urban facilities can be influenced by the work of the designer conscious of city imageability.
SECTION 1.5.0 THE INTRA METROPOLITAN CENTRAL PLACE

1.5.1 CENTRAL PLACE THEORY IN THE CITY

As social science has become more sophisticated, it has become unfashionable to accept theories of city growth as simple and convenient as those put forward by E.W. Burgess\(^1\) (Concentric theory) and Homer Hoyt\(^2\) (Sector theory). Whilst on examination cities normally show evidence of partially conforming to both theories in one way or the other, Emrys Jones\(^3\) is probably quite fair in pointing out that these two theories are in fact mutually exclusive and, being developed in the United States, were based on new world cities most of which are of recent growth and thus uncomplicated by historical inertia.

There is ample evidence,\(^4\) however, that within cities a pattern is developed over time which takes the form of a hierarchy of business centres. It has been believed that this network of intra urban central places functions for the urban dweller in much the same way that the central place system works for the rural community.\(^5\)

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\(^1\)E.W. Burgess, in Park, Burgess and McKenzie (eds.) The City, (Chicago, Ill.: Univ. of Chicago Press; 1925) pp 51-53

\(^2\)As reported in C.D. Harris and E.L. Ullman, Annals of the American Academy of Political and Social Science, Vol. 242 (1945), where the Multiple Nuclei Theory is also expounded.

\(^3\)Emrys Jones, *Towns and Cities*, (London: 1966)

\(^4\)Brian J.L. Berry and Allen Pred, *Central Place Studies A Bibliography of Theory and Applications* (Philadelphia: Regional Science Research Institute, 1961, and Supplement through 1964)

\(^5\)Ibid., p 10
The dominating central place within the city is the central business district. This is the specialised focus not only of the city, but also of the region for which the city may be considered the central place. Outside the central business district are the sub-centres within the city. The number of orders of such subsidiary centres depends upon the order of the city as a central place. This, in turn, effects the order of the cities' central business district. In a large city or metropolis the range of centres within the urban area will include street corner shop groups, neighbourhood centres, district centres and regional centres. These correspond approximately in function to the hamlets, villages, towns and cities of the rural central place hierarchy.

It is at this point in the logical extension of central place theory from the rural into the urban realm that some reservations must be put forward.
1.5.2 SOME AMENDMENTS TO THE THEORY

The extension of the classic central place theory into the intra-metropolitan case assumes a nested hierarchy of trade areas within cities, just as there is a nested hierarchy of central places and their catchment areas in the cities' hinterlands. Berry and Pred\(^1\) point to the plethora of other tertiary facilities, such as auto sales, medical facilities, printing and publishing concerns, etc., which form their own specialised districts, and the highway oriented traveller-service types of establishment commonly observed in American cities. These authors are content to conclude, however, that despite the fact that central place theory needs to be generalised in such a situation to allow for the random location of the various sorts of specialised tertiary functions noted above, it does apply to the hierarchy of shopping centres within cities.

The central place theory as originally developed assumed an evenly distributed purchasing power leading to an hexagonal arrangement of centres. B.J.L. Berry and W.L. Garrison\(^2\) found it possible to relax the assumption of an evenly distributed purchasing power and show that

"..whatever the distribution of purchasing power (and whether in open countryside or within a large metropolis) a hierarchical spatial structure of central places supplying central goods will emerge."

\(^{1}\) Ibid.

1.5.3 INTRA METROPOLITAN LIMITATIONS OF THE CLASSIC THEORY

Within the complexities of the modern metropolis it is not possible for the objective observer to fail to notice the apparent illogicalities of sub-centre distribution. Some aspects of the wide variations in consumer habits will be examined later in this volume. At this stage it is sufficient to note that the investigations of D.L. Huff into consumer space preferences, and in particular, two studies of central place patterns in an Australian metropolitan area, by R.J. Johnston, show that the originally formulated central place theory must be relaxed still further in the intra-metropolitan context to make allowance for the complexities of urban growth patterns and the variations in the distribution and actions of consumers.

The works cited above, and further evidence for the city of Boston, firstly, from an unpublished paper by E. Schell, and secondly from an

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atlas of planned shopping centres in metropolitan Boston,\textsuperscript{1} casts serious doubts as to the simple application of central place theory within cities. The central place theory seems to suffer most in the studies mentioned on the question of the nesting of service centre trade areas. Hierarchical nesting patterns are not necessarily present and the linear and discontinuous growth that accompanies the development of suburban railway systems must be especially accommodated by the theory. It has been shown that centres are often located eccentrically within their trade areas; higher order centres are not necessarily more complex functionally than lower; and increased complexity does not always lead to a wider spacing of centres.

Consequently, we may conclude that, despite the confidence of some researchers\textsuperscript{2} in the judicious extension of central place theory into the intra-metropolitan realm, this is an area of hypothesising where we should proceed with great care, because empirical testing may produce some surprises.

\textsuperscript{1}The Boston "Globe", Atlas of Metropolitan Boston Planned Shopping Centres, (Boston: "Globe" Promotion and Research Department, 1965)

\textsuperscript{2}Notably, B.J.L. Berry and Allen Pred, \textit{Loc. cit.}
1.5.4 CENTRES WITH UNEXPECTED ATTRACTIVENESS

In making a survey in a New Zealand city of the spatial behaviour of individual purchasing units, the households, W.A.V. Clark\(^1\) was able to test two hypotheses of central place theory. Firstly, that consumers purchase goods and services at the nearest centres offering these goods and services. Secondly, that there is not a significant difference in the distances travelled for the same good or service from different sizes of centres. These two hypotheses are necessary to support the concept of the range of a good, an essential concomitant of the central place theory.

On analysis Clark's results showed that less than half of the sample of consumers examined went to the nearest centre to purchase three typical low order goods.\(^2\) The second hypothesis examined was also not supported by the evidence, in that the analyses of mean distances travelled to various levels of the hierarchy showed that consumers travel significantly greater distances to the central business district and the larger sub-centres.

Despite these results, Clark points out that although we can reject the hypothesis that the ranges of the same good distributed from different levels of business centres do not differ, this does not mean that there is no order in spatial behaviour. His work showed that there is evidence confirming that consumers carry out several purchases on one trip, or visit business centres from a base other than from the home.

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This study is examined further in Section 4.2.5 in reference to Consumer travel patterns.

\(^2\)Grocery, meat and vegetable goods
It is suggested by Clark that a more profitable approach to the patterns of consumer purchases and the orderliness of spatial behaviour may be to investigate an alternative to the nearest centre hypotheses. Such an alternative might be a measure of the relative attractiveness of a centre.

1.5.5. ORDERS OF INTRA METROPOLITAN CENTRAL PLACES

As noted above\(^1\) any classification of the service centres within Greater London was avoided by Smailes (1944) and Carruthers (1957). A fresh British interest in service centres within the conurbations was stimulated, however, by the local Government Commissions and the Royal Commission on Local Government in Greater London (Herbert Commission). The main investigations prompted by these Commissions were those carried out by A.E. Smailes and G. Hartley,\(^2\) and particularly the comprehensive study by W.I. Carruthers.\(^3\) In addition, a close examination of the historical development and location of service centres in southern London was made by M.P. Collins,\(^4\) and a consideration of the development and pattern of the city’s major sub-centres by Norma A. Pears.\(^5\)

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\(^1\) See Section 1.3.4


The most authoritative work describing planning policy for London from 1940 to about 1960 is probably by Donald L. Foley.\(^1\)

The basic premise of Carruthers' study was that the sub-centres in a large city form a hierarchy comparable with the independent centres of provincial Britain. That this analogy is questionable and subject to certain severe restrictions has been pointed out in previous sections of this chapter. It is useful for us at this stage, however, to examine the method of classification used by Carruthers, whose work was undertaken at the request of the Herbert Commission, and consequently covered the whole of the Review Area of this Royal Commission. At the outset of his presentation,\(^2\) Carruthers notes that the method of investigation used was evolved to try to bring out the picture of London's service centres in as short a time as possible. He does not say, however, what other techniques might have been used had more time been available for the study.

The classification was based on a quantitative and qualitative analysis of service provision and an assessment of the demand for and use made of these facilities. As a starting point centres with three banks, or two banks and a Woolworth's Store, were picked out. As banks are an accepted index of commercial activity and as Woolworths are a retail trading company known to have sought out optimum suburban London sites


\(^2\)W.I. Carruthers, *loc.cit.*, p 5
for their operation this was a reasonable approach to finding the major smaller central places\(^1\). A list of over 200 centres was produced in this way. In order to assess the size, type and quality of each centre, stores to which only occasional visits are made, e.g., furniture, clothing, electrical goods stores, can be tabulated from the Classified Telephone Directory. These stores are a better guide to the importance of a shopping centre than food and other daily need shops. Entertainment facilities were measured by counting the number of theatres and cinemas.

Noting that the prestige of a shopping centre is enhanced by the existence of large stores, Carruthers took into consideration the number of stores in each centre with a rateable value higher than £1,500. These stores were concentrated in a relatively small number of important sub-centres. It was considered that the large stores were the most significant indication of a centre’s status.

As well as considering the status of sub-centres in terms of facilities provided Carruthers felt that a place should be

"...judged on its current achievements in terms of trade and customers as well as the number of shops to be seen there."\(^1\)

\(^1\) In strict survey practice defining a shopping centre (central place) can be difficult. A ratio of 1 : 3 between shops and other property was used by the Board of Trade (Census of Retail Distribution, 1961, H.M.S.O. 1964) to define the edge of a shopping centre. Wayne K.D. Davies, in "Centrality and the Central Place Hierarchy", Urban Studies Vol. 4 (February 1967) considers a slightly broader definition, where a shop is considered to be part of a central place if it lies within a distance equivalent to the frontage of four terrace houses from the nearby shops.

\(^2\) W.I. Carruthers, loc.cit. p 9
With this in mind he studied rateable values and nodality of bus services. The total rateable value of all shop premises in each centre was used as a comparative measure of prosperity. Bus services were measured in two ways: the average number of buses per hour between 9.30 a.m. and 4.00 p.m. on week days, and the proportion of these buses coming from centres with better facilities. The existence of tube stations was taken into account but private transport was not considered. It is unfortunate that he found no method of assessing the importance of private cars in sub-centres; since this form of transport is of growing significance, particularly in the outer centres.

In this study of the London area Carruthers arranged his classification so that service centres within London could be compared with centres outside London, each consisting of five ranks. Thus, Croydon, which is functionally similar to Sunderland is a 3A centre, Sutton, like Darlington, is a 3B centre.

The third order centre is one which provides, but with less choice, most of the central area facilities of the second order centres. It makes provision for occasional purchases such as men's clothing and furniture, but does not have the variety or magnetic power of the West End. This order of centres provides most Londoners with monthly and occasional purchases. Carruthers recognised their importance in the London area and has, therefore, subdivided them as follows:

3A e.g. Croydon, Watford, Brixton
3B e.g. Sutton, Stratford, Hackney
3C e.g. Richmond, Eltham, Camden Town.
The fourth order centres provide only weekly needs; for example, Morden, Surbiton, Deptford and Gants Hill. When assessing service areas, Carruthers took into consideration all forms of public transport and defined areas from which each service centre could be reached more rapidly than any of its rivals. From this evidence he deduced what appeared to be the most logical service areas.

The conclusions from this study were very generalised, and indeed, the analysis had been framed to present an overall picture. The results, particularly on service areas, whilst inadequate for any detailed planning proposals, would provide a background against which development proposals could be considered and could form the basis for more detailed studies.

The question of service centres in metropolitan areas, which is indeed the central subject of this dissertation, will be returned to with more specific reference to London, and other large metropolitan areas, in Chapter Five. The metropolitan planner will most likely consider his main aim is to achieve a better total environment for living, and his approach to this problem may often be through the examination and manipulation of the structure of the metropolis. It is towards such ends that studies like the one described above are made.
1.5.6 THE CENTRAL BUSINESS DISTRICT

Of all intra-metropolitan central places, historically, by definition, and by any criteria of centrality, the most important is the central business district. This may all seem too obvious to require stating, but in situations where sub-centres have developed rapidly at the apparent relative expense of the central business district, it is sometimes possible to overlook the sustained regional significance of the prime central place.

As the traditional advantages of the central business district are diminished by the congestion and lack of accessibility which has followed the increase of private transportation, certain businesses which were once tied to the city centre now find more suitable locations outside the expensive and congested central business district. Research in such widely differing metropolitan areas as Zurich¹ and San Francisco Bay area² confirms the impact of the various trends in retailing that have followed the social changes stimulated by increasing affluence, which are discussed in the next chapter.

Vance has shown convincingly in his California study that the main function of the sub-centres is in their role as mass sellers to the suburbs they serve, and in the cases he examined any other function was of minor importance. The central business district, he concludes, will continue to exist but without much of its former purpose. The two prime functions of

¹ Carol, loc. cit.

the future central business district are probably those of speciality seller and office and financial centre for the region. Vance suggests that much study could be given to the best structuring and transport arrangements for these two functions. Shoppers visiting the downtown core are likely to do so infrequently, and will probably prefer to drive to shop, whilst business people coming to the central business office district regularly to enjoy the benefits of its face to face business opportunities might well be most efficiently served by a mass transit facility. It is possible Vance submits, that the two functions may be physically separated, perhaps by a band of parking stations.

It would seem important, therefore that metropolitan planning investigations which delimit¹ and therefore reinforce our conceptual image of the central business district are used as an aid towards effective metropolitan structure planning.

¹For instance,


SECTION 1.6.0 RANKING STUDIES APPRAISED

1.6.1 SUBJECTIVE CLASSIFICATIONS

To establish an orderly framework of central places for consideration, central place theorists rely on systems of classification, but it is commonly acknowledged that different methods of ranking service centres give different results. As different techniques, or techniques which are being continuously developed and modified, are being used by different researchers, general comparability of results from study to study is normally all that can be achieved.

A more fundamental doubt on the whole subject of classification has recently been brought into focus by R.J. Johnston. Classification is a subjective process, and although the actual methodology employed may be based on objective numerical techniques,

"...the nature of the data to be collected, the form of the analysis, and the exact parameters to be used, are all subjective decisions frequently made either on past experience or with some foreknowledge of the type of phenomena expected."

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1.6.2 TOWARDS OBJECTIVITY IN RANKING STUDIES

Four alternative methods of ranking shopping centres were tested by David McEvoy¹ in the Manchester conurbation, but there is no point in detailing the results of this study here, particularly in view of the comments put forward in the preceding section.

It is sufficient to note that McEvoy concluded that any alleged grades of central places abstracted from lists of ranked service centres would be of doubtful validity, and that grades of central places can only be identified by consideration of the spatial relationships of the centres involved. That this may be a difficult process in the complex metropolitan landscape, with its overlays of transport systems and socio-economic irregularities, has been already shown.

In a critical review of previous work in the ranking of service centres, Wayne K.D. Davies² notes that the inputs of any ranking calculations are as important as the calculations themselves. He prepares a check list of considerations which apply basically to the direct count approach, and would be, in fact, the major principles for any ranking scheme.³ Where ranking techniques are being considered, or when


³ Ibid. Davies’ check list is appended here as Appendix B.
ranking studies need to be compared, it is probably helpful if a check list such as Davies' is used to help preserve a subjective attitude to the criteria being used. The value of ranking studies, however, is obviously questionable.

1.6.3 LIMITED VALUE OF CENTRE RANKING IN METROPOLITAN AREAS

Two major studies in which centres were classified and graded according to the range of shops and the service facilities they possessed were a survey of 133 towns in the Midlands by G.M. Lomas,¹ and the study of 90 towns in the North West of England by a team of planners from the University of Manchester.² Both these studies were able to grade the shopping centres in a continuum from the most to the least important, and then sought to place the centres into a hierarchical system.

The studies referred to, however, concluded that the service centres surveyed did not fall into rigid categories, and that there were no easily defined steps in the hierarchy of shopping centres. More recent studies³ do not presuppose that service centres will fit into a rigid grading system, but employ gravity models⁴ which normally use a measure of shopping floor space as a key to the attractiveness of any centre. This is a further admission that classic central place theory cannot be applied directly to central places within metropolitan areas.

¹G.M. Lomas, "Retail Trading Centres in the Midlands", Journal of the Town Planning Institute, Vol. 50 (March 1964) pp 104-119
²R.H. Kantorowich, (director) Regional Shopping Centres - a planning report on North-West England (Manchester: Dept. of Town and Country Planning, University of Manchester, 1964)
³For instance, Town Planning Institute, West Midlands Branch Research Group, Predicting Shopping Requirements, (Walsall, Staffs.: T.P.I., West Midland Branch, 1967) p 5
⁴See Section 2.2.8
This opening chapter has aimed to establish a conceptual and spatial framework within which our discussion of service centres in metropolitan areas may be most meaningfully cast.

Section 1.2.0 Metropolitan Areas examines concepts and measures of metropolitan systems. It is concluded that to define a metropolitan area in the fashion of G.A. Hoekveld, from the point of view of the inhabitants' "possibilities of participation" in the life of the region, is valid. This definition assumes that the regions' nucleus (or nuclei, if it is polycentric) is within the scale of life of the regions' inhabitants. Thus the importance of life style and quality are admitted as definitive elements. This recognition of the importance of human participation scale relationships was also made by Melvin Webber in his presentation of the concept of the "non-place urban realm". Such a definition of a Metropolitan Area appeals because it is flexible in regard to physical changes but retains a positive qualitative measure of the regions' livability and coherence.

This section also considers Patrick Geddes' formulation of the term "conurbation". It is pleasing to note, sixty years later, that Geddes' notion of conurbation is conceived in terms of sociological dependence and thus falls within the idea of a metropolitan area as outlined above. The word itself may not sound any more pleasant than it originally did, but the original concept was not of a necessarily physically apparent extent of bricks and mortar, as we may have been led to believe some years ago. Any notion that a metropolitan area needs to be a visibly distinguishable continuously built up environment is unsound.

In order that later sections discussing statistical changes in Standard Metropolitan Statistical Areas in the United States may be better understood, the official definition of these areas is explained in this section.
Section 1.3.0 Service Centres, presents definitions and a short discussion of central place theory in the classic sense. The work of geographers in classifying rural and urban service centres is examined, and it is noted that an appreciation of service centres must be made in time as well as in space.

Section 1.4.0 Urban Society is placed before the writer's examination of the intra-metropolitan central place because it seems that some attempt should be made to understand the ecology of urban living before the manifestations of metropolitan life are investigated.

It is shown that simple models of human action are not tenable, and that in fact, metropolitan or urban life is exceedingly complex. It seems that, for instance, the three normally established processes of boundary selection in urban areas - ecological, sociological and demographic - are not closely compatible, and that if any form of city organisation on the basis of these factors is attempted, some form of severe compromise will be necessary.\(^1\)

The importance of perceived images of the physical environment is noted, but there is evidence that an understanding of the layout and spatial distribution of the features of one's neighbourhood significantly influences the adult pattern of life. We may hopefully watch for a lead from the work of Kevin Lynch, Carl Steinitz and others, but in the meantime planners will need to be content to frame their social aims in terms of providing the maximum in choices within a physical environment in which a variety

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\(^1\) For further evidence see W.H. Form, G.P. Stone and J. Cowhig, "The compatibility of alternative approaches to the determination of urban sub areas" in Jack P. Gibbs (ed.) Urban Research Methods (New Jersey: Van Nostrand Co. Inc., 1961)
of social patterns may exist.  

Section 1.5.0 The Intra Metropolitan Central Place comes to terms with the classical central place theory within the complex case of the metropolitan area. It is found that in such a situation the central place theory at best needs certain reformulation, and that generally empirical testing will show that in the intra metropolitan realm the theory will not fit. Consequently we must be critical of studies of central places within metropolitan areas where it is attempted to grade the service centres into a rank order. Because of its importance as a case study of this type, however, W.I. Carruthers' survey within Greater London is discussed. Indeed, such studies will still need to be made in order to obtain some notion of the scale of metropolitan structure.

As the prime metropolitan central place, the central business district is considered in its emerging role. This aspect is returned to in the second chapter.

Section 1.6.0 Ranking Studies Appraised concludes this chapter in which it has been attempted to provide a satisfactory conceptual understanding of the situation today regarding metropolitan areas and their service centres.

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1 In terms of small scale practical community planning this problem is discussed by Jean Ferraton, "Community Planning, an analysis of certain social aims." Journal of the Town Planning Institute Vol. 53 (March 1967)
CHAPTER 2

TRENDS AND TECHNIQUES IN
METROPOLITAN RETAILING
TRENDS AND TECHNIQUES IN METROPOLITAN RETAILING

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### Section 2.5.0  Summary and Conclusions
This chapter consists of three major sections which aim to examine critically the phenomena which make up the components of what may be described as the 'retail spiral'. That is, the interaction of consumer behavioural modes and the responses of the retailing industry to this behaviour, which is in fact a cyclic process that may be said to take the form of an ascending spiral in an economic situation of increasing affluence.

The need for extreme caution if existing trends are to be projected as an aid to prognosis is stressed. With this in mind, the study of consumer behaviour that was first briefly considered in Chapter 1 is now more deeply examined, and an outline of consumer space and convenience preferences made. Certain trends in shopping habit changes are becoming clear. These are given some space in this chapter and will be further examined by way of the case study to be described in Chapter 3 and the discussion in Chapter 4.

Throughout the current chapter tables and graphs are used where they clarify the statements and conclusions of the text. Some statistical evidence of the response of the retailing industry to the increased affluence and changes in shopping behaviour of the consumer is available, and this is considered in some detail with regard to the British situation.

As was noted earlier, this study is concerned primarily with the development of service centres in metropolitan areas over the last twenty years or so. This period has been rich in the development of new retailing techniques, including a more sophisticated approach to the
techniques of site selection, demand prediction and area estimation. Ways and means of assessing the amount of shopping floor space required are examined, with some reference to the increasing refinement of these techniques over time. This chapter unfortunately must show, however, that present day techniques for assessing shopping floor space are by no means consistently reliable.
At the beginning of any discussion of trends it is as well to remind ourselves of the hazards of prediction. If the trends in consumer habits, and if the trends in the various responses made by the retail trade to increasing affluence amongst consumers are examined for the previous fifteen or twenty years it is only too easy to become involved in forecasting. Past experience shows that normally it is very difficult to predict with any useful degree of accuracy, and that serious deficiencies in predictions may be simply due to overlooking the possibilities of innovations, which in the evolution of our industrial society are bound to occur quite often.

The editor of *Forecasting and the Social Sciences* has given several examples of mistaken forecasts in the area of interest of this study. A contribution to the same volume by Mark Abrams on consumption in the year 2000 is notable for its justifiable brevity and reticence in discussing probable changes in the qualitative character of consumption over the next thirty years.

Furthermore, whilst generalisations may sometimes be acceptable on a national or even on an international scale, the specific situation in any particular district may be very different from that in another place nearby. This is well known, but recently has been clearly demonstrated in socio-economic terms for England and Wales

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1 Michael Young, *op. cit.*, pp. 7-9
2 Ibid., pp. 37-40
by C. B. Hall and R. A. Smith,\(^1\) and by the differing patterns of car ownership in Britain.\(^2\) For instance, whilst in the country as a whole there was recently one car for every 5.6 people, this national average conceals a considerable difference between regions. Bootle, in Lancashire, had only one car to every eleven persons, but in Surrey and Radnorshire there was a car to every four. It is of interest that the figures for these regions are close to the United States national average of about one car to every three people. When regional differences such as these are overlaid on trend patterns, predictions for a generalised situation are likely to be misleading for any particular case.

2.2.2 A NOTE ON RETAIL FORECASTING

When generalised forecasts are made by experienced observers who may be making a subconscious as well as conscious assessment of the trends apparent to them, hunches are quite likely to be born out in time. Twenty years ago Homer Hoyt,\(^3\) from a long background of study in urban geography, was able to advise:

"Now is the time to acquire good sites. ... There is a tremendous and almost untapped field for the future development of regional shopping centres on the periphery of nearly every American city with a population of 50,000 or more.

... The stores which are the first to go into new locations with forty or fifty other shops will outstrip their competitors even the solitary stores in the suburbs with ample parking - because they secure the added buying power attracted by the other shops."
Later Hoyt was able to claim his forecast had been fully justified.\(^1\) The 1949 comments had been made primarily because at that time lack of parking space and traffic congestion in established shopping centres was making the need for new shopping facilities obvious. By 1958 it was possible from the intervening nine years experience for Hoyt to develop a fuller discussion of why his prediction had proved so true. It is unlikely, of course, that such an experienced urban geographer as Homer Hoyt would have had a wildly inaccurate hunch. Needless to say, if he had, it probably would not have provided the basis for a further paper.

Despite the need for caution, it is easily understandable why trend appraisal stimulates forecasting. If such forecasting is made in full awareness of the fallibility of trend projection there will exist a reasonable basis for planning decisions, and constant re-appraisal of the situation will make the planning process valid. It is to facilitate an approach to the planning process through cautious trend appraisal that this chapter is planned along the lines outlined in Section 2.1.0, above.

At this point the theoretical approach which the writer considers the most applicable to the whole question of retail forecasting in any society experiencing a rising standard of living may be introduced.\(^2\) This theory may be referred to as a theory of spiral movement, and

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\(^2\) For the opportunity to study this theoretical approach the writer has made grateful acknowledgement to various sources in the Preface. A short report on the Institut for Center-Planlaegning, Lyngby, Denmark, whose members have developed the theory referred to, is included as Appendix C.
is explained in an English language publication of the Institut for Center-Planlaegning, Denmark. 1

2.2.3 A THEORY OF SPIRAL MOVEMENT IN RETAILING

It has been normal for forecasting in the field of retailing to be based on a number of assumptions, such as the size and location of the population, its income structure and growth, the changes in the consumption and purchasing pattern caused by this growth, the transportation system, and the competing centres. The Danish planners submit, however, that

"Such forecasting does not express the interaction and the dynamic development which can be found everywhere within retailing today and which must also be expected in the future." 2

As a service function retailing must adapt itself to changes in the socio-economic and physical factors listed above, and this adaptation is rarely taken into account in forecasting. As retail growth is not distributed evenly among the various types of shops and the different centres it can be more realistically compared to a step like movement rather than a smooth progression. At certain points in time different centres and different shop types may experience dramatic growth, and at other times they may stagnate.

To explain this phenomena the theory of spiral movement recognises that as well as the external factors mentioned above, such as

1 Erik Agergard, Poul Anker Olsen and John Allpass, The Interaction between Retailing and the Urban Centre Structure, (Lyngby: Institut for Center-Planlaegning, 1968)

2 Ibid., p.1
population, the traffic system, etc., which may be called the external factors, there are also certain quantities to be considered which in contrast will be called internal factors. These have been termed: price parameter, service parameter, assortment parameter, and distance parameter. Changing the emphasis of these quantities or combinations of quantities will result in new location demands for retailing with just as great an influence as changes in the external factors. It is true, however, that retailing cannot respond to the demands of the internal parameters without considering the external factors which indicate a framework within which choices must be made. For instance, in low income areas the degree of quality that retailing can offer is limited, and a great variety of services will require the support of a high income level population, etc.

This concept is a step towards the development of a realistic dynamic model and forecasting techniques. The point being made now is that the forecasting process which the theory of spiral movement can accept should accurately attempt to forecast the nature of the interaction between external and internal factors over a period of time as well as be a projection of the trend of the last few years. In this way the pattern of shops and service centres locating in metropolitan areas at various times may be most realistically monitored.

2.2.4 EXPENDITURE AND TREND PROJECTION

Given the simultaneous interaction of both the external and internal factors influencing the development and form of service centres, as discussed in the previous section, an identification of trends may begin at any point in what is a cyclic process. Where real incomes rise the cyclic process takes the form of an ascending spiral. We may therefore, chose to begin with a brief examination of income and expenditure trends.
What may now be regarded as the seminal British study of shopping centres was made by Wilfred Burns\(^1\) at the beginning of the recent period of accelerated interest in the subject. In his consideration of the analysis of shopping expenditure\(^2\) Burns made it clear that, as in his opinion it was not statistically possible to determine trends for the future, flexibility should be the prime consideration in design. After ten years of great interest in, and some sophisticated quantitative approaches to, the subject we must still acknowledge the prime need for flexibility in the design of shopping facilities.

The demand for shopping facilities would be expected to relate in some significant way to the ability of consumers to shop, that is, primarily to their wealth. Within Britain some idea of the details of expenditure by families are given in the Ministry of Labour Family Expenditure Surveys, published from time to time. In these, families are classified according to various household characteristics including size and composition of households, social class of head of household, income of household, regional location, place of residence, and type of residence. Unfortunately, the basis of classification has varied from year to year, and in some years a very small sample is taken for the survey, so that the data must be treated with great reserve. Nevertheless, in conjunction with the Board of Trade Census of Distribution, Reports for 1950, 1957, 1961 and 1966, and notes on the Census given in special articles in The Board of Trade Journal from time to time, much investigation for the measurement of sales and the assessment of geographical patterns of retail distribution has been able to proceed.

Measures of consumer expenditure, therefore, are available, if in a crude form, and may be incorporated in predictive techniques.

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\(^1\) Wilfred Burns, \textit{British Shopping Centres}, (Chatham: Mackay and Co. Ltd., 1959)

\(^2\) \textit{Ibid.}, p. 53
2.2.5 An Introduction to Consumer Decision Processes

One of the major questions which may be asked about consumers is how their behaviour depends on income. As data on the relation of consumption to income has been accumulated over the years an increasing number of variations in this relation have been observed. The factors which cause these variables to emerge are normally acknowledged to be the simple economic variables of prices, types of income, wealth etc., and the socio-economic attributes such as age, occupation, place of residence, education, race etc. Recent research has brought out the influence of social psychological variables and their effect on the consumers over behaviour, and an expanded range of variables is brought into play.

Nicosia has prepared a summarizing flow chart which graphically interprets the way in which modern marketing literature sees the consumer decision process. This model incorporates both external stimuli, the channels through which information and influence are received, and the internal variables modifying consumer purchasing behaviour.

```
    External Variables   Internal Variables   Behaviour

    RATIONAL

    STIMULI ---→         ---→ BUYING

    OTHER
```


2 Ibid., p. 32
The use of econometric methods has enabled researchers to broaden the scope of their investigations and to make some assessment of the relative impact of variables in addition to income. The sum of their work has been to find variables which have statistically significant associations with consumption expenditures and thus, presumably, having a high predictive value. As in our consideration of the entire question of retailing and the service centre structure, internal as well as external conditions seem also to apply here. Nicosia reports\(^1\) that there seems to be little attempt to study the interactions among these variables, which are essentially the structures underlying overt choice.

Macro-economic studies apparently overlook a unified notion of the consumers decision process. It seems that the logical development of macro-economic theory from a study of the income consumption relation under the influence of different variables proceeds directly to a search for the variables bearing significantly on the act of purchase and thus ignores the complex inter-related structure of the decision process model. The recognition of this deficiency helps us recognise that consumer behaviour is a complex phenomenon which we may have to view from different view points.

2.2.6 CHANGES IN CONSUMPTION PATTERNS

The interaction of consumer behaviour and the retail structure, and hence the provision of service centre facilities in an expanding economy has been shown\(^2\) to be comparable to a spiral movement, if the amount of disposable income available for the purchase of both convenience and

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\(^1\) Ibid., p. 52

\(^2\) See Section 2.2.3 above
durable goods is rising. A survey of British studies in the field of consumers wants and expenditures since 1945 cites 278 references, but for our purpose of showing the influence of rising disposable incomes on retailing trends a paper by W. Welfe, which provides a graphical interpretation of changes in consumption patterns, will provide the main evidence.

Welfe compares expenditure on the eight following commodity groups: Food, Clothing, Household, Communication, Transport, Drink and Tobacco, Entertainment and Other goods and services for the periods 1953-54 and 1959-62. The diagrams he has produced illustrate the changes in the shapes of Engel curves between the 1953-54 and 1959-62 data and thus give a broad picture of the position where the expenditure on a given commodity type can be compared directly to total expenditure. In all cases the expenditures are shown in shillings, per person per week.

It is to be noted that the degree of satiation of basic consumer wants (food, household) has increased, while at the same time in several goods like consumer durables the saturation level went up. As consumers

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1 By convenience goods, we mean those goods bought regularly and frequently. Durable goods are those purchased less frequently. These terms correspond roughly to those of 'convenience' and 'shopping' goods, commonly used in the United States.


4 Diagrams derived from Welfe and a short excerpt from the paper cited are appended here as Appendix D.
food needs are satisfied the build up of demand for durable goods which are considered part of a higher standard of living, for instance refrigerators and other electrical appliances, and also motor vehicles, is evident.

A steady decline in the proportion of income spent on food has continued. In 1956 it was estimated that 30.9 per cent of total consumers' expenditure went on food, and in 1961, 27.6 per cent. By 1966 the national average figure was down still further to 24.9 per cent.¹

It was noted by Welfe² that the trend towards processed, manufactured food meant that such food is now bought together with an increasing amount of services. This sector of the food market, that of convenience foods, has excited the interest of all the major food manufacturers over the last twenty years. The food manufacturers will no doubt see in the development of this part of their trade a way to offset the tendency towards the allocation of a reducing proportion of income towards food lines as living standards rise. The most important products in the category of convenience foods are cooked, canned and frozen meat, fish, vegetables and fruit, cakes, biscuits and breakfast cereals, canned and dehydrated soup. Together with less important items they account for 21.5 per cent of total household expenditure on food, a share that has crept up from 18.6 per cent in 1959.³

With social trends such as the acceptance of the housewife's role as a subsidiary wage earner, the greater opportunities for family entertainment outside the home, the more experimental outlook which should

²Welfe, *loc. cit.*, p. 21
³Unilever, Lintas, *op. cit.*
be fostered by greater mobility, foreign travel, and higher standards of living, convenience food should continue to gain in its share of the food market.

This trend towards an increasing expenditure on convenience food is an indicator of the influence of the advertising media on consumers as well as of further acceptance of new forms of convenience and of a generally affluent society. Seen within the context of the short term forecasts for spending on food in this country, the effect on total food spending may not be very great. Whereas total consumers’ spending in real terms could rise by about 10 per cent between 1967 and 1972, expenditure on food, again in real terms, is likely to rise by no more than 5 per cent. It is to be noted that much of this modest increase will be attributable to the 3 per cent increase in population that should take place over the five years.

2.2.7 CONSUMER CONVENIENCE

The increasing importance of convenience food has been discussed in the previous section. By 1955 the President of the General Foods Corporation (United States of America) was able to describe ten forms of convenience which, he claimed, the American consumer then expected almost as a matter of course.

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1. The Guardian, April 2nd, 1968, p. 16. For an estimate of Projected Consumers Expenditure for individual items between 1964 and 1970, see Appendix E.

These forms of convenience for the consumer can be listed as follows:

1. **Form Convenience**  
   i.e. cigarettes in various sizes and tips.

2. **Time Convenience**  
evening hours, fresh fruit and vegetable out of season.

3. **Place Convenience**  
the planned shopping centre, drive yourself car rental, life assurance sales at airports.

4. **Quantity or Unit Convenience**  
Aspirin in packs of 12 or 500.

5. **Packaging Convenience**  
disposable and utility packages, packaged vacations.

6. **Readiness Convenience**  
instant coffee, pre-cooked foods.

7. **Combination Convenience**  
do it yourself kits, combination and modeled sets.

8. **Automatic operation convenience**  
automatic kitchen equipment, power steering and brakes.

9. **Selection Convenience**  
greater variety in dairy products, car colour and upholstery combinations.

10. **Credit Convenience**  
for a wide range of goods and services - credit cards.

Of these factors, in the terms of reference of this study, place convenience is of the greatest significance. In the last analysis convenience costs will certainly be incurred through the expenditure of time, physical and nervous energy, and money required to overcome the frictions of space and time to obtain possession of goods and services, and there has been much evidence that convenience costs are assuming more importance as patronage determinants. ¹

Consumers making shopping decisions will achieve an equilibrium between commodity costs and convenience costs to suit their particular requirements. As Eugene J. Kelley reports:

"The new emphasis on convenience does not necessarily mean that consumers are less price conscious than formerly; rather, insistence on convenience cost minimization has been superimposed on the desire for economically favourable commodity transactions." ¹

This new emphasis on the convenience factor is particularly evident when consumer travel patterns are considered. Greater mobility is derived from greater affluence, and in a society experiencing rising living standards coupled with a changing distribution of population, increasing mobility will tend to impose a greater awareness of the demands of consumer convenience on the retailer.

2.2.8 CONSUMER SPACE PREFERENCES AND TRAVEL PATTERNS

Walter Isard in his work on general location theory points out that all individuals have given space preferences which he defined as desired levels of social contact, so that when placed in the same spatial situation with others, providing all possess identical levels of information, they will behave differently.²

This assertion was not supported by Isard with empirical evidence, even though he was able to point out that sociologists and psychologists, whether speaking of a gregarious instinct or of acquired behaviour patterns, or both, have maintained and demonstrated that variations exist in the social nature of man and his inclination to associate

¹Ibid., p. 32
²Walter Isard, Location and Space Economy, (New York: John Wiley and Sons Inc., 1956)
in various ways. Empirical support for Isard's statement came in the work of Duane F. Marble\textsuperscript{1} and of David L. Huff,\textsuperscript{2} who found however, that a significant relationship existed between the socio-economic status of a consumer and the total number of trips as well as the distance that he will travel during a given period.

The measurement of convenience costs, while difficult, is not impossible, and the original gravity model of William J. Reilly\textsuperscript{3} represents one approach to the quantifying of some convenience costs. Reilly stated that retail business gravitated from smaller towns and cities in accordance with a definite law. This law of retail gravitation was based on two rules derived from a study of retailing dynamics. The first law is that the larger the city the more outside trade it will draw. The second, that a city draws more trade from nearby towns than distant ones. Reilly's techniques were quickly recognised as useful and subsequently refined in practice, a most significant variant of the original statement being to substitute driving time for distance. From the law of retail gravitation it is possible to develop a consumer distance concept and so measure the costs of various locations.

A recent derivation from Reilly's work which uses time as a measure of accessibility and floor space as an indication of attraction is the Retail Market Potential Model developed by T. R. Lakshmanan and W. G. Hansen.\textsuperscript{4} The sophistication of this model is in that it does

\begin{itemize}
\item[3] William J. Reilly, \textit{op. cit.}
\end{itemize}
not assume that a consumer, even though confronted with a choice among several alternate shopping centres, will inexorably choose the nearest centre. In this way consumers and thereby money are assumed to be drawn from all parts of the region to each and every centre, and the region is not sub-divided into hinterlands but treated as one economic space differentiated by zones of spending power, centres of shopping attraction, and the friction involved in overcoming the distance between them.

Despite the obvious advances of this method and its applicability in the intra-metropolitan situation it must necessarily be a projection of the trends of the last few years and can therefore only partly come within the conceptual framework of the theory of spiral movement in retailing, the product of both the external and internal factors governing retail growth.¹

That fairly distinct patterns of movement and travel habits were developed by the average shopper in response to the convenience, range of merchandise, selection and the service offered by particular shopping areas was clearly demonstrated by a series of American studies in the early 1950's.² The consumers seemed to have regular patterns, particularly with regard to the time they shopped, the frequency of shopping trips and the mode of travel used, as well as the centre visited.

The authors of this report could not recommend distance as the only criterion for establishing the apparent extent of a trade area,

¹Agergard, Olsen and Allpass, op. cit., p. 39
pointing out that the movement of shoppers in an urban area is largely controlled by the competitive relationship of shopping centres as they follow Reilly's Law of Retail Gravitation. As to a centre's attractiveness, it was considered that the range of selection available at, and the travel time to, the centre were more decisive factors in attracting custom than was the availability of parking.

Notwithstanding quantitative measures of consumer convenience, Eugene J. Kelley maintains that the

"... core of convenience analysis lies in the area of consumer psychology and sociology" 1

Considering this area, David L. Huff 2 submitted that while individual predictability may not be possible it might be feasible to group individuals according to the various similarities which they possess and thus to determine what empirical regularities exist under various consumer decision making situations. Huff was not devising a predictive tool, but developing a model that provides a scheme for explaining already observed behaviour.

Such a model might give us a framework for testing empirically those aspects of consumer behaviour which lie within the area of consumer psychology and sociology, and might be considered a useful addition to our range of analytical tools. A few years later, however, Huff re-emphasised the irrationality of consumer behaviour in a further

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1 Eugene J. Kelley, loc. cit., p. 37
article where he pointed out that the consumer is not capable of choosing one alternative exclusively. Thus the behaviour of consumers differs markedly from traditional economic theory, which maintains that the consumer will always choose one particular alternative - the alternative which is most "desirable". This is not at all realistic, as in fact the knowledge possessed by the consumer is seldom perfect and is often checked by him in the shopping process when he makes a random choice from alternatives.

2.2.9 CONSUMER BEHAVIOURAL MODELS

Consumers responding in their behaviour patterns to the socio-economic situation in which they live are the dynamic element in the retail movement spiral.

Market researchers have been at pains to identify the decision makers in shopping. Studies made in the United States have confirmed that for most family members the housewife acts as the family purchasing agent and the decisions are hers alone, except in the case of mens clothing. In this field nearly half the clothing is bought without the wife being consulted. Family interaction is most marked in those major purchasing decisions regarding, for instance, cars and major kitchen appliances. In 80 per cent of the cases examined these were bought jointly.

Much evidence is available of low information gathering in shopping behaviour. The "rational" consumer behaviour attributed to

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the "economic man" by many economic theorists seems seldom to exist. In most economic theoretical analysis it is convenient and useful to assume that consumers know just exactly what their preferences are and then go out and spend their money so as to get the most value in terms of those preferences.

It is clear that this is not an accurate picture of reality. Buyers rarely seem to know exactly what they want and in addition they are often poorly informed about the places, prices and qualities in which these items may be obtained. Thus the rationality assumption will often be violated in practice. There is, however, some confusion about the way in which this violation of rational assumptions is likely to occur. For the marketing analyst and advertising man knowledge of the consumer patterns of irrationality can be of the utmost importance.

As acquisition of information by the intending purchaser can be exceedingly costly in time and effort, what is apparently extreme irrationality on the part of the consumer may in fact be a reasonable response to a situation in which decisions are taken for the simple convenience of less expenditure in time and effort in shopping. As it is known that about half of the people making an expensive purchase like a television receiver or a washing machine visit only one store and make their purchase there it is in the interests of the retailer to plan his marketing strategy in such a way that shoppers enter his store. Once the consumer is in the store he is likely to make a purchase there, and loss leaders, childrens' entertainments etc. have been developed as enticements for shoppers.

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By and large, however, stores seem to attract their customers by less superficial characteristics. There may be a tendency for a department store shopper to rely on a single store and shop at other stores as an occasional check on the basic choice or in response to bargain offers. The preferred store will be one that reflects a view of contemporary life consistent with the shopper's own, (normally "hers", as shown above). The study cited\(^1\) registered strongly that competing department stores have definite personalities.

Closely related to this phenomenon of shopping by store personalities is the manifestation known as shopping by store clusters. The research indicated that consumers preferred to do their shopping in stores which are geographically proximate and similar in character. Shoppers second choice stores tend to be in the same neighbourhood as the first choice store if there are nearby stores similar in character to the first choice. Geographic proximity alone is not enough to hold shoppers, but in department stores close competition may help rather than hinder sales.

These contentions are supported by Pierre Martineau\(^2\) who comments that people are very realistic in the way they match their values and expectations with the status of the store. The woman shopper has a considerable range of ideas about department stores, but these are generally organised on a scale ranking from High-Social Status to the lowest status and prestige. Normally the shopper is not going to take a chance of feeling out of place by going to a store where she might not fit.

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\(^1\) Frank, Kuehn and Massy, op. cit., p. 142
In conclusion, Martineau reached three premises significant for marketing.

1. There is a social-class system operating in metropolitan markets which can be isolated and described.

2. It is important to realise that there are far reaching psychological differences between the various classes.

3. Consumption patterns operate as prestige symbols to define class membership, which is a more significant determinant of economic behaviour than mere income.

This social-class system has recently been referred to by Brian Clarke and L. Bolwell. In a survey of shopping patterns in seven towns near Crawley, where the socio-economic structure of the respondents varied considerably from town to town, it was possible to gauge the extent of shopping mobility within the region. It seemed that there was a differential social attraction which depended less on the social make up of the town itself than upon the type of shopping it provided.

This correlation was reflected most strongly by the more mobile skilled manual and professional classes, which was to be expected. The authors suggested that the question of "attractiveness to whom" might in future be incorporated into retail potential models in terms of an "attractiveness index" which would rate the centre more in terms of social class or price rather than in the usual way, in terms of services

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2. Such as the Lakshamanan-Hansen model (see Section 2.4.4)
or type of shop. As far as the writer knows this is the first suggestion for incorporating this form of index of attraction into a retail potential model, and should be considered further.

The social psychologist Gregory P. Stone, reporting on some studies of Chicago women shoppers suggested that there were four types of shopper.

1. The Economic Shopper. This type of shopper is the closest approximation to the economic man of the classical economist. She is sensitive to the price and quality of goods.

2. The Personalising Shopper. This is the woman who shops "where they know my name", and who may form strong personal links with the people who serve her. This personal factor can often be the crucial factor in choosing and staying with a particular shop.

3. The Ethical Shopper. This is a special type of shopper who shops where she feels she "ought" to shop, perhaps sacrificing lower prices or wider selection of goods so as to be able "to help the little man out" or because "the chain store has no heart or soul".

4. The Apathetic Shopper. She merely shops because she has to, and her main aim is to get it over and done with as soon as possible so she tends to take the nearest shop irrespective of price or standards of service.

With this categorization of shoppers and the data from his survey Stone was able to hypothesize as follows.

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1. The higher the level of aspiration among newcomers to a residential area, the greater the likelihood that they will adopt economic orientations to shopping.

2. The lower the level of aspiration and the greater the marginality of newcomers, the greater the likelihood that they will adopt personalising orientations.

3. The greater the success long time residents of a residential area have enjoyed, the greater the likelihood that they will adopt ethical orientations to shopping.

4. Conversely, the less success, the greater the apathy among long time residents.

Philip Kotler\(^1\) conceived of the buying process as a system of inputs and outputs leading to overt purchasing responses. In this model the buyer is subject to many influences which arouse a complex course through his psyche and lead eventually to purchase decisions. This concept of the buying process is illustrated in Figure 2. Various influences and their modes of transmission are shown at the left. At the right are the buyers responses in choice of product, brand, dealer, quantities and frequency. In the centre stands the buyer with his hard to comprehend psychological processes, whose workings can only be partly deduced. Kotler claims that it is in this challenging area of partial understanding that the behavioural scientist must construct a more specific model.

The human mind remains only partially understood. But different partial models do exist, namely the following five behavioural models which may help us understand consumer decision making processes.

FIG. 2 THE BUYING PROCESS CONCEIVED AS A SYSTEM OF INPUTS AND OUTPUTS. (after Philip Kotler, loc. cit.)

1. Marshallian model, stressing economic motivations.
3. Freudian model, psychanalytic motivations.
4. Veblenian model, social-psychological factors.
5. Hobbesian model, organisational factors.

**Marshallian man** is concerned chiefly with economic cues - prices and income - and makes a fresh utility calculation before each purchase.

**Pavlovian man** behaves in a largely habitual rather than thoughtful way; certain configurations of cues will set off the same behaviour because of rewarded learning in the past.

**Freudian man's** choices are influenced strongly by motives and fantasies which take place deep within his private world.

**Veblenian man** acts in a way which is shaped largely by past and present social groups.

And finally, **Hobbesian man** seeks to reconcile individual gain with organisational gain.
The outcome of this discussion must be that we accept the apparent irrationality of consumer behaviour, and that while certain behavioural patterns do exist, they cannot be translated into a simple model of consumer behaviour.
SECTION 2.3.1 TRENDS IN POPULATION DISTRIBUTION

Changes in shopping habits are stimulated by a combination of changes in the way people live, and trends in population distribution must be considered as an important influence on changes in the retailing structure.

In the period 1951-1961 the population of England and Wales increased modestly from approximately 43.3 million to 45.8 million. This may be compared to an increase in the United States of America from 155 million to 184 million in the same period.\(^1\) Incidentally, 1955 seems to mark the end of the downward movement of fertility in Great Britain which had previously led to forecasts of an absolutely declining population later this century. Until then the main problem had been seen as one of distribution of population rather than growth. These were the basic assumptions of the Barlow Report (1939) and the Abercrombie Great London Plan (1944).

Population growth has in fact been very uneven. The prosperous regions in the Midlands and South East England have grown due to a high rate of natural increase and migration, while Scotland, Northern Ireland, Wales and the North of England have declined in their share of the total population, and South Western England has kept a static share of the population.

The South East Study[^1] tried to analyse the problems in the south east caused by continuing immigration. The uneven nature of growth in the south east is indicative of population change in a large metropolitan region, and is shown here in the following table:

**TABLE 1**

**CIVILIAN POPULATION CHANGES IN S. E. ENGLAND 1951-61 (thousands)**[^2]

<table>
<thead>
<tr>
<th>Area</th>
<th>Distribution 1951</th>
<th>Changes 1951-61</th>
<th>Distribution 1961</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>S. E. ENGLAND</td>
<td>16,480</td>
<td>100</td>
<td>1,267</td>
</tr>
<tr>
<td>London Conurbation</td>
<td>8,321</td>
<td>50.5</td>
<td>-189</td>
</tr>
<tr>
<td>Outer Metropolitan Region</td>
<td>3,182</td>
<td>19.9</td>
<td>985</td>
</tr>
<tr>
<td>a. Inner County Ring</td>
<td>1,658</td>
<td>10.0</td>
<td>659</td>
</tr>
<tr>
<td>b. Outer County Ring</td>
<td>1,626</td>
<td>9.9</td>
<td>326</td>
</tr>
<tr>
<td>Rest of S. E. England</td>
<td>4,875</td>
<td>29.6</td>
<td>471</td>
</tr>
</tbody>
</table>


[^2]: Ibid, this table is derived from Table 7, p. 124

There is here a statistical similarity with the recent growth of American cities, but in fact the nature of the growth is quite different. Because of planning control growth has been channelled into controlled satellite communities, for example the New Towns, or on the edges of existing settlements, such as at Weybridge, Surrey.

The dispersive effect of the car has not been as strong in this country as in the United States partly because of the lower level of car ownership, partly because of planning control, the price of land, and in particular because of the existing patterns of settlement. The need for completely new facilities, for meeting places as well as shopping, was not so marked as in the United States because growth in the conurbations has encircled existing towns and villages. Kingston-upon-Thames, for example, now functions as a regional centre for a large population in west and south-west London. In such cases the new inhabitants have assumed the shopping habits of the existing residents, with the result that many towns are now extremely congested. The central problem is, how far these towns can be adapted to new demands, and to what extent new shopping facilities are needed.

The regional distribution of population is a crucial factor in planning for future shopping provision. Estimates of future population are being constantly revised, but it is reasonable to expect that the population of the United Kingdom will rise from 52.9 million in 1961 to about 57 million in 1970 and 61 or 62 million in 1980.\(^1\)

The South East Study\(^2\) anticipated that 50 per cent of a seven million population increase in England and Wales, 1961-1981, would take

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\(^2\)Ministry of Housing and Local Government, op. cit.
place in the south east. More recent government pronouncements, however, make it clear that whilst a larger increase of population is expect, as noted above, policies of balanced growth in the regions are expected to be more effective in distributing this increased population. Whether this is the right policy, and whether it is possible to implement such a policy will not be discussed here. It is obvious, however, that national planning policy changes may seriously upset predictions, and that the uncertainty of governmental decisions is a further reason why we should be cautious in forecasting.

The recent position of south east England can be summarized as follows:

<table>
<thead>
<tr>
<th>TABLE 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOUTH EAST ENGLAND</td>
</tr>
<tr>
<td>POPULATION INCREASES SUGGESTED, IN MILLIONS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Normal Allocations</th>
<th>Planned Expansions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original Study 1961-81</td>
<td>3.525</td>
<td>2.205</td>
<td>1.32</td>
</tr>
<tr>
<td>Review of S.E. Study</td>
<td>2.9</td>
<td>2.0</td>
<td>0.9</td>
</tr>
<tr>
<td>1964-81</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estimated Increase</td>
<td>0.55</td>
<td>0.48</td>
<td>0.07</td>
</tr>
<tr>
<td>1961-1964</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total 1961-1981</td>
<td>3.45</td>
<td>2.48</td>
<td>0.97</td>
</tr>
</tbody>
</table>

---

1Standing Conference on London Regional Planning, Review of the South East Study, (March 1965)
These estimates will mean that 42 per cent of the increase in population in England and Wales in the period 1961 to 1981 will go to the South East, which at present has a share of 38.8 per cent of the total population. The shift of emphasis from planned expansions to 'normal' allocations will intensify the problems of adapting existing town centres rather than designing from scratch.

2.3.2 THE RESPONSE TO AFFLUENCE - CONSUMPTION THRESHOLDS

The most significant characteristic of this population is its rising affluence, derived from increases in economic productivity. The National Plan\(^1\) anticipated reaching an annual growth rate of 4 per cent sometime after 1970, with a 25 per cent increase between 1964 and 1970. This would have been, if maintained, a slightly faster rate of growth than the last few years. Over half the increase would be in personal income. It was estimated that consumers total expenditure would increase annually at an average of 3.2 per cent in 1964-70, and this would represent an average increase of 2.4 per cent per annum in per capita expenditure.

As the demand for consumer durables is met, however, relatively less will be spent through the normal retail outlets and more on things like housing, fuel, motor vehicles and foreign travel. The average annual increase in retail sales is expected to be 2.8 per cent. Within the retail category, the demand for products will rise at different rates.

\(^{1}\)Secretary of State for Economic Affairs, The National Plan, Cmn. 2764 (London: H.M.S.O., 1965)

Note that the Department of Economic Affairs, The Task Ahead, (London: H.M.S.O., 1969) does not attempt to look beyond 1972. This document predicts an average annual per centage increase of 2.4 per cent in Personal Consumption between 1967 and 1972.
In broad terms durable goods will increase sales at a higher rate than convenience goods. While increased spending on foodstuffs will take the form of the replacement of basic foods and "fillers", such as cereals, with more expensive and protein rich items, and with "convenience" foods, there is a limit to how much and how well people will want to eat. As food needs are satisfied a certain threshold in the standard of living is reached, and the consumer becomes able to afford to buy durable goods like a house, car, refrigerator and television receiver.

Significantly, the purchase of the desired consumer durables normally takes place because of social pressures, before the standard of living has reached the level where the full surplus to buy these things is available. These purchases are made possible only if convenience goods can be obtained at a low price, so that the standard of daily consumption can be maintained which has already been obtained with the higher standard of living.

This form of change in the consumption patterns is also brought about because the standard of living rises rather constantly. At any given time, therefore, the rise in the disposable amount of money is accordingly small compared with the total amount spent on consumption, so that the consumers can only afford to expand their existing consumption patterns during the first periods of growth. Not until after a number of periods has the expansion reached the size which gives the consumer the feeling that he has crossed a threshold and now finds himself in a new and higher income level. Thus, the reaction of the consumers to the rising standard of living can be illustrated as a stepped, rather than as a smooth curve development. It will be clear that as the various stepped thresholds occur in consumption habits there will be a similar step like
reaction by the retail trade. 

The reaction of the consumers to the rising standard of living can be illustrated in a step-like manner, not as an evenly sliding development. This gives the effect that at times consumption "leads", at other times "lags", the even trends in the standard of living.

FIG. 3 STANDARD OF LIVING/CONSUMPTION

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1 For a fuller description of the reaction of consumers to a rising standard of living and the subsequent thresholds in consumption, see: Aergard, Olsen and Allpass, op. cit., pp. 10-13 from which the illustration is taken.
We may note that the consumer is becoming more discerning as well as more prosperous. On the one hand, a rising level of education is coupled with the activities of consumer associations and the consumer council to produce more rational decisions in the search for value for money. On the other hand, the competitive pressures of advertising in our affluent society have increased the importance of style and fashion. Welfe has remarked on the rising proportion of income spent on clothing. It is only in recent years that men in lower income groups have acquired increasing varieties of clothing including leisure clothing. Women and men are tempted through advertisements to add to their clothing wardrobes and keep abreast of fashion changes. Thus the desire for a wide choice of goods and prices is becoming more important. It would seem that this ability to spend money must be met by expanded facilities for shopping.

2.3.3 CONSUMERS AND CARS

The writer has made clear his cautious attitude to trend projection and forecasting generally. Most commentators agree, however, that the motor car will be an important means of personal transport for a good many years to come, and there seems no serious reason to doubt this.

Current regional differences in the level of car ownership have already been mentioned in this dissertation, and differentials will continue to exist, even though the generally increasing prosperity of the population will mean that the range of differential will be narrowed. The following

1 Welfe, loc. cit., p. 21
Table 1 shows vehicles in use (i.e. with current licenses)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Vehicles</th>
<th>Cars</th>
</tr>
</thead>
<tbody>
<tr>
<td>1945</td>
<td>2,554</td>
<td>1,497</td>
</tr>
<tr>
<td>1950</td>
<td>4,409</td>
<td>2,258</td>
</tr>
<tr>
<td>1955</td>
<td>6,465</td>
<td>3,526</td>
</tr>
<tr>
<td>1960</td>
<td>9,439</td>
<td>5,526</td>
</tr>
<tr>
<td>1965</td>
<td>12,339</td>
<td>8,916</td>
</tr>
<tr>
<td>1967</td>
<td>14,096</td>
<td>10,302</td>
</tr>
</tbody>
</table>

There have been various estimates of the future growth of motor vehicle ownership. The Buchanan Report estimated that there would be: 0.2 cars per head in 1970; 0.31 cars per head in 1980; 0.40 cars per head in 2010.

Estimates by J.C. Tanner quoted in the National Plan 1965, based on the relationship between car ownership and personal income, agree closely with the Buchanan Report estimations.

In 1970 Great Britain may experience the level of car ownership known in the United States in 1950 - about one car to every

3 Secretary of State for Economic Affairs, op. cit.
4.5 persons. In this country the differentials in car ownership rates, largely determined by income and social class variations, will mean that in some areas households will generally have a car available for shopping some years earlier than other areas, particularly where there is a coincidence of high car ownership and small household size.

Because of the great convenience of the car for door to door transport and as a "shopping basket" we may expect people to continue to want to use their cars for shopping. Some indication of car use in shopping is available from a survey of shopping in central Manchester made in 1964 by Research Services Ltd. 2

A survey based on data collected by Kent County Council Planning Department 3 in 1962-63 correlated car ownership and use with occupation status, distance and type of shopping trip.

Of the households surveyed, 55 per cent owned cars, and amongst occupation status Groups I and II, 77 per cent were car owning. Amongst occupation Status Groups III, IV and V, 4 42 per cent were car

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1 For a fuller comparison note that in 1963 United Kingdom per capita Gross National Product was $1564, similar to the United States in 1949, and per capita consumer expenditure at $1009 was similar to 1948 U.S. levels.


3 W.I.R. Jones, The Influence of Car Ownership on Shopping Habits, (Kent County Council Planning Department, 1964)

4 1951 Census Class of Occupations were used.
owners. The survey showed that there was no significant difference in the use made of the car by the different occupation groups.

TABLE 4
THE USE OF THE CAR ON SHOPPING TRIPS

<table>
<thead>
<tr>
<th>Percentage of all shoppers:</th>
<th>Percentage Shoppers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whose household owns a car</td>
<td>46%</td>
</tr>
<tr>
<td>Who normally have personal access to and use of the car for shopping</td>
<td>23%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percentage of all shoppers having access to a car:</th>
<th>Percentage Shoppers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who used it for this trip</td>
<td>70%</td>
</tr>
<tr>
<td>Who did not use it for this trip</td>
<td>30%</td>
</tr>
</tbody>
</table>

* These reasons were given:
  - Car parking difficulty | 22%
  - Congestion and hold up on route | 5%
  - Public transport preferable | 10%
  - Car not available that day | 10%
  - Other reasons | 4%

* The reasons for not using a car on this trip add up to more than 30% because many gave more than one reason.

Obviously the results of such surveys are valid in detail only for the area examined, and at a particular point in time, as socio-economic and geographical factors very so greatly. They do suggest, however, how much the car is used in Britain for shopping today, and they indicate severe planning difficulties for the time when most households have a car.

The rise in car ownership is one of the many factors changing shopping habits, and it must be considered with other social changes.
In general, society is becoming more mobile, although it is physical mobility rather than class mobility which is important for shopping. With a car available to carry the heavy load, one weekly shopping trip in place of two or three is becoming more common, and many homes now have refrigerators.

Apart from these quantifiable characteristics of the factors involved in shopping behaviour we can appreciate that as more women join the workforce they will demand more efficient shopping facilities and perhaps more flexible shopping hours. The much discussed increase in leisure may have some effect on shopping patterns. Perhaps to make Friday rather than Saturday the busiest shopping day, as families devote a full weekend to broadening leisure interests. This tendency is seen in the United States, where many shopping centres remain open on Friday evenings until 9.30 p.m. or so.

2.3.4 CONSUMERS AND THE CENTRAL BUSINESS DISTRICT

In recent years it has been demonstrated from examples in various parts of the world that consumers are tending to forgo shopping opportunities in the central business districts of large cities and metropolitan areas for shopping in outlying service centres. The growth of these intra metropolitan subsidiary centres has been due to the combination of factors which have been discussed, congestion in and surrounding the central business district and the subsequent lack of accessibility to this part of the city, particularly for car shoppers, being a prime factor in the central business districts' relative decline as a shopping centre.

The possible future dual role of the metropolitan central business district considered by James E. Vance has been mentioned earlier in

\footnote{James E. Vance Jnr., (1960) loc. cit.}
this dissertation. Vance considered that an increasing specialisation was likely to occur in the shopping functions of the central business district which at the same time would continue in its major role as an office centre. The investigations into the functions and extent of central business districts in cities of moderate size in the United States of America by R. E. Murphy and J. E. Vance\(^1\) employed land use analysis as the main technique in determining the current limits of the central business district. The commercial land uses which are essential functions of the central business district were defined in these studies as those uses performing retail and service functions for profit and those performing various office functions. These studies regarded wholesaling, as well as manufacturing and residence as not characteristic of the central business district, and in fact, the younger of the cities surveyed showed a smaller proportion of such users, reflecting the fact that by the time they were built there was little demand at the city centre except for true central business district uses.

When A. E. Smailes\(^2\) considered city centres he drew attention to the increasing standardisation of the central business districts as they are progressively "colonized" by multiple trading concerns. These national chains, through the distinctive style of their shop fronts, have given some character similarity to British town centres. Smailes has also reminded us\(^3\) that a recentring of the "hub" or peak land value area of the central business district takes place from time to time.

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\(^1\)R. E. Murphy and J. E. Vance Jr., *loc. cit.*


This has been very evident in some European cities, for instance, on introduction of the railway station with its effect of restructuring the internal form of the city.

Other changes in the character and even the form of the central business district are brought about by external factors such as the redistribution of population within the metropolitan area which the central business district serves. Within metropolitan areas durable goods sales have in the past tended to be highly centralised, as they require a large base population and maximum accessibility for that population. Hence durable goods outlets have normally been mainly concentrated in the central business district. Convenience goods outlets, on the other hand, have been distributed throughout the city.

As the central business district has become increasingly less accessible a transfer of durable goods sales to the subsidiary service centres has occurred. The impact of this trend on cities in the United States has been discussed by S.C. McMillan, and an attempt to state more precisely the impact of population change and shopping centres on inter city variation in the decentralisation of retail sales and in the rate of change of central business district sales has been made by Alma F. Tauber.

McMillan's paper considers a study of fifty five metropolitan areas within the United States which were analysed by the United States

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Bureau of Census. The operation was initiated in the 1954 census and repeated in 1958. Of the fifty-five metropolitan areas examined, thirty-four were areas with populations in excess of 500,000, and twenty-one had less than 500,000 inhabitants. The fifty-five areas analysed contained about one-third of the total United States population and accounted for about one-third of the total retail sales. The definition of the United States Bureau of Census Standard Metropolitan Statistical Area has been considered earlier in this dissertation. From the case of the study reported by McMillan it is clear that the Standard Metropolitan Statistical Area concept has enabled a worthwhile analysis to be made on a nationwide basis.

The prime aim of the study was to provide a basis for comparing changes in business activity in the central business district with those in the remainder of the metropolitan area of the central city. It will be recalled that in official American terminology the components of the Standard Metropolitan Statistical Area are the central business district, the entire city, and the balance of the area. Statistics for the central business district are included in those of the entire city. Consequently, in considering the data, the central business district and the entire city are not mutually exclusive.

In the fifty-five metropolitan areas analysed the increase in sales volume from 1954 to 1958 was about 57.1 to 67.0 billion dollars, or 17.4 per cent. There was, however, an absolute decline of retail sales volume in the central business districts of 0.1 per cent in this time, which is more remarkable if the increases in prices during the period under consideration are remembered. It is therefore quite evident that the physical volume of merchandise handled in the central business districts was less in 1958 than in 1954. McMillan notes that one of the central business districts that suffered the largest relative
decline in retail sales volume was that of Detroit. Here the two outlying shopping centres of Eastland and Northland had retail sales in excess of $143 million in 1958.

The greatest improvement in retail sales volume was found to have taken place in that portion of the metropolitan area designated as "the balance of the area" - i.e. the metropolitan area outside of the central city. Here the average 1958 retail sales volume was 32.3 per cent higher than in 1954.

When relative changes in retail sales volume between the years 1954 and 1958 in the United States metropolitan areas studied are measured against the changes which occurred in the previous census period, between 1948 and 1954, it seems that the metropolitan area growth in retail sales volume which occurred outside of the central business district in the year 1954-58 was not as great on an absolute or annual basis as the growth which occurred in the earlier period. Despite the limitations of comparability which occur because a slightly different sample of metropolitan areas was used for each survey, and level of economic activity in both of the base years must have been different, the results from these two periods are useful for some assessment of trends.

The trend indicated, claims McMillan, may give some satisfaction to those observers who believe the serious challenge to retail trade in the central business district is passing. There is some evidence, he claims, that with the number of retail stores having declined those remaining are now doing sufficiently profitable business.
TABLE 5

PERCENTAGE DISTRIBUTION OF STORES AND SALES IN U.S. METROPOLITAN AREAS AND COMPONENT PARTS, 1954 and 1958

<table>
<thead>
<tr>
<th>Part of Metropolitan area</th>
<th>Stores</th>
<th>Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Total metro. areas)</td>
<td>(100.0)</td>
<td>(100.0)</td>
</tr>
<tr>
<td>Central Business District</td>
<td>9.2</td>
<td>8.1</td>
</tr>
<tr>
<td>Entire Cities</td>
<td>60.7</td>
<td>58.1</td>
</tr>
<tr>
<td>Balance of Areas</td>
<td>39.3</td>
<td>41.9</td>
</tr>
</tbody>
</table>

Another analysis of the same U.S. Bureau of Census data by Homer Hoyt concentrated on showing how misleading percentage increase figures could be. In large cities central business district sales were practically static having been overtaken in volume by sales in the remainder of the metropolitan region, whereas in smaller cities the central business district still accounted for well over two thirds of general merchandise sales.

1McMillan, loc. cit., Table IV
2Homer Hoyt, "Sales in leading shopping centres and shopping districts in the U.S.", Urban Land, Vol. 20 (September 1961)
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 million and over</td>
<td>61.5 mil.</td>
<td>3522</td>
<td>3337</td>
<td>3577</td>
<td>5652</td>
<td>1.6</td>
</tr>
<tr>
<td>500,000 - 999,000</td>
<td>17.0 mil.</td>
<td>1389</td>
<td>618</td>
<td>1442</td>
<td>1151</td>
<td>4.0</td>
</tr>
<tr>
<td>250,000 - 499,000</td>
<td>10.5 mil.</td>
<td>849</td>
<td>311</td>
<td>928</td>
<td>513</td>
<td>9.3</td>
</tr>
<tr>
<td>100,000 - 249,000</td>
<td>2.8 mil.</td>
<td>263</td>
<td>62</td>
<td>273</td>
<td>111</td>
<td>6.0</td>
</tr>
<tr>
<td>Total</td>
<td>91.8 mil.</td>
<td>6022</td>
<td>4829</td>
<td>6227</td>
<td>7430</td>
<td>3.4</td>
</tr>
</tbody>
</table>
2.3.5 THE RESPONSE OF THE AMERICAN RETAILER

The most obvious reaction of the retail trade to the dispersal of metropolitan area populations, the increasing inaccessibility of the central business district and the new affluence of consumers (to name the major influences considered) in the United States of America, has been the development of the planned regional shopping centre. These developments have accounted for much of the redistribution of shopping expenditure explained in the preceding section.

The statistics examined have shown that, despite the massive increases of population in the metropolitan areas, little of this increased purchasing power has been captured by central business district stores. One reason is the decentralisation of the large well known department stores which were previously the major magnets for shoppers in the central business or "downtown" areas.

A study by C. T. Jonassen of shopping habits and attitudes in Columbus, Houston and Seattle related these habits and attitudes to the variables of location, income, occupation, education and the age of respondents. In general these variables did not significantly affect the respondents attitudes to shopping in either the downtown area or in planned shopping centres. It can be noted, however, that those respondents in the higher age groups, and of higher socio-economic status did appreciate most keenly the downtown or central business district shopping advantage of large selection. The influence of habit in the actions of this group of consumers should also be considered.

---

1 C. T. Jonassen, The Shopping Centre versus Downtown, (Columbia, Ohio: Ohio State University, 1958)
The relative advantages and disadvantages of planned centre shopping as compared to downtown shopping, as nominated by Jonassen's respondents in 1954, may be listed as follows: ¹

<table>
<thead>
<tr>
<th>Advantages of Downtown</th>
<th>Disadvantages of suburban Shopping Centres</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Can do several things on one trip.</td>
<td>2. Some kinds of shops were not represented.</td>
</tr>
<tr>
<td>3. Cheaper prices.</td>
<td>3. Prices too high.</td>
</tr>
<tr>
<td></td>
<td>4. Poor public transportation.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Disadvantages of Downtown</th>
<th>Advantages of Suburban Shopping Centres</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Too crowded.</td>
<td>2. Less crowded.</td>
</tr>
<tr>
<td>3. Traffic congestion.</td>
<td>3. Close to homes.</td>
</tr>
<tr>
<td></td>
<td>4. More convenient opening hours.</td>
</tr>
<tr>
<td></td>
<td>5. Informality. (of dress, etc.)</td>
</tr>
</tbody>
</table>

In short the suburban shopping centres seemed to attract consumers because by shopping there they could avoid the inconvenience of downtown, and the downtown area attracted shoppers because it was here that they considered they had the widest choice at the lowest prices.

At the time of this survey car ownership was less developed in the United States than it is today, so we may assume that the respondents complaint regarding the poor public transportation to suburban shopping centres has been largely overcome. This would be primarily because

¹Ibid., p. 27
most shoppers now normally have the use of a car, but also as the longer established centres would expect to enjoy better public transport facilities.

The evolution of the out of town planned shopping centre in the United States has been the main response of the retail sector to the changing aspirations and demands of the consumer which seem to have arisen out of a combination of the factors of increasing population, increasing affluence, and changing travel habits. Changes in retailing methods themselves have developed and these have often been facilitated by the move to an out of town location and the ability to provide greater floor space for a given financial outlay.

2.3.6 THE BRITISH "REVOLUTION" IN RETAILING

Many commentators on changing patterns of shopping in Great Britain and the response of the retail trade to these trends have described the changes taking place as a "revolution" in retailing. Perhaps the term is not too strong.

Two reports which were published in the same month of 1964 by the Planning Departments of the Cities of Liverpool and Coventry respectively each give a very clear and concise exposition of trends in retailing in Great Britain in the 1960's. It is not intended here to restate the facts presented in the useful documents referred to, but to present supplementary material from a variety of sources which is complementary to that in these reports.

1Walter G. Bor, Retail Trends and their Planning Implications, Research Report No. 10, (Liverpool City Planning Department, 1964) 
Arthur Ling, Shopping in Coventry, Report D. P. R. 34, (City of Coventry Planning Department, 1964)
(Both reports were made in respect of Reviews of the City Development Plan)
A survey of retail trading in Britain from 1850 to 1950 by J. B. Jefferys provides the data from which the graphs shown in Figures 4 and 5 are plotted. Over the last fifty or so years the multiple shops have achieved a large increase in sales. This increase has been at the expense of the "others", independents mainly, but including here (Fig. 4) department stores and non-shop retailing.

This graph shows the change in percentage of total sales from 1900 to 1950 for food and household goods. In the other categories of goods the shape of the curves is similar, the percentages of total sales achieved

---

in each category by the various types of outlet being shown in the following table.

**TABLE 7**

SHARES OF DIFFERENT ECONOMIC TYPES OF RETAILER IN TOTAL RETAIL SALES OF VARIOUS COMMODITIES, 1950.

<table>
<thead>
<tr>
<th>Commodity type</th>
<th>Retailer</th>
<th>Percentage of total sales 1950</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food and Household Goods</td>
<td>Co-operative</td>
<td>17.5</td>
</tr>
<tr>
<td></td>
<td>Multiple</td>
<td>18.5</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>64.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100.0</td>
</tr>
<tr>
<td>Confectionery</td>
<td>Co-operative</td>
<td>5.5</td>
</tr>
<tr>
<td>Stationery and Tobacco</td>
<td>Multiple</td>
<td>10.5</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>84.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100.0</td>
</tr>
<tr>
<td>Clothing and Footwear</td>
<td>Co-operative</td>
<td>9.0</td>
</tr>
<tr>
<td></td>
<td>Multiple</td>
<td>29.0</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>62.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100.0</td>
</tr>
<tr>
<td>All other Goods</td>
<td>Co-operative</td>
<td>4.5</td>
</tr>
<tr>
<td></td>
<td>Multiple</td>
<td>26.0</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>69.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100.0</td>
</tr>
</tbody>
</table>

The graph shown in Figure 5 indicates that between 1900 and 1939 in all commodities the share of total trade taken by Department Stores and Co-operatives rose slightly, whilst that of the Multiples rose sharply at the expense of the Independents. After 1939 this trend continued but at a far slower rate as Independents became more competitive under the influence of voluntary organisations.
FIG. 5 SHARES OF DIFFERENT ECONOMIC TYPES OF RETAILER
IN THE TOTAL SALES (1900-1960)
Since 1951 the general trend has been one where a larger volume of trade has been handled by slightly fewer shops and although there has been an expansion of the multiple organisations, the small independent shop in 1961 accounted for half the retail trade.

The following table shows that the total number of shops decreased slightly between 1960 and 1961, but that this decrease did not occur in all categories, and the decrease in non-grocery retailers, confectioners and tobacconists, clothing and footwear and non-food retailers (other than household goods) must be offset by an increase in the grocery, household goods and general stores (i.e. department and variety) categories.

TABLE 8

<table>
<thead>
<tr>
<th>Category</th>
<th>1950</th>
<th>1961</th>
<th>Percentage Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grocery</td>
<td>148,692</td>
<td>150,098</td>
<td>+5</td>
</tr>
<tr>
<td>Other Food</td>
<td>139,884</td>
<td>129,642</td>
<td>-7</td>
</tr>
<tr>
<td>Confectionery and Tobacco</td>
<td>74,606</td>
<td>70,802</td>
<td>-5.5</td>
</tr>
<tr>
<td>Clothing, Footwear</td>
<td>97,162</td>
<td>93,068</td>
<td>-4</td>
</tr>
<tr>
<td>Household Goods</td>
<td>65,785</td>
<td>73,689</td>
<td>+12.5</td>
</tr>
<tr>
<td>Other Non-Food</td>
<td>60,352</td>
<td>59,125</td>
<td>-1.5</td>
</tr>
<tr>
<td>General Stores (Variety and Dept.)</td>
<td>1,641</td>
<td>3,727</td>
<td>+133</td>
</tr>
<tr>
<td>Total</td>
<td>583,132</td>
<td>580,151</td>
<td>-0.6</td>
</tr>
</tbody>
</table>

\(^1\) Derived from the Board of Trade Journal, February 8th, 1963.
The growth of the Household Goods category of retail outlet shown in Table 8 was due primarily to the growth of television and radio multiples and the "Do-it-yourself" shop.

The provisional results from the 1966 Census (sample) and the results from the 1957 Census (sample) are used to compile Table 9. It will be noted, by reference to Table 8, that the decline in the number of shops in the grocery, confectionery and tobacco, clothing and footwear, household and other non-food categories had begun, and was in some instances a well established trend, by 1961. A sharp decline in the number of general stores, (department and variety) seems to have taken place between 1961 and 1966.

### Table 9

**NUMBER OF SHOPS BY RETAIL CATEGORY, 1957-1966**

<table>
<thead>
<tr>
<th>Category</th>
<th>1957</th>
<th>1966</th>
<th>Percentage Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grocery</td>
<td>151,859</td>
<td>122,336</td>
<td>-19.5</td>
</tr>
<tr>
<td>Confectionery and Tobacco</td>
<td>77,437</td>
<td>63,015</td>
<td>-18.5</td>
</tr>
<tr>
<td>Clothing, Footwear</td>
<td>97,656</td>
<td>81,544</td>
<td>-16.5</td>
</tr>
<tr>
<td>Household Goods</td>
<td>62,115</td>
<td>68,339</td>
<td>+10</td>
</tr>
<tr>
<td>Other Non-Food</td>
<td>61,360</td>
<td>57,028</td>
<td>-7</td>
</tr>
<tr>
<td>General Stores (Variety and Dept.)</td>
<td>3,683</td>
<td>2,919</td>
<td>-21</td>
</tr>
</tbody>
</table>
The fact that fewer shops are dealing with a much larger turnover and a larger number of these fewer shops are controlled by multiple organisations who, due to their economies of scale, specialisation of labour and possible time and motion studies use the sales are much more fully than the independent retailers, normally would suggest that shop floor space today is being used much more intensively than it was in the 1950's.

It is considered that this trend will continue with more of the small retailers disappearing in both the older residential areas which are being redeveloped and in the central areas where the long established retailer will be forced out of a central position on redevelopment. Because of the high rents asked for accommodation in many cases these retailers will not be able to afford to come back.

In terms of number of establishments in the three organisation categories, the Co-operatives, the Multiples and the Independant retailers, the changes which took place over the 1957 Census (sample), 1961 Census and 1966 Census (sample) are shown in Table 10.¹

¹Derived from the Board of Trade Journal, February 23rd, 1968 p. 583
**TABLE 10**

**NUMBER OF ESTABLISHMENTS BY FORM OF ORGANISATION**

<table>
<thead>
<tr>
<th>Form of Organisation</th>
<th>1957</th>
<th>1961</th>
<th>1966</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Retail Trade</td>
<td>577,405</td>
<td>577,307</td>
<td>498,477</td>
</tr>
<tr>
<td>Co-operatives</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Establishments</td>
<td>28,945</td>
<td>29,396</td>
<td>26,436</td>
</tr>
<tr>
<td>Percentage distribution</td>
<td>5</td>
<td>5.1</td>
<td>5.3</td>
</tr>
<tr>
<td>Multiples</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Establishments</td>
<td>59,105</td>
<td>67,299</td>
<td>73,933</td>
</tr>
<tr>
<td>Percentage distribution</td>
<td>10.2</td>
<td>11.7</td>
<td>14.8</td>
</tr>
<tr>
<td>Independents</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Establishments</td>
<td>489,355</td>
<td>480,612</td>
<td>398,103</td>
</tr>
<tr>
<td>Percentage distribution</td>
<td>84.8</td>
<td>83.3</td>
<td>79.9</td>
</tr>
</tbody>
</table>
2.3.7 THE NUMBERS OF SHOPS AND THE PERSONS EMPLOYED

The basic external factors effecting the retail trade: higher standards of living, the ownership of cars, refrigerators, increasingly better informed consumers and the use of telephones, have been interacting with changes in manufacture and distribution. The trend towards larger shop units and the integration of wholesale and retail functions are internal changes, as are changes in pre-packaging and branding.

Productivity in distribution has not risen as fast as that in industry, mainly because it is difficult to apply scientific processes to a situation of uneven consumer flow, and quick variations over space and time. Nevertheless, sales per person engaged, at constant prices, increased by about 20 per cent between 1950 and 1961, and have continued to increase at about the same rate. The pressure of labour costs against profit margins is extremely high in a time of full employment, and it is the need to reduce labour costs which has caused many of the largest changes in the "revolution" in retailing. For example, the rapid development of self service supermarkets and discount houses. Labour is a particular problem since it has a high proportion of young, female, and part time workers. The National Plan, however, anticipated a continuing rise in the efficiency of labour, and a growing polarization between the routine jobs, such as check out girls, and the tasks of management.

1Secretary of State for Economic Affairs, op. cit, p. 228
Changes in the number and turnover of shops in the various commodity groups, and hence some indication of their changing size, can be seen from a comparison of the 1950, 1957 (sample) 1961 and 1966 (sample) Censuses of Distribution. Since many unusual factors were operating in 1950, for example, rationing and building controls, a better projection may result by ignoring the figures for that year. The changes are shown by Table 11, which also incorporates the numbers of persons engaged in the various categories.

The first two groups of businesses taken together are the convenience goods group, the remaining four groups constituting the durable goods. The Table shows the strong trend in the total retail trade towards the reduction of the number of shops and the constant size of the labour force. The increase in household goods, particularly, testifies to rising disposable income, and is likely to continue.

The previous section has discussed the changes in the amount of trade carried on by the different forms of shop. The independent retailer took over half the trade in 1961, and continued to do so, showing some decline in 1966, although the number of shops has been declining steadily. With regard to the smaller independents, there are still a large number of shops with a turnover of less than £5,000 per annum.

The further decline of the independent trader in the face of the advantages enjoyed by the multiple traders seems inevitable. The independent cannot organise central buying, wholesaling and stock control, and lacks the expertise and size to take advantage of the specialising labour force. Furthermore, he has little influence with the manufacturer

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1 Central Statistical Office, loc. cit., p. 196
<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
<th>Turnover (£ thousands)</th>
<th>Persons engaged</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL RETAIL TRADE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>583,132</td>
<td>577,405</td>
<td>577,307</td>
</tr>
<tr>
<td>Turnover (£ thousands)</td>
<td>5,000,130</td>
<td>7,587,154</td>
<td>8,913,860</td>
</tr>
<tr>
<td>Persons engaged</td>
<td>2,392,000</td>
<td>2,530,000</td>
<td>2,524,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GROCERS, PROVISIONS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>145,709</td>
<td>151,835</td>
<td>151,154</td>
</tr>
<tr>
<td>Turnover (£ thousands)</td>
<td>1,223,797</td>
<td>2,038,374</td>
<td>2,336,905</td>
</tr>
<tr>
<td>Persons engaged</td>
<td>522,683</td>
<td>556,706</td>
<td>556,953</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONFEC. TOBAC., NEWS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>74,606</td>
<td>77,437</td>
<td>70,662</td>
</tr>
<tr>
<td>Turnover (£ thousands)</td>
<td>502,661</td>
<td>702,996</td>
<td>799,632</td>
</tr>
<tr>
<td>Persons engaged</td>
<td>254,266</td>
<td>285,163</td>
<td>250,717</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLOTHING AND FOOTWEAR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>100,011</td>
<td>97,956</td>
<td>96,612</td>
</tr>
<tr>
<td>Turnover (£ thousands)</td>
<td>966,336</td>
<td>1,180,212</td>
<td>1,384,576</td>
</tr>
<tr>
<td>Persons engaged</td>
<td>427,885</td>
<td>411,631</td>
<td>405,079</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HOUSEHOLD GOODS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>62,946</td>
<td>62,115</td>
<td>69,133</td>
</tr>
<tr>
<td>Turnover (£ thousands)</td>
<td>500,477</td>
<td>795,566</td>
<td>993,660</td>
</tr>
<tr>
<td>Persons engaged</td>
<td>231,085</td>
<td>239,603</td>
<td>281,376</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OTHER NON-FOOD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>60,352</td>
<td>61,360</td>
<td>58,694</td>
</tr>
<tr>
<td>Turnover (£ thousands)</td>
<td>374,413</td>
<td>563,650</td>
<td>673,900</td>
</tr>
<tr>
<td>Persons engaged</td>
<td>231,019</td>
<td>237,597</td>
<td>227,776</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GENERAL STORES (Dept. and Variety)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>1,641</td>
<td>3,683</td>
<td>3,750</td>
</tr>
<tr>
<td>Turnover (£ thousands)</td>
<td>436,115</td>
<td>762,253</td>
<td>929,657</td>
</tr>
<tr>
<td>Persons engaged</td>
<td>190,578</td>
<td>287,446</td>
<td>312,745</td>
</tr>
</tbody>
</table>
or wholesaler and so his goods tend to be more expensive and his supplies more uneven. In the grocery field, the formation of independent chains or alliances, for example, the "Alliance of Individual Grocers", has enabled independents to copy some multiple techniques. The future that may exist for a reduced number of independent shops will depend on their ability to exploit the advantages they enjoy, such as flexibility of trading hours, personal service, and the ability to site in convenient locations.

The decline of the independent retailer, and particularly of the small local shop, is in fact partly due to modern affluence. T. Brennan has described the conditions of poverty in parts of Glasgow before the 1939-45 war, when the small credit offering shop was a manifestation of the hand to mouth day to day existence of the very poor. Whilst some people may deplore the lack of convenience caused by the demise of such shops, we may feel glad that the current life style of consumers and the shopkeepers themselves will not encourage the continuance of small independent retailers operating in such an economically meagre way.

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2 T. Brennan, *Reshaping a City*, (Glasgow: The House of Grant Ltd., 1959) p. 179
2.3.8 SELF SERVICE AND SUPERMARKETS

In studying the figures from the Census of Distribution we must bear in mind that the results of the Census cannot be fully comprehensive as a description of todays' spending habits. The Census classifies shops according to the main goods sold, and takes no account of outlets for these goods in other shops. As floor space has increased and self-serve techniques have been introduced, the retailers have taken advantage of the consumers requirement of the greatest possible convenience in location and choice, with the result that many shops formerly offering only groceries now sell meat lines, fruit and vegetables.

It is probably correct to state of self service shops in Britain that

"Their application is the most noticeable development of post-war retailing along with the freedom from rationing, shortages and queues." 1

The rise of the self service shop in this country has been particularly rapid. The fast growth of this form of retailing has perhaps led to some inconsistencies in the statistics available from various sources, but it was obviously not until the mid 1950's that the self service shop was firmly established in the British retailing scene. The study by the Northumberland County Planning Office into Trends in Retail Distribution 2 indicates the rapid growth of self service in the early

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1 W. Bor, loc. cit., p. 15
2 Ross, loc. cit., p. 15


1950's, and the introduction of the larger self service store or supermarket in the late 1950's. The data for this study was derived from statistics published at various times from the Board of Trade Journal and the Financial Times, and is reproduced here as Table 12.

TABLE 12
GROWTH OF SELF SERVICE SHOPS AND SUPERMARKETS TO 1963.

<table>
<thead>
<tr>
<th>Year</th>
<th>Self Service Shops</th>
<th>Percentage of total grocery sales</th>
<th>Supermarkets</th>
<th>Percentage of total grocery sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>1947</td>
<td>10</td>
<td></td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1950</td>
<td>500</td>
<td>1.4</td>
<td>-</td>
<td>-</td>
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<tr>
<td>1957</td>
<td>3,500</td>
<td>10</td>
<td>80</td>
<td>2.3</td>
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<td>1958</td>
<td></td>
<td>175</td>
<td>-</td>
<td>6</td>
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<tr>
<td>1959</td>
<td>5,000</td>
<td>16</td>
<td>600</td>
<td>7</td>
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<td>1961</td>
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<td>3</td>
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<tr>
<td>1962</td>
<td>9,000</td>
<td>27</td>
<td>1,100</td>
<td>10.5</td>
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<tr>
<td>1963</td>
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A supermarket is normally described as a self-service shop which exceeds 2,000 square feet in selling area, has at least three checkouts, and includes fresh meat and greengroceries as well as a basic range of household requisites and grocery lines in its stock.  

1A larger floor area is the basis for a definition adopted by the International self-service organisation. They consider "A supermarket is a self-service food shop with at least 400 sq. metre (approx 4320 sq. ft.) of selling space, which in addition to the normal assortment of foodstuffs also carries fresh fish, fresh meat, vegetables and other articles of daily consumption."

(Ross, loc. cit., p. 17)
A definition based on operational methods has been extended by Ross\(^1\) to include layout and marketing techniques, and it is in the whole approach to selling adopted by the supermarket retailers that the "revolution" in retailing has been most apparent to the individual consumers. Supermarket managements have introduced display methods such as "linear shelf footage control" to determine the area devoted to each commodity and each brand, and through apparent price cutting and other attention getting devices have held the consumers interest.

The further diversification of the grocery supermarket into non-food lines is possible, particularly in view of the higher profit margin normally expected from such stock. We may note, however, that in the United States there is now a trend away from the too wide a diversification of goods. In fact, in some shopping centres the leasing arrangements specifically limit the types of goods that the supermarkets may sell, thereby ensuring the success of the individual shops comprising the remainder of the shopping development and guaranteeing the continued viability of the centre as a whole.

Within the existing structure of British city and suburban centres the possibilities for very large supermarkets are restricted, which in such cases will limit the amount of diversification physically possible. Reconstructed and new shopping centres have made stores of larger floor area possible, but they are seldom feasible because of high rate costs. The exception to be expected is in the case of an out-of-town or urban fringe centre, and will be considered in later discussion.

\(^1\) Ross, loc. cit., p. 16
In considering the rapid development of the supermarket in Britain in the late 1950's, the significance of the removal of restrictions on building in 1954, should not be overlooked. A threshold in demand and in the retail traders ability to meet that demand with new techniques had been reached, and when the building restrictions were removed a period of rapid growth was able to meet the demand potential which had built up during the time of restriction.

In 1962 a prediction was made by W. G. McClelland\(^1\) based on the tendencies apparent in supermarket development in the preceding few years. He estimated that a saturation point in supermarket provision in this country might be reached when 5,500 to 6,000 supermarkets had been established, if conditions in Great Britain tended to approximate those in the United States. In the United States there are at present about 70,000 people to a supermarket, and at this point supermarkets account for between 65 per cent and 70 per cent of food shop sales.

Comparisons between American and British practice should be drawn guardedly. The long experience of this form of retailing in the United States, however, is possibly some guide for British operators. At any rate, in the United States the supermarkets, with their associated marketing trends, had been found to have cut food distribution costs to 14 to 17 per cent of turnover as early as 1955, as compared with food distribution costs of 25 to 30 per cent of turnover in 1930.\(^2\) This must be good news for British consumers and retailers alike.

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By the latter part of 1967 it was reported that about fifty per cent of all food retailed in the United Kingdom was sold by self service, twenty per cent of it through supermarkets. By this time a new style of grocery trade management had started to emerge, the new supermarket managers having become adjusted to their brightly coloured environment, with its sometimes scientific consumer manipulation techniques. In 1967 it was necessary for the supermarket on a site of average cost to sell about £2 of goods for each square foot of its area each week in order to stay in business. At this time there were about 2,750 supermarkets in operation in the United Kingdom, and the Supermarket Association suggested that a ceiling of about 7,000 units seemed likely. This estimation of the likely point of saturation is similar to the estimate made in 1962 which is referred to above.

At the beginning of 1969, after a period of mergers and general rationalization in the grocery trade, and after two years of reportedly slower growth in the field, it seemed that if economic conditions held reasonably sound a boom period lay ahead. It was reported that openings in 1969 were expected to average nine large self service stores per week throughout the United Kingdom. On January 12th, 1969 the Department of Employment and Productivity's Manpower Research Unit announced that the number of self-service outlets would be likely to rise from the present 23,000 to about 30,000 by 1980. It was considered that, allowing for closures and conversions, there would be about 7,500 supermarkets

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2. But note the severe difficulty of the retail trade in attracting and retaining efficient staff at below managerial level because of long hours etc. See, Secretary for State for Economic Affairs, *op. cit.*, p. 226.

within this total, compared with 2,800 at the beginning of 1968. This number of supermarkets might approximate a maximum capable of being supported under the expected economic conditions, as previously noted. It is significant that the predictions for saturation levels quoted here show a tendency to rise, particularly as there is a strong trend towards supermarkets with larger floor areas, and consequently capable of higher turnover.

We shall probably see further conversion of medium and large counter service shops to self-service, and more closures amongst the smaller shops. Present supermarkets have on average about 4,000 square feet of selling area, which normally means a total area of about 6,400 square feet, as an area equivalent to about 60 per cent of the sales floor space must be set aside for storage, staff and plant facilities.

Indicative of the move towards bigger stores was the announcement in January 1969 that the Tesco chain were to open at least twenty-five stores in the next twelve months, averaging 6,000 to 7,000 square feet sales area. Another chain, Key Markets, propose opening at the rate of one store a month during 1969, with some stores of up to 10,000 square feet. The most enterprising retail operation now being undertaken, however, may be that of Woolworths with its large Woolco stores on urban fringes throughout the country. This was described in a *Times* leader of January 7th 1969, with perhaps some implied reservation, as "... the Woolco experiment..." That this experiment is most likely to be successful in Great Britain at this point in time will be shown later in this dissertation.

At this stage it may be remarked that if these larger supermarkets
are to succeed in their aim to provide one shop shopping they must be accessible, particularly for the car shopper using the car as a shopping basket.

2.3.9 TRADITIONAL DIRECT AND EMERGING INDIRECT SELLING TECHNIQUES

Before discussing those marketing techniques where the consumer does not come into direct contact with the retailing personnel, namely mail order trade and trade transacted with automatic vending machines, some brief notes on the traditional forms of retailing not considered specifically before now will be made.

The Department Stores and Variety Chain Stores are a continuing feature of British town centres, the latter, such as Woolworths, Marks and Spencer, and British Home Stores having been very successful in the late 1950's and 1960's. It will be of interest to see how they propose to meet the consumer demand away from the central areas of towns and the well established subsidiary service centres within the conurbations, where they are normally found. The expansion of Woolworth's into the Woolco style has been mentioned, but to date Marks and Spencer's and the other large variety chains and department stores are proving conservative compared to their counterparts in other countries.

As has been shown, the importance of the Co-operative retail shop movement is declining. The Co-operatives have always been stronger in

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1 Mr. T.A.D. Sainsbury, addressing a meeting of the Royal Institution of Chartered Surveyors, January 6th 1969, quoted in The Times, January 7th 1969, p. 19. Mr. Sainsbury noted the widening of choice in each product range and the move of supermarkets into clothing sales. Shops "... will tend to grow larger because the demarcation lines are gradually being dismantled."
the north of England and Scotland than in other parts of the country, and
as the attraction of the dividend is offset by price reductions and other
forms of bargain offers from their competitors custom is lost. The
Co-operative's share of the retail trade since 1950 remains at about
10 per cent.

The mobile shop continues to be of continuing importance in
bringing basic daily needs to the housewife in new housing areas and in
country areas of low residential density. The mobile shop is a particu-
larly strong Scottish institution, possibly a continuation of the "packman"
tradition. Mobile shops will probably continue to account for about two
and one half per cent of the total food turnover in food sales, as they did
in 1961. Their existence is marginal, and due primarily to an under-
provision of traditional shops. The mobile shop does, however, provide
an inexpensive means for the individual to begin in retail business, and
the benefit of some personal contact for the isolated and immobile
housewife.

Direct sales from manufacturers to consumers doubled in value
between 1950 and 1961 and have continued to increase. With increasing
standardisation in durable goods, mass media advertising, and the gener-
ally better quality and reliability of goods, consumers are often willing
to deal direct with the manufacturers, with the knowledge that they are
making a considerable cost saving.

Discount houses also offer the benefit of "factory fresh, original
carton" shopping to consumers. The discount houses deal mainly in
consumer durable and rely on large scale buying, quick turnover and the
advertisement of branded goods by the manufacturers. Superseded
models of consumer durable goods may be sold by discount houses on
behalf of manufacturers, and there should continue to be a place for this
type of retail outlet in any economic climate. These stores normally operate at very low overhead costs, and provided they make adequate provision for their customers' car parking, can locate on very economic sites.

The remarkable growth of mail order shopping is a little difficult to account for in times when personal shopping is becoming increasingly well catered for. There are very few people in modern British society unable to reach a comprehensive shopping centre quickly if they want to. The success of mail order business may rest to a great extent in one of its traditional attributes, its ability to provide a system of credit for shopping purposes which can be obtained from mail order trading clubs quickly and with dignity. Even with the relatively high earnings of today, the purchase of clothes, particularly children's clothes, shoes, household linen and other items can be a severe strain on family budgets, particularly of those families in the poorer industrial areas. Again, as with the co-operatives, mail order business has been particularly strong in the north of England.

The 1961 Census of Distribution covered the trade of all specialist mail order businesses, and revealed an increase in their sales of 80 per cent between 1957 and 1961, from £126 million to £227 million. A brief statistical analysis by the Investors' Chronicle in March 1967 estimated the value of mail order business in 1966 at £420 millions, and its annual rate of growth at a cumulative thirteen per cent, doubling sales over five years. This is more than twice the percentage annual rate of growth of retail trade generally. But mail order still represents only a

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1 This view is put forward by an article in The Guardian, November 30th, 1967.

2 Cited by The Guardian, loc. cit.
a small fraction of Britain's general retail trade, estimated at about two and one half per cent in 1962 and not quite four per cent in 1966.

The introduction by the Post Office of National Giro in the autumn of 1968 should have tended to stimulate all forms of postal trading. Giro payment forms could be included in a mail order firm's catalogue and the dispatch of such forms would be a quick and convenient way of sending money. The expansion of mail order business seems certain, despite the attractions of the new forms of conventional shopping.

Automatic Vending should experience even further expansion in future years as food and drink services are provided at work places, using this method of distribution. It is estimated that there is an immediate potential for 250,000 machines in factories and offices alone.\(^1\) A long term prediction claims that by 1980 thirty three per cent of the total trade in cigarettes and coffee will be made by machine.\(^2\)

The trade of specialist machine owners and operators (excluding machines run by shop owners) was shown by the 1961 Census to be £4.2 million compared to £2.3 million in 1957. Modern packaging has allowed an increased range of goods to be sold by vending machine. Whilst the greatest growth in the installations of automatic vending machines in the near future is likely to be in interior locations in factories and offices, the planner must make adequate provision for the most effective and aesthetically acceptable siting of automatic vending machines in the urban setting, as they should now be considered an integral part of the retail trade.

\(^1\)The Times, January 7th 1969, Automatic Vending Supplement

In the future we must expect electronic engineering to contribute further to merchandising. It has been predicted that at some unspecified future time in the United States it will be possible to order by video-telephone. Orders will be taken at any time of day or night for delivery the same or the following day from a warehouse which may be located away from traditional business centres. Much shopping will probably continue to be carried out in the same way as it is done today at specialised shops and at large self-service stores, but for the selection and ordering of certain lines of convenience and durable goods adequately known to the consumer from past use the video-telephone method seems feasible.

The point is that retailing techniques will continue to develop. We can expect new mechanical innovations as everyday life itself accepts and depends more on sophisticated industrial techniques.

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SECTION 2.4.0 TECHNIQUES: SITE SELECTION, DEMAND PREDICTION AND AREA ESTIMATION

2.4.1 PREDICTION TECHNIQUES AND PLANNING POLICY

Service centres play an important role in the community as centres for commercial and social exchange and interaction, and are consequently important traffic generators demanding good communications, parking and servicing arrangements. The degree of success with which any service centre fulfils its function will depend to a large extent upon the development of a planning policy for the centre which will allow it to modify its form in accordance with the changes in consumer behaviour which will occur over time. Within Great Britain this planning policy is normally the responsibility of the local planning authority, but in the case of very large centres in the control of a private developer, this policy for development will rest to a certain extent in the private sector.

In a report on the prediction of shopping requirements prepared by the West Midlands Branch of the Town Planning Institute,¹ it is submitted that the planner is concerned with the following aspects of shopping provision:

1. The **location** and **extent** of shopping centres, within the context of development plans. These factors should be determined by the planner from his knowledge of changes in population distribution, communications and land use generally. Additionally, the **intensity** to which a site is developed should also be under the control of the planner because of the repercussions of the development on such things as traffic generation and congestion.

2. **Adequate freedom for vehicular movement and safety for pedestrians.** These attributes may be achieved by the planner exercising his statutory duties of development control. The planner must also endeavour to ensure a satisfactory standard of overall design.

3. The **economic viability** of the proposal must be examined not only as an isolated scheme, but in the context of the whole town centre, town or region.

4. The planning authority may be itself responsible for implementing development, in which case the planner must stipulate the extent and quantity of retail development and the range of facilities the centre should possess. These facilities are, in fact, crucial to any centre and determine the function it fulfils.

The role of the planner in developing from forecasts a planning policy for service centres may be either seen as that of an interpreter or initiator. In any case, it is the professional duty of the planner to reconcile the varied interests and demands of shoppers, developers and retailers. It will be economic factors which control the amount of development that any population can support at any time, so it is within this context that the planner should endeavour to achieve a satisfactory result for both the consumer and the retailer. A satisfactory return or investment will be required for both the developer and the shopkeeper, consistent with the best economic use of the land for the community as a whole, and the provision of the fullest range of services and facilities possible for the consumer.

To achieve this approach to a planning policy the planning authority will need to become involved in estimations of future levels of economic activity and trends in consumer behaviour, as well as in the estimation of floor space required for both retail and non-retail uses within the service
centre. As detailed proposals for development or redevelopment are prepared, either by a private developer or by the planning authority itself, details of selling space, storage and other ancillary uses, parking facilities, loading requirements, pedestrian segregation and many other particular layout requirements will need to be considered. It will be necessary for the architectural control of the centre to be carefully thought about and specified in the site leases and when building permissions are granted.

The report quoted above\(^1\) considers that the powers of local planning authorities appear to be reasonably adequate for implementing a co-ordinated shopping policy. This depends to a large extent, the report claims, on the Minister continuing to give support to economic arguments and being prepared to accept detailed policy statements on shopping in the written statements submitted as part of Development Plan reviews.

It will be obvious from the material presented in this dissertation that any forecasts of the future distribution of population, of demand, of consumer behaviour, and, in fact, of any matter effecting the future development of service centres, must be made with care and used in planning with utmost discretion. Prognosis is essential, however, and it is critical that the best possible data should be used. Consequently it is considered that in the formulation of planning policy by local planning authorities, particularly in regard to service centre planning, that central government authorities, particularly in regard to service centre planning, that central government authorities and outside planning consultants with a wide experience in the problems concerned should be consulted and retained as policies are formulated and revised over time.

\(^1\)Ibid., p.7
2.4.2 RETAIL SITE SELECTION

Techniques for the appraisal and selection of sites for retail outlets of various types have been developed to an extremely sophisticated level in the United States. One feels that in Great Britain site selection by developers and retailers is still made more on the basis of hunch or intuition. In fact in this country, the stringency of planning control, which normally and obviously operates for the benefit of the community at large, limits most retailers to sites within established, redeveloping or new town service centres. Existing service centres are extended or modified and consequently new possibilities for shops arise, but it is seldom that a site away from an established service centre becomes available for retail development. Even in cases where shifting and expanding population makes the provision of new shopping facilities necessary they are normally based on some nucleus of development which has some historic significance in the area.

This is not so often the case in the United States. Where zoning ordinances are applied there is some restriction on the developer's choice of site, but in most cases a greater degree of flexibility in site selection occurs in the United States than in Great Britain, and the developer is fairly free to play the local market in terms of site selection as he thinks fit. Many cities, of course, such as Philadelphia, have a firm policy regarding the siting of retail outlets, but in general the freedom of choice available has sharpened the techniques of the site selection consultants and store managements to a degree which the opportunities for site choice existing in Great Britain do not stimulate.

In this country, however, the choices for site selection within the existing planning legislation have become so great and perhaps bewildering to the smaller retailer that recently a useful handbook on the subject has been published.¹

The author of this book states that his intention is to lay down certain principles of retail siting and selection. He has produced a useful guide to the uninitiated in the subject of retail site assessment, and will probably not do these people the disservice of making them feel completely confident to proceed to a final site selection without consulting a specialist in the field. The author has in fact thoughtfully appended a list of surveyors and agents whom retailers may consult.

A similar study dealing specifically with the problem of selecting sites for supermarkets in the United States, by Bernard J. Kane,² is in many ways comparable to the work referred to above. Kane is quick to draw the readers attention to the difference between a site and a location. The site has the physical attributes of depth, frontage, shape, whilst the location is the situation of the site in its relationship to the surrounding network of streets, population and other physical features of the landscape. In choosing a retail position both the site and the location should be considered.

The publication of these books, Kane in 1966 in the United States, and Cox in 1968 in Great Britain, is significant in the consideration of


trends in retailing we are making. The British study, particularly, marks the end of a period of enquiry and theoretical development in the field of shopping studies. The American study is perhaps not so definitive in time, but as a handbook for supermarket retailers it is able to be confidently reassuring from within the conceptual framework of firmly established practice. Both books, it may be said, are at a threshold of much more sophisticated site selection techniques which require the use of complex mathematical models. These new techniques will require the skills of a specialist for proper interpretation, and because of this it might be fair to say that the studies quoted signal the end of the first period of scientific site appraisal in retailing.

2.4.3 THE DEVELOPMENT OF TECHNIQUES: TRADE AREAS

The concepts of service centre, service population and catchment area have been previously introduced, and some discussion of studies aimed at defining areas of influence of service centres has been made. This section will attempt to incorporate some further brief reference to this work into a general summary of analytical techniques aimed at predicting shopping demand at a service centre, in the first analysis, the assessment of the number of shoppers using a service centre.

Normally, in any predictive techniques, for retail purposes it is first necessary to define catchment area, retail trade area, or hinterland for the service centre under consideration. Three methods may be used:

1. Subjective judgments based on observations of similar conditions from which generalisations are drawn.
3. The use of empirically derived formula.
The latter, known as gravity models, were first used by William J. Reilly in the United States in 1929, and have been considered briefly in the previous Chapter.\(^1\) Reilly’s thesis, put simply, is that two towns will attract trade from any intermediate point in direct proportion to the population of the respective towns and in inverse proportion to the square of the distance that the intermediate point is from either town. The method has been widely used in the United States,\(^2\) and can be modified by substituting total floor space of a shopping centre, or the size or number of a particular facility, for the normal population figure.

In Great Britain, however, the more common method of defining retail trade areas has been by studying actual consumer movements, and in particular, the transport pattern. Most early British work in this field was done by geographers primarily interested in the hierarchy of urban centres.\(^3\) F.W.H. Green\(^4\) studied bus routes in order to determine the catchment areas of towns, having hypothesized that a towns’ sphere of influence could be identified from the limit of its radial bus routes provided that they served no larger town. For ease in the manipulation of this method, Green assumed mutually exclusive areas of influence without overlap. Despite its limitations, at the time, when fewer cars were in use, the method and Green’s findings were of some significance.

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1. William J. Reilly, \textit{op. cit.}


3. For example, Smailes (1944) \textit{loc. cit.}

4. Green, (1948) \textit{loc. cit.}
In 1955 the Local Accessibility Map was published by the Ordnance Survey for the Ministry of Housing and Local Government. This map made use of Green's work and distinguished both central places and their retail and service trade areas. The essential criteria for distinguishing a centre was that it should have bus services radiating from it and these routes should serve communities smaller than the nodal centre, making them dependent on it and placing them within its sphere of influence. This method of assessing service area has been widely used by local planning offices and the Ministry of Housing and Local Government. The method became rapidly outmoded, however, with the rapid rise of motor car registrations in the second half of the nineteen fifties, and the use of this technique within Greater London in the survey of shopping facilities for the Boundary Commission is questionable. At the time, however, the continued use of this method was justified by the researchers because it was considered that the growth of motor car ownership and the decline of public transport systems was relatively recent and that neither would have yet affected the established pattern of travel.

That a trading area is defined not by a fixed boundary, but rather is bounded by a series of radial zones, has been recognised for some time. A mathematical model which was able to incorporate an allowance for this zonal character of the trade areas was established scientifically by David L. Huff. Zonal probability contours were described by Huff and used in a technique which was later developed and refined by Lakshmanan and Hansen. The bus service hinterland technique and the

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3. Lakshmanan and Hansen, loc. cit.
early gravity models unfortunately gave the impression that a trading area has a fixed boundary, and consequently have been supplemented as techniques of trade area estimation by the more refined methods referred to.

The concept of "range of a good" has been discussed in some detail already in this dissertation, and will not be reiterated here, save to say that it is this concept which determines the zonal characteristics of the trade area. The work of H. E. Bracey¹ showed each service centre in the rural area he surveyed to be surrounded by a small zone over which it enjoyed almost total dominance, termed the "intensive zone". Beyond this there was a further area of strong affiliation termed the "extensive zone", and around the large centres a further "fringe zone" where affiliations were generally weak. A similar study by H.W.E. Davies² in Cardiganshire had similar findings. It is in these outer zones where goods of extreme range penetrate that several centres often compete for trade, and the allocation of population to any one centre for the purpose of demand calculation is problematical. Consequently, techniques of demand estimation which rely on the determination of a defined catchment area are likely to be less realistic than gravitational model techniques.

¹H.E. Bracey, loc. cit.
Another technique aimed at arriving at the population served by the service centre being studied was developed by W.L. Waide, who attempted to measure a town's attraction in terms of turnover. To do this the turnover of each centre was divided by average regional per capita expenditure and so a figure for the total population served was arrived at. This population was then compared to that of the town and the difference expressed as a trade import or export. In spite of certain deficiencies, such as the assumption that all the expenditure of a town's inhabitants is retained by that town, this technique has proved useful to give a true picture of a rural town's trading position in its regional context. This technique was also used by G.M. Lomas in a study of towns in the Midlands.

By this time it was abundantly clear that consumers from fringe zones were using different centres in a fashion which was not easy to predict.

2.4.4 THE HAYDOCK STUDY AND THE LAKSHMANAN-HANSEN MODEL

One of the most influential British studies to date, which has come to be known as the Haydock Study, sought to determine the break points between catchment areas of service centres in the North West of England by using Reilly's Gravitational Model with two simple refinements. Firstly, a measure of the attraction of a centre was used instead of population, and secondly, time was used instead of distance.

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2 G.M. Lomas, loc. cit.

3 R.H. Kantorowich (director) op. cit.
The Haydock Study arose out of the commissioning of the Department of Town and Country Planning at the University of Manchester to undertake research into the desirability of an out-of-town regional shopping centre at Haydock Park, at the most highly accessible location where the M6 motorway and the East Lancashire Road intersect. This research was sponsored by the developer and was undertaken in the time between refusal of the original application and the subsequent appeal of the developer to the Minister for Housing and Local Government. Eventually the appeal was rejected by the Minister, but in the meantime Manchester University’s study had been carried out and on publication of the methodology and the results, produced criticism and further consideration which has undoubtedly served to sharpen the approach of retail researchers in this country.

It is of interest that shortly after publication of the Haydock Report, T. R. Lakshmanan and W. G. Hansen\(^1\) published their work on a retail market potential model. The Manchester researchers subsequently programmed the data they had collected for processing by ATLAS computer, using in this case the Lakshmanan-Hansen model, and were pleased to see that the results obtained in this instance loosely resembled the results obtained in the earlier study.\(^2\)

In this survey of the development of predictive techniques in retailing studies the Haydock Study is important as it marks the culmination of successive studies which principally employ the method of centres-

\(^1\)Lakshmanan and Hansen, *loc. cit.*

\(^2\)R. H. Kantorowich, (director) *op. cit.*
and-hinterland study derived from Christaller, Carruthers, Lomas et al.

The Haydock method consisted of:

1. The identification of a hierarchy of centres with distinct levels.

2. The delineation of a hinterland for each centre, at each level by using a modified form of Reilly's Law as applied to journeys by private car.

3. The calculation of sales generated within each hinterland by the population resident there and by comparison of this with the sales actually recorded in the hinterland, to derive a statement of the 'balance of trade' in both convenience and durable goods.

If a new assumption was made regarding the future situation when this method was being used, whether regarding population, spending power, the size and attractiveness of new centres, etc., a great deal of time-consuming recalculation had to be done. This method, however, perhaps represents the ultimate sophistication using the concepts of centre order and hinterland in the way they are understood in classic central place theory. It has been mentioned that this study incorporated two simple but significant refinements in the use of Reilly's Law, using the measure of attraction of a centre as a substitute for population and driving time instead of distance. But the Haydock Method does incorporate a hierarchical "Centre Order" concept for the region, a concept which has been rejected in later work.

David L. Huff\(^1\) has emphasised that consumer spatial behaviour may best be described as a probalistic phenomenon, and that the retail

\(^1\)Huff (1962) *op. cit.*
trade area of an existing or proposed service centre can be ascertained by

1. Dividing the surrounding area into small statistical units.

2. Calculating the probability of consumers for each of these units going to a particular shopping centre.

3. Drawing lines connecting all statistical units having like probabilities. A retail trade area is thus not a fixed line circumscribing a shopping centre but rather a series of zonal probability contours.

Huff seems to have reached his hypothesis, which he began testing in the early 1960's, from observations of actual consumer behaviour; (as previously reported in this dissertation,) and a realisation of the gross deficiencies in terms of economic theory that the regional gravity models supported. He pointed out\(^1\) that traditional economic theory maintains that a consumer either always chooses one particular (the "most desirable") alternative with probability one, or is indifferent between several "most desirable" alternatives (presumably chosen with equal possibilities). As a consequence, all other alternatives possess zero probabilities. Refil\(^{\prime}\)'s method asserts that two variables are sufficient to estimate a shopping centre's utility:

1. The size of the shopping centre (square footage of selling space)

2. The travel time involved in getting from a consumer's travel base to a shopping centre.

With these variable available, it is hypothesized that the probability of a consumer patronising a shopping centre is directly related to the size

\(^1\)Ibid.
of the centre and conversely related to some increasing function of the
time involved in travelling to a centre.

From an empirical pilot study, Huff found that the marginal
utility associated with the size of a service centre increases rather slowly
for small centres, rises rather markedly at some larger size levels, and
then the marginal utility begins to decline with successively larger size
centres. This model formed the tentative operational basis for under-
standing and determining the retail trade area of a service centre by
following the three steps outlined above, and in particular, for determining
the equiprobability contours which circumscribe any shopping centre.¹

The non-exclusive approach outlined by Huff has been fully exploited
in the Lakshmanan–Hansen model² which, in contrast to the centres–and-
hinterlands logic with the modified Reilly equation which the original
Haydock Study used, acknowledges that money is drawn from all parts of
the region to each and every centre. The region is not subdivided into
hinterlands but treated as one economic space differentiated by zones of
spending power, and centres of shopping attraction, and calculations allow
for the frictions of time and cost involved in overcoming the distances
between zones and the shopping centres.

The basis of this approach is that a consumer, confronted with a
choice amongst several alternative shopping centres will not inexorably

¹Ibid. p. 33
²For an adequate explanation of the mathematics of this model see
Kantorowich (director) Regional Shopping Centres, Part Two (1966)
chose the nearest centre. This assumption recognises that there is indeed a continuum of market orientation of consumers to shopping centres, and that an overlapping or competition between shopping centres does exist.

Despite the sophistication of this technique, and the confirmation it produced of the original Haydock Study results where a different approach had at first been used, the planner must be aware of the fact that the successful application of models such as this depend on the validity of the many inputs, and consequently one mistaken or loose assumption will produce a false picture in the results obtained. Opportunities for error will be examined later in this dissertation when the application of this model to the service centre planning on Tees-side is discussed.

2.4.5 THE CUMBERNAULD STUDY

The analytical techniques used to determine the amount of shopping floor space to be provided in Cumbernauld new town\(^1\) made a significant methodological advance on the previous methods used for such predictions, while being based on the theory developed by Wilfred Burns\(^2\) shortly before.

This study sought to estimate the shopping needs of a new town for 70,000 people, situated in the vicinity of Glasgow, and as a basis for this

---


\(^2\)Burns, op. cit.
estimation made an analysis of the retail trading structure of a sample of one hundred towns, each of between 25,000 and 100,000 inhabitants, using the 1950 Census of Distribution. Each of the towns selected was situated within twenty miles radius of one of the nine largest cities in Great Britain, excluding the London area.

The report anticipated that the new town would be overshadowed by Glasgow and that the sales potential of the town would thus be below average for the size of town. This assumption was based on evidence published earlier by J. B. Fleming, who had stated:

"Towns which have a lower level of sales per person are generally those near to large cities which tend to overshadow them, and indeed, all the towns between Glasgow and Edinburgh, even the large ones, fall into this category."

The Cumbernauld report included a graph correlating retail sales and population for the towns which had been samples, showing a correlation coefficient of 0.84, which may be compared with a correlation coefficient of 0.98 for retail sales and towns plus hinterland population. G.M. Lomas, however, in a discussion of the Cumbernauld study, pointed out that the range of the sample used was misleading in that the slope of the regression line would give a sales potential to the larger cities of over 100,000 population far in excess of that possible, and would likewise underestimate the sales potential of the very small centres below 40,000. It was considered that if the graph had been extended in the upper portion to include cities of over 100,000 population and within twenty miles of, and

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2 Lomas, loc. cit., p. 108.
including, the provincial capitals, the regression line would then adopt a position more like the national average. Lomas maintained that this was a more realistic picture of the structure of retail trading around large cities. This critical appraisal of the Cumbernauld reports' analysis clearly showed that the effect of the large cities in terms of total trading area on surrounding cities and towns must not be over-rated.

A further feature of the Cumbernauld report which G.M. Lomas found wanting was that the average population for the sample of one hundred towns was only 45,550, and subsequent calculations for particular categories of retail sales were based on that average. This would result in the sales potential having been underestimated if the sample aimed to reflect a town of 70,000.

The Cumbernauld researchers,¹ having shown a positive correlation on the scatter diagram described above, but overlooking the difficulties raised by Lomas, then proceeded to calculate, from the 1950 Census of Distribution, average sales per head for each retail and service trade. This ratio was modified to allow for changes in the value of the pound between 1950 and 1959. A sales conversion (sales/floorspace) factor was established after consultations with the Chamber of Commerce and various retail organisations, and this factor was then applied to sales in each category and related to the ultimate planned population of 70,000.

As a result of this work, the overall shopping needs of the new town were estimated at 617,700 square feet of shopping space. According

¹ Particularly E.B. Gibb, an economist, and D.R. Diamond, a geographer, both of Glasgow University.
to Lomas this figure could be almost twenty per cent too low because of the errors caused by the fact that the average town in the sample had a population lower than that which Cumbernauld was to be planned for.

With some naivety the Cumbernauld report stated that

"...it would not be wise to provide at the outset for the hardcore of 20,000 potential regional shoppers, but rather to regard them as an insurance policy which will help the town’s shopping to get started and to provide a little extra turnover for the traders.” 1

We may observe, therefore, that although the method of assessing retail floor space in Cumbernauld was based on a basically sound and also innovating technique, in the actual application of this part of the methodology and in the assumptions regarding the regional shopping population, the effectiveness of this pioneering study was severely limited.

2.4.6 SOME BASIC DATA REQUIREMENTS

In 1959 Wilfred Burns criticised the way in which the provision of shopping facilities was arrived at in Great Britain, but admitted that until 1953 2 a calculation of shopping needs as opposed to a guess, was practically impossible. In the United States of America, on the other hand, methods of calculating shopping needs had received considerable attention and were facilitated by quite detailed population statistics and figures showing the average expenditure on a wide range of goods and services issued by the United States Department of Labour.

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1 Cumbernauld Report, loc. cit., p. 49.

2 Burns, op. cit., p. 51. He refers here, of course, to the publication of the 1950 Census of Distribution.
In the United States most assessment is done by consultants employed by private enterprise, and many advances in predictive techniques have been made under the pressures of intense competition. In general, the basic method used, described in its crudest form, is as follows:

First, to assess the catchment area of each shop. The total catchment area is often subdivided according to the frequency with which the inhabitants use the shop under study, and the percentage of their expenditure that it receives.

Secondly, population of the service area can be calculated.

Thirdly, the percentage expenditure and population statistics are converted into expenditure at the shopping centre. The total expenditure thereby obtained is then translated into floor space requirements by applying a ratio of gross sales to floor area. 1

In Great Britain, detailed figures of the American type do not exist, the Census of Distribution being the only published source of information for all retail establishments. This is inadequate for making detailed estimates of shopping requirements, and the Family Income and Expenditure Tables, which in any case may sometimes be unreliable because of the relatively small scale of sample used, refer only to commodities and therefore cannot be related to the establishments recorded by the Census of Distribution.

There are two main phases in the assessment of shopping needs for areas of new development or redevelopment: the estimation of the service area population, and the determination of the relationship between the number of customers and the amount of shopping required.

1 L. Smith, "The Assessment of Shopping Needs", Chartered Surveyor (January 1964)
The number of people to be served must be known in order to make an estimate of their service requirements. The research work done in this regard has been previously discussed, but we should note here again that generally the results are over-simplified, and therefore unsuitable for an accurate forecast of shopping needs. Not only is it necessary to know the total population in the service area, but also the percentage of expenditure in the centre. To find the number of people actually using the service centre, survey work is normally required.

Secondly, a measure of shopping provision is needed which can be related to the service population to give a total amount of shopping space for the centre. Shopping facilities can be measured in a number of ways. The once common method of simply counting the number of shops is now acknowledged as completely unsatisfactory. Shop frontage and square footage of shopping area are more satisfactory but each has its drawbacks. More preferable is shop turnover or commodity sales per square foot of retail space, but this requires statistical information which British shopkeepers are reluctant to give.
2.4.7 FROM NEW TOWNS REPORT 1946 TO M. H. L. G.

RECOMMENDATIONS 1967

The book by Wilfred Burns, British Shopping Centres, published in 1959, is in many respects a significant hinge point in any discussion of the development of the attitude of planning authorities towards the planning of service centres in this country during the last twenty years, and the development of techniques of shopping floorspace assessment. The influence of Burns' study can hardly be over-rated. It obviously was published at a time of increasing interest in all aspects of shopping and service centre provisions.

In the immediate post war years, however, estimates for shopping requirements continued to be made on the basis of the number of shops in proportion to population. As a basis for the provision of shopping facilities in the new towns, the Final Report of the New Towns Committee, in 1946, recommended as a working rule, the provision of between one shop to 100-150 people. The Committee had observed that the number of shops in old towns was as high as one to 40-60 people, while in the newer housing estates it varied from between one to 150 and one to 325 persons. It seems that one observed standard was of too high a provision, and one too low, and that the Committee had chosen a reasonable looking intermediate figure.

Various other recommendations on the ideal number of shops for a given population were made in the advisory plans and statutory Development Plans of the next few years, but no recognisable trend emerged.

1 Burns, op. cit.

For instance, Ford and Thomas\(^1\) as a result of their work in Southampton suggested that the recommendation of the New Towns Committee was inadequate, but did not offer an alternative.

In their initial planning, the first group of eight new towns around London assumed space for eight shop units (approximately, 1,000 square feet each) per 1,000 of the ultimate population, that is, eight square feet per head. Conversely, this meant one shop for 125 people. This standard was worked out from an analysis of shopping provision in a number of established towns with some allowance for the fact that 'corner shops' were being eliminated from the residential areas, and that new shops are generally more efficient. The new towns were furthermore regarded as being self contained, and there was no speculation on spheres of influence. As few as half of the new town shops were expected to be in town centres (the initial situation at Stevenage), but this proportion was revised to provide more town centre shops as the towns developed.

Avoiding the danger of counting shops, Nathaniel Lichfield evolved the following formula for floor space needed (N):

\[
N = \text{Total floor space}^* \times \frac{\text{Forecast population of town and hinterland}}{\text{Present population of town and hinterland}}
\]

(*of true central area type shops)


\(^2\) See also Nathaniel Lichfield, *Economics of Planned Development*, (London: The Estates Gazette Ltd., 1956)
This avoided the danger of counting shops but still uses existing shopping area as a starting point and involves floor space surveys of individual catchment areas.

Demand in the form of customers expenditure is the economic determinant of the amount of retail area. Other things being equal a retailer will expect to double his sales by doubling the size of his shop. It is thought, therefore, that if an accurate estimate of sales in a shopping area could be made, this would form a useful criterion for measuring shopping requirements.

The expenditure in each major retail category and the relationship between sales and shop floor area are needed. Although this relationship is difficult to assess the method is more reliable than the average number of shops or the number of employed persons, because:

1. Retail sales can be related to population with considerable accuracy.
2. Sales are one of the most uniform characteristics of shops and, therefore, easily measured on a uniform basis.
3. When planning the retail area of a new shopping centre the most up to date ratio of sales/area can be used.
4. Expenditure is related to income which is to some extent predictable.

Wilfred Burns\(^1\) suggested a method of assessing the shopping floor space required which was based on the relationship of sales or turnover

\(^1\)Burns, op. cit.
to retail floor space, and in addition, recognised that this ratio varied with the catchment area. The total expenditure under each commodity head, as set out in the Census of Distribution, 1950, was measured. Empirical evidence on the turnover per 1,000 square feet of floor space in the various retail trades was also collected and in this way figures for square footage of shop space were produced. While not suggesting that the statistics he gave were applicable to particular cities, Burns was merely putting forward a method which would need more detailed analysis before being applied to any specific case.

Significant and stimulating as this development was, there are a number of drawbacks in the use of the method outlined. First, although using a much more definite measure than number of shops, it is still based on existing conditions, and since the retail trade is constantly changing, this technique runs the risk of overestimating future requirements. Secondly, the census figures on expenditure available at any one time will almost inevitably be considerably out of date. Thirdly, accurate conversion factors sales/floor space are difficult to estimate. A thorough study of these relationships is needed which takes into consideration the internal layout of stores, trends in turnover per unit area, comparisons of the results of studies using selling space as well as total shop floorspace, comparisons of central area and subsidiary service centres, variations between shops serving different social classes and the diversity between trades. Fourthly, it seems it is not possible to prove that there is a relationship between commodity sales and shop floor space.

Burns' theory was followed by the Cumbernauld Development Corporation, as has been outlined previously, and the adoption of this technique for assessing the amount of floor space to be provided for a new town made a remarkable advance on the methods previously used for such a purpose.
The same idea was adopted by the London County Council for the proposed new town of Hook (abandoned in 1960) and the Andover town centre proposals (Town Map approved, 1962), and has been adjusted and applied to several urban renewal schemes.  

This technique has been used and refined by research workers such as D.R. Diamond, and has indeed formed the basis of the booklet issued by the Ministry of Housing and Local Government to local authorities in 1967 on a method of estimating retail floor space requirements. This document describes what is involved in a simple yet adequately detailed analytical approach to the problem of assessing shopping requirements by reference to spheres of influence and the conversion of estimated turnover into floor space requirements. The stages in this method may be briefly described as follows:

1. Define the trading area of hinterland.
2. Divide the trading area into zones.
3. Estimate the future population of each zone.

---


4. Estimate per capita retail expenditure in each trade group by zones.

5. Determine total retail expenditure.

6. Deduct effective competition within the trading area to arrive at the unsatisfied potential.

7. Determine the share attributable to the new shopping centre.

8. Convert the new centres' share to square feet.

The booklet takes each of these steps in turn, and shows how they may be achieved in practice. Admirable as a guide to Local Authorities, the Ministry's publication concludes with an appropriate warning about the liability of shopping habits and retailing methods to change, and the statement

"Flexibility in planning is therefore absolutely essential and plans should always permit of alterations in the light of events, because although floor space estimates are useful tools in planning shopping centres it is impossible to predict floor space with certainty."

Nevertheless, in the twenty years since the fumbling estimate of shopping requirements set out in the Final Report of the New Towns Committee in 1946 much has been done to come to grips with the problem.

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Ibid., p. 13.

Note also that whilst the Surveyors and other consultants working in this field do make use of sophisticated analytical techniques they often seem to regard these with healthy scepticism, not ignoring the hunches which may occur as a result of long experience when the final analysis is being made.

Towards the end of this period it was generally felt that the analytical approaches developed from Burns' earlier work were worthwhile technical procedures to carry out before making planning decisions, no matter how great a flexibility had to be built into the final scheme. It was well recognised that overprovision of shopping floor space was a costly mistake, disheartening for the entire community. There have been some sorry examples of this in Great Britain.¹

The period reviewed encompassed the Haydock Study previously referred to, when more complex mathematical models were introduced, incorporating greater flexibility, and potentially greater accuracy in a regional system of service centres. More important, however, may have been the realisation by planning officers that any models used to help in predicting shopping floor space requirements could build in a series of local refinements to make national data more applicable to the local conditions. This logic leads to the development of regional data banks, the formulation of standard computer programmes, etc., so that the situation regarding shopping floor space requirements can be economically and quickly reviewed.

¹ More noticeable in the North of England in the mid 1960's, in the small and medium sized towns of Lancashire, North Cheshire and Yorkshire for instance, and on Tyneside, where urban boundaries lie close together.

2.4.8 A NOTE ON THE RELIABILITY OF SHOPPING ASSESSMENTS

It has been mentioned previously that the lack of detailed statistical information in Great Britain limits the effectiveness of any retail predictive technique. Forecasts of shopping demand are particularly vulnerable in this regard, and as various commentators, for instance T. Rhodes and R. Whitaker, have remarked, it is likely that there will always be a fairly high margin of error inherent in shopping forecasts until national statistics in this country are improved at the detailed geographical level.

A further matter to be considered is the variable way in which the statistical information that does exist may be interpreted by individual consultants or planning officers. Harvey Cole in a review article suggested that the assessment of future shopping needs seemed to be more of an art than a science, and that much of the work currently being done appeared to be little more than

"... the application of individual preconceptions to insufficient data" 3

It is generally recognised that the main variables in estimating future shopping space requirements are the population expected and the income of this population. The way in which these are projected and the relative importance given to each of these variables has tended to differ markedly from one analysis to another, however, with the result that the outcome of any study depends to a large extent on the choice of consultant.

1 T. Rhodes and R. Whitaker, "Forecasting Shopping Demand", Journal of the Town Planning Institute, Vol 53, (May 1967)


3 Ibid., p. 147.
Cole supported this contention with a table, \(^1\) which is reproduced below. The results of seven different studies by seven different consultants for the central areas of seven different towns were analysed. In the table the recommended shopping floor space percentage increase, as recommended by the advisor concerned, is shown underlined. The percentages of floor space increase which would have been recommended by the other advisors had they been engaged, and had they used the method of analysis and projection that the employed on the towns for which they actually made projections, are also shown.

**TABLE 13**

**RECOMMENDED PERCENTAGE FLOOR SPACE INCREASES FOR SEVEN COUNTRIES**

<table>
<thead>
<tr>
<th>Town</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
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<tr>
<td>Adviser to Town: A</td>
<td>10</td>
<td>3</td>
<td>6</td>
<td>6</td>
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<td>10</td>
<td>12</td>
<td>15</td>
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<tr>
<td>C</td>
<td>42</td>
<td>10</td>
<td>25</td>
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</tr>
<tr>
<td>F</td>
<td>42</td>
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<td>36</td>
<td>33</td>
<td>78</td>
<td>53</td>
<td>64</td>
</tr>
<tr>
<td>G</td>
<td>115</td>
<td>32</td>
<td>71</td>
<td>74</td>
<td>94</td>
<td>96</td>
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\(^1\)Ibid., p. 155.
SECTION 2.5.0 SUMMARY AND CONCLUSIONS: CHAPTER 2

This Chapter has presented a critical discussion of trends and techniques in metropolitan retailing based on a recognition of the interaction that takes place between the retailing industry and the patterns of behaviour of consumers.

Section 2.2.0 Trends Identified, examines various studies of consumer behaviour, particularly the increasing demand for consumer convenience in various forms, and some theories of the relationship between demand and retail provision. The consumers' behavioural patterns are key elements in any theory of retailing, but we must conclude from the discussion of this chapter that whilst certain identifiable modes of behaviour do exist, they cannot be translated into a simple model.

This factor complicates still further the question of trend projection. It would be simple to say that the projection of trends for prognostic purposes is to be avoided at all costs, but as forecasting is an essential part of the planning process we should become fully aware of the difficulties of projecting apparent trends.

Section 2.3.0 Trends and the Retailers Responses begins with an examination of trends in population distribution and decentralisation. Affluence-consumption thresholds are considered and the importance of the trend towards rising expenditure on consumer durables, including vehicles and the running of these vehicles (primarily motor cars) is explained. The existing and possible future position regarding car ownership in Great Britain is having a positive effect on shopping patterns in this country.

It is demonstrated how consumers, particularly in the United States of America, are tending to shop less in the central business district
of metropolitan areas. We note the response of the American retailer to this trend, which was initially instigated by the increasing inaccessibility of central business districts, both spatially as population shifted outwards, and by the congestion which developed with the increasing use of the motor car for personal transport.

Quite dramatic changes in retailing techniques have taken place in Britain since the mid 1950's, and these are readily demonstrated by tables and graphs in this section. The number and size of supermarkets in this country is increasing, and there is some evidence of their diversification into other lines beside convenience goods. Mail order sales, the mobile shop, and automatic vending play an increasingly important, if minor, role in total sales, and must not be overlooked by the planner. From the evidence presented and discussed it may be concluded that the traditional form of personal selling from the independent shopkeeper to the consumer is being replaced by more efficient though largely impersonal retailing techniques, which require larger shops and possibly sites other than those traditionally used.

Section 2.4.0 Techniques: Site Selection, Demand Prediction and Area Estimation deals with those aspects of assessment in retailing which should be the responsibility of the planner as much as the retailer or developer. This section contrives primarily to be a critical review of techniques within Britain in the last ten years or so and concludes that present day techniques for assessing shopping floor space are by no means consistently reliable.

It has been the general overall purpose of this chapter to examine the phenomena comprising the 'retail spiral', as previously described. In combination, the changes and trends in both consumer behaviour and retailing, which have been discussed here, reflect an optimisation of the
present situation by both the consumers and the retailers. Up to now in Great Britain the greatest innovation in retailing in recent years has been the self service supermarket. In the United States the development of the planned suburban regional drive-in shopping centre is the most important innovation.

Despite the governmental decision that the proposed out-of-town shopping centre at Haydock, in north west England, should not be built there is certainly a need to consider the various means for providing increasing amounts of shopping floor space and better car parking facilities in British shopping centres. The proposal for Haydock would have provided these features, but there are other possibilities. In any case, it is clear that a large service centre within a metropolitan area is an important feature in the life and form of that metropolitan area. The remainder of this dissertation explores this notion.
CHAPTER 3

CHANGING SHOPPING HABITS: A METROPOLITAN AREA CASE STUDY IN AUSTRALIA
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SECTION 3.1.0 THE SCOPE AND INTENT OF CHAPTER 3

The previous chapter has shown how the changing shopping patterns of consumers have been met by quite basic changes in the retailing industry in Great Britain in the last fifteen or so years. Some idea of the scale of suburban retailing in the United States of America has also been given, and it is well known that in the United States the bulk of suburban retailing is carried out at planned shopping centres provided with adequate on site car parking.

This chapter discusses the impact of such a planned shopping centre in a metropolitan area, with particular reference to the changing shopping habits of the inhabitants of the metropolitan area who live in the vicinity of the planned centre. This metropolitan area case study was made by the writer, acting as an interested observer, over a period which extended from before the opening of the planned centre, which had been built on a previously undeveloped site, until about five years after the centre had opened. In this time some measurable changes had taken place in the shopping habits of the consumers who lived in the study area. It may be supposed that some of the changes in the behaviour of the consumers surveyed were due to the impact that the new service centre had on their shopping behaviour. Other socio-economic factors, of course, also would have influenced their behaviour to a certain degree during the period of the study.

The form and content of the three surveys made over the five year period will be discussed in detail below. At this point it might be noted that the writer's interest was aroused in the subject because the new

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1 Actually within a five mile radius of the centre, which is "close" by the standards of a large metropolis.
The writer's study of Melbourne's first planned shopping centre was the only series of surveys made of this new phenomena on a "before and after" basis. It is, therefore, a study of impact and a study of trends. In the same year that the final survey in this series was made a study was made by other researchers which produced some results which were directly comparable with those achieved by the writer. These will be discussed in the latter part of this chapter.
Comparisons of the "retail spiral" in the United States, Great Britain, Scandinavia and Australia may be made, and the various manifestations of affluence in these several communities can be compared if this is thought worthwhile. This is not the purpose of this dissertation. It is intended to consider here the service centre in the metropolitan area in affluent societies, to examine trends and to make some remarks on metropolitan form. Consequently, no dogmatic recommendations may be made for one situation as a direct result of experience in another society.

Some stimulation of discussion as a result of comparisons is, however, inevitable and useful. The next chapter will therefore deal with observed trends in shopping habits in Great Britain which relate in some way to those described in the current chapter, and make some comment on the relevance of the planned out-of-town shopping centre to the British situation.
SECTION 3.2.0 METROPOLITAN AUSTRALIA

3.2.1 METROPOLITAN PRIMACY IN AUSTRALIA

Three fifths of the population of Australia (approaching a total of fourteen million) is accommodated on less than one thousandth of the land area. These main metropolitan concentrations have an average growth rate substantially greater than the non-metropolitan areas and thus the trend in Australia continues to be one of ever increasing metropolitan primacy.

The port cities of the east, south east and far south west enjoyed an initial advantage as colonial outposts, and when the colonies federated in 1901, Australia was predominantly urban. The low and erratic rainfall and the poor agricultural potential of much of the land in the north has been instrumental in restricting development to the more favoured coastal hinterlands of the major cities. In New South Wales the urban industrial core extends from Newcastle right through Sydney to Wollongong, an area with one quarter of all Australians, while in Victoria the core region with one fifth of the Australian population extends from Yallourn (90 miles east of Melbourne) through Melbourne to Geelong.

If no substantial changes are made to the existing immigration policy it is anticipated that metropolitan Sydney and Melbourne will each have populations in excess of five million by the turn of the century. As with other rapidly developing countries, therefore, the high rate of metropolitan primacy evident in the Australian states has indicated that the problems of fast urban growth have been concentrated around the centres of greatest historical importance. The subsequent congestion of the

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1 The one exception is Tasmania, where two cities, Hobart and Launceston, were concurrently developed in colonial times.
traditional commercial centres and the time lag in commercial provision on the fast growing metropolitan peripheries is not unlike the situation which has occurred in the United States, but the problems are concentrated in Australia because of the high metropolitan primacy.

To indicate the extent of metropolitan primacy in Australia the following table\(^1\) derives the ratio of the state capital cities' population (a) to that of the next populous city in that state (b). An international study of metropolitan primacy by Arnold S. Linsky\(^2\) considered thirty nine countries and defined a high primacy rate as being a ratio of at least 2.4. Of the countries he considered, only three had a ratio exceeding 10. Consequently, with due regard to the fact that in the Australian case the separate states are not individual countries, we may conclude that by international standards the primacy of the capital cities of the separate states is extremely high.

In such a situation we may expect the metropolitan areas to have continuous self generating growth, and the need for the development of adequate subsidiary service centres throughout the metropolitan areas to be acute. It is against the background of this anticipated future metropolitan giganticism that the study to be described here should be viewed.

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TABLE 14

PRIMACY OF THE STATE CAPITAL CITIES IN AUSTRALIA, 1966.

<table>
<thead>
<tr>
<th>State</th>
<th>Cities</th>
<th>Population</th>
<th>Ratio (a)/(b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>New South Wales</td>
<td>Sydney (a)</td>
<td>2,444,740</td>
<td>10.4</td>
</tr>
<tr>
<td></td>
<td>Newcastle (b)</td>
<td>233,970</td>
<td></td>
</tr>
<tr>
<td>Victoria</td>
<td>Melbourne (a)</td>
<td>2,108,500</td>
<td>20.1</td>
</tr>
<tr>
<td></td>
<td>Geelong (b)</td>
<td>104,970</td>
<td></td>
</tr>
<tr>
<td>South Australia</td>
<td>Adelaide (a)</td>
<td>726,930</td>
<td>32.9</td>
</tr>
<tr>
<td></td>
<td>Whyalla (b)</td>
<td>22,130</td>
<td></td>
</tr>
<tr>
<td>Queensland</td>
<td>Brisbane (a)</td>
<td>719,140</td>
<td>12.7</td>
</tr>
<tr>
<td></td>
<td>Townsville (b)</td>
<td>56,890</td>
<td></td>
</tr>
<tr>
<td>Western Australia</td>
<td>Perth (a)</td>
<td>499,490</td>
<td>25.1</td>
</tr>
<tr>
<td></td>
<td>Kalgoorlie (b)</td>
<td>19,890</td>
<td></td>
</tr>
<tr>
<td>Tasmania</td>
<td>Hobart (a)</td>
<td>119,420</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td>Launceston (b)</td>
<td>60,450</td>
<td></td>
</tr>
</tbody>
</table>
3.2.2 THE MELBOURNE METROPOLITAN AREA: THE RAILWAYS

Settlement was begun at Melbourne in 1835 and by 1861 a population in excess of 100,000 had been reached. At the 1961 Census the Melbourne Metropolitan Area, which includes the City of Melbourne and forty four suburban municipalities, had a population of 1.9 million. As Table 14 has shown, in 1986 the population was in excess of 2.1 million. Figure 6 shows the approximate boundaries of urban development in 1861, 1891, 1911 and 1938. It will be seen that excluding the Bay area in the south west, the shape of the built up area is roughly circular from the central business district, with fingers of growth extending along the main highways to the east, south-east and south.

The sprawl of the suburbs which is particularly noticeable from about 1880 is in no small way due to the development of a suburban railway system. The majority of Melbourne's railways were constructed between 1863 and 1893, paralleling the land boom and ending with the financial crash of the 1890's. Only minor extensions have been made to the suburban railway system since 1900. This early development of an efficient mass transport network, focussing on the central business district, meant that the metropolitan area developed as a highly centralised unit, dependent on the centre for most employment opportunities and for durable and speciality goods shopping. Low density commuter suburbs grew around the suburban railway stations, which were usually sited at approximately three quarter to one and one half mile intervals, and as the populations in these suburbs built up, the clusters of shops which usually had gathered near the railway stations developed into service centres of some importance.

FIG. 6. EXTENT OF URBAN DEVELOPMENT IN METROPOLITAN MELBOURNE, 1861, 1891, 1911, 1938.
Consequently, the commercial landscape of metropolitan Melbourne generally followed a form consisting of service centres strung along the railway routes. A recently published study by R.J. Johnston describes this commercial growth, and an illustration from this article is included here as Figure 7. Johnston had previously determined a hierarchical system of central places for the Melbourne Metropolitan Area, and these are referred to in the figure reproduced.

Johnston concluded that the relative size of the service centres which were railway station based was closely associated with the date at which the stations were opened and the distance between them, and that the lack of other large centres was a result of the initial advantage and inertia developed at locations adjacent to the stations.

Up to the end of the 1939-1945 war, therefore, the form of urban growth in metropolitan Melbourne was clearly defined by the railway system which resulted in fingers of development with the major service centres tied to the railway stations.


3 R.J. Johnston (1968) loc. cit., p. 41.
FIG. 7. CENTRAL PLACES AND RAILWAY STATIONS IN SOUTH EAST METROPOLITAN MELBOURNE.
3.2.3 The Melbourne Metropolitan Area: The Motor Car

It has been shown that the Melbourne metropolitan area was well provided with a centralised railway system which attracted low density residential developments to spread in a linear fashion well away from the central business district. Melbourne was also served by a tramway system in the inner suburbs, and in time buses operated by the tramways board replaced streetcars where these were causing untenable traffic congestion.

Private motor bus companies provided inter suburban links, but these were not a significant feature of the transport system which continued to be dominated by the suburban railways until after the 1939-1945 war.

From this time motor car ownership was widely enjoyed, and by the early 1950's the suburban family without a car was rare. This factor of increased personal mobility plus the fact that the population of the metropolitan area increased by about twenty five per cent between 1950 and 1961 due to natural causes and a vigorous federal government immigration programme meant that new residential sites could be developed in the wedges of market gardening lands which had existed between the fingers of the suburban railway system.

This did in fact occur, and the new residential areas were generally of an even lower residential density than those which had developed around the public transport network. A high proportion of these suburban dwellers continued to hold jobs in the central city, and many commuted by car, which was normally more direct than driving to the nearest railway station and using the train. The central business district also retained its position as the major consumer goods shopping centre, normally only small groups of convenience shops being built in the new suburbs to satisfy weekly shopping needs.
This situation is seen in Figure 8, which is taken from Johnston's study of the central place hierarchy in metropolitan Melbourne. This diagram clearly shows the major service centres reflecting the position of the suburban railway system. By this time the previously under developed lands between the railway lines had been built up with low density residential development. It is clear that there was a major lag in the provision of adequate service centres.

In time the central business district became a less desirable place at which to shop. It became increasingly remote from a rising proportion of homes, and increasingly congested. Consumer spending habits and travel patterns changed with increasing affluence and the time became ripe for a response from the retail sector.

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1R.J. Johnson, (1966) loc. cit., p. 31
FIG. 8. THE DISTRIBUTION OF THE HIERARCHY OF SHOPPING CENTRES, METROPOLITAN MELBOURNE.
SECTION 3.3.0 A SURVEY OF SHOPPING HABITS

3.3.1 THE CHADSTONE CENTRE

As the post war increase in car ownership in Melbourne became pronounced the idea of a planned regional shopping centre with ample on site car parking was discussed tentatively by the executives of one of Australia's leading department stores. Before the mid 1950's the Myer Emporium Ltd. had initiated a feasibility study to pursue the matter and to examine suburban shopping areas which might have sufficient potential to warrant the establishment of a planned shopping centre with ample parking space.

Eventually American consultants were called in to analyse population trends, retail spending figures, per capita sales in different functions, spending habits of consumers, sales volume and the size of existing centres. As a result of these studies an area of "growth lag" was noted south east of the central business district, where the growth of population had outstripped the provision of shopping facilities to such an extent that the consultants considered that a large planned shopping centre of the type then proving very successful in the United States would be feasible.

A few years earlier the Surveys and Analysis volume \(^1\) accompanying the Melbourne and Metropolitan Planning Scheme of 1954 had made some sound assessments of trends at that time already well established, and the Planning Scheme itself proposed the development of five major district shopping centres at five well developed suburban shopping centres:

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\(^1\) Melbourne and Metropolitan Board of Works, Melbourne and Metropolitan Planning Scheme, 1954 Volume 1. "Surveys and Analysis" see particularly Chapter 8.
Box Hill, Dandenong, Footscray, Moorabbin and Preston. Tentative proposals for these centres envisaged the integrated development of new major retail facilities with commercial, administrative, entertainment and cultural uses. The plans for implementing these bold changes within the metropolitan area, however, lay dormant and the Metropolitan Planning authorities welcomed and gave approval to the Myer organisation to proceed with their proposal for a major new shopping centre on the site which they had acquired, approximately eight miles south east of the central business district.

Although the new centre was to be established in a relatively old\(^1\) residential area there were few large centres within two miles of the site. Between the proposed new centre of Chadstone\(^2\) and the central business district there are three first order centres, as defined by R.J. Johnston,\(^3\) which were the largest of the subsidiary centres nominated in his study of Melbourne's central places. These centres are shown in Figure 9, but it is understood that the developers of the new centre reasonably considered that most trade would be drawn from the newly developed parts of the metropolitan area in the vicinity of the centre where there was an under provision of shopping facilities.

The actual provision of business types which was made at the new centre has been analysed in some detail by R.J. Johnston and P.J. Rimmer,\(^4\)

\(^1\)That is, 1930's.

\(^2\)The name is taken from the district in which the centre is located.

\(^3\)R.J. Johnston (1966), loc. cit.

and it is unnecessary for our purposes to consider this matter in detail here. It may be noted that a total of 396,000 square feet of gross rentable floor area was provided in the centre, which contains eighty five shops, professional offices for doctors, dentists, solicitors, accountants, estate agents and a stockbroker. Meeting rooms and restaurants are incorporated, a small auditorium, a play centre with child minding facilities, and a bowling alley, but the greatest attraction for shoppers is probably the free car parking area for 3,500 cars.
Unlike the unplanned centres in metropolitan Melbourne the Chadstone centre is dominated by a large department store ("Myers") owned by the developers. The rents for the other shops are determined according to their individual turnover, which must be disclosed under the leasing agreement. The developers have normally not allowed more than one or two establishments of any one business function within the centre, although they have found that it pays to have competition in certain lines, particularly food. In Chadstone there are two separate butchers shops compared to six or more in the normal unplanned centre of similar scale.¹

The eighty five establishments which the Chadstone centre contains cover fifty four functions.² Johnston³ had found that Malvern amongst the first order centres in 1965 had seventy one functions and 326 establishments, and that most of the second order centres in metropolitan Melbourne averaged about 150 establishments. Chadstone's functional structure, therefore, differs significantly from other large centres. This is mainly because of the existence of the large department store and several smaller department stores, but also because of the superior services offered from modern shops. Chadstone is predominantly a durable or comparison goods shopping centre. This is how the centre was conceived, and in this aspect is is undoubtedly now a major service centre in metropolitan Melbourne.

¹ There are also meat counters in each of the two large supermarkets.

² Function being defined as the dominant activity carried on by the establishment.

The older centres do, of course, have smaller and presumably less efficient shops than the Chadstone centre.
3.3.2 THE INITIATION OF THE SURVEYS

Considering the matter in retrospect the writer believes that had he known more about the problems of research in the field of consumer behaviour in 1960 he would not have started on the programme of surveys now to be described. At the outset, however, the possibility of assessing changes in shopping habits as a result of the establishment of the Chadstone centre was evident, and the idea of attempting to measure the impact of the centre was appealing.

It was assumed that a series of surveys would have been planned by the developers or some official research agency. A number of enquiries, however, suggested that no specific programme of research related to the anticipated changing shopping habits of consumers in the vicinity of the new service centre had been planned. This seemed surprising, as the idea of measuring shopping habits before, and then after, the opening of the centre had seemed so obvious. After expert opinions were sought, which suggested that the programme of surveys proposed was worthwhile, it was decided to proceed, even though the writer recognised himself as a novice in the field.

In this way these surveys were initiated. After the three surveys of 1960 (before the Chadstone Centre opened) 1963 and 1965 had been made it was ascertained that they were, in fact, the only series of "before and after" studies made in connection with the project, so that they are, in a sense, unique. The writer's enthusiasm and naivety at the outset of the project may therefore have been of some advantage.
3.3.3 THE SURVEY PROGRAMME AND ITS LIMITATIONS

An outline questionnaire for the initial survey was discussed with the Chadstone Centre consultants and various other people, including an expert in social survey, and the initial and subsequent phases of the programme were planned with expert guidance.

Certain decisions taken at this time were important in determining the future analysis of the survey results and the conclusions which could be drawn from the completed series of surveys. The limitations of the surveys derive initially from the following considerations made when the first survey was being planned.

1. No financial assistance was available for the surveys, and all interviews would have to be made by the writer and a few friends.
2. All interviews in the initial survey had to be made before the opening of the Chadstone centre, which was about two months after the decision to proceed had been taken.

Perhaps the strict limitations of time and resources for the first survey were of some benefit in the end. They had the effect of restricting the investigation to a simple minimum and in spite of the limitations the stringency this produced may have made the task of the follow up surveys seem less onerous that it might otherwise have been.

With the limited resources and time referred to in mind, an unstratified area sample of approximately 500 households was decided upon to be taken within a circle of five miles radius around the Chadstone Centre. A sample of 500 seemed to be all we could hope to interview with the resources available. It was understood that a five mile radius had been
considered by the promoters of the new service centre as a likely catchment area, and that within a five miles radius of Chadstone lived a population of about 400,000 people.

We considered that a sample of 500 would give us about eight respondents per square mile, and we were hopeful that over the period of the surveys this scale of sample would give some opportunity to trace trends in time. This assumption seems to have been reasonably based, if not adequately considered at the time in terms of population distribution or statistical feasibility. An assessment of the population within the sampling area is made in Table 15.

**TABLE 15**

**NUMBER OF HOUSEHOLDS IN SAMPLING AREA (APPROXIMATE)**

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Total Population 1961 Census</th>
<th>Percentage of municipality within 5 mile radius (approx.)</th>
<th>Number sampled (approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Box Hill</td>
<td>50,412</td>
<td>50</td>
<td>25,200</td>
</tr>
<tr>
<td>Brighton</td>
<td>41,302</td>
<td>25</td>
<td>10,325</td>
</tr>
<tr>
<td>Camberwell</td>
<td>99,353</td>
<td>50</td>
<td>49,600</td>
</tr>
<tr>
<td>Caulfield</td>
<td>74,859</td>
<td>100</td>
<td>74,859</td>
</tr>
<tr>
<td>Hawthorn</td>
<td>36,707</td>
<td>50</td>
<td>18,350</td>
</tr>
<tr>
<td>Malvern</td>
<td>47,870</td>
<td>100</td>
<td>47,870</td>
</tr>
<tr>
<td>Moorabbin</td>
<td>95,669</td>
<td>60</td>
<td>58,000</td>
</tr>
<tr>
<td>Oakleigh</td>
<td>48,017</td>
<td>90</td>
<td>43,200</td>
</tr>
<tr>
<td>Prahran</td>
<td>52,554</td>
<td>50</td>
<td>26,270</td>
</tr>
<tr>
<td>St. Kilda</td>
<td>62,205</td>
<td>25</td>
<td>13,500</td>
</tr>
<tr>
<td>Waverley</td>
<td>44,987</td>
<td>80</td>
<td>36,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>403,250</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If average occupancy = 3.8 persons per dwelling, then $403,250 \div 3.8 = 106,116$ dwellings in 5 mile radius.

less approx. 8% to allow for actual sampling area compared with 5 mile radius (See figure ) = 98,000 households approx.
It will be described how the number of households sampled in the three surveys varied slightly. Some allowance was made for population increase in the sampling area between 1960 and 1965 and it was concluded that in each survey the ratio of interviewed households to the total number of households in the sampling area was as follows, as set out below.

**TABLE 16**

**RATIO OF SAMPLED HOUSEHOLDS IN TOTAL HOUSEHOLDS**

<table>
<thead>
<tr>
<th>Year</th>
<th>Estimated Total Households in sampling area</th>
<th>No. of Households sampled</th>
<th>Interviewers per 1 Household</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>98,000</td>
<td>490</td>
<td>1/200</td>
</tr>
<tr>
<td>1963</td>
<td>100,000</td>
<td>450</td>
<td>1/222</td>
</tr>
<tr>
<td>1965</td>
<td>103,000</td>
<td>524</td>
<td>1/198</td>
</tr>
</tbody>
</table>

It should be remarked that whilst practically all of the sampling area was within the built up metropolitan area the residential densities over the sixty eight grid sampling squares did vary, the lowest densities being in the east and south east sections of the sampling area at the greatest distance from the central business district. This may have affected the results regarding the assessment of respondents visits to the central business district, as it can be assumed that those households furthest from the central business district would use its facilities less than those nearest to it.
Consequently, from the sampling area as a whole, visits to the central business district will not have been represented as having been made by a sample which is a constant proportion of the population in any given sector.

As the results are interpreted, however, in terms of trends over time, this deficiency is not serious.

A further limitation was that the data which was derived from the questionnaire forms used in the three surveys had to be obtained from hand sorting, as access to a computer was not available. This resulted in a more limited number of correlations being explored than might otherwise have been possible. Nevertheless, it would seem that for the number of questionnaires involved and for the extent of detail sought in the results the hand sorting technique was adequate.

A further severe limitation on the way in which the data from the surveys can be used is due to the fact that the initial survey did not aim to collect any information on the amount of spending, the income or the age structure of respondents. This simplification, and the fact that the success of the programme depended on follow up surveys being comparable to the initial study, means that we were confined in the end to a general statement as to apparent trends. The conclusions reached must therefore be restricted to statements of apparent trends in where people shop and their method of transport, rather than how they shop, in terms of expenditure. Appreciating these restrictions the writer trusts that the findings of this case study will be accepted as a useful original contribution towards the emerging total picture of changing shopping habits within metropolitan areas.
3.3.4 QUESTIONNAIRE DESIGN AND SAMPLING TECHNIQUE

For the initial survey which was carried out in the two months in 1960 preceding the opening of the Chadstone Centre Questionnaire was used. This questionnaire was developed in consultation with advisers and several versions were produced before the final draft was adopted. A small pilot study of about thirty interviews was made after which the wording and order of the questions was revised in detail. When the results of this first questionnaire came to be analysed further faults in the wording became apparent. These are discussed when dealing with the 1963 survey. A discussion of interviewer bias is deferred until all the surveys can be considered together.

It was hoped that the form of the initial questionnaire would establish where and how often the respondent shopped for weekly supplies (convenience goods) and the means of transport employed to reach that shopping destination. The car shoppers were questioned as to the quality of the car parking facilities at the shopping centre patronized, and whether the shopper drove the car or was a passenger. The frequency with which the Melbourne central business district was visited was ascertained and the means of transport used to reach the central area had to be stipulated. Shopping for durable goods was investigated by location under the four categories of clothing, electrical appliances, furniture and household hardware.

The remainder of the questionnaire asked the respondent (normally expected to be the housewife, as we were, in fact, sampling households

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1The Questionnaire forms used in the three surveys of 1960, 1963 and 1965 are appended here as Questionnaires I, II and III respectively in Appendix F.
or shopping units in which the wife usually was the dominant shopper) if any members of the family normally went shopping with her, and also aimed to test the respondents attitude to evening shopping. \(^1\) A final question asked for an opinion on the possibility of the respondent visiting the proposed Chadstone centre.

The sampling technique employed for the 1960 survey aimed at obtaining a random area sample of the area encompassed by a circle of five miles radius about the Chadstone Centre, and was carried out as follows:

1. On a Melbourne Metropolitan street map of scale 4" = 1 mile a circle of five mile radius was drawn about the Chadstone Centre.
2. The latest available (1960) edition of Morgan's Street Directory was consulted, and checked against the sampling map. Any streets not shown on the sampling map were plotted in from the street directory.
3. A grid with its axes perpendicular and parallel to Melbourne's basic suburban street pattern (approx. North-South, East-West) was drawn over the area, to produce 68 complete squares, of 1 square mile area. Incomplete squares within the circle were omitted from the sampling (See Fig. 10).
4. By interviewing eight households in every square of the grid 544 interviews would be obtained.

\(^1\) Australian shops normally close at 5.30 or 6.00 p.m. during week days, 1.00 p.m. on Saturdays.
5. By dividing each grid square into a further grid pattern of 100 squares, and throwing dice to select a point 1 to 9 on each of the X and Y axes of the grid, a completely random means of selecting a particular street for interviewing was established. In all cases the section of the street to be sampled was at or as near as possible to the randomly selected grid co-ordinates.

A copy of the written "Instructions to Interviewers" is included in Appendix G. No "call backs" were to be made, again a decision reached because of the limitations of time. Some comment is made on this later when the problem of interviewer bias is discussed.

All told, 490 completed interviews were made in the months of August and September 1960, prior to the opening of the Chadstone Shopping centre in October of that year.
FIG. 10. AREA SAMPLING GRID. 1960, 1963 and 1965 SURVEYS.
SECTION 3.4.0 THE FOLLOW UP SURVEYS

3.4.1 THE 1963 SURVEY

After the initial survey had been completed before the opening of the Chadstone Centre in 1960, the writer had no time to pursue the research further until 1963. In September of that year the first of the follow-up surveys was made, this time with the aid of students from the University of Melbourne.

It has been originally planned to re-interview half of the initial sample in subsequent surveys, and the 1963 sampling procedure was devised with this aim in view. This survey involved thirty students as interviewers, and it was decided to interview as many of the initial sample as possible who were available on first call.

Students were allocated one grid square (as shown on Figure 10) each, were given the original 1960 respondents addresses within that grid square and asked to proceed to collect a total of sixteen interviews each, in accordance with the following procedure:

"Students are to make sixteen interviews. As many of the original sample as are available, making the total number of interviews up to sixteen by selecting new interviewees as detailed below.

Your first new sample interview - household adjacent to the highest street number in the original interview above. If not home try next door etc.

Your second sample new interview - miss three households, and proceeding in the same direction, try again - if not home try adjacent, etc."

This procedure resulted in 102 of the initial 1960 sample of 490 being available for re-interview, and a total of 450 interviews were made.
As a result of our experiences when analysing the results of the 1960 Survey, a slightly modified form of Questionnaire was produced for 1963. Questionnaire II is included in Appendix F, and apart from the forming of questions to suit the state of the Chadstone Centre being operating, as against the 1960 case of anticipated operation, the only change made to the first part of the Questionnaire was as follows:

Questions 2: "Which day(s) of the week do you go shopping?" compared to "How often do you shop there" (of 1960).

Interviewers had found the initial Question 2 rather cumbersome as respondents answers had often been in terms of a specific day or days rather than in the anticipated form, and in analysis it did not give a specific day or days when shopping took place for "weekly supplies", a term, incidentally, which was well understood by respondents and interviewers as meaning those convenience goods necessary for the weekly maintenance of a household.

3.4.2 THE 1965 SURVEY

It was not until April 1965 that the third and final survey in this series was carried out. Again a group of thirty students was available, and a total of 524 interviews were made, but in this instance no attempt was made to find any of the original respondents and the random areal sampling technique which had been employed for the first survey was employed again.

For this survey, minor alterations were made to several of the questions which would not have been expected to influence the respondents' replies, with the possible exception of Question 12, "Where do you shop now for .... (Comparison Goods)?" which was presented in such a way that the interviewer would suggest "City and suburb" to the respondents. There may be some influence of this in the results for 1965 for this question.
The revised format for Questionnaire III was found most helpful by interviewers. The questionnaire had been set out on a single foolscap sheet, compared to the 1963 questionnaire, which was on two sheets of quarto paper. Our experience would show that a single sheet is preferable for a short questionnaire of this type.

3.4.3 INTERVIEWER BIAS, REFUSALS

Reasonably certain that the sampling technique was without bias, the writer's main concern was that calls would be made at all times of the day, evening and weekend to compensate for the fact that no "call backs" were to be made. This principle was followed in the 1960 survey, which involved about six interviewers working in their spare time, and covering all acceptable times for calling, and in the following surveys, when large numbers of students were employed, a similar spread in calling times was encouraged. Students made reports of their field work and it seems that a sufficient spread in times of calling was achieved, which would cancel out much of the bias otherwise occurring in this "no call back" programme. The problem of bias could not be entirely overcome, however, as those respondents away from home a great deal were less likely to be interviewed, and this group would possibly have different shopping patterns from those more likely to be found at home.

The fact that 102 respondents of the 1963 sample had previously been interviewed in 1960 would normally be expected to colour their replies to the 1963 Questionnaire in some way. No comparison of the 1963 respondents who were not previously interviewed with those who had been previously interviewed has been made, however, so no comment can be made other than that the results of the 1963 survey do not seem obviously influenced by the repeats.
Other aspects of bias were not considered a problem with the type of questionnaire forms used, and the variety of interviewers employed. The interviewer preamble stated that the interviewer was from the University of Melbourne, which normally ensured attentive interest from the respondents.

Interviewers in the 1960 survey received only three refusals to cooperate, and only one of these was without an apparently sincere excuse because of the awkwardness of the calling time.

The 1963 and 1965 surveys showed an increase in refusals up to approximately twelve for the 1965 survey. Partly due, perhaps, to the vigorous activities of encyclopedia salesmen in recent years and the respondent's consequent suspicion of interviewers. Even so, twelve refusals in 500 odd interviews is a relatively small percentage.
SECTION 3.5.0 THE SURVEY RESULTS

3.5.1 CONCLUSIONS

The detailed results of the surveys will be presented in this major section in a series of Tables and Figures.

In general terms the main conclusions which may be reached as a result of the surveys are as follows:

1. A decline in the frequency of convenience shopping (for weekly supplies) occurred within the sampling area between 1960 and 1965. There occurred a strong trend towards convenience shopping on one day per week as compared with more frequent shopping for convenience items in 1960. The day of the week most of the respondents in the 1965 survey preferred to do their convenience shopping was Friday.

2. An increase in the use of a motor car as a means of transport when convenience shopping occurred between 1960 and 1965, and an increasing tendency for the shopper to drive her/himself was found in the respondents from within the sampling area.

3. A decline in the frequency of shopping in the Melbourne central business district occurred amongst respondents within the sampling area between 1960 and 1965. The central business district became less important as a location of comparison good shopping to respondents within the sampling area between 1960 and 1965.
4. A decline occurred in the use of public transport alone by shoppers when central business district shopping between 1960 and 1965. Increases in the use of car and public transport and the use of car alone took place in the same period with respondents within the sampling area.

5. An increase in the percentage of shoppers who said that they would shop in the evenings if the shops were open occurred within the sampling area between 1960 and 1965.

6. The Chadstone Centre, established after the first survey of 1960 in the centre of the sampling area, has emerged as an important comparison good centre within the sampling area.

The conclusions set out above are stated in terms of the trends which were defined by an analysis of the data which the three surveys of 1960, 1963 and 1965 produced. The Tables and Figures which follow present in some detail those results from which the author feels some conclusion may reasonably be drawn. No claim is made for specific results, as it is felt that the circumstances and design of the surveys should restrict interpretation to trends and generalisations.
3.5.2 ANALYSIS BY TABLES AND FIGURES

The results tabulated below generally have the numbers of respondents directly expressed as a percentage. This is done for simplicity in presentation and interpretation, and is considered a valid expression as the total number interviewed in each of the surveys, 490, 450 and 524 for the 1960, 1963 and 1965 surveys respectively, are close enough and large enough to preclude mis-interpretation from percentage figures. Where percentages refer to other than the total number of respondents for any particular survey, this is clearly indicated in the table concerned.

CONVENIENCE SHOPPING

Refer to Tables 17, 18, 19, 20 Figures 11, 12.

A tendency may be noted in the percentage of respondents shopping once per week. This trend is due to a variety of changes in consumer behaviour which have been previously discussed. At the same time, a steady decline in the use of public transport for convenience shopping can be seen.

Table 20, setting out the respondents' assessment of the parking conditions they experienced when convenience shopping, within the terms of reference suggested by the questionnaire might indicate a preference for quickly obtaining a parking space rather than parking near to the principal shopping destination. Considering the vagueness of the qualitative judgments implied, the results are fairly consistent.

The sharp increase from 34.5 per cent to 57.5 per cent in the respondents expressing ability to park "right at" the principal shopping destination between 1960 and 1963 might be a reflection of the widespread provision of off-street parking facilities with the new supermarkets which were developed during this period.
DURABLE GOODS SHOPPING
Refer to Tables 21, 22, 23. Figures 13, 14, 15.

The clearly defined decrease in the frequency of central business
district shopping is shown graphically, Figure 13, and the sharp drop in
the use of public transport alone for central business district shopping
trips is shown by Figure 15.

Table 23 and Figure 14 show the location of shopping for durable
goods by the respondents in terms of central business district, suburbs
or both suburbs and central business district. It should be noted that
in the 1965 survey Questionnaire III incorporated a recall aid which, it
might be suggested, could be partially responsible for the swing to "City
and Suburbs" shown in Table 23.

EVENING SHOPPING
Refer to Table 24.

The marked increase in the percentage of those respondents
between 1960 and 1965 who would like to go shopping in the evenings if the
shops were open may indicate, among other things, the acceptance of
shopping as an outing. If this is so, the respondents' increasing demand
for the opportunity to experience evening shopping is possibly being condi-
tioned by the excitement and sense of occasion that shopping at service
centres such as the Chadstone centre gives. During the period of the
surveys it is also likely that more women had become workers, a situation
which may often be noted as the affluence of a community increases. This
factor would no doubt contribute to the rising demand for evening shopping.

For ease in studying the material presented the tables make
reference to the figures which demonstrate graphically the trends shown by
the tables concerned. The questions from the questionnaires of 1960, 1963
and 1965 which solicited from the respondents the data contained in the tables are referred to by the following code:

QI    ... Questionnaire I,  1960.
QII   ... Questionnaire II, 1963.
QIII  ... Questionnaire III, 1965.

For example, QII, 5. Refers to question number 5 in the 1963 survey which employed Questionnaire II.
203.

### TABLE 17

FREQUENCY OF CONVENIENCE SHOPPING (Percentages)

<table>
<thead>
<tr>
<th>Frequency</th>
<th>1960</th>
<th>1963</th>
<th>1965</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once a day</td>
<td>14.5</td>
<td>11.0</td>
<td>12.0</td>
</tr>
<tr>
<td>Twice a week</td>
<td>33.5</td>
<td>29.0</td>
<td>30.0</td>
</tr>
<tr>
<td>Once a week</td>
<td>45.5</td>
<td>50.0</td>
<td>57.5</td>
</tr>
<tr>
<td>Other</td>
<td>6.5</td>
<td>10.0</td>
<td>6.5</td>
</tr>
</tbody>
</table>

100.0 100.0 100.0

See Figure 11.

Refer: QI,2. QII,2. QIII,2.

---

### TABLE 18

MODE OF TRANSPORT WHEN CONVENIENCE SHOPPING (Percentages)

<table>
<thead>
<tr>
<th>Mode</th>
<th>1960</th>
<th>1963</th>
<th>1965</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car</td>
<td>47.0</td>
<td>51.0</td>
<td>50.5</td>
</tr>
<tr>
<td>Walk</td>
<td>39.0</td>
<td>38.0</td>
<td>40.0</td>
</tr>
<tr>
<td>Public Transport</td>
<td>14.0</td>
<td>11.0</td>
<td>9.5</td>
</tr>
</tbody>
</table>

100.0 100.0 100.0

See Figure 12.

Refer: QI,3. QII,3. QIII,3.
### TABLE 19
CAR SHOPPERS WHO DROVE THEMSELVES
WHEN CONVENIENCE SHOPPING (Percentages)\(^1\)

<table>
<thead>
<tr>
<th>Status</th>
<th>1960</th>
<th>1963</th>
<th>1965</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normally drove themselves</td>
<td>67.5</td>
<td>66.5</td>
<td>71.0</td>
</tr>
<tr>
<td>Normally driven by others</td>
<td>32.5</td>
<td>33.5</td>
<td>29.0</td>
</tr>
<tr>
<td></td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

\(^1\)Percentages are of total car shoppers for each year
Refer: QI, 4. QII, 4. QIII, 4.

### TABLE 20
PARKING CONDITIONS EXPERIENCED BY CAR SHOPPERS
WHEN CONVENIENCE SHOPPING (Percentages)\(^1\)

<table>
<thead>
<tr>
<th>(a) Time taken to find a place to park the car</th>
<th>1960</th>
<th>1963</th>
<th>1965</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right away</td>
<td>60.0</td>
<td>64.5</td>
<td>57.0</td>
</tr>
<tr>
<td>Within 5 minutes</td>
<td>23.0</td>
<td>23.0</td>
<td>22.0</td>
</tr>
<tr>
<td>Other</td>
<td>17.0</td>
<td>12.5</td>
<td>21.0</td>
</tr>
<tr>
<td></td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(b) Distance parked from principal shopping destination</th>
<th>1960</th>
<th>1963</th>
<th>1965</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right at it</td>
<td>34.5</td>
<td>57.5</td>
<td>54.5</td>
</tr>
<tr>
<td>Within 5 minutes walk</td>
<td>51.0</td>
<td>36.0</td>
<td>40.0</td>
</tr>
<tr>
<td>Other</td>
<td>14.5</td>
<td>6.5</td>
<td>5.5</td>
</tr>
<tr>
<td></td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

\(^1\)Percentages are of total car shoppers for each year.
Refer: QI, 5, 6. QII, 5, 6. QIII, 5, 6.
TABLE 21
FREQUENCY OF CENTRAL BUSINESS DISTRICT SHOPPING
(Percentages)

<table>
<thead>
<tr>
<th>Frequency</th>
<th>1960</th>
<th>1963</th>
<th>1965</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) More than once a week</td>
<td>9</td>
<td>5.5</td>
<td>1.5</td>
</tr>
<tr>
<td>(b) More than once a fortnight</td>
<td>8</td>
<td>4.5</td>
<td>7.5</td>
</tr>
<tr>
<td>(c) More than once a month</td>
<td>19</td>
<td>11.0</td>
<td>6.5</td>
</tr>
<tr>
<td>(d) More than once in three months</td>
<td>18</td>
<td>17.0</td>
<td>17.0</td>
</tr>
<tr>
<td>(e) More than once in six months</td>
<td>15</td>
<td>16.0</td>
<td>18.5</td>
</tr>
<tr>
<td>(f) More than once a year</td>
<td>10</td>
<td>10.0</td>
<td>16.0</td>
</tr>
<tr>
<td>(g) Less than once a year</td>
<td>11</td>
<td>27.5</td>
<td>24.5</td>
</tr>
<tr>
<td>(h) Never</td>
<td>10</td>
<td>8.5</td>
<td>8.5</td>
</tr>
<tr>
<td></td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Percentages for (b) do not include (a)
Percentages for (c) do not include (b) etc.

See Figure 13.
Refer: QI, 7. QII, 7. QIII, 10.

TABLE 22
MODE OF TRANSPORT USED WHEN CENTRAL BUSINESS DISTRICT SHOPPING
(Percentages)

<table>
<thead>
<tr>
<th>Mode</th>
<th>1960</th>
<th>1963</th>
<th>1965</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car</td>
<td>19.5</td>
<td>22.0</td>
<td>23.5</td>
</tr>
<tr>
<td>Public Transport</td>
<td>72.0</td>
<td>65.0</td>
<td>59.0</td>
</tr>
<tr>
<td>Car and Public Transport</td>
<td>8.5</td>
<td>13.0</td>
<td>17.0</td>
</tr>
<tr>
<td></td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

See Figure 15.
Refer: QI, 8. QII, 8. QIII, 11.
### TABLE 23
LOCATION OF SHOPPING FOR DURABLE GOODS
(Percentages)

<table>
<thead>
<tr>
<th>Category</th>
<th>Location</th>
<th>1960</th>
<th>1963</th>
<th>1965</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Clothing</strong></td>
<td>City</td>
<td>25.5</td>
<td>24.5</td>
<td>25.5</td>
</tr>
<tr>
<td></td>
<td>Suburbs</td>
<td>37.5</td>
<td>64.0</td>
<td>50.0</td>
</tr>
<tr>
<td></td>
<td>City and Suburbs</td>
<td>37.0</td>
<td>11.5</td>
<td>24.5</td>
</tr>
<tr>
<td><strong>Furniture</strong></td>
<td>City</td>
<td>58.0</td>
<td>45.0</td>
<td>12.0</td>
</tr>
<tr>
<td></td>
<td>Suburbs</td>
<td>32.0</td>
<td>45.0</td>
<td>40.0</td>
</tr>
<tr>
<td></td>
<td>City and Suburbs</td>
<td>10.0</td>
<td>10.0</td>
<td>48.0</td>
</tr>
<tr>
<td><strong>Household Hardware</strong></td>
<td>City</td>
<td>19.0</td>
<td>16.5</td>
<td>13.0</td>
</tr>
<tr>
<td></td>
<td>Suburbs</td>
<td>72.0</td>
<td>77.5</td>
<td>70.0</td>
</tr>
<tr>
<td></td>
<td>City and Suburbs</td>
<td>9.0</td>
<td>6.0</td>
<td>17.0</td>
</tr>
<tr>
<td><strong>Electrical Appliances</strong></td>
<td>City</td>
<td>39.0</td>
<td>28.5</td>
<td>12.5</td>
</tr>
<tr>
<td></td>
<td>Suburbs</td>
<td>36.5</td>
<td>53.5</td>
<td>25.5</td>
</tr>
<tr>
<td></td>
<td>City and Suburbs</td>
<td>24.5</td>
<td>18.0</td>
<td>62.0</td>
</tr>
</tbody>
</table>

100.0 100.0 100.0

See Figure

Refer: QI, 9, 14. QII, 9. QIII, 12.
TABLE 24
RESPONDENTS ATTITUDE TO EVENING SHOPPING
(Percentages)

<table>
<thead>
<tr>
<th>Attitude</th>
<th>1960</th>
<th>1963</th>
<th>1965</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would like to go shopping in the evening if the shops were open</td>
<td>49.5</td>
<td>52.5</td>
<td>65.0</td>
</tr>
<tr>
<td>Would not like to go shopping in the evening if the shops were open</td>
<td>44.5</td>
<td>41.5</td>
<td>31.0</td>
</tr>
<tr>
<td>No opinion</td>
<td>6.0</td>
<td>6.0</td>
<td>4.0</td>
</tr>
</tbody>
</table>

100.0 100.0 100.0

Refer: QI, 11. QII, 11. QIII, 15.

Note: Of the 1965 Respondents who would like to go shopping in the evening if the shops were open -

67 per cent favoured Friday evening

11 " " " Thursday evening

11 " " " Monday, Tuesday or Wednesday

3 " " " Saturday evening

8 " " had no opinion

100 per cent
FIG. 11. FREQUENCY OF CONVENIENCE SHOPPING.
Vertical Scale: 1"=10%

FIG. 12. MODE OF TRANSPORT, CONVENIENCE SHOPPING.
FIG. 13.
FREQUENCY OF CENTRAL BUSINESS DISTRICT SHOPPING.
Figure 14. LOCATION OF SHOPPING FOR COMPARISON GOODS.
FIG. 15. MODE OF TRANSPORT, C. B. D. SHOPPING.
3.5.3 THE CHADSTONE CENTRE AND DURABLE GOODS

Tables 25 to 33 inclusive show primarily the importance of the Chadstone centre as a durable goods shopping centre within the survey area. Section 3.6 will consider the hierarchical order of shopping centres within the survey area as it has been discussed by R.J. Johnston, but in order to establish some simple basis for assessing the influence of Chadstone in the current section Johnston's classification of First, Second and Third Order Centres within the sampling area is used to distinguish the existing unplanned centres in Tables 26, 27 and 28.

It has been shown earlier in this dissertation that the establishment of a rank order of service centres within a metropolitan area is not necessarily an effective step towards the determination of the areas of influence of such centres. In this case, however, the ranking used by Johnston is employed in the writer's study as an index of attraction for service centres within the sampling area, and the results obtained would seem to confirm that this obvious use of a ranking study is valid.

Three First Order Centres, Box Hill, Prahran and St. Kilda are located on the extreme edge of the sampling area, and in these cases it has been found that the data, in terms of numbers visiting these centres, is more realistic when an adjustment is made to allow for the fact that these Centres are heavily patronised by shoppers living outside the sampling frame. Consequently, in Tables 26 and 30 the sampled number of shoppers using these Centres is multiplied by two.

---

In Table 27 the ratio obtained from the number of respondents clothing shopping to the number of respondents convenience good shopping is used to demonstrate the dominance of the Chadstone Centre for durable goods shopping within the sampling area. Tables 29 and 30 show that Chadstone's share of durables shopping is rather greater than would be expected if it was in direct competition with both First and Second Order Centres.

Data from the 1965 survey, when arranged in Table 28 and expressed graphically in Figures 18 and 19 clearly shows the functions of the First, Second and Third Order Centres in the sample area compared to Chadstone.

Table 31, setting out anticipated and actual visits to Chadstone by our respondents is only of general interest, whilst Tables 32 and 33 will be examined more specifically in Section 3.6.

Taken all together, the results give a picture of the Chadstone centre as a new element in the existing pattern of shopping centres, having some characteristics similar to other centres, for instance, in its share of convenience shopping, but at the same time attracting durable goods shopping on a larger scale than existing centres of greater magnitude within the sampling area. The evidence of a decreasing number of shopping visits being made to the central business district by shoppers from within the survey area suggests that Chadstone has apparently taken over some significant part of the shopping previously carried out in the central business district by these people.
TABLE 25

SHOPPING WITHIN THE SAMPLING AREA FOR DURABLE GOODS 1965

<table>
<thead>
<tr>
<th>Centre</th>
<th>Clothing</th>
<th>Furniture</th>
<th>Household Hardware</th>
<th>Electrical Appliances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bentleigh</td>
<td>27</td>
<td>11</td>
<td>24</td>
<td>14</td>
</tr>
<tr>
<td>Box Hill</td>
<td>19</td>
<td>7</td>
<td>17</td>
<td>11</td>
</tr>
<tr>
<td>Camberwell</td>
<td>24</td>
<td>11</td>
<td>14</td>
<td>12</td>
</tr>
<tr>
<td>Chadstone</td>
<td>151</td>
<td>62</td>
<td>77</td>
<td>59</td>
</tr>
<tr>
<td>Clayton</td>
<td>20</td>
<td>5</td>
<td>27</td>
<td>14</td>
</tr>
<tr>
<td>Elsternwick</td>
<td>10</td>
<td>13</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Malvern</td>
<td>9</td>
<td>7</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Mt. Waverley</td>
<td>12</td>
<td>3</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>Moorabbin</td>
<td>6</td>
<td>3</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>Oakleigh</td>
<td>32</td>
<td>27</td>
<td>28</td>
<td>24</td>
</tr>
<tr>
<td>Prahran</td>
<td>15</td>
<td>13</td>
<td>8</td>
<td>11</td>
</tr>
</tbody>
</table>

Note: Centres tabled are those visited by a minimum of ten or more respondents for any one class of durable good. Malvern is included for comparison with material to be discussed later, as it has been classified as a First Order Centre.

See Figure 16.

Refer: QIII, 12.
TABLE 26
DURABLE GOODS SHOPPING CENTRES RANKED BY VISITS

<table>
<thead>
<tr>
<th>Centre</th>
<th>Clothing</th>
<th>Furniture</th>
<th>Household Hardware</th>
<th>Electrical Appliances</th>
<th>Convenience Shopping</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chadstone</td>
<td>151</td>
<td>62</td>
<td>77</td>
<td>59</td>
<td>21</td>
</tr>
<tr>
<td>Box Hill (x 2)</td>
<td>38</td>
<td>14</td>
<td>34</td>
<td>22</td>
<td>16</td>
</tr>
<tr>
<td>Oakleigh</td>
<td>32</td>
<td>27</td>
<td>28</td>
<td>24</td>
<td>42</td>
</tr>
<tr>
<td>Prahran (x 2)</td>
<td>30</td>
<td>26</td>
<td>16</td>
<td>22</td>
<td>12</td>
</tr>
<tr>
<td>Bentleigh</td>
<td>27</td>
<td>11</td>
<td>24</td>
<td>14</td>
<td>31</td>
</tr>
<tr>
<td>Camberwell</td>
<td>24</td>
<td>11</td>
<td>14</td>
<td>12</td>
<td>28</td>
</tr>
<tr>
<td>Clayton</td>
<td>20</td>
<td>5</td>
<td>27</td>
<td>14</td>
<td>41</td>
</tr>
<tr>
<td>Mt. Waverley</td>
<td>12</td>
<td>3</td>
<td>10</td>
<td>3</td>
<td>20</td>
</tr>
<tr>
<td>Elsternwick</td>
<td>10</td>
<td>13</td>
<td>10</td>
<td>10</td>
<td>23</td>
</tr>
<tr>
<td>Malvern</td>
<td>9</td>
<td>7</td>
<td>3</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Moorabbin</td>
<td>6</td>
<td>3</td>
<td>15</td>
<td>2</td>
<td>9</td>
</tr>
</tbody>
</table>

Note: Box Hill and Prahran x 2 to allow for about half of the hypothesized area of influence of these centres lying within the sampling area.

Additionally to the data from Table 25, the number of respondents convenience shopping at the various centres is listed.

See Figure 16.

Refer: QIII, 12.
TABLE 27
DURABLE GOODS TO CONVENIENCE GOODS
SHOPPING AS A RATIO OF SHOPPERS VISITING 1965

<table>
<thead>
<tr>
<th>Centre</th>
<th>Clothing Shopping Convenience Shopping</th>
<th>Hardware Shopping Convenience Shopping</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chadstone</td>
<td>7.5</td>
<td>3.8</td>
</tr>
<tr>
<td>Box Hill</td>
<td>2.4</td>
<td>2.1</td>
</tr>
<tr>
<td>Oakleigh</td>
<td>.8</td>
<td>.7</td>
</tr>
<tr>
<td>Prahran</td>
<td>2.5</td>
<td>1.3</td>
</tr>
<tr>
<td>Bentleigh</td>
<td>.9</td>
<td>.8</td>
</tr>
<tr>
<td>Camberwell</td>
<td>.9</td>
<td>.5</td>
</tr>
<tr>
<td>Clayton</td>
<td>.5</td>
<td>.7</td>
</tr>
<tr>
<td>Mt. Waverley</td>
<td>.6</td>
<td>.5</td>
</tr>
<tr>
<td>Elsternwick</td>
<td>.4</td>
<td>.4</td>
</tr>
<tr>
<td>Malvern</td>
<td>.9</td>
<td>.8</td>
</tr>
<tr>
<td>Moorabbin</td>
<td>.7</td>
<td>1.7</td>
</tr>
</tbody>
</table>

Note: Ratios of respondents visiting derived from Table 26.
See Figure 16.
Refer: QII, 12.
TABLE 28
DURABLE GOODS SHOPPING WITHIN THE SAMPLING AREA BY RESPONDENTS, 1965

<table>
<thead>
<tr>
<th>Centre</th>
<th>Clothing</th>
<th>Furniture</th>
<th>Household Hardware</th>
<th>Electrical Appliances</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) First Order Centres*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Box Hill</td>
<td>19</td>
<td>7</td>
<td>17</td>
<td>11</td>
</tr>
<tr>
<td>Camberwell</td>
<td>24</td>
<td>11</td>
<td>14</td>
<td>12</td>
</tr>
<tr>
<td>Malvern</td>
<td>9</td>
<td>7</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Prahran</td>
<td>15</td>
<td>13</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>67</strong></td>
<td><strong>38</strong></td>
<td><strong>47</strong></td>
<td><strong>42</strong></td>
</tr>
<tr>
<td>Percentage of Full Sample</td>
<td>12</td>
<td>7</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Percentage of all respondents shopping for this durable good within the sampling area</td>
<td>19</td>
<td>22.5</td>
<td>16</td>
<td>21</td>
</tr>
<tr>
<td>(b) Second Order Centres*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ashburton</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Bentleigh</td>
<td>27</td>
<td>11</td>
<td>24</td>
<td>14</td>
</tr>
<tr>
<td>Burwood</td>
<td>1</td>
<td>0</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Carnegie</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Clayton</td>
<td>20</td>
<td>5</td>
<td>27</td>
<td>14</td>
</tr>
<tr>
<td>Elsternwick</td>
<td>10</td>
<td>13</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Moorabbin</td>
<td>6</td>
<td>3</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>Oakleigh</td>
<td>32</td>
<td>27</td>
<td>28</td>
<td>24</td>
</tr>
<tr>
<td>Ormond</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>St. Kilda</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Other Second Order.</td>
<td>20</td>
<td>7</td>
<td>13</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>125</strong></td>
<td><strong>75</strong></td>
<td><strong>141</strong></td>
<td><strong>80</strong></td>
</tr>
<tr>
<td>Percentage of Full Sample</td>
<td>24</td>
<td>14.5</td>
<td>27</td>
<td>15</td>
</tr>
<tr>
<td>Percentage of all respondents shopping for this durable good within the sampling area</td>
<td>35</td>
<td>41</td>
<td>48</td>
<td>40</td>
</tr>
</tbody>
</table>
## TABLE 23 (continued)

DURABLE GOODS SHOPPING WITHIN THE SAMPLING AREA BY RESPONDENTS, 1965

<table>
<thead>
<tr>
<th>Centre</th>
<th>Clothing</th>
<th>Furniture</th>
<th>Household Hardware</th>
<th>Electrical Appliances</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>(c) Third Order Centres</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>15</td>
<td>8</td>
<td>30</td>
<td>19</td>
</tr>
<tr>
<td>Percentage of Full Sample</td>
<td>3</td>
<td>1.5</td>
<td>6</td>
<td>3.5</td>
</tr>
<tr>
<td>Percentage of all respondents shopping for this durable good within the sampling area</td>
<td>4</td>
<td>4.5</td>
<td>10</td>
<td>9.5</td>
</tr>
</tbody>
</table>

| *(d) Chadstone Centre*      |          |           |                    |                      |
| Totals                      | 151      | 62        | 77                 | 59                   |
| Percentage of Full Sample   | 29       | 12        | 14.5               | 11                   |
| Percentage of all respondents shopping for this durable good within the sampling area | 42 | 33 | 26 | 29.5 |

| *(e) Total number of respondents shopping within the sampling area in each category* | 358 | 183 | 295 | 200 |
| Percentage who shop for this durable good within the sampling area | 70 | 35 | 56 | 28 |

Note: *Signifies centres grouped as First, Second and Third Order centres after R. J. Johnston's classification.

See Figure 18.

Refer: QIII, 12.
TABLE 29

CONVENIENCE SHOPPING IN THE SAMPLING AREA BY NUMBERS OF RESPONDENTS

<table>
<thead>
<tr>
<th>Centre</th>
<th>1960</th>
<th>1963</th>
<th>1965</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(a) First Order Centres:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Box Hill</td>
<td>12</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Camberwell</td>
<td>24</td>
<td>15</td>
<td>23</td>
</tr>
<tr>
<td>Malvern</td>
<td>10</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>Prahran</td>
<td>5</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>51</td>
<td>30</td>
<td>54</td>
</tr>
<tr>
<td><strong>Percentage of Sample</strong></td>
<td>13%</td>
<td>7%</td>
<td>11%</td>
</tr>
</tbody>
</table>

| **(b) Second Order Centres:** |      |      |      |
| Ashburton    | 16   | 12   | 16   |
| Bentleigh    | 29   | 41   | 31   |
| Burwood      | 29   | 11   | 9    |
| Carnegie     | 19   | 23   | 15   |
| Clayton      | 29   | 26   | 41   |
| Elsternwick  | 12   | 17   | 23   |
| Moorabbin    | 5    | 4    | 9    |
| Oakleigh     | 50   | 28   | 42   |
| Ormond       | 9    | 5    | 3    |
| St. Kilda    | 9    | 17   | 7    |
| Other Second Order | 7   | 9    | 9    |
| **Total**    | 218  | 193  | 212  |
| **Percentage of Sample** | 44%  | 43%  | 41%  |

| **(c) Third Order Centres:** |      |      |      |
| Totals*                  | 229  | 198  | 235  |
| **Percentage of Sample** | 44%  | 44.5%| 45%  |

| **(d) Chadstone** |      |      |      |
| Totals            | -    | 25   | 21   |
| **Percentage of Sample** | -   | 5.5%| 4%   |

Note: *Less respondents visiting two or more centres.

See Figure 19.
Refer QI, 1. QII, 1. QIII, 1.
TABLE 30
DISTRIBUTION OF SHOPPERS FOR CONVENIENCE AND DURABLE SHOPPING, 1965

<table>
<thead>
<tr>
<th>Centre</th>
<th>Convenience Goods</th>
<th>Clothes</th>
<th>Furniture</th>
<th>Household Hardware</th>
<th>Electrical Appliances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chadstone</td>
<td>21</td>
<td>151</td>
<td>62</td>
<td>77</td>
<td>59</td>
</tr>
<tr>
<td>First Order Centres*</td>
<td>18</td>
<td>25</td>
<td>14.5</td>
<td>18</td>
<td>8</td>
</tr>
<tr>
<td>Second Order Centres*</td>
<td>20.5</td>
<td>10.5</td>
<td>7</td>
<td>12.5</td>
<td>8</td>
</tr>
</tbody>
</table>

Note: *Average distribution of shoppers at these centres
Refer: QIII,1,12.

TABLE 31
ANTICIPATED AND ACTUAL VISITS TO CHADSTONE (Percentages)

<table>
<thead>
<tr>
<th>Attitude</th>
<th>1960</th>
<th>1963</th>
<th>1965</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shoppers who thought that they</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>would visit Chadstone</td>
<td>65</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shoppers who thought that they</td>
<td></td>
<td>29.5</td>
<td></td>
</tr>
<tr>
<td>would not visit Chadstone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did not know</td>
<td>5.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Had visited Chadstone</td>
<td></td>
<td>55</td>
<td>30</td>
</tr>
<tr>
<td>Had not visited Chadstone</td>
<td></td>
<td>45</td>
<td>20</td>
</tr>
</tbody>
</table>

100.0  100.0  100.0

Refer: QI,12. QII, QIII.
TABLE 32
MODE OF TRANSPORT TO CHADSTONE, 1965

<table>
<thead>
<tr>
<th>Mode</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car (including bicycle)</td>
<td>68.5</td>
</tr>
<tr>
<td>Public Transport (including walking)</td>
<td>31.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Refer: QIII, 3, 11.

TABLE 33
FREQUENCY OF VISITS TO CHADSTONE, 1965

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily</td>
<td>0.75</td>
</tr>
<tr>
<td>Twice weekly</td>
<td>1.00</td>
</tr>
<tr>
<td>Weekly</td>
<td>14.00</td>
</tr>
<tr>
<td>Fortnightly</td>
<td>14.00</td>
</tr>
<tr>
<td>Monthly</td>
<td>23.50</td>
</tr>
<tr>
<td>Two Monthly</td>
<td>7.00</td>
</tr>
<tr>
<td>Three Monthly</td>
<td>14.00</td>
</tr>
<tr>
<td>Six Monthly</td>
<td>9.50</td>
</tr>
<tr>
<td>Annually</td>
<td>6.00</td>
</tr>
<tr>
<td>Less Frequently</td>
<td>10.25</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

Refer: QIII, 1, 13(a)
Percentages of Respondents Shopping.

FIG. 17. SHOPPING BY CENTRE WITHIN SAMPLING AREA, 1965.
Clothing
70% of respondents Clothing shopping within sampling area.

Furniture
35% of respondents Furniture shopping within sampling area.

Household Hardware
56% of respondents Hardware shopping within sampling area.

Electrical Appliances
38% of respondents Electrical shopping within sampling area.

Areas Proportional

FIG. 18. COMPARISON SHOPPING BY CENTRE ORDER, 1965.
FIG. 19. CONVENIENCE SHOPPING BY CENTRE ORDER.
SECTION 3.6.0 OTHER RELEVANT MELBOURNE METROPOLITAN AREA RESEARCH

3.6.1 A CHADSTONE SURVEY BY P.J. RIMMER AND R.J. JOHNSTON

In 1965 a large scale survey of shopping at the Chadstone centre was organised by P.J. Rimmer and R.J. Johnston as an exercise for students in the Department of Geography in the University of Monash, Melbourne. By interviewing shoppers at the Chadstone centre the researchers attempted to establish:

1. The area the Centre served
2. Why and how often people from this area go to the Centre
3. How shoppers get to the Centre
4. When they do arrive, how long they stay and what establishments they visit at the Centre.

The areal distribution of shoppers was plotted by recording the shoppers' address in terms of location within the transportation zones of the Melbourne Metropolitan Transportation Study, which had taken place in 1964. Using this zonal data the varying intensity of Chadstone's service area was gauged by constructing two separate isopleth maps of food and non-food purchasers. These maps are reproduced here as Figures 20 and 21. It will be noted that the non-food purchasers are drawn from a much wider area than the food purchasers, and that the two patterns are markedly different. The greatest number of food purchasers live very close to the centre, the bulk of them coming from within a three

---

mile radius. Note, however, that the service area for food goods does not approximate to a circle as there are extensions of the centre's influence along the main bus routes in the south-east and south-west.

The non-food purchasers are drawn from a much wider area, but in this case it appears that the influence of Chadstone is restricted to three or four miles of the Centre where the Melbourne central business district and the large and important shopping centres of Malvern, Prahran and Camberwell provide strong attraction for shoppers. To the south, south-east and east, however, Chadstone's influence extends along arterial roads and bus routes for six to eight miles, deeply penetrating the newly developed areas where shopping provision is usually inadequate. The evidence here suggests that the Chadstone centre has fully exploited the "growth-lag" situation which it was designed to meet.

Shopping by public transport, primarily bus, is a surprisingly important aspect of the Chadstone Centre, as both Rimmer and Johnston's and the writer's surveys show.

**Rimmer and Johnston**: Bus 37.5 per cent of total
(considered overstated due to the locations of the interviewers)
Walk 5.7 per cent of total

**J. Brine**: Public transport 31.5 per cent
(including walk)

Figure 22 shows all the bus routes serving the Chadstone Centre is 1965 with Rimmer and Johnston's five person non-food isoline superimposed by the writer.
The study described confirms the importance of Chadstone for shoppers from south east metropolitan Melbourne for non-food goods (durables). Whilst Chadstone could not have appeared to have interfered much with the shoppers continuing use of their local centres for convenience shopping the impact of Chadstone on durable good shopping, much of which had been traditionally carried out in the central business district, seems to have been considerable.

In concluding, Rimmer and Johnston were able to state that their survey suggested that local shopping centres are likely to retain much of their influence as purveyors of food lines, and that the impact of the new planned centres such as Chadstone would be found mainly on the retail trade of the central business district. Consequently, the decentralisation of retail activities would therefore be strengthened and would result in the stagnation or long term decline in sales of retail establishments in the central business district and the ring of inner suburban shopping centres which surround it.

1Ibid., p. 76.
FIG. 20.
CHADSTONE FOOD SHOPPERS. (Isolines)

FIG. 21.
CHADSTONE NON-FOOD SHOPPERS. (Isolines)

FIGS. 20 and 21.
FIG. 22. SHoppers TRavelling BY BUS TO CHadstone.
3.6.2 THE MELBOURNE AND METROPOLITAN TRANSPORTATION STUDY, 1964

With regard to the rapid rise in car ownership in Melbourne between 1955 and 1965, statistical information is available from the Victorian Year Books, and is set out in Appendix H. Between 1955 and 1965 the number of vehicles registered in Victoria almost doubled while the proportion of persons aged over twenty one increased by only about twenty five per cent. The number of valid licences did not increase as rapidly over the same period, and fewer licences per car in 1965 than 1955 indicate greater ownership levels and a higher average number of vehicles per household.1

Over the same decade the number of passenger journeys by bus, tram and train declined by between ten and twenty per cent, providing further supporting evidence of the switchover to shopping by car in Melbourne.2

As the transportation problem and increasing congestion seemed to be a dominate consideration when planning Melbourne's future development a transportation study was made on a metropolitan wide basis in 1964. The Melbourne and Metropolitan Board of Works have kindly made

1 Refer Appendix H. Note that in Canberra 6,014 out of 22,114 dwelling units in 1966 had two or more cars.

2 Considering these statistics, the fact that both the writer's and Rimmer and Johnston's Chadstone surveys showed that over thirty per cent of the shoppers came by bus in 1965 is suprising, but clearly indicative that even in a society where high levels of car ownership are experienced public transport will be used by shoppers if it is available and efficient. It must be added that the bus companies serving the Chadstone Centre provide a high element of convenience for the suburban passengers as they are dropped by these services right into the pedestrian shopping centre.
available to the writer data relating to shopping at the Chadstone centre, which is now presented in the form of Figures 23, 24 and 25.

Figure 23 plots the origin of average weekday shopping trips to Chadstone, by all modes of transport, as a percentage of the total trips made from these transportation districts. The important aspect of this study for our present consideration is that the Chadstone Centre is seen to have a relatively small catchment area, and whilst about seventy five per cent of all Chadstone shoppers come from within a five mile radius, about fifty five per cent of all Chadstone shoppers come to the Centre from within a three mile radius. Thus, whilst there is no suggestion that Chadstone is not attracting comparison good shoppers who would otherwise shop in the central business district of Melbourne, it is clear that the area of influence of the Chadstone centre is rather less than the promoters may have expected initially.

Figure 25 groups trips to Chadstone from Figure 24 in terms of sector percentages, showing significant dominance by the north west and south west sectors which are nearer the central business district of Melbourne. This may be partially accounted for by the slightly greater affluence of the population in these sectors, but is contrary to what might be expected to occur if the Chadstone centre was to be considered as a direct competitor to the First and Second Order Centres to its north west. This sector analysis is particularly significant when the impact of the Chadstone Centre on the central business district is being assessed as it would normally be expected that shoppers from those areas to the north and west of Chadstone would be mostly drawn to the central business district. The significance of good parking and accessibility, which the Chadstone centre offers, is made clear.
Figure 23 shows trips making for Chadstone from transportation districts expressed as a rate per 1,000 population, the base 100 applying to an area immediately adjoining Chadstone running west, within the three mile radius. Within this three mile belt indices range from 100 to 32 with a mean of about 50. Beyond this range indices range from as low as 5 to as high as 38. It is known that the bayside residential areas with the high indices of 39 and 22 are high income sectors, while a nearby suburb of lower average income level, at about the same distance from the Chadstone centre, has an index of 12. It is likely that the availability of a second car for the housewife as well as the generally higher level of affluence in these sectors is responsible for the high indices recorded.

Figure 26 shows the rate of cars per dwelling for metropolitan Melbourne as recorded by the 1964 Transportation Study, showing the location of the Chadstone Centre superimposed.
FIG. 23. ORIGIN OF AVERAGE WEEKDAY SHOPPING TRIPS TO CHADSTONE. (All Modes)
Source: Melbourne Metropolitan Transportation Study 1964.
FIG. 24. ORIGIN OF AVERAGE WEEKDAY SHOPPING TRIPS TO CHADSTONE (ALL MODES) AS PERCENTAGE OF TOTAL TRIPS.
Source: Melbourne Metropolitan Transportation Study 1964.
FIG. 25. TRIPS TO CHADSTONE BY SECTOR PERCENTAGES.
(Derived from Figure 24)
FIG. 26 CARS PER DWELLINGS, MELBOURNE 1964

Source: Melbourne Metropolitan Transportation Study
3.6.3 NOTES ON THE INTRA-METROPOLITAN COMMERCIAL LANDSCAPE

The several studies of R.J. Johnston, and P.J. Rimmer and R.J. Johnston, the geographers whose publications have been previously cited in this dissertation, have proved valuable in assisting the writer to see the results of his research into shopping patterns in metropolitan Melbourne in relation to the total picture of intra-metropolitan service centres.

As explained earlier in this chapter, the classifying of service centres within the sampling area for the surveys described here in accordance with Johnston's Centre Order classification\(^1\) has led to the development of a useful series of analyses\(^2\) from the data obtained from the writer's surveys. Figure 27 plots First and Second Order Centres (after Johnston) in south east metropolitan Melbourne and indicates their relationship to the sampling area used in the writer's surveys. This figure also shows the ten person isolines for Chadstone Food and Non-Food shopping (after Rimmer and Johnston) which have previously been discussed. From this basis a hypothesized Chadstone sphere of influence is superimposed, but it will be recalled from earlier discussion in this dissertation that such a boundary does not in fact exist. The nearest approximation to what is actually the situation being best described as a series of zones around the centre registering a successively decreasing probability of consumers from these zones using the centre. For the purposes of discussion and for clarity in the Figure, however, an outer hypothesized boundary has been drawn.

---

1 R.J. Johnston (1966) loc. cit.
2 See Tables 28, 29, 30.
FIG. 27. FIRST AND SECOND ORDER CENTRES, SOUTH EAST METROPOLITAN MELBOURNE.
The various studies upon which Johnston draws in his discussion of the distribution of an intra-metropolitan central place hierarchy for Melbourne, show that the social, economic and physical elements of an urban area are not evenly distributed throughout that area, which in turn leads to the uneven distribution of purchasing power, leading still further to an uneven distribution of shopping centres. Johnston showed that, significantly for Melbourne, the internal differences in that city's structure, including the development of the metropolitan railway system, have contributed towards a distinctive hierarchical arrangement of shopping centres within the metropolitan area. Even though a city wide hierarchical structure exists in Melbourne, wide variations occur in the relative proportions of each Order of centre present, and a nesting hierarchical spatial structure does not occur.

In assessing the position of Chadstone within the hierarchical spatial structure of metropolitan Melbourne Johnston and Rimmer re-emphasize that no complete picture of the spatial competition occurring can be presented. We may therefore proceed more fruitfully to consider the impact of a planned service centre, such as Chadstone, rather from the point of view of its direct interaction with the central business district than with the First or Second Order Centres within what might be assumed to be its area of influence.

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1 R. J. Johnston (1968) loc. cit.

2 This phenomena has been discussed previously for the general case. See Section 1.5.

From the writer's research and other studies cited there is reason to believe that a planned shopping centre, developed quickly on an intra-metropolitan site, will be soon absorbed into the pattern of service centres it is superimposed upon. Such a centre may be expected to quickly establish for itself a share of the convenience good shopping of nearby residents on such a scale as would normally be expected for a centre of similar size in the adjacent hierarchical framework. This we have noted in the case of Chadstone.

As to such a centre's position in the durable goods or comparison shopping centre order, however, there is considerable room for speculation. Where the centre is of a different functional structure to nearby centres, as is the normal case with a planned regional shopping centre which is usually created with one or more large central area type department stores as its main draw, the centre may be expected to relate to a much wider framework of service centres, which may include the central business district itself.

A further aspect of attractiveness, which certainly exists, but which may be difficult to quantify, is the high amenity in terms of parking and environmental design which planned centres normally provide. This aspect should not be under-rated.

3.6.4 INCREASING SPECIALISATION IN THE CENTRAL BUSINESS DISTRICT

During recent years a large proportion of the Melbourne metropolitan area's growth has stemmed from a large scale immigration to Australia, and a considerable number of these newcomers have taken up residence, at least temporarily, in the inner suburbs.  

The majority of the migrants at first earn relatively low incomes by Australian standards, and the changes in the distribution of population and spending ability have had important repercussions on the central business district and the large shopping areas in the inner suburbs.

In 1956-57 twenty nine per cent of all retail disbursement in Melbourne was collected in the central business district, but five years later the proportion was only twenty four per cent. Total receipts in the former years came to $254,808,000 and in the latter $254,832,000 although the latter figure is equal only to $225,332,000, if the dollar is held constant at the 1956-57 level. Thus, as we have seen in the case of certain cities in the United States, there is now an absolute decline in the annual turnover of retail outlets in the central business district. The share of metropolitan receipts taken in the city has declined from forty per cent in 1952-53, thirty four per cent in 1956-57 to only twenty seven per cent in 1961-62.

During this period of transition Melbourne's central business district has become more specialised in the types of goods sold. This has been commented on by R. J. Johnston, who found in an analysis of all Australian capital city central business districts that all major cities with the exception of Hobart had become more specialised during the late 1950's.

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1 Monetary comparisons are here made from the consumer price indices in the Federal and State Yearbooks, published annually.

2 No separate data is given for the central business district in the 1948-49 and 1952-53 censuses. The City of Melbourne has a population of approximately 100,000.

The retail heart has become and presumably will continue to become more specialised in newspapers and books, clothing, footwear and drapery, certain electrical items, furniture, sporting and travel goods and jewellery. It may be noted that only in women's clothing and footwear and jewellery does the central business district now receive over half of metropolitan expenditure.

It was against this background of a clearly defined trend in Melbourne's central business district towards increasing specialisation and loss of trade to the suburbs that the Chadstone Centre was established. It is not surprising that other planned service centres have now followed Chadstone's success in the Melbourne Metropolitan area.¹

¹By the same developer, Northland in 1966 and Eastland in October 1968. Two or three other major planned service centres will be opened in the next few years.
The metropolitan area case study described in this chapter is an important part of the research which supports the development of the writer's thesis.

The conclusions it was possible to draw from the three surveys described have been set out in Section 3.5.1 and supported by Tables and Figures. The surveys give some idea of the impact of a planned regional shopping centre on the commercial landscape of a metropolitan area, and to some extent also record the evolution of shopping behaviour among respondents from the sampling area which may be due to a variety of causes apart from the development of the new planned centre.

It does seem that the Chadstone Centre did fill a need which existed in metropolitan Melbourne for a durable or comparison goods shopping centre of high accessibility, parking convenience and amenity. If the Chadstone Centre had not been built it is to be supposed that the shoppers now using this centre would have managed to continue shopping in more or less the same way that they did before the centre opened, in spite of the increasing congestion and consequent increasing inaccessibility of Melbourne's central business district.

Now that this planned centre is a reality, however, and can be experienced by Melbourne people who are not, in fact, its regular users, it is probable that a demand for this form of shopping convenience has been built up in Melbourne. This hypothesis has not been tested as an academic exercise, but the developers of the Chadstone Centre have been so satisfied with the profitability of their first venture that they now have two other strategically located centres of a similar nature in operation and are building several more. In this way a new service centre element in the
form of the Melbourne metropolitan area has emerged. This will be discussed further in Chapter Five.

Section 3.2.0 Metropolitan Australia, first set the background for the case study by showing how metropolitan primacy is the normal state in Australia. The remainder of this section discussed the evolution of the Melbourne metropolitan area and its intra-metropolitan central places.

The case study was described in the following three major sections:

Section 3.3.0 A survey of Shopping Habits.

Section 3.4.0 The follow-up Surveys.

Section 3.5.0 The Survey Results.

The surveys and the methodology employed are set out in detail and the limitations of the survey programme made clear. Interviewer bias is discussed as are other causes of bias which were kept in mind when the results of the study were appraised. In presenting the survey results the relevant Tables are shown with the Questionnaire numbers and Figure numbers they refer to noted, so that a ready reference to these may be made.

Section 3.6.0 Other Relevant Melbourne Metropolitan Area Research, describes other research undertaken within the Melbourne metropolitan area which is related to the study described in this chapter. The writer draws heavily on the studies made by two geographers, R.J. Johnston and P.J. Rimmer, and is able to show how his work is complementary to or is supported by those other studies in a number of major points. As a longitudinal study over time, however, the writer's research is unlike other studies in this field and consequently makes an important contribution to the development of this thesis.
SERVICE CENTRES IN METROPOLITAN AREAS

CHAPTER 4

CHANGING SHOPPING HABITS AND NEW SHOPPING ENVIRONMENTS
# CHANGING SHOPPING HABITS AND NEW SHOPPING ENVIRONMENTS

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SECTION 4.1.0 THE SCOPE AND INTENT OF CHAPTER 4

This chapter will aim to examine additional relevant studies of changing shopping habits and trace the development of new patterns of shopping behaviour, with particular reference to Great Britain. To meet various situations, suggestions for different distributions of shopping facilities have been put forward from time to time. Those hierarchical arrangements of shops which most closely resemble the naturally emerging patterns and which help to rationalise these patterns seem most likely to be successful, and as an understanding of emerging trends is very important to the planner.

It has been remarked in concluding the previous chapter that as a new form of shopping centre was developed in Melbourne, and as shoppers could experience a new style of shopping, a stronger demand for the benefits that a planned regional shopping centre could offer, in terms of ease of access, better car parking, and higher amenity, may have been built up. Because of this aspect of, shall we say, "consumer experience", any discussion of the possible future development of out-of-town shopping centres in Great Britain should be made warily. There are significant differences between the British and the North American or Australian situation, however, and these are briefly reviewed in this chapter.

Recently in Great Britain a Woolworth subsidiary company, Woolco Department Stores, has been active in planning and developing urban fringe stores of a new style, and the programme of this company, as far as it is known, and the stores that they are building, will be described.

In the last ten years or so the acceptance by shoppers, developers and shopkeepers of the pedestrian precinct as a preferred shopping place has occurred, and more sophisticated solutions have been found for servicing...
shops and parking the shopper's cars. Various studies of pedestrians will be mentioned, but it must be noted that in this field of investigation more research is needed, particularly in regard to multi level shopping centres.

This chapter is concluded by a discussion of certain of the service centres that the writer has visited, with particular reference to the physical environment of these centres. Some comparisons are drawn and the question of the relative attractiveness of these centres to the shopper is raised. Following this chapter a series of simple plans of selected centres is included at a scale of 1:2000, with photographs chosen to make some visual comparison of the centres possible.
SECTION 4.2.0 SHOPPING STUDIES AND SURVEYS

4.2.1 ASSESSING CHANGING SHOPPING HABITS

Many of the surveys made in Great Britain since 1945 which throw some light on to the question of changing shopping habits have been made by planning authorities as a basis for policy decisions regarding planning schemes or the reviews of these schemes. Several of these documents have been referred to in Chapter Two. The aim of this section will be to discuss briefly surveys which cover the same aspects of shopping behaviour as those examined by the writer in the case study presented in the previous chapter.

Researchers often comment on the desirability of carrying out before and after studies in this field, and in fact, many of the research sections of the various planning departments in the country do carry out surveys and repeat studies which help in assessing changes in time. Normally, however, changes in the survey programme, in questionnaire design, in the methodology used in making the surveys and in processing the results, mean that successive studies are not strictly comparable.

A.N. Oppenheim has discussed the use of panel studies in the making of longitudinal surveys whereby processes of slow informal influence and change can be measured, or the emergence of a new social

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variable can be examined. The writer's study of the Chadstone Centre was of this type, and shows how trends may be observed and quantified within the limitations of available resources and methodology. This leads one to believe that design and implementation of rigorously controlled follow up studies of shopping phenomena by planning authorities might be worthwhile.

4.2.2 SELF SERVICE SUPERMARKETS AT LOCAL CENTRES

Some valuable research in Great Britain has been made into shopping habits following the wide introduction of self-service supermarkets. Consumers attitudes to the new way of shopping for convenience goods have been measured by sociologists¹ and others, and this data may be of significance to planners when the form and location of new shopping developments is being considered or when amendments to existing service centres are being planned.

It has recently been shown² how a ten shop local centre in a residential district of detached and semi-detached houses in southern England is patronized by a catchment area of about 2,240 families. This small centre, of 7,600 square feet of retail sales area, is perhaps not typical of many such centres in Britain in that it contains a large self-service supermarket as the main shopping draw. Where such centres are provided with adequate car parking space continued patronage by shoppers seems assured. In the survey referred to, the consumers dislike of the congestion

¹See, for instance, Peter H. Mann, "Self service and the corner shop", New Society, 27th February 1964.

and difficulties of parking in the town centre and their appreciation of the convenience and compact nature of the local centre with its self-service supermarket indicates a continuing use of the local centre for convenience shopping. This pattern may persist even with increasing use of the car for such shopping trips made once or twice a week, when one might expect these shoppers to travel further afield.

This centre, which in the terminology used in relation to the first of the new towns could be described as being of neighbourhood scale, is appreciated by the consumers because of the convenience it provides. We may assume conversely that such small centres may lose trade if they do not offer convenience to the shopper in terms of good car parking and facilities such as a self-service supermarket. Despite the convenience of proximity that many small centres offer there are indications that they are increasingly by-passed if they do not in addition offer high convenience of this type.

One of the few British studies which sets out systematically to measure changing shopping behaviour in time was commissioned by Alfred Bird and Sons Ltd. A table from this study\(^1\) is set out below as Table 34, which shows the responses of the 2,000 housewives interviewed as they left grocers shops on a Friday to the question "About how often do you buy groceries"? We know from the publication referred to that the surveys for 1957 and 1960 were carried out "up and down the country" and that the respondents were selected by established market research techniques, but no precise account of the survey methodology is given. This study is of some significance, however, and shows a positive trend

\(^1\) Alfred Bird and Sons Ltd., Mrs. Housewife and Her Grocer, (1961) Table 1, facing page 8.
towards shopping for groceries once a week in 1960 as compared to more often in 1957. The other results of this study were of interest in assessing the respondents attitude towards self-service shopping and the various food lines supplied by Alfred Bird and Sons Ltd.

TABLE 34
FREQUENCY OF BUYING GROCERIES, GREAT BRITAIN 1957-1960
(Percentages)

<table>
<thead>
<tr>
<th>Frequency</th>
<th>1957</th>
<th>1960</th>
</tr>
</thead>
<tbody>
<tr>
<td>Every day</td>
<td>21</td>
<td>22</td>
</tr>
<tr>
<td>At least twice a week</td>
<td>42</td>
<td>36</td>
</tr>
<tr>
<td>Once a week</td>
<td>35</td>
<td>40</td>
</tr>
<tr>
<td>Less often</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

That households with cars tend to rely less on their local centres and travel over greater distances to visit a wider variety of centres than do households without cars was shown by a study made in 1962-64 which aimed at ascertaining what differences existed in shopping habits between families which owned a car or had the use of a motor vehicle and those which did not.

1 W.I.R. Jones, The Influence of Car Ownership on Shopping Habits (Kent County Council Planning Department, 1964)
It is on the basis of emerging trends such as those noted here that the role of the small or neighbourhood centre is being reappraised. Further discussion on this subject is made below, but we should remember that many small centres of ten shops or so do exist, and that the planner should be aware of what factors may make such centres viable or alternatively, make them decline.

4.2.3 WALKING TO NEARBY CONVENIENCE SHOPS

A study of intra-urban shopping patterns in the built-up area between Littlehampton and Seaford on the Sussex coast recently reported by P.J. Ambrose\(^1\) produced information on shopping behaviour under three headings:

1. An analysis of the effects of distance on trip frequency.
2. The distribution of shopping activity between days of the week.
3. An analysis of the effects of certain socio-economic variables on shopping behaviour.

A marked fall in journey frequency with distance was recorded, and the graph showing this relationship is reproduced here as Figure 28.

A very high proportion of all shopping journeys are made on foot, which is to be expected considering the slopes recorded on the graph. In fact, sixty seven per cent of the total journeys made were made on foot to nearby shopping centres, and of the food shopping trips almost sixty four per cent were to the nearest possible point, only thirty six per cent of the trips for this convenience good incurring excess travel beyond the nearest sales point.

FIG. 28 THE FALL OF JOURNEY FREQUENCY WITH DISTANCE

It was found that, as is expected, Thursday, Friday and Saturday were the busiest shopping days, and that larger families tend to shop more frequently.

With regard to an analysis of the number of shopping trips made by respondents who were also refrigerator owners, the researcher reported that the presence of cold storage did not produce a more rational approach towards shopping by reducing the number of trips. This observation leads P. J. Ambrose to remark that perhaps the implication of his survey is that
shopping cannot generally be viewed as simply an attempt to stock the house with necessities using the least possible effort, and that many shopping journeys probably arise from much more complex reasons. This contention can be accepted without definite proof as it is well known that "shopping efficiency is a non-dominant factor in the motivation of the consumer."

Further evidence of large amount of shopping done near to the home and on foot is available from a research paper of the London County Council Policy and General Research Group. In the case of this study it was found that eighty one per cent of all shopping visits were made by walking, and that seventy per cent of the total shopping expenditure by Hammersmith residents was made within the Hammersmith area itself. Of the shopping visits made, sixty one per cent were to the local shop, which tallies well with the study made by P.J. Ambrose where sixty four per cent of convenience shopping trips were to the nearest sales point.

The Hammersmith study estimated that the average expenditure per visit in Hammersmith itself was seventeen shillings, while on a trip to the West End and Knightsbridge Hammersmith residents might spend on average thirty three shillings. A visit to the nearest local shop resulted in an average of eight shillings being spent.

Christina Fulop made some attempt to estimate the frequency of visits to shops in 1957 on the basis of the average weekly expenditure of

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2 Christina Fulop (1965) *op. cit.*
14.8 million households, using data from the 1957 Census of Distribution (Sample). The author admits that the second column of figures in her table, which is included here as Table 35, are her informed guess, although she had seen some figures assembled by the Retail Distributors Association. Allowing for some doubt as to the validity of this data, the figures in the third column are interesting. These figures are arrived at for the food trades by dividing column one by column two, and for the non-food trades by dividing column two by column one.

It is possible that the high number of visits per week recorded for grocers is due to the several short journeys to buy the forgotten box of matches and half pound of tea from the nearest shop. In any case the ranking of trades does show an order of priorities on those trades which should be available near the home.

To what extent the planner should cater for the demands of the consumer for shopping within easy walking distance, however, is difficult to ascertain, as the shopper, being human, is very adaptable to the conditions in which he finds himself. It would seem reasonable, however, that some form of shopping should always be available within walking distance of the place of residence, if only to provide an excuse for the housewife to take the children, the dog, or herself for a walk.
TABLE 35
FREQUENCY OF VISITS TO SHOPS 1957
ROUGH ESTIMATES IN SELECTED TRADES

<table>
<thead>
<tr>
<th>Trade</th>
<th>Sales per Household per week 1957 (shillings)</th>
<th>Presumed average transaction value (shillings)</th>
<th>Number of visits per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grocers</td>
<td>53</td>
<td>7</td>
<td>7.6</td>
</tr>
<tr>
<td>Greengrocers</td>
<td>7</td>
<td>2</td>
<td>3.5</td>
</tr>
<tr>
<td>Butchers</td>
<td>13</td>
<td>4</td>
<td>3.3</td>
</tr>
<tr>
<td>Bakers</td>
<td>6</td>
<td>2</td>
<td>2.8</td>
</tr>
<tr>
<td>Chemists</td>
<td>7</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Hardware</td>
<td>6</td>
<td>11</td>
<td>1.9</td>
</tr>
<tr>
<td>Footware</td>
<td>5</td>
<td>32</td>
<td>7</td>
</tr>
<tr>
<td>Mens Wear</td>
<td>6</td>
<td>27</td>
<td>4.25</td>
</tr>
<tr>
<td>Womens Wear</td>
<td>18</td>
<td>17</td>
<td>0.9</td>
</tr>
<tr>
<td>Furniture</td>
<td>9</td>
<td>273</td>
<td>31.5</td>
</tr>
<tr>
<td>Radio and Electrical</td>
<td>7</td>
<td>64</td>
<td>9.3</td>
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</tbody>
</table>
4.2.4 SHOPPING VISITS TO OTHER THAN THE NEAREST CENTRES

An important survey of British shopping habits was made in 1947 in relation to an investigation initiated by a Departmental Committee of the Home Office on Shop Closing Hours.¹ A sample of over two thousand shoppers was taken from all shoppers (excepting from H.M. Forces) in England, Scotland and Wales with interviews distributed according to the known proportions of the population in different parts of the country. A selection of the tables presented in the results of this survey are appended here as Appendix I.

In this study shoppers were asked questions regarding their travel patterns to service centres in four categories, identified as: Local, Main, Central and Additional.

Half of the local shopping centres were within seven minutes travelling time of the shoppers homes, half the main centres were within eighteen minutes, and half the central shopping centres were within twenty four minutes travelling time. Half of the additional centres were within fifty seven minutes travelling time. The median time to a main shopping centre in an urban area is thirteen minutes, and in a rural area twenty two minutes. We may assume that in 1947 most of the shopping journeys other than those made on foot would have been by bus. It was found that sixty per cent of dwellers in large towns went to their central shopping centres and that eighty per cent used the local or main centres. In fact, most shoppers at this time were shown to pay more than one visit a week to the local or main centre and less than one visit a week to

¹David Ginsburg, Shopping Hours Survey, The Social Survey NS 84 (1947). The findings of this survey were presented in The Closing Hours of Shops, Cmnd. Paper 7105.
their central shopping centre, if they were dwellers in large towns, or if they were not, to an additional shopping centre which might be some distance away in a neighbouring town.

The survey showed that only eight per cent used the telephone to order one commodity or the other, but that twenty one per cent optimistically were of the opinion that they would use the telephone as a shopping aid, if they had one. What now seems to be high thirty nine per cent used some delivery service for food, and twelve per cent used some form of mail order shopping.

It is obvious that the larger the town the smaller will be the proportion of the total expenditure on convenience goods made in the town centre. There are other motives at work here, however, apart from the distance factor. In the case of the medium sized city where most inhabitants are in fact reasonably close to the central business district consumers may be influenced by a variety of factors. Some of these factors were recorded by W.L. Waide¹ who quoted a Cambridge study of 1962. The motives for preferring either the town centre or the suburban centre as stated by the respondents are set out here as Table 36.

As a medium sized city grows in area the peripheral population must travel greater distances to reach the central business district and, if these people are shopping by car, find a parking place. An Economic Development Committee for the Distributive Trades Report² on the Cowley Centre in Oxford throws some light on the place of a planned suburban centre in a city of Oxford's size.

¹W.L. Waide, loc. cit.
²R.W. Bacon, Economic Development Committee for the Distributive Trades, op. cit.
### TABLE 36
MOTIVES FOR PREFERENCE OF TOWN CENTRE OR SUBURBAN CENTRE
CAMBRIDGE 1962
(Percentages of Respondents)

<table>
<thead>
<tr>
<th>Reason</th>
<th>Town Centre</th>
<th>Suburban Centre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selection</td>
<td>44.2</td>
<td>7.5</td>
</tr>
<tr>
<td>Convenience</td>
<td>28.9</td>
<td>65.3</td>
</tr>
<tr>
<td>Parking</td>
<td>0.6</td>
<td>17.5</td>
</tr>
<tr>
<td>Enjoyable</td>
<td>24.8</td>
<td>14.7</td>
</tr>
<tr>
<td>One-stop</td>
<td>0.5</td>
<td>7.6</td>
</tr>
<tr>
<td>Bargain Sales</td>
<td>3.3</td>
<td>1.2</td>
</tr>
<tr>
<td>Other</td>
<td>1.4</td>
<td>1.7</td>
</tr>
<tr>
<td>No definite motive</td>
<td>3.4</td>
<td>8.4</td>
</tr>
</tbody>
</table>

The Cowley Centre opened its first shop, a Fine Fare self-service supermarket in 1962, and by October 1965 the full planned range of sixty eight shops and three banks was established. Nine hundred car spaces are provided. This centre was specifically planned to

"provide a business and shopping centre at Cowley to meet the increasing needs of the population in the south east of the city, and in so doing to relieve some of the existing congestion of the old city." ¹

¹ City of Oxford Development Plan 1954.
The balance of shops in the centre was considered at the planning stage, and particular attention has been given to the provision of self-service supermarket shopping. It now seems that the Cowley Centre is of some importance both as a convenience and durable goods shopping centre, with three major grocery stores sharing 32,160 square feet of floor space. The total convenience shopping floor space of the centre is 43,460 square feet and the total durable goods shopping floor space 137,080 square feet.

The survey referred to indicated that, considering competing centres, the Cowley Centre had an exceptionally wide catchment area for foodstuffs. Respondents are attracted to the big supermarkets, and allowing for the size of the city, once weekly shoppers are drawn from a considerable distance.

The study maintained that the key to the suburban shopping centre's success lies in the supermarket selling convenience goods as cheaply or more cheaply than other centres with only convenience and service shops. It is assumed that this is because the potential customers usually have to incur higher travel costs in using the shopping centre, and this will only be done if the whole process is economically worthwhile. Where other big attractions such as department stores are to be included successfully the potential catchment area may have to be very much larger, but in this case competition is normally only to be experienced from the central business district and other large suburban centres of similar type.

In the case of this centre the better value of the convenience shopping merchandise when compared to other centres seemed to the researchers to have been a bigger attraction to consumers than the high standard of environment and parking facilities the centre offered. This centre seems to be highly successful as a convenience centre, and it may be that suburban
centres in medium sized cities should not aim to compete directly in durable goods with the central business districts of such cities. This question must remain open, however, for further discussion in each particular case, when full regard can be paid to the socio-economic status of the neighbouring population, the accessibility of the central business district, and other matters.

There do seem to be various good reasons for considering the development of larger and more efficient convenience goods centres, however, within the suburban areas of the medium sized cities.

4.2.5 CONSUMER TRAVEL PATTERNS

The most recent authoritative paper on consumer travel patterns and shopping habits with a metropolitan area is probably that published in June 1968 by W.A.V. Clark. Clark set out to study an aspect of Central Place Theory, the range of a good, for a variety of service centres within the city of Christchurch, New Zealand, and is concerned with understanding the orderliness of consumer spatial behaviour, examining the distances which consumers travels to various levels of business centre.

From the previous studies referred to in this section the writer has been able to show that high percentages of the consumers in the samples studied here used the nearest centre in which to do their convenience good shopping. Clark found, however, in his study of a New Zealand metropolis in 1965-66, that only forty nine per cent of consumers in the sample studied

---

1 W.A.V. Clark (1968) loc. cit.
used the nearest offering at butchers shops, and sixty two per cent used the nearest offering of vegetables. Clark maintains that this finding does not support one of the important hypothesis of Central Place Theory, that consumers purchase goods and services at the nearest centres offering these goods and services.

A second important hypothesis of Central Place Theory examined by this study states that there is no significant difference in the distances travelled for the same good from different levels of a hierarchy of service centres. Clark's surveys showed, however, that consumers do tend to travel significantly different distances to the central business district and to the next highest order service centre than to the low order centres, for the same class of good.

Despite these essential hypotheses of the classic central place theory being unsupported by his research, Clark emphasizes that as there is evidence that consumers carry out several purchases on one trip, or visit service centres from a base other than the household residence, some order in spatial behaviour is likely to exist.

Table 37, which is derived from data presented by Clark,\(^1\) shows that the respondents in his study did, particularly in the case of groceries, behave in a similar fashion to those respondents in the surveys previously cited, especially if some allowance is made for New Zealand consumers probably being slightly more affluent and hence more likely to be more mobile than their British counterparts.

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\(^1\) See also W. A. V. Clark, "The Spatial Structure of Retail Functions in a New Zealand City", *New Zealand Geographer*, Vol. 23 (April, 1967) pp. 23–33.
### TABLE 37
CONSUMER PATRONAGE OF NEAREST CENTRE
CHRISTCHURCH N.Z. 1965-66

<table>
<thead>
<tr>
<th>Class of Centres, showing number of functions</th>
<th>Number Purchasing</th>
<th>Percentage using nearest centre</th>
</tr>
</thead>
<tbody>
<tr>
<td>GROCERY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I ( 1-6)</td>
<td>191</td>
<td>73.3</td>
</tr>
<tr>
<td>II (7-12)</td>
<td>65</td>
<td>64.6</td>
</tr>
<tr>
<td>III (13-26)</td>
<td>101</td>
<td>55.4</td>
</tr>
<tr>
<td>IV (27-44)</td>
<td>107</td>
<td>35.9</td>
</tr>
<tr>
<td>V (C.B.D.)</td>
<td>14</td>
<td>00.0</td>
</tr>
<tr>
<td>VEGETABLE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I ( 1-6)</td>
<td>100</td>
<td>83.0</td>
</tr>
<tr>
<td>II (7-12)</td>
<td>49</td>
<td>67.3</td>
</tr>
<tr>
<td>III (13-26)</td>
<td>83</td>
<td>62.7</td>
</tr>
<tr>
<td>IV (27-44)</td>
<td>91</td>
<td>48.4</td>
</tr>
<tr>
<td>V C.B.D.</td>
<td>13</td>
<td>00.0</td>
</tr>
<tr>
<td>MEAT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I ( 1-6)</td>
<td>81</td>
<td>61.7</td>
</tr>
<tr>
<td>II (7-12)</td>
<td>72</td>
<td>62.5</td>
</tr>
<tr>
<td>III (13-26)</td>
<td>127</td>
<td>59.1</td>
</tr>
<tr>
<td>IV (27-44)</td>
<td>131</td>
<td>48.4</td>
</tr>
<tr>
<td>V C.B.D.</td>
<td>48</td>
<td>00.0</td>
</tr>
</tbody>
</table>

In conclusion Clark submits that a more profitable approach to the patterns of consumer purchasing than is available from central place theory in its classic form may be found in a measure of the relative attractiveness of a centre.
How such a model may be evolved is still to be seen, but the studies noted in this section and the findings of this dissertation generally do, in fact, tend to support Clark's contention. As the changing scale and function of service centres emerges in metropolitan areas this aspect must receive closer attention from researchers, and some attempt should be made to develop indices of attractiveness other than those already used.
SECTION 4.3.0 THE CHANGING SCALE AND DISTRIBUTION OF
SERVICE CENTRES

4.3.1 SHOPPING PATTERNS AND SHOP PATTERNS

It has been shown, through the consideration of various studies and surveys, including the writer's metropolitan area case study, that consumers shopping habits have changed considerably in the last decade or so. The retailing industry has introduced new merchandising techniques which have in certain instances encouraged shoppers to adopt new modes of behaviour. We have seen that in most instances the consumer and the retailer do not behave in a completely rational fashion, but in general the aim of both groups is to minimize costs and so obtain maximum return on expenditure.¹

The shopping patterns of consumers in reasonably affluent societies seem to be basically similar. Trends in shopping behaviour now apparent in North America, Australia and New Zealand² are not dissimilar to those trends now observable in Great Britain. Certain merchandising devices seem internationally interchangeable, although they have normally been first developed in the United States.

¹A full discussion of the interaction between the consumer, the retailer and the economic conditions prevailing has been presented in Chapter 2.

²Trends in these countries have been discussed. The situation in Scandinavia will be briefly examined in a later chapter. Unfortunately, a discussion of the emerging shopping patterns in other countries is beyond the scope of this dissertation, but in affluent countries the situation is similar to that discussed here.
We have seen how consumers are tending to shop less frequently for convenience goods, but that they will shop close to home for these items if the nearest outlets are convenient in terms of location, the type and range of shops, and with car parking facilities. While a good deal of convenience shopping may still be undertaken by walking shoppers in some areas, much shopping of this type is done by car twice, and increasingly once, per week. Good public transport facilities, usually provided by a bus service, are still essential for any but the smallest of shopping centres.

Shopping for durable goods still continues to be done in the central business districts of cities, but in large metropolitan areas, if other alternatives for durable goods or comparison shopping exist, these will be used by the shoppers deterred from visiting the central business district by such factors as distance, congestion, difficulties of parking and high public transport costs.

It has been noted in an earlier chapter that the greatest innovation in retailing in Great Britain in recent years has been the self-service supermarket. The greatest retailing innovation in the United States of America, and more recently, in Australia, has been the planned regional-shopping centres. Section 4.4 will consider the feasibility and desirability of such centres in Great Britain, but it must be always kept in mind how the scale of development patterns differ between these countries.
Earlier reference to London made it clear that this world metropolis was not comparable to other British cities in the scale of service centres it contains. This section again avoids a discussion of the London case, which will be made briefly later. It is conceptually more convenient to begin with a consideration of a suggested hierarchy of centres within a small planned community, a new town.

A three tier arrangement of shopping centres was recommended by the New Town Committee\(^1\) for a new town based on the neighbourhood principle as practised in the first group of new towns. The neighbourhood concept envisages a series of population cells, each self-sufficient in terms of day to day services and amenities. The ideal neighbourhood population was thought to be about 10,000, but it was recognised that in practise existing physical conditions would often be the over-riding factor influencing size.

In providing shopping facilities for a town of six or seven neighbourhoods the three tier arrangement might function in this way. At the neighbourhood level a group of twenty to thirty shops would supply weekly needs for the population. Daily needs would be met by groups of four to six shops in the residential areas, and specialist shops for occasional purchases would be provided in the town centre.

Where neighbourhoods were at a substantial distance from the town centre district centres were proposed to serve a group of neighbourhoods, and hence a four tier system emerged. Wilfred Burns\(^2\) in 1959 criticised

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\(^2\) Wilfred Burns, op. cit., p. 35.
the four tier system of town centre, district centre, neighbourhood centre and subcentre as being unsuited to the requirements of shoppers, even though this system had at that time gained wide acceptance in Great Britain.

Burns was able to cite cases from the large cities\(^1\) in support of the simple three tier system he advocated. He noted that in cities such as Birmingham and Leeds a three tier arrangement of shops had evolved gradually to meet the demands of consumers. In his opinion the small neighbourhood sub-centres could be dispensed with, as a single or corner shop satisfied the convenience need for shopping at the very local level, and also had a social function. In small towns no shopping provision of intermediate scale normally exists between the isolated local shops and the town centre, but Burns admitted a need for district or suburban centres in the largest cities. Such centres, he maintained, would be best developed in towns of over 150,000 inhabitants.

Consequently his three tier arrangement of shop groups would take the form of a corner shop at the local level, a large district centre in cases where the residential areas were at a considerable distance from the town centre and where a support population of about 40,000 to 70,000 is available, and the city centre itself. In advocating a return to what was in effect the natural order apparent in contemporary urban areas, Wilfred Burns stimulated a more rational and less formularized approach to shopping centre siting in this country, particularly in the new towns which followed the publication of his book.

\(^1\)Ibid., p. 48.
4.3.3 GROCERY SALES AND THE LOCAL SHOP

In previous comments on planned shopping centres in Britain such as the Cowley Centre in Oxford, the point has been made that these centres may owe their viability to the lower cost and greater convenience of their food sales rather than to durable goods sales, especially if the central business district is still relatively accessible to consumers for comparison goods shopping. Burns makes no mention of self-service supermarkets in suburban areas, and it has been shown that a shop of this type may save a small group of ten or twelve shops from being by-passed by consumers if good parking is available.

The corner shop as well has adopted self-service techniques, and remains competitive because the traditional long opening hours are maintained. The writer believes that it is in the field of residential layout design and small scale community planning that the "corner" shop will either be assured of continued importance or be obliterated. From previous discussion it would seem that the isolated shop, probably a self-service grocery and general store type with newsagency and milk bar, is a social necessity in low density residential areas, being to some extent a social focal point. As the level of car ownership rises still further in this country these shops could disappear if planners do not make pedestrian access to them convenient and pleasant. If this is done in the design of residential areas the isolated small shop should persist and continue to play its part in community life.
SECTION 4.4.0 OUT-OF-TOWN SHOPPING CENTRES

4.4.1 SOME DEFINITIONS

Planned shopping centres are by no means a new commercial phenomena in Great Britain. In recent years obvious examples may be taken, for instance from the new towns programme, and throughout the nineteenth and eighteenth centuries various forms of shopping environment were built by speculators as planned units. The planned shopping centre in the United States of America has in recent times often been built in outlying low density residential districts or, as in some cases, has even anticipated existing residential development and been built beyond the periphery of the built up area. Consequently, when speaking of an American type of planned shopping development British commentators have been inclined to use the term "out-of-town" centre, which the writer will now use in this dissertation when discussing the British situation.

Richard G. Thompson defines the American planned shopping centre as

"... a group of commercial establishments planned, developed and managed as a unit and related in location and size and type to the surrounding trade area, which it serves." 1

He maintains that a well designed centre, regardless of its size, should be a place where people want to congregate, so that conditions of

easy access, ample parking, and safety should be provided. Additionally, he notes, an "air of restfulness" should be created. In this way certain requirements as to the environmental character of a good planned shopping centre have been introduced into the definition.

The larger scale planned shopping centres, or regional centres, as they are termed, become more than a group of commercial establishments and develop into a major service centre perhaps with civic cultural and social provisions.¹

Three main categories of modern planned shopping centres have been identified by Thompson² in the United States. Each of these types of service centre has a counterpart in the older, unplanned centre structure, the external difference being that the planned centres are developed as a result of economic studies and are designed to serve a considered trade area and to provide adequate parking during peak business hours.

The principal characteristics of the American planned centres may be tabulated as follows.

¹ But because of the dominance of the commercial interests, however, these provisions are usually limited. Some idea of the scale at which ancillary uses to the main shopping function is usually provided at regional centres has been given when the Chadstone Centre was being discussed.

² Richard G. Thompson, op. cit. p. 4.
### TABLE 38

CHARACTERISTICS OF PLANNED NORTH AMERICAN SHOPPING CENTRES  
(after Thompson)

<table>
<thead>
<tr>
<th>Centre Type</th>
<th>Population Served</th>
<th>Building Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional</td>
<td>100,000–250,000</td>
<td>400,000–1,000,000 sq. ft.</td>
</tr>
<tr>
<td></td>
<td>within 30 minutes</td>
<td>(50–100 stores normally incorporated, with 10–15 apparel stores included)</td>
</tr>
<tr>
<td></td>
<td>driving time</td>
<td></td>
</tr>
<tr>
<td>Suburban</td>
<td>20,000–100,000</td>
<td>75,000–300,000 sq. ft.</td>
</tr>
<tr>
<td>(Community or District)</td>
<td>within 20 minutes driving time</td>
<td></td>
</tr>
<tr>
<td>Neighbourhood</td>
<td>up to 20,000</td>
<td>10,000–50,000 sq. ft.</td>
</tr>
</tbody>
</table>

A further opinion on the scale and hierarchy of planned shopping centres in the United States is put forward by a British observer, John Brierly, who noted that North American shopping centres fell into four classes:

- The Regional Centre serving a population of 250,000–1,000,000.
- The District Centre serving a population of 50,000–200,000.
- The Local Centre serving a population of 30,000–50,000.
- The Supermarket serving a population of 7,000–15,000.

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1 John Brierly, "The Regional Shopping Centre", The Surveyor and Municipal Engineer, 12th November 1966.
He considered that in the American structure, with express highways and first class main roads serving the centre, a driving time of thirty minutes would be a measure of the catchment area for the largest centres in the hierarchy, the Regional Centres.

4.4.2 THE FEASIBILITY OF OUT-OF-TOWN CENTRES IN BRITAIN

Some comment has already been made regarding the regional out-of-town shopping centre proposed for Haydock in North West England, but rejected by the Minister on appeal by the developers. This decision was made for a particular case and the discussion in regard to the feasibility of such proposals in the British context continues. There has been evidence in the last year or two of a strong trend by certain supermarket chains and variety stores towards locating on large sites on the periphery of the urban area in certain cities. This will be discussed shortly with particular reference to the Woolco developments.

It seems to the writer, however, that the development of very large regional planned shopping centres on the American pattern is desirable in Great Britain. In general, the growth of metropolitan areas in this country has been at a much slower rate than in the United States or Australia, and as has been shown by the experience of the Greater London region, where rapid expansion has occurred there exists a historical network of small towns and market centres as service centres which may be expanded to play a more important part in the hierarchy of central places, thus helping to meet the new demands. In Britain, therefore, the demand at regional level has been, and probably will still continue to be, rather for a continuing metamorphosis and extension of the existing shopping premises stock.

Where new residential areas are developed much of their convenience goods needs are usually met by new local centres, but the bulk of durable goods comparison shopping persists in the traditional centres of higher order.
Because of proliferation of centres of at least 3B status the problem in some areas may be one of rationalisation rather than lack of opportunity to develop an adequate existing service centre.

Despite the massive suburban expansion in the United States the development of large out-of-town centres has severely effected central business district trade as well as provided adequate provision for the new outlying districts. The impact of decentralisation on and the increasing specialisation of the central business districts in the United States and Australia has been already demonstrated. Within the British commercial landscape, as it is being redeveloped, matured and planned, the impact of very large out-of-town shopping centres could be disastrous. The writer feels that one of the strengths of British planning is in its appeals procedure and that the decision taken in the Haydock case was probably wise.

The possibility of a large out-of-town centre being feasible in certain instances, however, must always remain, and as will be discussed in the next section. The emergence of medium sized out-of-town or urban fringe centres is in fact now occurring.

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1 The reference is to the Ministry of Housing and Local Government classification. See Figure 1.
4.4.3 THE WOOLCO OUT-OF-TOWN CENTRES IN BRITAIN

The F.W. Woolworth Company's new move into out-of-town trading in Great Britain is being noted by their competitors and by planners with interest. The Woolworth subsidiary company concerned, Woolco Department Stores, at present has three centres in operation, one at Oadby, three miles outside of Leicester, a second at Thornaby, Tee-side, and a third near Bournemouth. Woolworth's have long been known as central area variety store traders in the lower price ranges, and the company claims that their new venture is being developed in recognition of the changing socio-economic status of the bulk of the consumers who have been Woolworth shoppers in the past. It is understood that concurrently with the out-of-town move, which, as will be shown, is more than a relocation, the existing, 1,280 Woolworth central area stores are undergoing an up-grading of merchandise in line with the rising expectations and affluence of their patrons.

There is little doubt that a significant number of shoppers will find that the Woolco centres, with adequate car parking and a wide range of convenience and durable goods under the same roof, are a form of shopping which they may want to patronize regularly. Woolco in their initial promotion of the centres have emphasized the convenience

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1 Information upon which this section is based has been obtained from Mr. J. Dodds, General Manager, Woolco Thornaby (interview 18th December 1968) and by correspondence with Mr. D.H.G. West, Assistant General Manager Woolco Department Stores, London, and to these gentlemen grateful acknowledgement is made. At this early stage in the Woolco operation, however, the company is reluctant to discuss present and future policies in detail, and the writer was not given permission to take photographs within the Thornaby store.

2 The dates of opening of these centres were as follows:
   Oadby, Leicester: 10th October, 1967
   Thornaby, Tee-side: 20th August, 1968
   Bournemouth: 29th October, 1968.
parameter rather than the price parameter, and it remains to be seen whether the customers can be held when the novelty of the new shopping environment wears off. The writer believes environmental conditions are of such a high standard that if small price differentials do exist they will most likely be borne by the consumer, and the scale of the Woolco/Woolworth operation should in any case enable prices to be held to acceptable levels.

The model for the Woolco stores in Britain is the parent Company's chain of more than seventy Woolco stores in North America, developed over the last five or six years. In Britain the company is now confident that the level of affluence of consumers has reached the stage where their centres will be adequately supported by car shoppers avoiding the problem of urban congestion and parking and seeking a wide range of family purchases at the one store. Extended evening hours have been introduced to encourage the idea that shopping is a family business, and an outing, as well as catering for the working women. In addition, to help establish regular shopping habits at the centres, three different types of credit account are operated for customers.1

It is understood that the British Woolco stores are very close replicas of their American counterparts, and that the long term aim of the company is to establish a chain in the American fashion. It is reported that seven stores should be operating by the end of 1970 and it is

1The following newspaper reports have been consulted:

The Financial Times, 14th July, 1967
The Sunday Times, 8th October, 1967
New Society, 21st December, 1967 pp885-886
The Scotsman, 20th March, 1968
The Times, 15th April, 1968
Salesbury Times and South Wilts Gazette, 25th October, 1968
The Times, 30th October, 1968
The Times, 12th November, 1968
likely that two of these will be on sites in Scotland on the perimeters of Glasgow and Edinburgh. The company understandably will not divulge location details until final agreements have been reached, but the Runcorn new town centre was under consideration at one stage and is indicative of the range of sites the company is likely to consider. These might normally be expected to be well placed in relation to roads giving quick and easy access from a wide hinterland of suburban residential areas which normally have a high proportion of car owning families. Consequently good parking facilities will enhance the attraction of any shopping centre to these people, and where durable comparison goods shopping is available, some transfer of trade from the congested nearby central business district may be expected.

The population living in the urban fringe areas where many of the Woolco stores are likely to be situated will provide an immediate catchment for convenience goods shopping, and many of these people might come on foot or use local bus transport. It seems that in Great Britain most housewives have only restricted use of a car for shopping trips during the week, and an average of only about three per cent of British households have two cars. This factor may be overcome to a certain extent by the extended evening hours and Saturday trading the Woolco chain offer, but adequate bus services will probably be essential to the success of the centres.

1The Oadby store is open until 8 p.m. on Thursdays and Fridays, with a half day Monday. The Bournemouth store is open 10 a.m. to 8 p.m. Tuesday to Friday, 9 a.m. to 6 p.m. Saturday, closed all day Monday.
Compared to the normal size of out-of-town operations in the United States, the Woolco stores are a small scale offering, so that a noticeable effect on the central business districts of the urban areas they serve is not expected. The development is seen by the writer more as a rationalisation of suburban shopping facilities, with the provision of the environmental and convenience standards the contemporary consumer will make use of if he has the opportunity.

With a total floor area of about 91,000 square feet the Oadby Woolco store has 72,000 square feet of air conditioned selling area, on one level and under the one ceiling. Free parking is provided for 800 cars. The centre is located on the main Bedford-Leicester trunk road and the suburb of Oadby, three miles from Leicester, assures a strong demand for convenience goods from the immediate population. Eighteen check out points control the sales floor, and the sales area is served by 260 employees who help customers with certain items, and in some departments operate cash registers in the normal department store fashion.

Environmentally, the main internal impression in the Woolco stores is one of extensive spaciousness, well controlled lighting and unobtrusive air conditioning. The floor is carpetted in some sections, with synthetic tiles in others. The atmosphere is one of unruffled calm, and there is no suggestion in the environment or from the staff that the shopper should hurry. In the Thornaby store that the writer visited a place to sit down and rest was not obvious, and would have been appreciated after some time of looking around the store.1

The Oadby Woolco centre has a few small shops for letting to other traders attached to it, but a very extensive range of convenience and

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1 The writer's notes of the visit mention "commercial museum fatigue"
durable goods is available within the Woolco store itself. The Thornaby Woolco is of similar size to the Oadby Store, with about 66,000 square feet devoted to retail selling area. In this case, however, a total of 357 car spaces are under the store at basement level, reached by ramp from the store entrance, so that the short journey from car to store may be made completely under cover. An additional 317 car spaces are at ground level outside the front of the store, which is the dominating retailer in the new planned Thornaby Town Centre, and many other car parking opportunities exist in the town centre.

The Bournemouth Woolco occupies 9,600 square feet and is part of a shopping complex of about 140,000 square feet. In addition to the Woolco store a large food store of 24,000 square feet and twelve standard shop units, two banks and a petrol filling station are on the site, which can accommodate 1,750 cars.

From the foregoing it will be noted that the Woolco stores do not normally form out-of-town centres in their own right, but in the case of Thornaby, are the largest shop in the new town centre, and in the case of the New Hampshire centre, Bournemouth, are the largest tenant. The Oadby store, however, does in fact constitute to all intents and purposes a "Woolco Centre", and in future we may expect to see a continuation of this pattern and perhaps some new variations. In the three stores built so far no changes in floor level within the store have been made, and it will be of interest to see if this one level approach is maintained.
4.4.4 THE G.E.M. DISCOUNT STORES

We have seen from cases already cited how price competitive offerings of convenience goods can draw consumers from a wider catchment than might normally be expected for that order of good. Consequently, the success of the Woolco venture may to a certain extent depend on a lack of effective competition in these lines.

The apparent initial failure of American type discount stores in Britain may not have been a true indication of how these stores will develop in the future here, and consequently new competition may develop for the Woolco chain in the durable goods sector. It might be supposed, however, that as the Woolworth group become firmly established, and presumably have an initial price advantage because of their scale, that any threat to the durable side of their operations would effect more strongly the conventional comparison goods shops of town centres.

In any case it seems that the G.E.M. Discount Store promoters, who initially located at Bridgford, outside of Nottingham about five years ago and at first reportedly had some misunderstandings with their concessionnaires, are now doing reasonably well in their discount selling from three stores.

The success of discount store operation lies in rigorously staying within low overhead costs for premises and site, and it is possibly because of these factors that to some shoppers these stores may appear

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1 For a further indication of this a Table derived from Bernard, J. Kane, *op. cit.*, is appended as Appendix J, showing the extent of primary trading areas for supermarkets in various locations in the eastern United States. Kane comments that a full discount supermarket in any type of location should expand its trading area considerably, sometimes up to double the normal dimensions.
less acceptable places to shop at, despite lower prices. This factor of "respectability" seems to produce differing reactions from different socio-economic groups.\(^1\)

The writer expects, however, as out-of-town shopping is further developed that discount stores with good parking facilities will acquire increasing "respectability" and acceptance in Britain by all consumers watching the price factor keenly. These and other forms of drive in shopping and service facilities will be accepted as a convenient adjunct to central area and suburban service centres as they are currently understood.

4.4.5 OTHER PROPOSED OUT-OF-TOWN CENTRES IN BRITAIN

Some considerations why the writer believes that large scale out-of-town regional shopping centres of the American pattern are inappropriate in the British situation have been put forward previously. For a useful discussion on the question of regional shopping centres the Haydock Report may be consulted.\(^2\) This report concluded that regional shopping centres should, and probably would, form a feature of future retailing in Great Britain.

In the case that was specifically examined it was considered that in the future the two existing regional centres of Manchester and Liverpool would not be able to cope adequately with the demand for future regional shopping facilities. The out-of-town regional shopping centre, it was noted, was likely to be an efficient way of meeting this demand and it was

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\(^1\) See a note on the 'IKEA' Store, Stockholm, in Chapter 5.

\(^2\) Kantorowich, (1964) op. cit.
suggested that more than one such centre could be built subject to the following conditions.\footnote{Ibid., pp 54-55.}

1. Each centre must be sure of a hinterland population of at least a million people that is not likely to be seriously affected by competition from other regional shopping centres.

2. The long term strategy for regional development must first be decided, i.e. the broad redistribution of population and employment that is desirable. The strategy must include decisions on the location of regional shopping facilities.

3. Cost-benefit analyses should be undertaken to compare the advantages of the out-of-town centre with those of converting a nearby existing centre into a regional shopping centre or of expanding an existing regional centre.

4. The function of nearby shopping centres likely to be affected by the out-of-town centre should be decided and the scale of redevelopment in these centres established so as to avoid wasteful use of resources.

5. A detailed plan (similar to a town map or a new town master plan) should be prepared showing the regional shopping centre site; the land to be used for regional offices and other sources of employment; the supporting residential and ancillary uses; the communications needed to serve all proposed activities in the area including the regional centre; and the supporting services and utilities.

6. The responsibility for implementing the plan referred to in Item 5, must be decided at the same time as permission is given for the development of an out-of-town centre.
Whilst impressed by the strategy proposed, the writer remains unconvinced that completely new centres of this regional scale are required in contemporary Britain, and believes that they normally seem unjustifiable in the foreseeable future. Under (3) above an alternative of converting or expanding an existing centre is left open, and this could normally be expected to be feasible.

If existing conditions of growth in Britain outside of London continue as they are doing now the need for expanded and modified facilities should be readily anticipated and an economically viable result achieved in terms of shopping provision without resorting to such strong measures as building completely new centres of great scale on new sites. Furthermore, there is much to be said in favour of progressively modifying the existing environment where this is proving unacceptable for modern life.

There will always be special instances when a series of circumstances combine to justify a different solution, however, and the current proposal for a large out-of-town centre at Brent Cross, London, is a case in point. It is estimated that 1,800,000 people live within twenty minutes driving time of the proposed regional centre, which it is anticipated will capture some trade which would otherwise go to the West End.

Whilst many major trading companies are likely to be represented in the centre its scale is still to be small by the standards of regional centres in North America. Parking for about 3,000 cars is proposed.

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2. The very large Northland Centre, twelve miles north west of Detroit City centre is on a site of 162 acres, with 10,500 car spaces and 1,380,000 square feet of floor space.
The Brent Cross proposal, therefore, seems to be of the same scale as Melbourne's Chadstone Centre. If, in fact, it is to be much bigger, with many of the large West End stores represented, much more parking space than that presently proposed should be allowed for.

Conceptions of scale may vary, and it is possible to be misled by different terminology and other factors in this regard, such as car parking provisions. It is certain, however, that as the scale and distribution of service centres is changing in response to the changing demands of consumers and retailers within the retail "spiral movement" that the physical characteristics of these service centres are also changing. In this way new environments emerge to meet new demands.
SECTION 4.5.0 NEW SHOPPING ENVIRONMENTS: DESIGN CONSIDERATIONS

4.5.1 SHOPPERS, SHOPKEEPERS AND PLANNERS

The ultimate success of any service centre will depend to a great extent on the response of both shoppers and shopkeepers to the environment at the centre which will in turn influence their actions as consumers and their efficiency as retailers.

In recent years the various retail traders organisations have helped the retail industry make clearer its requirements to planners and developers. It now seems that a better degree of communication exists between those parties whose aim is to achieve the optimum operation of any shopping development. In fact many members of the largest of the retail traders organisations, the Multiple Shops Federation, are considerable owners of real estate and developers in their own rights. About 45,000 shops in Great Britain are controlled by members of the Multiple Shops Federation and the publications of the Federation must have considerable influence in shaping the attitudes of members towards trends in service centre development.

In 1944 the Multiple Shops Federation took part in the Retail Advisory Committee on Town Planning and after this produced a booklet at the suggestion of the Ministry of Town and Country Planning on shopping centre planning. The experience of traders in the post war years and the success of the precinct type shopping centres pioneered in post war reconstruction in central areas and in the new towns subsequently caused the multiple Shops Federation to drastically revise its recommendations regarding shopping centre layout, and in 1963 The Planning of Shopping Centres was published, which stated:
"The Federation has therefore been driven to the conclusion that the only satisfactory basis on which to plan the building of a new main shopping centre, or the comprehensive reconstruction of an old one, is the principle of the traffic-free precinct; and that where an existing main centre is to be redeveloped piecemeal, the aim should be to bring about the closest approximation to the precinct that is reasonably practicable." ¹

There is general agreement, therefore, that we should plan service centres primarily for pedestrians. Wilfred Burns in 1959 ² made a simple statement of the needs of a pedestrian shopper, which included, he considered:

"A feeling of activity in the centre, with as many shops as possible within a short walking distance and with variety and interest in the shopping scene."

This was to be achieved in conjunction with safety from traffic and with protection from the weather. Writing before the Multiple Shops Federation had reformulated their views on shopping precincts, Burns pointed out that, as the demands of the shopkeeper for traffic passing his shop, were incompatible with the demands of the shopper, we had better satisfy the pedestrian and provide precincts and traffic-free streets, and an environment.

"...where people can feel free to indulge in the luxury of just looking." ³

The shopkeepers now have realised that such an environment leads also to the act of purchasing.

---

¹ The Multiple Shops Federation, The Planning of Shopping Centres, (London: Multiple Shops Federation, 1963) p.11

² Wilfred Burns, op. cit., p. 71

³ Ibid. p. 95
4.5.2 THE ENJOYMENT OF BEING A PEDESTRIAN IN THE CITY

At a symposium entitled "Shopping and the Future" in 1965 the chairman, Professor Sir Robert H. Matthew, remarked on the changing attitude of shopkeepers towards the new design ideas for shopping centres such as traffic separation, varying levels, arcades and the like. Sir Robert further commented that such ideas were not in fact "new", but had largely existed until overwhelmed by the "civic barbarism" of the industrial revolution.

Participation in the life of a service centre by shopping or making other use of its facilities should be, and has in some cases been, a stimulating and pleasurable experience. This aspect of shopping centres was mentioned by other speakers at the symposium referred to and if such experiences can be quantified, there would seem to be a good case for an "index of enjoyment" being somehow incorporated into any measure of attractiveness of a service centre.

Marketing analysts have been aware of the fact that if the shopper enjoys being in a shopping environment she is likely to engage in more price and quality comparisons than if she does not enjoy shopping there. Thus, when deciding how to apportion shopping time, an unconscious decision on environmental quality is possibly made by the shopper, and where more time is spent "shopping around" for enjoyment the more likely is the shopper to be exposed to those conditions in which an actual purchase will be made.

---

1 A symposium organised by the Town Planning and Amenity Committee of the Edinburgh Architectural Association. 1st May 1965.

2 Examples of historical precedents are given in, for instance, Percy Johnson-Marshall, Rebuilding Cities (Edinburgh: Edinburgh University Press 1966), and the Institute for Center Planlaegning, by Center Menneske, Lyngby: Institut for Center Planlaegning, 1965)

Perhaps environmental qualities are more important to the shopper at the higher order centres, however, as where local shopping is concerned Peter H. Mann's Netherthorpe Shopping Survey, at Sheffield, showed that seventy per cent of his informants regarded local shopping as part of the housework rather than as an outing. It is by no means likely that this attitude is held by all socio-economic groups, particularly where convenience shopping is done by car. In this case the shopper is likely to be of a higher socio-economic status and liable also to shop less often for convenience goods. Some durable goods comparison shopping is possibly combined with the convenience shopping which has to be done, and the trip consequently becomes more of an outing.

One of the most significant aspects of the contemporary planned service centre for the shopper may be that there, within the pedestrian precincts, is one of the few places outside his own home or garden that he can be free of the motor vehicle. There is a certain fundamental enjoyment in being in a stimulating pedestrian environment. Despite the advances of modern technology the freedom to move about as a pedestrian in a safe and comfortable but lively environment must be preserved as a fundamental human right in urban society.

1 Peter H. Mann, loc. cit.
4.5.3 PEDESTRIAN MOVEMENT IN SHOPPING CENTRES

As we take up about the same amount of room when we walk about as we did in the past, there should be much to be gained from past experience by studying acknowledged successful pedestrian environments. This was the first approach to the problem of designing successful contemporary shopping precincts made by the Institut for Center Planlaegning in Denmark, and the results of their observation of past environments, principally successful shopping streets and places in the older parts of Scandinavian cities, have been published.1

In Great Britain much attention has been focussed on the planning concept of the precinct and the environmental area existing in a cellular form within the surrounding web of roads,2 but little research has so far been carried out within the pedestrian environments themselves in an attempt to establish design standards related to pedestrian space requirements, let alone to identify criteria for the assessability of pedestrian enjoyment.

A recent research project into pedestrian movement in urban shopping areas3 had to conclude, not surprisingly, that no absolute rules for predicting the behaviour of shopping pedestrians did exist, but that movement could be considered in the context of the function of the

1 Institut for Center Planlaegning (1965), op. cit.
site. The author was able to cite American literature that showed no major progress in this line of research had been made in the United States, either, so that

"...planning for the pedestrian generally depends more upon intuition than upon any factual base. The yardsticks and gauges that have proved useful in determining highway needs are unavailable to make comparable analyses for pedestrians." 1

As a result of his study Taunton-Rigby gained the impression that it would be worthwhile to attempt to determine the minimum practical dimensions in pedestrian areas, not only to avoid wasted space, but also to stimulate trade by minimizing walking distances. He suggested that this might involve planning a network to a fairly intimate scale instead of with a few broad walks and precincts.

This proposal is in line with some of the design solutions evolved by the Institut for Center Planlaegning, Copenhagen, but is in contradiction to a trend in layout design noted by the recent Capital and Counties Property Company Ltd's party on a tour of north-east American shopping centres. This group noted in their report 2 that the most successful of the recent centres they saw were based on a very straightforward pedestrian arrangement, based on a straight line flow with a few variations as possible. Single straight walks were provided where conditions allowed.


In Britain the Road Research Laboratory of the Ministry of Transport has shown that, in comparison between "High Street" and "Precinct" type shopping centres, that:

"If roads on the periphery of the shopping area were included, the number of pedestrian accidents in a three year period were found to be less in two out of three precinct areas, than in high street areas of similar population". 1

For our purposes this finding is a useful reminder that the precinct centre is not necessarily completely safe for the pedestrian in that the peripheral roads, which may sometimes have to be crossed by pedestrians en route from the car park to the shopping mall can be a source of danger. Where parking is provided either under or above the main pedestrian ways the danger of accidents is likely to be still further reduced and, in fact, shopping precincts on various levels would appear to offer many advantages.

4.5.4 MULTI-LEVEL SERVICE CENTRES

The shortage and high cost of most land desirable for service centre use in Great Britain coupled with the opportunity to offer a wider range of tenants accommodation which exists because of a greater retail differential has resulted in many schemes of multi level shopping centres being built in this country, with varying degrees of success. In the field of multi level shopping centres in general and in the detailed

question of the means of vertical circulation of pedestrians there is much
need for study. As so little investigation has been done in this field up to
date little substantiated comment may be made except to note that where
sloping sites exist the use of a multi level design solution is obvious and
is more likely to become a commercial success.

The historical precedents for multi level communications have
been illustrated and discussed by Percy Johnson-Marshall, ¹ and the very
successful contemporary extension of the Rows at Chester will be
illustrated in the photographs which follow this chapter. A two tier
shopping arrangement was built in the Coventry central area, which was
derived in concept from the Chester Rows. The latter phases of the
Coventry centre, with direct connections to the multi level car park for
pedestrians, have shown how such access arrangements can channel
shoppers into the upper tier of shops and consequently less difficulties are
now being experienced with the upper levels of the centre, which previously
had seemed remote from pedestrian flows.

It is by direct connections to car parks that the upper tiers of
multi level shopping centres can best be given the exposure to passing
shoppers that many of the upper level tenants will seek. In the Billingham
New Town Centre pedestrians are channelled into the Centre from the
upper level car parks to meet this need, but in other schemes, such as
the Sheaf Market at Sheffield and the Thornaby New Town Centre, pedestrian
flow to the upper levels is expected to come from shoppers who come to
the centres on foot via pedestrian overpasses. Whether enough casual
shopping traffic is generated in this way remains to be seen.

¹ Percy Johnson-Marshall, op. cit., pp 126-128
Pedestrian movement to the upper levels is largely generated. One may suppose, from the consumers desire to purchase the goods or services being offered at that level. An analysis of the placing of tenants in multi level shopping centres by Peter Dalton¹ begins to investigate the placing of "magnet" traders and two level shops in such shopping developments, and much more useful work can be done in this form of investigation.

4.5.5 THE ENCLOSED SHOPPING CENTRE

By June 1968² the developer of the Bull Ring Centre in Birmingham reportedly had only one shop unlet in the main block of the project. Four years after its opening the Bull Ring Centre seemed to have finally become firmly established.

As will be seen from the cross section in the illustration which follows this chapter the Bull Ring Centre enjoys direct pedestrian access at grade on every level up to the fourth. The impact of the Centre on the pedestrian, however, seems often to be one of disorientation, and easier identification of sections of the centre from within by the shopper would possibly be helpful in overcoming this sensation.³ This might have been achieved by more positive and obvious connections vertically between the shopping levels, even if some floor space was lost in the process. The continuous impression of low ceilings can become oppressive.


² The Sunday Times, 23rd June 1968.

³ This is the writer's impression: substantiated in discussing with others who know the Bull Ring Centre.
With the terminal for the Midland Red Bus Company in a lower level of the centre and parking above for about 500 cars high densities of shoppers are generated. Department stores, supermarkets and about 100 shops are provided with both enclosed and open market areas and some offices.

As is the case with the Cumbernauld Town Centre, the Bull Ring centre possesses a physical form which clearly expresses the existence of the service centre as an entity. The precinct is perfectly legible to the external observer by virtue of its all embracing structural form... Both these service centres will probably prove difficult to adapt to changing requirements, but there is certainly great opportunity for the development of centres of this type, particularly because of the high potential for climatic control such environments possess.

4.5.6 PARKING AND SERVICING

Pedestrians, cars and the servicing of new shopping environments are three aspects which can be physically separated and each properly catered for.

In the United States of America it is now common practice to provide 5.5 car spaces to every 1,000 square feet of retail trading space in planned shopping centres, so that car parks are consequently huge, particularly at the large regional centres. It is not proposed to discuss the problem of parking as far as Great Britain is concerned, but it is obvious that where shoppers can be encouraged to use public transport facilities great savings in space and money can be made.

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1Capital and Counties Property Company Ltd., op. cit., p. 15
With regard to servicing arrangements, this too is a subject in itself. Service yards have often been an eyesore in new town centre schemes, but it is claimed that the cost of underground service tunnels can seldom be justified. With multi level shopping centres the problems of servicing are acute, as may be seen at the case at the Bull Ring centre. Recently the Multiple Shops Federation published a schedule of standards for service areas in shopping centres¹ and the subject has been shown to be in need of considerable further investigation following a study by Gillian M. Pain.²

It seems easier to derive design criteria for parking and servicing than it does for the pedestrian. It may be that specialised studies such as studies of different environments from, for instance, the point of view of the disabled person, will focus our attention on those aspects of pedestrian environment which positively affect our enjoyment of certain places as service centres.³

¹ Multiple Shops Federation, Standards for Service areas in a Shopping Centre, (London: Multiple Shops Federation, no date)

² Gillian M. Pain, Planning and the Shopkeeper, (London: Barrie and Rockcliff, 1967)


SECTION 4.6.0 NEW SHOPPING ENVIRONMENTS: SELECTED EXAMPLES

4.6.1 NOTES ON THE COMPARISONS MADE AND THE QUESTION OF ATTRACTIVENESS

Many service centres have been visited in the course of this study and the examples chosen to provide the illustrations which follow this chapter have been selected primarily because they will be referred to in Chapter 5, "Emerging Service Centre Nodes in Metropolitan Areas".

The main floor plans of the centres illustrated are shown at a scale of 1:2000 so that a ready comparison of the scale of the centres may be made in plan. The vertical element of the environment is normally indicated by the photographs, the main purpose of which is to show the differing environmental characteristics of the centres illustrated. 1

If the shopping environments illustrated are not yet a full commercial success it is almost certainly likely that they will become so. In some cases, where, for instance, weather protection is not in the writers' view adequate, this success is achieved almost certainly in spite of the form of the service centre and its environmental design rather than because of it. There is no reason to doubt that normally the success of a service centre, and this is in fact largely by virtue of definition, depends first on its location and not to any great extent on its environmental characteristics. In the long term, however, the continued patronage and enjoyment of a centre by shoppers may depend very greatly on the environmental amenity that centre offers, so that this measure of a centre's attractiveness, if it were possible to formulate such an index,

1Reference has been made to D. Sheppard, "The Use of Photographs in a Survey of an Architectural Topic, Social Survey Papers, No. M. 91. 1960 in the Methodological Series. (Mimeograph)
would perhaps indicate a higher degree of drawing power than at competing centres, all other things being equal.

It would be reasonable to expect that measures of attractiveness could include obvious physical characteristics, such as car parking, the degree and type of pedestrian-vehicle separation, climate control, and walking distances as well as the type, scale and proportions of various shopping opportunities. The less obvious characteristics would be more concerned with the personal physical comfort of shoppers and their psychological reaction to the environment.

4.6.2 NOTES ON THE EXAMPLES ILLUSTRATED

The service centres illustrated by photographs and plans to the same scale may be grouped as follows:

1. Billingham and Thornaby New Town Centres, Teesside

   Both these centres are located on completely new sites within the Teesside urban region and serve the pre war and post war housing estates of the neighbouring area. In 1965 the new Billingham Town Centre had estimated annual retail sales of £1,767,000 of which nearly half was in durable goods. The centre has been built up from nothing in recent years and has full pedestrian segregation, two level shopping, a bowling centre and a hotel, municipal and central government offices, a forum offering a wide range of sports and recreation facilities and a theatre. The planned size of

---

1 Further details of Billingham, Thornaby, Chadstone, Rødovre Skårholmen are tabulated with the illustrations.
shopping provision in this centre is 213,000 square feet.

The Thornaby centre has a planned size of 296,000 square feet, a large proportion of which has been taken up by the Wooloo store previously described. The Thornaby centre is now almost completed and consists of a shopping centre with a hotel, an indoor bowling centre, a health centre, public library and offices which include the offices of the North Eastern Electricity Board. A number of residential flats are provided above the shops.

Both these service centres are significant elements in the Teesside County Borough, and will be known as District Centres in the terminology of the Teesside Survey and Plan.1

2. The Chadstone Centre, Melbourne

Details of this centre have been given in Chapter 3.

In contrast to the pedestrian precinct of this planned shopping centre, two other metropolitan Melbourne unplanned shopping centres are illustrated. Oakleigh has been chosen because it is representative of the more compact centres within metropolitan Melbourne which have grown from a "Township Plan" grid layout, and has owed its former prosperity to the fact that it was situated at an important metropolitan railway station.

Another form of typical unplanned metropolitan centre is illustrated by the Bentleigh shopping centre, a development

1 The writer is grateful for the efficient help he has received in his study of the Teesside metropolitan area from various officers of the Teesside County Borough Department of Planning and Development. For further information the Teesside Survey and Plan (London: H.M.S.O., in press 1969) may be consulted.
of the "linear highway string", to use American terminology.
Both these centres are within the Chadstone survey area
previously described.

3. The Rødovre Centre, Copenhagen

The position of this district shopping centre in the future
development of Copenhagen metropolitan area will be dis¬
cussed in Chapter 5.
The centre includes community and public buildings and
covers an area of 500,000 square feet of floor area, of
which 180,000 square feet is retail sales floor space.
The Rødovre centre is completely enclosed, and in its
layout embodies the environmental philosophy of the
Institut for Center Planlaegning.

4. Skärholmen Centre, Stockholm

This major regional centre will be examined in relation
to metropolitan Stockholm in Chapter 5.
Skärholmen is planned to serve a population of about
300,000. It was opened in September 1968 as a shopping
centre, but many community facilities will be added over
the next year or two.

---

1 Information from the Institut for Center Planlaegning, Copenhagen.

2 Information from Stockholm City Planning Office.
5. Chester Central Area

Not strictly a service centre within a metropolitan area in the same sense as the other centres illustrated, it has been decided to include the Chester Central Area for comparative purposes. The Rows are well known, and the recent extension to the Rows in a series of arcades is of very high environmental quality.

6. Stockport Market

Again not strictly comparative, the shopping environment of the Victorian Stockport Market, with its purpose built structure and ancillary street stalls is worthy of attention as a very satisfactory shopping precinct.

7. The Bull Ring Centre, Birmingham

An enclosed shopping centre as a central area redevelopment, continuing the traditional use of a site.

8. Stevenage, Faresta and Vallingby

The plans of these acknowledged successful service centre environments are included for scale comparisons.

---

1 Information from Grosvenor Estate Commercial Developments Ltd., Chester, and Chester Planning Department.

2 Information from Stockport Planning Department.
This chapter has aimed to show how new shopping environments have developed, partly in response to new shopping habits arising in part from increasing affluence.

Section 4.2.0 Shopping Studies and Surveys notes certain British studies which throw further light on the shopping habits of consumers in this country. It may be concluded from this discussion that much shopping for convenience goods in Britain is still carried out by shoppers who use the nearest offering of such goods and who walk to the shops. Some local centres enjoy a catchment population of sufficient size to be able to provide convenience shoppers with a self service supermarket. Where this is the case, and where good parking facilities are available, it is likely that these local centres will still retain a relatively high proportion of the spending on convenience goods, even as the car is more regularly used as a "shopping basket".

Section 4.3.0 The Changing Scale and Distribution of Service Centres, traces how shop patterns are modifying. Large cities with congested central business districts will need well located and well designed subsidiary service centres where comparison shopping for durable goods can be carried out, and it seems likely that the isolated local shop will always play some role, even if this is increasingly primarily of social significance.

It remains to be seen how far people are willing to travel to undertake convenience shopping. It is most likely that the bulk of this shopping will continue to be done close to home, particularly in this country where many nearby shopping groups usually exist, where these shops provide an acceptable
physical environment as well as meet the shoppers demands regarding price and accessibility. Some new convenience and durable goods shopping developments have used the attractive pricing of their convenience goods as a means of drawing customers, with noticeable success. It is difficult to isolate other factors of attractiveness, however, and environmental conditions at these centres may be of significant importance.

Section 4.4.0 Out-of-town Shopping Centres, discusses the development of such facilities in reference to the current British situation and concludes that the development of large regional out-of-town shopping centres of the scale of the regional centres which have been built in North America is not warranted in this country. New forms of shopping environment are emerging, however, and the example of the Woolco stores is examined. This form of development is probably of a very suitable scale for new shopping provisions in British metropolitan areas and should be very successful commercially. Where planning authorities ensure that such stores are built in conjunction with other service provisions and some community facilities these new small scale central places will become valuable service centres for the community as well as for their developers,

Section 4.5.0 New Shopping Environments: Design considerations, first examines the once differing interests of the shoppers, shopkeepers and the planners. There has been general agreement that the pedestrian precinct, in one form or the other, is the most viable physical solution to the problem of achieving safety and amenity in a shopping centre.

The enjoyment of being a pedestrian in a safe and attractive urban environment is seldom questioned, but it is difficult to measure scientifically. It seems that even the measurement of the speed at which pedestrians walk and the space that they take up cannot easily be transformed into a design code. There is much more research needed in this field, particularly with regard to multi-level service centres.
Section 4.6.0 New Shopping Environments: Selected Examples, is an introduction to a series of comparisons of selected service centres by plans drawn at the same scale and by photographs. In considering the question of service centres the amenity a centre offers is very difficult to quantify, but some obvious physical characteristics such as the degree and type of pedestrian vehicle separation, climate control and walking distances within the centre are perhaps the first things to examine. The following figures and plates show the differences in the selected service centre environments which are most obvious to the observer. It is suggested that in this direction lies scope for further, although as yet unspecified, research. Some comments regarding the directions future research may take are made in the concluding notes of this dissertation, in Section 6.0.0.
# TABLE 39

**SELECTED PLANNED SERVICE CENTRES COMPARED**

<table>
<thead>
<tr>
<th>Planned Centres</th>
<th>Billingham</th>
<th>Thornaby</th>
<th>Chadstone</th>
<th>Rodøvre</th>
<th>Skarholmen</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Metropolitan Status</strong></td>
<td>District Centre</td>
<td>District Centre</td>
<td>Regional Centre</td>
<td>District Centre</td>
<td>Regional Centre</td>
</tr>
<tr>
<td><strong>Approximate Catchment Area Population</strong></td>
<td>50,000</td>
<td>50,000</td>
<td>300,000</td>
<td>100,000</td>
<td>300,000</td>
</tr>
<tr>
<td><strong>Shopping Floor Space (sq. feet)</strong></td>
<td>213,000</td>
<td>296,500</td>
<td>396,000</td>
<td>180,000</td>
<td>800,000</td>
</tr>
<tr>
<td><strong>Car Spaces</strong></td>
<td>1,400</td>
<td>900</td>
<td>3,500</td>
<td>2,000</td>
<td>4,000</td>
</tr>
<tr>
<td><strong>Servicing</strong></td>
<td>Rear Yd.</td>
<td>Rear Yd.</td>
<td>Tunnel</td>
<td>Tunnel</td>
<td>Tunnel</td>
</tr>
<tr>
<td><strong>Climate Control</strong></td>
<td>Open Mall</td>
<td>Open Mall</td>
<td>Covered Mall</td>
<td>Fully Enclosed</td>
<td>Open Mall</td>
</tr>
<tr>
<td><strong>Environmental Impression</strong></td>
<td>Good Scale</td>
<td>Too Open, Confused Circulation</td>
<td>Pleasant Simple Layout</td>
<td>Very Good</td>
<td>Scale Too Big</td>
</tr>
</tbody>
</table>

Sources: Reports, correspondence, site visits.
FIG. 29. BILLINGHAM CENTRE
PLAN
FIG. 30. THORNABY CENTRE PLAN.

$875' = \text{about 3 minutes walk.}$
FIG. 31. CHADSTONE CENTRE.
A planned Regional shopping centre in Metropolitan Melbourne.
312.

Civic Buildings.

875' = about 3 minutes walk.

FIG. 32. OAKLEIGH CENTRE PLAN.
A Railway Station based centre in Metropolitan Melbourne relying primarily on kerbside car parking.
FIG. 33. PENTLEIGH CENTRE PLAN. (East Half.)
A linear string type centre in Metropolitan Melbourne with recently developed off-street parking areas.
FIG. 34. RODØVRE CENTRE PLAN.
Scale: 1:2000
FIG. 35. SKARHOLMEN CENTRE PLAN.

875' = about 3 minutes walk.
FIG. 36. CHESTER ARCADING PLAN.

875' = about 3 minutes walk.

FIG. 37. STOCKPORT MARKET AREA PLAN.
FIG. 38. BIRMINGHAM BULL RING CENTRE PLAN. 
Plan taken at Centre Court level.
FIG. 39. BULL RING CENTRE, SITE PLAN.

FIG. 40. BULL RING CENTRE, SECTION.
875' = about 3 minutes walk.

FIG. 41. STEVENAGE CENTRE PLAN.
FIG. 42. FARSTA CENTRE PLAN.

875' = about 3 minutes walk.
FIG. 43. VALLINGBY CENTRE PLAN.
Plate A.

RODØVRE CENTRE.
Plate A.

RODØVRE CENTRE

A1  Pedestrian Mall Interiors.
A2
A3
A4

Of the centres visited it is considered that this centre provides the highest degree of environmental amenity.
Plate B.

BILLINGHAM CENTRE.
Plate B.

BILLINGHAM CENTRE.

B1 Central pedestrian area.
B2 "
B3 Upper level connecting bridge to car parking deck.
Plate C.

THORNABY CENTRE.
Plate C.

THORNABY CENTRE.

C1 Pedestrian areas at ground showing unprotected upper level walkways.

C2 "

C3 "
Plate D.

THORNABY CENTRE.
Plate D.
THORNABY CENTRE.

D1 Pedestrian areas.
D2 "
D3 Pedestrian bridge to residential area.
Plate E.

THORNABY CENTRE.
Plate E.

THORNABY CENTRE.

E1 Woolco Store.

E2 Woolco entrance showing ramp to car park under.

E3 Woolco deliveries.
Plate F.

MELBOURNE CENTRES.
Plate E

MELBOURNE CENTRES.

F1 Oakleigh shopping street.
F2 Chadstone shopping mall.
Plate G.

CHADSTONE CENTRE.
Plate G.

CHADSTONE CENTRE.

G1 Incidental spaces.
G2 "
Plate H.

CHADSTONE CENTRE.
Plate H.

**CHADSTONE CENTRE.**

H1 Traffic hazards exist in walking from car parking to shopping.

H2 "
Plate I.

BENTLEIGH CENTRE.
Plate I.

BENTLEIGH CENTRE.

I1 Shops are on either side of a major road.

I2 "

I3 Recently developed car parking.
Plate J.

SKARHOLMEN CENTRE.
Plate J.
SKARHOLMEN CENTRE.

J1 Motorists Approach.
J2 "
J3 "


Plate K.

SKARHOLMEN CENTRE.
Plate K.

SKARHOLMEN CENTRE.

K1 Pedestrian spaces, indicating the very large scale.
K2 "
K3 "
K4 "
Plate L.

SKARHOLMEN CENTRE.
Plate L.

SKARHOLMEN CENTRE.

L1 Car park top deck.
L2 Trolleys at car park entrance.
L3 Adjacent IKEA store.
Plate M.

CHESTER TOWN CENTRE.
Plate M.

CHESTER TOWN CENTRE.

M1 High Street redevelopment.
M2 Ring Road, car park entrance on left.
M3 Entrance to car park.
Pedestrian Entrance to Shopping Precinct.
Plate N.

CHESTER TOWN CENTRE.
Plate N.

CHESTER TOWN CENTRE.

N1 The Rows.
N2 Old arcading off the Rows.
N3 Pedestrian approach to the new arcading at street level.
N4 Upper level in the new arcading.
Plate O.

CHESTER TOWN CENTRE.
Plate 0.

CHESTER TOWN CENTRE.

01 Places to sit.
02 "
03 Clear direction indicators.
Plate P.

MARKET INTERIORS.
Plate P.

MARKET INTERIORS.

P1 Stockport Market.

P2 New Chester Market.
Plate Q.

STOCKPORT MARKET.
Plate Q.

STOCKPORT MARKET.

Q1 Surrounding streets become a pedestrian precinct.

Q2 "
CHAPTER 5

EMERGING SERVICE CENTRE NODES
IN METROPOLITAN AREAS
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The purpose of this chapter will be to again draw attention to the question of the metropolitan area as a whole, taking particular notice of the emergence of service centre nodes within metropolitan regions. Some comment will be made on the metropolitan settings which the shopping environments previously discussed occupy, and the fact that problems of metropolitan growth and sub centring are common in many contemporary and affluent metropolitan communities will be made clear.

Scandinavian proposals for providing the large service centres that are required in a very buoyant economical situation, with heavy demands for retail floor space, are examined and the fact that co-operation between the public and private sectors of the economy is occurring so effectively in these countries is contrasted with situations where private enterprise initiative is expected to meet consumer demands with only minimal government interference. Such a solution at present exists in Australia, which is again noted in this chapter for the case of metropolitan Melbourne, and, of course, in the United States.

The London region and the south east of England serves as an example of a multi-nuclei metropolitan region, and the current role of the new town centres around London is assessed. Central government policies aimed at correcting regional imbalance by the creation of new communities and consequently new service centres are discussed, and the regional role of any major planned service centre demonstrated.

Because of the significance of the English Town and Country Planning Act, 1968, the implications of this Act in metropolitan area structure planning
are discussed, taking as a particular case the current situation on Tees-side. The proceeding Royal Commission on Local Government in England and Wales may eventually recommend rationalising changes in the distribution of local authorities in this country. It would be reasonable if these local governments were based on economically viable units and regionally significant clusters of these units.

This chapter, therefore, as the final chapter in this dissertation, makes some attempt to cover in broad detail those aspects of the emergence of service centres in metropolitan areas which are relevant to the development of the writer's thesis. A final discussion of these points and other matters previously raised will be made in Section 6.0.0, following this chapter.
SECTION 5.2.0 SERVICE CENTRES IN COPENHAGEN AND STOCKHOLM

5.2.1 SOME NOTES ON METROPOLITAN COPENHAGEN

The Preliminary Outline Plan prepared for the three metropolitan counties of Copenhagen, Roskilde and Frederiksborg by the Copenhagen Regional Planning Office in 1947 become internationally known as the "Finger Plan" because it appeared somewhat like a hand in shape with development running outwards in a radial direction from the centre along the railway lines. By the early 1960's it was clear that development had taken place at a more rapid rate than had been at first anticipated, and the proposed structuring of metropolitan Copenhagen was reconsidered by a Committee under the chairmanship of Professor Peter Bredsdorff.¹

It had become apparent that the central business district of Copenhagen would need to be supplemented in the long term by new primary centres of larger scale than had been foreseen by the 1947 Plan, which had designated the central business district's subsidiary centres as "important secondary centres".

The revised policy is best shown in Figure 45 which shows a possible structural development of the Copenhagen metropolitan area from the 1947 proposal until late in the present century. The long term structure envisages the expansion of the existing subsidiary service centre of Lyngby, north west of the central business district, and the construction of a completely new service centre on a virgin site at Høje Tastrup in the south west. Figure 46 shows the primary trade areas of Copenhagen's service centres as they may appear in 1980 if this structure plan is implemented, as seems likely.

¹ Report of the Technical Committee appointed to examine the Preliminary Outline Plan for the Copenhagen Metropolitan Region. (1963)
FIG. 44 COPENHAGEN FINGER PLAN, 1947.

FIG. 45 COPENHAGEN'S POSSIBLE GROWTH

FIG. 46 PROPOSED COPENHAGEN CENTRE STRUCTURE AT 1980.
At present about one quarter of a million people use the Lyngby centre which is of about 300,000 square feet floor area. This service centre may be expanded to about 900,000 square feet by 1985.

Planning for the Høje Tastrup centre has already reached an advanced stage. This centre could have a floor area totalling 700,000 square feet by the mid 1970's and could eventually grow to as great an area as 3,000,000 square feet in the 1980's. The research carried out in Copenhagen by the Institut for Center Planlaegning has shown that such a demand for floor space is not unlikely given a continuation and development of current levels of consumer affluence in Denmark.

In western Copenhagen in 1965 there were about 87,000 housing units within the possible future catchment area of Høje Tastrup. By 1975 this could become 160,000 housing units or approaching half a million people. It should be pointed out that Figure 46 shows the primary trading areas of the various service centres in metropolitan Copenhagen, and that the larger centres of Lyngby and Høje Tastrup will in fact enjoy major support by durable goods shoppers from a wider catchment area than the figure shows.

The Copenhagen metropolitan area will therefore in future look to the central business district for specialised shopping but it is expected that the major subsidiary service centres of Lyngby and Høje Tastrup will cater for a large portion of the comparison shopping needs of the metropolitan region.

Sub-regional or district centres will be built similar to the Rødovre Centre, previously described. It is likely that many of the centres of this scale, will incorporate housing and community facilities in the same way that the Rødovre centre does. Here the district Town Hall, police station,
courthouse and main library are included in the centre, as are clinics, recreation facilities, offices, a post office and banks. Such comprehensive centres are obviously significant sub-centres in the metropolitan area, and when such centres are built from scratch, as the Rødovre centre was, the possibilities of total environmental design exist and seem to have been fully appreciated in the work so far evident.

Local or neighbourhood centres are also integrated with community facilities of a smaller scale. In the examples the writer visited, such as Hørne Gladsaxe, these small centres are the nucleus of housing developments and form the social as well as commercial core of these housing projects, which would otherwise lack a focal point.

A diagram explaining the normal relationships that exist between centres of varying degrees of importance in a metropolitan area is included here as Figure 47. It may be that in the future cities with a service centre structure planning policy such as Copenhagen is developing will find that a major subsidiary service centre of the metropolitan area virtually replaces the central business district as the prime centre for many people.

5.2.2 SERVICE CENTRES IN METROPOLITAN STOCKHOLM

Stockholm's programme of building satellite suburbs is generally well known and the centres of Vallingby and Farsta, in particular, are visited by planners from many parts of the world in the same way that the British New Towns have been the focus of planners interest. The fundamental difference between the Swedish and British suburban planning programmes for new settlements was that the British New Towns were to be self contained communities whilst the suburban satellites in Stockholm were to function primarily as dormitory suburbs, with many of the people living in these developments working in central Stockholm. This was facilitated by the fast and efficient
The centers of an urban region can normally be grouped in 3-4 different types. This classification cannot be used to express a constant size of retail area and composition of shops of each type, only to illustrate the function of the various center types and their interaction through time in the center-structure.

FIG. 47. THEORETICAL BASIS OF THE CENTRE STRUCTURE.
FIG. 48. STOCKHOLM TRANSPORT SYSTEMS AND COMMUNITY STRUCTURE.
Scale: 1"=3 Miles (approx.)
electric rail system which linked the satellites with the centre.

It is of interest here in this discussion of emerging service centre nodes in metropolitan areas to consider the most recent major service centre in the Stockholm metropolitan area, Skärholmen, which is now of a scale and of a regional importance as was most probably not envisaged by Swedish planners in the mid 1950's.

Skärholmen has been built in response to the now clearer patterns of spending and personal mobility which are the present behavioural modes of consumers in affluent societies. The outline physical details of this centre are given in a tabulated form accompanying the illustrations which preceded this chapter. From the point of view of metropolitan Stockholm the Skärholmen centre is the major comparison shopping centre for durable goods in the south western region of the metropolis, with a catchment population of about 300,000 people in nearby suburbs. In its initial stage this centre is about as large as Vallingby and Farsta together, and room exists for future expansion.

As Skärholmen lies only twelve kilometres from the centre of Stockholm and as the Stockholm central business district has undergone such extensive and effective redevelopment in recent years the demand for such a new centre is not at once obvious. The previously built satellite communities of Stockholm followed a pattern of a similar scale of shopping provision as had been used in the British New Towns. "Self sufficient" district centres to serve groups of 10,000 people or so were planned to be supported at the lowest level of the shopping hierarchy by small groups of shops serving neighbourhoods. Speciality shopping was to be carried out in the central business district.
By about 1960, however, the population of greater Stockholm increased\(^1\) and became more affluent and mobile with rising car ownership, the policy of service centre provision was revised. As many people tended to by-pass the very small groups of local shops previously noted as part of the hierarchical system they have now been dropped for similar reasons as in the British New Towns. The shopping hierarchy in metropolitan Stockholm was until recently envisaged as follows:

**TABLE 40\(^2\)**

**METROPOLITAN STOCKHOLM SERVICE CENTRE HIERARCHY**

<table>
<thead>
<tr>
<th>Centre Type</th>
<th>Approx. Minimum Population required</th>
<th>Approx. Selling Area (square feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional Centre</td>
<td>150,000 - 400,000</td>
<td>From 323,000</td>
</tr>
<tr>
<td>Area Centre</td>
<td>50,000 - 120,000 (10 minute drive)</td>
<td>129,000 - 323,000</td>
</tr>
<tr>
<td>District Centre</td>
<td>8,000 - 15,000</td>
<td>27,000 - 54,000</td>
</tr>
<tr>
<td>Neighbourhood Centre</td>
<td>4,000 - 7,000</td>
<td>at least 16,000</td>
</tr>
</tbody>
</table>

It now seems likely that regional centres which it was anticipated would serve populations from catchments of as few as 150,000 people will be upgraded still further. It has been mentioned that Skärholmen (800,000 square feet retail floor area) may be extended in the future, and it should be noted that both Vällingby and Farsta have added to their shopping floor space in recent years. Farsta currently has a retail floor area of about 310,000 square feet and Vällingby of about 225,000 square feet.

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1 The population of Greater Stockholm increased from 988,000 in 1950 to 1,200,000 in 1965.

2 Derived from data given in the Multiple Shops Federation, Shopping Centres in North-West Europe, 1967.
Consequently, in Stockholm, the development of the retail spiral is clearly discernable, largely because the economic development has been so rapid, but also partly due to the fact that developed retailing techniques are taken from North America after they have been perfected, and are launched into the Scandinavian situation in a form that does not require further refinement. Because of this we can see large self service supermarkets, discount stores for convenience and durable items and all forms of self service operating to serve those customers with a newly increased amount of wealth to spare for consumer durables, and the development of more specialised stores for those who have for the present satisfied their immediate need for basic consumer items.

In watching this Scandinavian situation the big scale of the whole retailing operation must be remarked upon. Very large service centres have emerged or are emerging in the metropolitan areas discussed, and may be some indication of the trend which may occur in the metropolitan areas of Great Britain and in Australia and other countries of increasing consumer affluence.
SECTION 5.3.0 SERVICE CENTRES IN LONDON AND S.E. ENGLAND

5.3.1 STRUCTURE PLAN POLICY IN LONDON AND THE SOUTH EAST

Some discussion has been made in Chapter One of the rapid population growth which has recently occurred in south east England and particularly around London. This section will briefly examine the pattern and process of service centre development in Greater London and will make some reference to the emergence of other new central places of some significance in the south east.

The classification made in 1961 of the major service centres in England and Wales by the Ministry of Housing and Local Government has been illustrated in Figure 1, which also shows the major service centres from within the Greater London areas as they had been ranked in a comparable fashion by W.I. Carruthers.¹

In October 1966 the Preliminary Report of the Greater London Development Plan was published by the Greater London Council.² This report noted that the G.L.C. assumed that the structure of London would be clarified by the insertion of a primary network of roads at or near motorway standard, and proposals for this road system were eventually made public late in 1968. In this way and with a high capacity secondary road system to supplement the major road proposals, it was hoped to structure the London metropolitan area into a series of sectors which would be given further meaning by the acceleration of development at the "sector centres", certain of the major service centres of the London metropolitan area.

¹W.I. Carruthers, loc. cit.

²Reported by The Architects Journal, 28th December 1966, pp.1585-1587.
The 1966 Preliminary Report nominated Ealing, Wood Green, Bromley, Ilford, Croydon and Kingston as the major service centres to be further developed. Very recently the Greater London Council's Development Plan has been made public\(^1\), and it is to be noted that Lewisham replaces Bromley in south east London as one of the six main development centres. A new style of shopping centre at Brent Cross, near the present North Circular Road at Hendon is recognised by the plan as an important new element.\(^2\)

Some idea of the structure now proposed for Greater London is given by Figure 49, which is derived from the Preliminary Report of the Greater London Development Plan of 1966. How this metropolitan structure may become a part of the total framework for the south east of England is indicated in Figure 50, a diagram which was prepared after the publication of the South East Economic Planning Council's document, *A Strategy for the South East*, in late 1967. At present the whole question of structure planning policy in the south east is under further review and a new, possibly definitive, report is expected late in 1969.\(^3\)

The proposals of the South East Economic Planning Council developed further the recommendations of the *South East Study, 1961–81*\(^4\) which involved the development of city regions seventy miles or more from London to help reduce the centripetal forces in the metropolitan region. Priorities for development were suggested at Portsmouth–Southampton, Milton Keynes and the Ipswich–Colchester area, in that order. It was suggested that new developments outwards from London should be channelled into corridors along the main radial routes.

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\(^1\) *The Times*, 21st March, 1969

\(^2\) Previously discussed in Chapter 4

\(^3\) This current investigation is being undertaken by the Ministry of Housing and Local Government in conjunction with the Standing Conference on London and South-Eastern Regional Planning.

\(^4\) Ministry of Housing and Local Government, *op. cit.*
FIG. 49. LONDON METROPOLITAN STRUCTURE, 1966 PROPOSAL.
FIG. 50. GREATER LONDON AND THE SOUTH EAST.
Strategic plans for metropolitan London are not new. While the proposals of the Modern Architectural Research Society Group of the late nineteen thirties were bold, but probably impossible to achieve, they do indicate that planners have appreciated the scale of London's structure problems for some time, and has sought to focus attention on these problems. In the present situation, with the south east of England growing very rapidly it is essential that a firm and feasible policy is adopted and maintained.

It would be unfortunate if the planning strategy for the London metropolitan region relied too heavily in the end on a structure which depends primarily on a road system. Transport systems have a high incidence of obsolescence, or at least must be subject to modifications, a point which will be raised again later in this chapter.

In this regard the writer believes that investment in the physical environment at London's major service centre nodal points should be at least as carefully considered and as skilfully implemented as the road building programme. London's major service centres have taken many years to emerge and develop, and should enjoy a vigorous future if provision exists for socially and physically feasible interaction with their hinterlands and with each other.
5.3.2 LONDON AS A MULTI-NUCLEI CITY

D. L. Foley has noted that:

"Centring (including sub-centring) is an inevitable way of placing sets of activities in proximate locations so that convenience of accessibility between these activities is maximised."

The traditionally important subsidiary service centres of London have emerged over a long time period and to a great extent have given the London metropolitan area a structural form which has enabled a large population to be attained without undue congestion until recent times. This naturally evolving sub-centring process normally occurs in one of two ways.

Multi-nuclei cities may be formed by a process of conurbanisation, where a coalescence of several independent nuclei occurs over time, for instance, as on Tees-side. In the case of London the multi-nuclei city has formed by the process of metropolisation, when one centre has grown outwards absorbing smaller centres. The resulting pattern of centres in metropolitan London made that city for many years a viable urban organism, the first main service centres emerging as an inner ring within the area built up before the 1914-1918 war. In the inter-war years of the 1920's and 1930's the built up area of metropolitan London extended still further, engulfing an outer ring of centres. These inner and outer rings of service centres in Greater London are shown in Figure 51.

It is apparent that the network of service centres existing in this type of situation is influenced by the pre-existing settlement pattern, the lines of

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FIG. 51. INNER AND OUTER SERVICE CENTRE RINGS OF LONDON.
communication into the centre, and the time at which the centre developed. Through simple historical inertia there is a tendency for shopping centres to crystallise in old village centres, even after the village form itself has been completely submerged by the spread of the urban complex. In London, some of the largest sub-centres are sited at important points in the communication system. For example, Brixton, Camden Town and Holloway are at transport nodes, and Kingston is sited at one of the old crossing points of the Thames.

It has been shown in the examination of metropolitan Melbourne how suburban railway stations in more recent times have stimulated growth of service centres. An example of such a centre in metropolitan London might be Golders Green. The type of transport in use at the time of the early development of a subcentre will have an important effect on the distance between adjoining centres. Consequently, in the nineteenth century, when most shopping was done on foot, a closer centre structure developed.

The outer areas of the region which have urbanised following the introduction of bus services and the increasing use of the private motor car show a much greater dispersion. As might be expected, this difference between the pattern of service centre location in the inner and outer areas of metropolitan London is reinforced by the densities of building, the class of resident and the type of shop property.

Considering this historically evolved pattern of service centres in metropolitan London, Sir Patrick Abercrombie and many others considered that planning proposals which sought to maintain this localised community character would be most likely to provide a better style of life for the metropolitan area's inhabitants. As recently as 1960 a commentator wrote in this fashion:
"Uniformity has reduced the metropolis to what can only be described as a vast housing estate, within which certain historic elements struggle to maintain their communal independence. The community concept as defined in the Greater London Plan has not been developed..."\textsuperscript{1}

Remarks such as these overlook the development of new metropolitan life styles and interactions, as will be discussed in the next part of this section.

### 5.3.3 THE REGIONAL SIGNIFICANCE OF NEW TOWN CENTRES

The Standing Conference on London and the South East first met in December 1962 and has been considering the principal issues affecting the area and advising on common policies to deal with them. In 1967 the Standing Conference noted that:

"Probably few would dispute that the concept of self contained towns and communities within each of which the population lives, works, shops, goes to school, etc. has moved steadily away from reality. The household may today live in one town, its workers may have jobs in other places, the older children follow educational studies in yet other towns, the mother shops and the family follows social, cultural and recreational pursuits in a variety of centres near and far. We believe these changes are to be welcomed as offering wider horizons and extending economic and social freedom."\textsuperscript{2}

The concept of an ideal self sufficient community, however, has been hard to dislodge from the planners rule book. Audrey A. Ogilvy has recently noted\textsuperscript{3} that the words "self contained" still appears in some of the reports by the corporations which have begun on the planning of the latest round of new towns. In the study reported in this paper it was shown how the planned self

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\textsuperscript{1} M. P. Collins (1960) \textit{op. cit.}

\textsuperscript{2} Reported in the \textit{Architects' Journal}, 1st February, 1967

sufficiency of the new towns to the north of London in terms of employment does not, in fact, occur. Large numbers of new town residents travel to work in other areas and new town jobs may be filled by people who live elsewhere.

It was shown that cross-movements in and out of new towns are, in most cases, fewer than those in older districts, but still considerably higher than would be necessary to balance the numbers of jobs and working population. Whilst all the new towns considered were relatively close to London it was shown that it was not the influence of London that was decisive in the movement patterns noted, but rather that of the immediate regional environment of the towns. Analysis suggested that the daily interchange of population between the new towns and surrounding districts is likely to increase in future. As a result of her study the author concluded that, in future, concepts of city regional planning should be developed relating the size, location and type of towns. In this way urban facilities may be distributed throughout the region and a certain amount of flexibility be allowed for in the future development of population and in employment growth.

Peter Hall also insists that we should revise our restrictive notion regarding the self containment of new towns. He points out that the town centres of Harlow and Stevenage lose some of the advantage they could gain from their regional location because of the limiting terms of reference within which they were conceived.

Evidence is available, however, that the Stevenage town centre does cater for a considerable number of shoppers drawn from outside the new

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In revising the estimates of future requirements for shopping floor space within Stevenage Town Centre the Development Corporation have taken the centres' emerging regional significance into account. Because of this factor and other pressures for increased shopping floor space from within the town itself it may in future be necessary to almost double the shops in the town centre.

The shopping draw to Stevenage from the sub-region is shown in Figure 52, and some information regarding the shopping behaviour of shoppers from outside Stevenage may be noted from the Development Corporation's shopping survey of 12th December 1964, which is presented here as Table 41.

<table>
<thead>
<tr>
<th>No. of Shoppers from outside Stevenage</th>
<th>Percentage</th>
<th>Frequency of Visits</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,296</td>
<td>41.6</td>
<td>Weekly or more often</td>
<td>42</td>
</tr>
<tr>
<td>1,950</td>
<td>35.3</td>
<td>Monthly</td>
<td>28</td>
</tr>
<tr>
<td>1,276</td>
<td>23.1</td>
<td>Less frequently</td>
<td>30</td>
</tr>
<tr>
<td>5,522</td>
<td>100.0</td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

1 Leonard G. Vincent, Stevenage Master Plan 1966, (Stevenage Development Corporation, 1967)

2 Ibid., p.88
FIG. 52. THE SHOPPING DRAW OF STEVENAGE IN THE SUB-REGION.
Source: Leonard G. Vincent, Stevenage Master Plan 1966,
(Stevenage Development Corporation, 1967) p. 82.
The high percentage making visits to Stevenage weekly or more often could indicate that a high proportion of the outside shoppers do a large part of their convenience goods shopping in Stevenage Town Centre.

The surveys also showed that some six percent of Stevenage residents shopped outside the town weekly or more often, and nineteen percent shopped outside once a month or more often. With greater car ownership, therefore, there is likely to be even more intra-regional movement by shoppers using their mobility to enjoy the greater freedom of choice in attractive shopping locations now available to them.

Thus the town centres of certain of the new towns near London are emerging as regional service centres of increasing importance.
SECTION 5.4.0 NEW TOWN SERVICE CENTRES IN THE METROPOLITAN CONTEXT

5.4.1 SOME IMPLICATIONS OF THE 1968 TOWN AND COUNTRY PLANNING ACT

From the first of January, 1969, the new Town and Country Planning Act became law in England. This reformulation of British planning legislation has five main effects.

1. It introduces a new type of development plan
2. It provides new opportunities for public participation in making local plans
3. It speeds up appeal procedures
4. It institutes new planning inquiry commissions for matters of national and regional importance
5. It tightens the law protecting historic buildings.

The proposals for the new development plans are significant outcome of the recommendations of the Planning Advisory Group,¹ which called for a basic change in the structure of the planning system distinguishing between the policy or strategic decisions on the one hand and the detailed or technical decisions on the other. Under the provisions of the Act the new development plans will operate in two stages. First will come the Structure Plan, as a statement of broad policy aims. Structure Plans by local planning authorities will have to be based on wider-ranging surveys than were called for under the previous legislation. Apart from surveys of the physical and economic characteristics of the area under consideration, and its main land uses, population, communications and traffic characteristics, these studies will need to embrace an appreciation of regional economic tendencies and policies

Simply, the new Act may be described as being "research orientated".1 The Action Areas, which will receive attention in the second, or Local Plan stage required under the Act, will be programmed for short term action once the Minister has been satisfied that publicity and consultation has been adequate.

For the purposes of the discussion in this dissertation, which in this section will focus on aspects of service centre development in regions outside of the south east of England, the new Town and Country Planning Act may be considered of great importance in that it clearly accommodates a comprehensive view of the planning process. This viewpoint will be an essential basis for any consideration of the part service centres play in a total regional setting.

5.4.2 NEW TOWNS IN METROPOLITAN REGIONAL SETTINGS

The first chapter of this dissertation set out the writer's view of an acceptable scale of metropolitan area. From this definition it will follow that the new towns around London must share in the life of that metropolitan area, and similarly the new towns in the north west and north east of England will share in the metropolitan life of the cities whose conurbations they are peripheral to.

It has been noted how Stevenage and other of the new towns near London cannot now be said to be "self sufficient" in the sense in which they were conceived. It may be expected to an increasingly greater degree that new towns and the central areas or principal service centres of these new towns should play a more prominent regional role in the future. With a more affluent style of life being enjoyed by a greater proportion of the community, the

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1 Wilfred Burns, in a lecture, University of Edinburgh, January 17th, 1969
opportunities for a higher standard of general education and the increased mobility in both working and leisure patterns that this brings in its train will place a high premium on the ability of the individual to interact effectively with his metropolitan environment. Consequently, metropolitan opportunities should be optimized through the communications systems and in the distribution of the various metropolitan foci.

From the foregoing it will be seen that the siting of a new service centre and its primary supporting community is not merely a matter of selecting the best site for that community, but a problem of selecting the most effective location for that community and its service centre within the framework of the region and to the enhancement of the region.

5.4.3 REGIONAL POLICIES AND NEW TOWN DESIGNATION

The British new towns of the nineteen sixties might reasonably be expected to have been considered more specifically within their regional content than the earlier new towns, bearing in mind that the wider implications of regional planning were more generally recognised in this later period. The record here is at this stage relatively unclear, as many of the projects now in the planning stage will no doubt be subject to modification before they are realised. It is possible to make some comment, however, which will highlight the general need for a more regionally orientated system of local government rather than point to any deficiencies which may exist in particular new town proposals.

By the late 1950's it was appreciated that the problem of population and employment growth in south eastern England was becoming more serious, and at the same time the increasing amount of regional imbalance was also noticeable. In 1964 the Labour Government established the Department of
Economic Affairs which was to be responsible for national and regional planning.

This programme got away to a promising start with the country being divided into ten regions, each with its Economic Planning Board and Economic Planning Council. Several regional studies were prepared in rather too short a time, for the North West under the Ministry of Housing and Local Government and for the West Midlands under the Department of Economic Affairs. Whilst of some value in providing a useful basis for the discussion of the problems involved in the regions, these reports have been criticised for their lack of a series of comprehensive studies of the sub-regions concerned.¹

It would seem that this hurried programme lost much of its advantage by omitting the sub-regional study stage, and the next step of appointing consultants to study and report on the feasibility of new towns and new town expansion schemes was entered into before valid sub-regional goals were formulated.

It is unlikely that in the long run serious mistakes will be made as a result of this flurry of governmental activity, as before the more recent of new town proposals are realised on the ground a fair amount of modification in the light of the regional situation is bound to take place. There is some evidence from published reports, however, that certain of the facilities proposed for the recent new towns have been designed with the regional setting of the town and contemporary patterns of consumer behaviour not clear to the consultants.

G.A. Nader, \(^1\) for instance, has argued convincingly that the proposed shopping provisions in Washington town centre largely ignored the probable future role that the new town centre will logically play in its region. This would normally be expected to be as a minor service centre, considering the existing network of service centres in the region. Having due regard to the consultants' comments\(^2\) on this criticism it at least shows how easily the regional situation may be too lightly treated if a new community is being planned from within rather than as part of an integrated regional concept.

In the north west of England, it is believed that Runcorn new town centre will in fact act as a major service centre for a population drawn from beyond the new town boundary, serving to meet some part of the region's lack of modern shopping facilities.\(^3\) The situation of Runcorn and Skelmersdale new town is shown in Figure 53, which indicates the obvious regional complexity of these new town sites.

Considering the situation in the north west of England the Regional Study of this area by the Department of Economic Affairs remarked concerning town centre renewal schemes that:

"It would be wrong to try to eliminate competition between shopping centres or to control developments according to a rigid plan which purported to dictate the future hierarchy of centres within the region. Some competition is desirable between centres to stimulate efficiency and some flexibility

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\(^2\)John Stephenson, Ibid., p. 392.

\(^3\)Discussion with Keith Smith, Runcorn Town Centre principal architect/planner, September 19th 1968, and subsequent correspondence.
is necessary in planning to meet changing patterns of demand. Every renewal scheme should, however, be concerned against the background of a knowledge of broad trends and prospects within the region, and the possible effects of future changes in the volume and distribution of purchasing power". ¹

The need for flexibility in the planning of new communities within such regions is paramount, but only the first step in the process of realisation which ideally should be kept as flexible as possible at all stages. Consequently major studies such as that for a new city in central Lancashire ² or the proposals for South Hampshire ³ are clearly stated by the Consultants concerned to be structuring proposals rather than final working documents. This trend towards the preparation of frameworks in which to plan is to be commended, and is given positive encouragement by the new planning legislation.

¹Department of Economic Affairs, The North West, Regional Study, (H.M.S.O., 1965)


FIG. 53. THE REGIONAL SETTING OF RUNCORN AND SKELMERSDALE NEW TOWNS.

5.5.0 CITY REGIONS AND LOCAL GOVERNMENT

5.5.1 TOWARDS CITY REGIONS IN GREAT BRITAIN

In mid 1968 the Minister for Housing and Local Government approached local government authorities in seven major areas and asked them if they would be willing to prepare development plans for all or part of their area under the terms of the 1968 Town and Country Planning Act. Under the terms of this Act the Minister is empowered to ask for concurrent strategic planning submissions from adjoining authorities for an area that can be planned as a unit. This provision of the Act must be considered as a major step forward in the field of regional planning in this country.

It may be that the first essay in structure planning under the new Act will be undertaken by Tees-side County Borough who are now on the point of publishing the Tees-side Survey and Plan. The amalgamation of the six Tees-side towns of Middlesborough, Stockton-on-Tees, Thornaby, Redcar, Billingham and Eston in April 1968, to form a single new authority, has been the biggest English local government reshuffle since the five towns of the Potteries were amalgamated early this century.

Such city regions may be the most viable local government units of the future in Great Britain, and the process and achievement of planning on Tees-side will be watched with interest. A preliminary structure diagram of the region is included here as Figure 54 for the purpose of showing the scale and form of this poly nucleated metropolitan area. Two of the new major nodal points in this region, Billingham and Thornaby town centres, have been previously discussed.

Now that the Tees-side region exists as the responsibility of one planning agency the Tees-side Survey and Plan has been able to make recommendations towards achieving some regionally viable pattern of shopping
FIG. 54. TEES-SIDE COUNTY BOROUGH.
Note: Dark areas are urban areas. Service centres shown as dark circle on white square.
Scale: 1"=2\(\frac{1}{4}\) Miles. (Approx.)
provision. The past inter-town rivalry and the ambition of developers had resulted in certain commitments for future provision of shopping floor space having been inherited by the new county borough, and these have been incorporated into the new recommendations as skilfully as possible.

The resulting policy of service centre provision on Tees-side maintains that Middlesbrough should be developed as the dominant regional centre, with its floor space being expanded from 1.2 million square feet in 1965 to 2.6 million square feet in 1991. Only a limited amount of expansion would be permitted at Stockton, where the current 0.8 million square feet would be allowed to grow to 1.1 million square feet in 1991. In this way Stockton would continue to serve the western part of the region, but the development of Middlesbrough would ensure that a centre of sufficient magnitude existed in the area to allow the development of some specialisations to occur in one place to serve the region as a whole.

It was found that in the region a total of fifty one nucleated shopping centres could be identified, and at the time of the survey, 1965, three levels of service centres could be recognised.

1. The two major centres at Middlesbrough and Stockton
2. A series of district centres including Redcar, Billingham Town Centre, South Bank, North Ormesby, Mandale Rd, Thornaby, Guisborough
3. Local shopping, including small centres, groups of shops and corner shops.

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With regard to the two major centres it was found that their hinterlands were mutually exclusive but covered the whole of Tees-side. The failure of one centre to become dominant was attributed partly to the historic patterns of development and partly to the inter-related factors of the distance from the residential areas to a shopping centre and its attraction as a centre. It was found that the time that people on Tees-side spent on shopping journeys is comparatively short. Even to the two main centres the average journey time lasted less than twenty minutes. Consequently, no centre lies within easy reach of the whole of Tees-side neither centre has dominated the region. It is thought that with better road systems, increased personal mobility, and the encouragement of more shopping provision at Middlesborough this centre will become more attractive and at the same time more readily accessible to people within the region.

The scale of the district centres of Billingham and Thornaby, which with Redcar form the second tier in the shopping centre hierarchy, has been previously described. Both Billingham and Thornaby new town centres were in existence and with planning approval for major extensions of floor area before the Tees-side Survey and Plan was begun. It seems, however, that these service centres have been successfully integrated into the new proposals for the region, and as their catchment areas are relatively small in scale, this integration would not have been very difficult to achieve. Thus the emergence of these smaller service centres within the regional framework is occurring naturally enough as they capture a high percentage of durable goods shopping because of the amenities and parking facilities they offer.

The use of the Lakshamanan-Hansen retail potential model for testing possible future situations in a regional study such as that carried out for
Tees-side introduces possibilities for error in several ways, the most obvious being that the mathematical equation normally employed uses a straight line measure of distance between residence and shopping destination. In the Tees-side case, of course, the few river crossing points and the existing road pattern result in many journeys being over a somewhat tortuous path. Perhaps even more critical is that models of this type can only project existing situations. When projections are for more than a very few years ahead factors impossible to predict will have entered into the calculations.

The Tayside study, currently in progress, has avoided the use of mathematical predictive techniques for reasons such as those noted, and will rely more on a reasoned interpretation of the service centre requirements of the distributed population based on that populations' economic aspirations and possible travel patterns. For long term prognosis it seems that a reasoned approach of this nature cannot be bettered by mathematical predictive techniques at this time. In either case, there is ample room for error.

5.5.2 SERVICE CENTRES IN CITY REGIONS

The development of a structure plan for the city region on Tees-side will be watched with interest. The application of structure planning as the first means of rationalising some of Britain's more complex metropolitan regions is obvious, and the part the planned development of service centres may play in giving form to city regions is becoming clearer.

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1 Ibid., see particularly Chapter 14 Shopping


3 Discussions with Hugh Begg, Tayside Study, Dundee, 12th March 1969.
At the lower levels of the service centre hierarchy there is now some evidence to suggest that the catchment required to support a district shopping centre has been used on occasion as a planning device for fixing a residential sectors' size.¹ There may be grave dangers in this approach for the smaller scale units, however, as retailing techniques and consumer behavioural patterns are subject to such fluctuating patterns, whereas theories of what constitutes proper primary education provision, for instance, are more stable as a basis for deciding on the provision of schools and hence community size. It is at least at the district centre level, that the benefits of a more rational city region policy will become clear.

The continuing Royal Commission on Local Government in England, under the chairmanship of Lord Redcliffe-Maud, recently published the written evidence of Commercial, Industrial and Political Organisations which had been presented to it, and the submission by Shankland, Cox and Associates is worth noting here.²

They gave three reasons why it seems likely that the most appropriate areas for physical planning and development will also be the best areas for most local government operations.

These reasons were:

"1. The implementation of plans depends upon the provision of the infrastructure of roads, sewers, schools, street lighting, public transport refuse disposal, libraries,

¹Michael Young (ed.) 1968, op.cit., p.89

clinics and other services involving the whole range of local government functions. Plans must be made in the closest consultation with the committees and officers responsible for the operation of each service; this will be best achieved if planning and all other functions are the responsibility of the same authority.

2. By deciding the pattern of communications and service centres, planning also decides to a large extent the most suitable catchment areas for most local services.

3. Authorities with areas and functions appropriate for planning and development are also likely to arouse the greatest public interest in local government."¹

In the long run it is almost certain that local government units in this country will become larger. One tentatively suggested arrangements of provinces is shown in Figure 55, but between thirty or forty five councils based on city and regions were suggested by Shankland, Cox and Associates. It was further suggested that there might be twelve to fifteen lower tier authorities to each city region, giving a total of between 400 and 600, considerably fewer than the present number of municipal boroughs and urban and rural district councils.

Both tiers in this proposal would, in fact, be based on service centre catchments - the concept of the lower tier authorities being derived from a suggestion in the Liverpool Interim Planning Policy Statement in which district shopping centres (of fourth order status) each serving about 50,000 people, were considered feasible as the smallest local government administrative units.

¹Ibid., p.179
### Table: Where the Provinces May Be

<table>
<thead>
<tr>
<th>Area</th>
<th>Population (thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Lakes and West Pennines</td>
<td>579</td>
</tr>
<tr>
<td>The North East and E. Pennines</td>
<td>3018</td>
</tr>
<tr>
<td>Liverpool/Manchester Conurbation, West Pennines and Cotton Area</td>
<td>6278</td>
</tr>
<tr>
<td>Industrial Pennines—Weal, steel and coal</td>
<td>3686</td>
</tr>
<tr>
<td>Humber Complex</td>
<td>1829</td>
</tr>
<tr>
<td>Midlands Conurbation &amp; Environ</td>
<td>6370</td>
</tr>
<tr>
<td>East Anglia and Outer Fringe of Greater London influence</td>
<td>2625</td>
</tr>
<tr>
<td>Severn Complex and Outer Fringe of Greater London influence</td>
<td>1974</td>
</tr>
<tr>
<td>South East Conurbation®</td>
<td>6041</td>
</tr>
<tr>
<td>Portsmouth/Southampton Conurbation and Outer Fringe of Greater London</td>
<td>1963</td>
</tr>
<tr>
<td>South West</td>
<td>1187</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>35,470</strong></td>
</tr>
</tbody>
</table>

*Excludes Greater London*

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**FIG. 55. A SUGGESTED ARRANGEMENT OF ADMINISTRATIVE PROVINCES IN ENGLAND.**

SECTION 5.6.0 METROPOLITAN SUBCENTRING AS AN INTERNATIONAL PHENOMENA

5.6.1 MACRO-METROPOLITAN STRUCTURING

The process of subcentring within urban areas is by no means a new phenomena, but must become of increasing importance as metropolitan regions achieve greater size. In affluent societies it appears that the process of subcentring within cities is achieved in a similar way to that which has been described in this chapter in the case of London, and earlier for Melbourne.

No matter what the future may bring in the way of new intrametropolitan transport systems, the importance of the subcentre for the average person as compared to the central business district is likely to increase. This development will be simply relatable to the scale of modern metropolitan areas. There is little reason to doubt that city regions will rise from ten to thirty million inhabitants on to sixty or eighty million, and in such regions poly nucleation with the growth of major service centres must occur. Even within the smaller metropolitan areas we know today many inhabitants only rarely visit the main central place, so for many people the local district centre is the only place where they may regularly participate in some form of urban environment.

Within metropolitan systems of the size we are now beginning to understand personal communication between the major nodal points may be adequately achieved by land based transit systems or private vehicle. The traditional metropolitan model, for instance, as shown in Figure 56, assumes the continuing dominance of the traditional central city, and

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A MODEL METROPOLITAN AREA SHOWING THE RELATIONSHIP BETWEEN THE CENTRAL CITY, SUBURBAN ZONE, AND RURAL-URBAN FRINGE

FIG. 56. A MODEL METROPOLITAN AREA.
consequently communications networks are centralised. In the macro-metropolis, however, it is likely that nodes of specialisation will emerge and cross regional communications between these service centres will become increasingly important. Such regional patterns have been discussed at length by Lloyd Hodwin and others, and various structural forms for such regions proposed. In all discussions, however, the need to provide the opportunity for face to face meeting at nodal points in the system is reiterated.

In recent years air transport between major metropolitan centres has received some serious attention, and it may be feasible for helicopters and vertical take off and landing aircraft as well as more sophisticated line travel vehicles, such as hover trains, to contribute to the metropolitan transport system. In any case the problem of intra-metropolitan communication is very grave, and must leave many options open for its ultimate solution in any region.

It is as well to first consider the best location of service centres, however, and in this process an understanding of the factors which cause major nodal points to emerge when and where they do in the metropolitan complex is the first essential. When this is understood the optimum locations for new major centres may be chosen, growth at these centres stimulated, and a viable metropolitan form achieved.

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2 The Times, 27th March 1969, quoting M. Gabrial Bouadon, Head of Engineering at the Batelle Institute, Geneva.

5.6.2 SERVICE CENTRE PLANNING AS A POLITICAL PRIORITY

It has been recently pointed out¹ that we in fact know very little about the growth of city regions and that much of our thinking on the subject grows out of information from the top twenty of the world cities. In fact research still relies heavily on the methods initiated by Burgess in Chicago. Peter Haggett has remarked:

"Perhaps urban spatial structures are too relevant to leave to academics, two complex to leave to local planners, and too profitable to leave to consultants." ²

Governmental priorities may often unfortunately prevent decisive action on urban problems until private enterprise has taken the initiative because of the profit motive, and the effect in this case has been shown in Chapter Three for metropolitan Melbourne. Constructive co-operation between both the private and public sector must be achieved where matters of such metropolitan importance are concerned, and the examples cited from Scandinavia in the early sections of this chapter indicate what may be achieved if this occurs.

Figure 57 shows how the existing pattern of service centres in the Melbourne metropolitan area will be further developed by the opening of more regional shopping centres of the Chadstone type. These, with an enlargement of certain of the existing outlying service centres, will play an important role in Melbourne’s metropolitan structure in the foreseeable future, as more shoppers patronise these centres in preference to the

²Ibid., p. 19.
403.

HYPOTHESESSED FUTURE AREAS OF INFLUENCE OF EXISTING AND PROPOSED REGIONAL SHOPPING CENTRES

LEGEND
- EXISTING FIRST ORDER CENTRES
- PROPOSED FIRST ORDER CENTRES
- PROPOSED SECOND ORDER CENTRES
- PROPOSED THIRD ORDER CENTRES
- PROPOSED FOURTH ORDER CENTRES

FIG. 57. MAJOR SERVICE CENTRES IN METROPOLITAN MELBOURNE.
central city for consumer durable goods. In the figure the older inner service centres which dominated in previous years are shown clustered near the central business district, and the wider distribution of the recent major nodes is clearly shown. It may be that if continued outward growth is permitted further rings of service centres will appear. The historical parallel with London may be noted, and in fact, this process would seem to be of a generally universal nature.

The following quotation from the English translation of an article on metropolitan Tokyo is of interest:

"In the explanation of the changing structure of the civic centre, enormous development of the sub-centres, and the differentiation of the qualitative functions in the civic centre and the sub-centres, we can find the key to the solution of the present day urban problems and regional problems." 1

Investigations into the service centre structure and then the implementation of service centre planning policies within metropolitan areas is unquestionably one of the prime planning tasks of the present.

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1 Keijiro Hattori, "Concerning the Civic Centre and the Sub-Centres of the Metropolis", The Human Geography, (Kyoto) Vol. 18 (Feb. 1969) p. 47.
SECTION 5.7.0 SUMMARY AND CONCLUSIONS: CHAPTER 5

The aim of this chapter has been to note and comment upon the role of the major central places within metropolitan areas. As these metropolitan regions have grown in scale, service centres have developed in some hierarchical order; but, as earlier chapters have shown, the intra-metropolitan central place is not subject to a simple series of rules governing its spatial role. Through an examination of various aspects of service centres in a metropolitan regional context it has been possible to draw attention to the significance of these service centres in the planning process, and hence to highlight their role in the developing structure of metropolitan areas.

Section 5.2.0 Service Centres in Copenhagen and Stockholm, described the current approach to service centre planning in these two affluent Scandinavian communities and noted how in each case central government planning policies are meeting consumer demands for greater amounts of shopping floor space in the creation of very large, strategically located, sub-centres within the metropolis. In such affluent societies the various manifestations in retailing techniques of the "retail spiral movement" may be readily observed.

Section 5.3.0 Service Centres in London and South East England made a quick appraisal of the present position regarding service centres in the London region. It was shown that the new towns around London cannot now be described as self-sufficient in the sense in which they were designed. In fact the regional significance of any new town centre must be very carefully considered.

Section 5.4.0 New Town service centres in the metropolitan context pursued the above line of investigation for proposed new towns and expanded communities in other British regions. Government policies have made some impact in this regard but an much more sophisticated approach to the integrated
regional planning of all metropolitan areas in this country must be achieved if the full benefits of the investment proposed are to be realised.

Section 5.5.0 City Regions and Local Governments, looked at the question of service centres in city regions from the point of view of achieving some viable regional government. There may be very good arguments in favour of the service centre structure in a region being taken as indicative of possible new local government areas. If such a lead is taken from the service centre hierarchy developing patterns of association may be influenced and at the same time certain major nodal points may be given added attraction. In this way the emerging service centre structure of a region may be anticipated, modified or reinforced.

Section 5.6.0 Metropolitan subcentring as an international phenomena, serves to set the discussion of emerging service centre nodes in metropolitan areas within a wider framework than a survey of only the British situation permits. There is every indication that metropolitan areas will continue to grow, in extent, with the development of more service centres and with greater distances to be travelled. It is possible that new forms of intra-metropolitan transport will develop. Keeping this in mind it is wise, therefore, to consider the centre structure rather than other factors such as transportation linkages as the prime determinant of metropolitan patterns.
SECTION 6.0.0

A NOTE IN CONCLUSION:
CONCERNING THE FUTURE OF SERVICE CENTRES
IN METROPOLITAN AREAS
SECTION 6.0.0 A NOTE IN CONCLUSION: CONCERNING THE FUTURE OF SERVICE CENTRES IN METROPOLITAN AREAS

The preceding five chapters of this dissertation have aimed to show that current trends in shopping habits in affluent urbanised societies are well enough defined to significantly guide planners in the selection of optimum locations and designs for planned service centres within metropolitan areas.

The evidence supporting this thesis has been drawn together from a variety of sources, including a series of surveys made by the writer, and in the opening and concluding sections of each chapter the material has been presented for convenience in a summary form, with the main conclusions which have arisen out of the discussion being highlighted.

It is left for this section to consider briefly, and as a whole, some of the points previously subjected to a more detailed appraisal. This concluding note, in extending the discussion, makes some comment related to the future of service centres within metropolitan areas, having regard for the implications of the point of view taken by this thesis.

The phenomena investigated by this dissertation are continuously in a state of flux. The retailing structure within metropolitan areas is constantly evolving in response to changing patterns both in the demand for retail services and in the way in which they are provided. This was discussed at some length as the "retail spiral movement" in the early parts of this dissertation.

We have seen how in most instances the consumer and the retailer do not behave in what would appear to be a completely rational fashion because of imperfect knowledge, but that their general aim is to minimise costs and
so obtain maximum returns on expenditure. Thus, there are on the one hand variations in demand factors as consumers alter their preferences and shopping habits, normally as a result of increasing affluence, and on the other hand changes in the supply factor occur as retailers introduce new techniques of distribution. These new retailing techniques may be evolved partly to meet consumer requirements and partly to meet changes occurring within the retail industry itself. In some instances the retail industry may actually endeavour to generate further modifications in consumer behaviour through the introduction of new techniques or locational patterns, and hence the cycle is completed.

The Australian metropolitan area case study presented in this dissertation showed how, in newer suburban areas where retailing patterns are developing for the first time, differences in modes of consumer behaviour and the retail structure will occur and may, in fact, be further reinforced by the action of developers.

There is much to be said for this initiative coming from the public sector, however, and in the Scandinavian cases examined viable service and cultural centres are being encouraged as metropolitan nodal points. Sub-centring has been shown to occur naturally in metropolitan areas, and as the metropolitan region grows in scale such subsidiary service centres grow in size and importance.

Problems of communication will occur between such centres, their hinterlands, and the central business district, even though the latter will continue to be of importance as the major centre for specialised goods and services, and perhaps also for business purposes. It must be remembered, however, that the subsidiary centres in the metropolitan area are by no means centres for self sufficient community structures, and that a certain amount of cross movement will occur. In practice certain of these major
Service centres may specialise in various aspects of retail, governmental, cultural or business provision, hence increasing the region's need for effective intra-metropolitan transport systems.

The service centre, therefore, its primary trading area, or, in more general terms, the socio-economic functional area which it serves, must be considered a critical element in the development of form patterns within metropolitan regions.

As a result of the research carried out the thesis submitted asserts that, through an appraisal of current trends, planners should be in a position to select optimum locations and optimum designs for planned service centres in metropolitan areas. It has been noted, that, with the passing of time, certain centres grow in size and predominate, but that in some situations it will be possible to plan and build completely new service centres, thus meeting a metropolitan need by stimulating development and focusing attention on a particular nodal point.

The writer has expressed the opinion that in Great Britain it will normally not be necessary nor desirable to build completely new service centres of a size comparable to the large regional planned centres in the United States. Apart from the question of congestion at and difficulties of access to central business districts it should be stated that the success of out-of-town shopping centres must depend to some extent on the "non-policy" of the central city towards meeting changing shopping patterns. It might be assumed, therefore, that a city such as Coventry, where large central area durable goods stores have been planned within a pedestrian shopping environment, and where good parking facilities are provided, will not be the type of city which will give much incentive for the development of large out-of-town shopping centres nearby.
411.

In this country the example given is hardly unique, and because of the relatively sophisticated government control that does exist through the medium of British planning legislation it should be possible in planning to keep abreast of changing demands, making decisions in the best interests of the community as a whole. This, the writer has maintained, entails using to be best advantage the existing building stock and might be expected to take the form of a process of metamorphosis, beginning within the existing centre structure.

Whilst there may be few reasons for the development of very large regional shopping centres on new sites in Great Britain, the Woolco stores and the competing chains that will surely follow their example will soon become an established feature of the urban periphery around many cities in this country. These stores are a development of a very different scale to that of a major regional centre, and do seem to fill a need as a new retailing form with certain special attractions - perhaps of price, and most certainly of parking convenience and internal arrangement.

The writer's investigations have shown that whilst the selection of locations to develop as major service centres within metropolitan areas is a fairly straightforward quantitative planning process, that the selection of optimum designs for the form of the centre is a subject which must be investigated in much more detail. This is to be expected, as the locational questions may normally be resolved by natural processes, slowly over time, but decisions regarding the environmental design of service centres are taken quickly. Furthermore, because of the dominating importance of a centre's location, the success or otherwise of the more subtle environmental characteristics which may be contributing to or detracting from a centre's attractiveness are harder to test.

A part of the research carried out involved making an appraisal of selected service centres. Some results of this study were shown in
Table 39, and the series of photographic illustrations gives some idea of the environmental characteristics of the centres concerned. The abstracted plans of these centres, all drawn to the same scale, may be read in conjunction with the photographs and some indication obtained of the spatial and environmental characteristics of the centres examined.

Any comments made as a result of such an appraisal regarding the environmental characteristics of service centres will be quite subjective, but do form the basis for developing hypotheses which can possibly be tested further. Of the centres appraised, perhaps the least successful from the point of view of environmental quality was the Thornaby centre on Tees-side. The most successful of the centres of this size, in the writer's opinion, is certainly the fully enclosed Rodvære centre in Copenhagen. The simplicity of architectural concept which the discipline of the enclosing structure imposes is possibly influential here, but it does seem that in general the more simply the pedestrian areas in service centres are achieved, and the more simply the visual enclosure is developed, the more environmentally satisfying these centres are likely to be.

Compared to Vallingby and Farsta, Stockholm's new regional centre at Skarholmen is disappointingly gross in scale, despite the high quality of its conception, construction and detailing. The writer considers that this centre felt more like a city centre without cars than as a centre designed specifically for pedestrian movement.

Any justification that may exist for amenity judgments such as those implied above may spring from the necessity to begin a serious study of simple value judgments as a basis for developing a more scientific form of appraisal. In fact, whilst trends in the designs for planned service centres in metropolitan areas may be well enough defined to guide planners in the
selection of optimum solutions, principally by way of their value judgments of these design, it is in this field of research that much more investigation may be made.

Quantitative assessments of the demand for shopping floor space may not be perfectly reliable indicators for long term planning purposes, but the models employed have very importantly helped us to isolate and understand better the various factors contributing to a centre's viability. As Louis K. Loewenstein has shown, such models, in abstracting from reality, facilitate an understanding of the subject matter under consideration because of the way in which they show the inter-relation of the underlying factors.

In any service centre development, the facilities and the result sought by the developer, the retailer and the consumer are apparently becoming reconcilable, as each optimises his choices. Of increasing importance, however, is the elusive question of a centre's attractiveness to the consumer. This question seems to recur constantly in study after study. In one case previously noted that attractiveness of a centre seemed to depend more on the range of selection and the travel time to the centre rather than the parking facilities at the centre. Another study reported the importance of social attraction, "attractiveness to whom", a socio-economic characteristic related to social class appeal and the price parameter.

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2 See Section 2.2.8, Voorhees op. cit.

3 See Section 2.2.9 Clarke and Bolwell loc. cit.
The important recent study by Clark suggested that through the investigation of the measure of relative attractiveness of a centre a more profitable approach to the understanding of the patterns of consumer purchasing might be achieved than through central place theory. Considering the question more specifically from the point of view of the architectural environment, a symposium held by the Edinburgh Architectural Association raised the question of an "index of enjoyment". Other studies, including the writer's research, have of necessity become involved in some way with the question of environmental amenity.

It may be that future investigations into the elusive subject of a centre's attractiveness, at present an important missing link in the model building process, will approach the subject from two points of view. One approach may be to isolate those factors which are overtly acknowledged by consumers, and the other approach might be to attempt to sort out those factors of attraction impinging principally on the consumers unconscious mind. There is little doubt in the writer's mind that these fields constitute a major research frontier, and it is salutory that both Walter Isard and Wilfred Burns recognised some time ago and mentioned in passing the need for further investigation in this difficult area.

Many indications leave little doubt that the environmental characteristics of a service centre are an important secondary determinant of the

1 See Section 4.2.5 Clark loc. cit.
2 See Section 4.5.2
3 See Section 4.6.1
4 Walter Isard (1956) op. cit.
6 All other things being equal, the primary determinant of a centre's attraction to consumers is, by definition, its location.
centre's attractiveness. This question is perhaps best approached through the obvious attributes of pedestrian-vehicle separation, climate control, and the disposition of the facilities provided. With regard to pedestrian movement, surprisingly little conclusive research has been carried out, and despite the need to conserve sites in this country, multi level shopping centres are normally avoided by developers. There are various ways of overcoming the technical problems of servicing multi level centres, and such centres must appeal to developers for many locations if the behaviour of the pedestrian shopper within the multi level service centre can be predicted.

Generally, the trends apparent in the form of planned service centres point to the increasing size of major subsidiary centres as they take over part of the role previously played by the central business districts. Fortunately, climate control may now be achieved after a rather more scientific appraisal than that currently available to help with decisions regarding those factors derived from the movement patterns of pedestrians. Consequently there is now a strong tendency to enclose the service centre as effectively as possible from the external environment, even in the more equable climatic situations. This immediately allows a greater freedom in the arrangement of facilities within the centre and greater personal comfort. How these qualities effect a consumers response to the service centre should be relatively straightforward to test, and from these investigations more specialised and subtle aspects of environmental attractiveness may be isolated and made quantifiable.

At this point some further indication of the changing character in the form and development of the environmental attributes of contemporary and planned service centres will be given by way of the following illustrations.
Figure 58 shows an overall view and section sketch of the Skarholmen centre, which has been previously discussed. Conceptually this scheme is of obvious importance, and in its full realisation will be a very significant example of integrated public and private facilities at a major service centre nodal point within Stockholm's metropolitan area. The part of a sketch of Cumbernauld Town Centre, which is included here as Figure 59, similarly shows the variety of facilities that a viable major service centre may be expected to provide.

Figures 60 to 63, however, perhaps most effectively demonstrate the development of current thinking regarding the architectural form and environmental character of the major service centre nodes which may emerge in the more affluent metropolitan areas of the world in the next twenty years or so.

The illustrations, which are self explanatory but which will be seen to indicate a particularly high degree of enclosure, are taken from a recent Harvard University case study.1 The concept illustrated seems perfectly feasible and quite in keeping with the indications of an appropriate service centre form pointed to by the writer's research. It must be reiterated, however, that in the interests of the best possible results being achieved for any particular situation much research remains to be done.

From the point of view of both the location and the detailed design of service centres we should hope to probe in some depth the question of attractiveness, keeping in mind that this question relates to factors other than those of environmental amenity.

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1 Graduate School of Design, Harvard University New Communities Project, Preliminary Summary Report, (1968). Carried out with the aid of an award from the recently established United States Federal Government Department of Housing and Urban Development.
With regard to the identification of hierarchical systems and the spatial structure of service centres within metropolitan areas, it seems that only recently have investigators developed an interest in the behavioural concepts on which the structural parts of the central place theory have been based. It is possible that from these studies new concepts for metropolitan area structuring will develop. At this stage the key may lie in the centre's "attractiveness", in whatever forms this attribute may take.

Further studies of consumer behaviour are required, and it is suggested that longitudinal surveys, of which the writer's metropolitan area shopping habit case-study is a relatively simple example, may be of some use to planners who need to keep abreast of emerging patterns of behaviour in order to maintain a continuous and effective process of review.

In any case, there can be little doubt that through an increasing understanding of the forces which contribute to the process and form of metropolitan development the more efficient and realistic planning of service centres in metropolitan areas, in both location and design, may be achieved.
FIG. 58. SKARHOLMEN SECTION AND AERIAL VIEW.
FIG. 59.
CUMBERNAULD.
Pert of
Central Area.
Access to Core from Region

Four half-interchanges feed the parking areas adjacent to the core and provide access to the other three quadrants.

Access to Core from Community

Transit, pedestrian and moving sidewalk modes are purposefully direct; auto access is purposefully indirect.

FIG. 61. A POSSIBLE NEW COMMUNITY WITH AN ENCLOSED SERVICE CENTRE CORE, (on the left)
FIG. 62. SYSTEMS PLAN.
FIG. 63. A POSSIBLE SERVICE CENTRE CORE. SECTIONS.
SERVICE CENTRES IN METROPOLITAN AREAS

APPENDICES
APPENDIX A

BERRY AND PRED\textsuperscript{1} BIBLIOGRAPHY: ANALYSIS

The five sections of this bibliography which are most pertinent to the field of research of this thesis are tabulated hereunder to show the number of papers published per section per year, as recorded by Berry and Pred from 1949 to 1956. Other sections from the bibliography show a much greater evenness of interest.

<table>
<thead>
<tr>
<th>Section</th>
<th>Year 1949</th>
<th>50</th>
<th>51</th>
<th>52</th>
<th>53</th>
<th>54</th>
<th>55</th>
<th>56</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systems of Central Places</td>
<td>3</td>
<td>5</td>
<td>8</td>
<td>8</td>
<td>9</td>
<td>7</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Studies of Urban Spheres of Influence and</td>
<td>4</td>
<td>7</td>
<td>4</td>
<td>10</td>
<td>16</td>
<td>11</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>the Trade Areas of Cities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Internal Business Structure of the</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>8</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>City</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planned Shopping Centres</td>
<td>2</td>
<td>5</td>
<td>1</td>
<td>7</td>
<td>6</td>
<td>3</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Relations of Business Structure and</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumer Shopping and Travel Habits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

After about 1956 the number of papers being published in this area of study, and being recorded by Berry and Pred, generally declined. It is submitted that in the early 1960's, particularly in the U.S.A., interest in these subjects intensified as many new shopping developments were being planned.

\textsuperscript{1}Brian J.L. Berry and Allen Pred, \textit{Central Place Studies A Bibliography of Theory and Applications} (Philadelphia: Regional Science Research Institute, 1961, and Supplement through 1964)
APPENDIX B

W. K. D. Davies: MAJOR PRINCIPLES FOR ANY RANKING SCHEME

CHECK LIST

1. Area and scale of study; time of study; definition of centre, if this is considered necessary.
2. Type of focal place investigated - urban, commercial or retail centres?
3. Are all function considered, or just key criteria?
4. How are the key criteria chosen? Are they representative in an objective manner?
5. What is the definition of function - establishment, functional unit, functional types or a more detailed study?
6. Is the size of function introduced as a variable?
7. How is the information obtained and is it really comparable?
8. Are all focal places in the area investigated (for example, certain sizes ignored) or is a sample taken?
9. How are the functions associated together? Is there any initial grouping of data?
10. How many additional limiting inputs are there for the technique, outside the range of functions, for example, is population introduced?
11. If classes of centres are obtained, is there an objective test of randomness or is the definition subjective?

APPENDIX C

THE INSTITUT FOR CENTER-PLANLAEGNING, LYNGBY, DENMARK

The Institut is directed by Mr. John Alpass. The following notes were made after a discussion with Mr. Jesper Harvest on September 23rd, 1968.

Initiation: The Institut came into being about ten years ago at a time when the Co-operative retailing movement in Denmark was particularly strong and also the free grocers associations and other retailers were keen to establish outlets in good locations.

Clients: First commissions came from these retailing organisations. The task was to make planning studies and to recommend the best locations for shops to be sited at. Subsequent studies have been undertaken on behalf of the local government authorities, the Communes, and on behalf of State and private Building Societies.

Scope of Work: At first work was entirely related to the selection of optimum retailing locations, but it soon became apparent that the whole field of community planning would come within the field of study of the Institut, and the Communes commissioned studies into the need for schools, kindergartens, institutions for aged people, etc.

Financing: The Institut is a self owning non-profit organisation, but with a Ministry subsidy. As I understand the position, every three months a balance is prepared and the Ministry (presumably the Boligministerjet) makes up any reasonable deficit incurred in that period.
Despite this financial help the Institut is fairly independent but with the knowledge that unprofitable work undertaken on behalf of the Communes will be subsidized by funds from the Ministry. This three monthly balancing arrangement is criticised in so far as it prevents the Institut embarking on much long term research of an unprofitable nature.

**Staffing:**

The Institut's staff of about 40 people (including secretarial staff) is divided into three sections.

(a) **Retail Trade Studies** mainly economists.

(b) **Theoretical**, (prognostic studies particularly), including population, economics, staff includes geographers, sociologist, economists, statistician and computer programmer.

(c) **Physical Planning** architect-planners, draftsmen, traffic engineers.

Some work of this section is contracted out to outside consultants.
APPENDIX D

W. WELFE: CHANGES IN CONSUMERS' BEHAVIOUR

A broad picture of the changes in consumption patterns discussed in Welfe's paper may be obtained from an inspection of the following table (Welfe, loc. cit., p. 20) and the graphs which illustrate the changes in the shape of Engel curves between 1953-54 and 1959-60.

### TABLE D

Total expenditure elasticities and the percentage of saturation for the main commodity groups

<table>
<thead>
<tr>
<th>Commodity Group</th>
<th>Total expenditure elasticities</th>
<th>Percentage of Saturation</th>
</tr>
</thead>
<tbody>
<tr>
<td>I Food</td>
<td>semi-log</td>
<td>0.55</td>
</tr>
<tr>
<td>II Clothing</td>
<td>double-log</td>
<td>1.05</td>
</tr>
<tr>
<td>III Household</td>
<td>double-log</td>
<td>1.03</td>
</tr>
<tr>
<td>IV Communication</td>
<td>double-log</td>
<td>1.11</td>
</tr>
<tr>
<td>V Transport</td>
<td>log-inverse</td>
<td>1.69</td>
</tr>
<tr>
<td>VI Drink and tobacco</td>
<td>log-inverse</td>
<td>0.97</td>
</tr>
<tr>
<td>VII Entertainment</td>
<td>log-inverse</td>
<td>1.10</td>
</tr>
<tr>
<td>VIII Other goods and services</td>
<td>double-log</td>
<td>1.47</td>
</tr>
</tbody>
</table>

---

1 Data in this Appendix is derived from W. Welfe, Changes in Consumers' Behaviour, unpublished paper, Department of Applied Economics, University of Cambridge, 1964.
The following notes from pages 20 and 21 of Welfe's paper accompany the graphs.

"Comparing the elasticities for 1959-1962 with the elasticities for 1937-1939 it may be seen that only for food, household and entertainment are the elasticities decreasing. It means that the degree of satiation of basic consumer wants (food, household) increased, despite the fact that at the same time in several goods like household durables the saturation level went up. The trend in the elasticities of food is not smooth and this may be due to (a) the rationing in 1953-1954 and (b) to an increase in the share of supplies of processed, manufactured food, which means that food bought now is in fact bought together with an increasing amount of services the demand elasticity of which seems to be considerable. The elasticities for clothing, communications, transport and other goods and services increased as compared with the pre-war period, whereas those for drink and tobacco remained fairly stable. This generally indicates that upward changes in saturation levels were considerable and here dominate the picture.

This development for the period from 1953-1954 until 1959-1962 may also be observed from the diagrams. These diagrams were drawn in different scales according to the form of Engel curve used so as to arrive at a straight regression line on a given diagram. The observations (dotted points) regression lines and the estimated values of parameters standing with total expenditure per person are given in the diagrams: broken line for 1953-1954 (in current prices) and a continuous line for
1959-1962 (in 1958 prices). It may be seen from these diagrams that the fits are usually good and that only for food and transport are the relative differences in the slopes considerable."
Expenditure on Food (per person per week in shillings)

Total expenditure (per person per week in shillings)

FOOD (semi-log)

\[ b = 9.90 \pm 0.39 \text{ (1959-62)} \]

\[ b = 14.68 \pm 0.37 \text{ (1953-54)} \]
Total expenditure (per person per week in shillings)

CLOTHING (log-log)

\[ b = 1.59 \pm 0.08 \text{ (1959-62)} \]
\[ b = 1.43 \pm 0.06 \text{ (1953-54)} \]
# APPENDIX E

## PROJECTED CONSUMER'S EXPENDITURE 1964-1970

<table>
<thead>
<tr>
<th>Item</th>
<th>£m. 1964 prices</th>
<th>Average annual % increase (compound)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food</td>
<td>5,557</td>
<td>6,022</td>
</tr>
<tr>
<td>Beer</td>
<td>761</td>
<td>844</td>
</tr>
<tr>
<td>Other alcoholic drink</td>
<td>556</td>
<td>773</td>
</tr>
<tr>
<td>Tobacco</td>
<td>1,344</td>
<td>1,385</td>
</tr>
<tr>
<td>Housing</td>
<td>2,246</td>
<td>2,690</td>
</tr>
<tr>
<td>Fuel and Light</td>
<td>988</td>
<td>1,334</td>
</tr>
<tr>
<td>Motors</td>
<td>854</td>
<td>1,815</td>
</tr>
<tr>
<td>Running costs of vehicles</td>
<td>771</td>
<td>1,156</td>
</tr>
<tr>
<td>Furniture and floor coverings</td>
<td>486</td>
<td>555</td>
</tr>
<tr>
<td>Radio and electrical</td>
<td>515</td>
<td>670</td>
</tr>
<tr>
<td>Clothing</td>
<td>1,919</td>
<td>2,316</td>
</tr>
<tr>
<td>Other goods</td>
<td>1,933</td>
<td>2,442</td>
</tr>
<tr>
<td>Travel</td>
<td>691</td>
<td>761</td>
</tr>
<tr>
<td>Communications</td>
<td>179</td>
<td>231</td>
</tr>
<tr>
<td>Entertainment etc.</td>
<td>2,866</td>
<td>3,029</td>
</tr>
<tr>
<td>Expenditure abroad</td>
<td>382</td>
<td>494</td>
</tr>
<tr>
<td><strong>LESS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expenditure in U.K. by foreigners</td>
<td>- 214</td>
<td>- 266</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>21,334</td>
<td>25,789</td>
</tr>
</tbody>
</table>

---

**APPENDIX F**

**METROPOLITAN AREA CASE STUDY - CHADSTONE SURVEY**

**QUESTIONNAIRE FORMS**

**QUESTIONNAIRE I (1960)**

<table>
<thead>
<tr>
<th>Section No.</th>
<th>Street No.</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>Interviewer</td>
<td></td>
</tr>
</tbody>
</table>

1. Where do you normally shop for your weekly supplies? ...........

2. How often do you shop there? more than once a day. once a day. once every 2 days. twice a week. once a week. less than once a week.


4. If a car shopper. When you go shopping by car do you drive yourself? Yes. No. Sometimes.

5. How long does it normally take you to find a place to park the car? varies right away 5 minutes . . . . . . . . . . . . . .

6. How near can you normally park to your main shopping destination? right at it. close. 5 mins. walk . . . . . . . . . . . . . .

7. How often do you shop in Melbourne? once a week. once a fortnight. once a month. 3 monthly 6 monthly. once a year. rarely . . . . . . . . . . . . . .


9. Where do you shop now for

- Clothing ........................................
- Electrical Appliances ..........................
- Furniture ....................................
- Household Hardware ............................
QUESTIONNAIRE I (1960) (continued)

10. Do any members of the family normally go shopping with you?
    Yes            No
    if yes   Who? ............ husband. daughter. children.

11. Would you like to go shopping in the evenings if the shops were open?
    ..........Yes   No   Don’t know.
    if yes, which night preferred?

12. Do you think you will visit Myers Chadstone Shopping Centre?
    Yes            No            Don’t know.
    if yes,   How often?
    Go for a look at it. once a week. once a fortnight.
    don’t know. once a month ........................................
APPENDIX F

METROPOLITAN AREA CASE STUDY - CHADSTONE SURVEY

QUESTIONNAIRE FORMS

QUESTIONNAIRE II (1963)

Section No. ............................ Street ........... No. .......
Date ...................................... Interviewer .....................

1. Where do you normally shop for your weekly supplies? ............

2. Which day(s) of the week do you go shopping? ......................

3. How do you get there when you go shopping?
   Walk   Public Transport   Car

4. If a car shopper
   When you go shopping by car do you drive yourself?
      Yes  No  Sometimes

5. How long does it normally take you to find a place to park the car?
   Varies   right away  5 minutes  ......................

6. How near can you normally park to your main shopping destination?
   right at it   close  5 minutes walk  ......................

7. How often do you shop in Melbourne?
   once a week  once a fortnight  once a month  3 monthly
   6 monthly   once a year  rarely  ......................

8. How do you get to Melbourne when you go shopping?
   walk   public transport   car  public transport and car

9. Where do you shop now for
   Clothing .............................
   Electrical appliances ................
   Furniture ............................
   Household Hardware ..................
10. Do any members of the family normally go shopping with you?
    Yes  No
    If yes  Who? .......... husband daughter children

11. Would you like to go shopping in the evenings if the shops were open?
    ................. Yes  No  Don't know
               Fri.  Sat.

12. (If not a Chadstone shopper in any of the above questions?)
    Do you ever go to the Chadstone Shopping Centre? ............
    What do you do there? ........................................
    Why don't you shop at Chadstone?  .........................

13. (If a Chadstone Shopper for Weekly Supplies (Q.1))
    Where did you shop for your weekly supplies before Chadstone 
    opened) ..........................................................

14. When you do go to Chadstone what do you buy or do? ..............

15. What are the things you like about the Chadstone Shopping Centre?
    Dislike ..........................................................

16. How long do you normally spend at the Chadstone Centre? ......
### METROPOLITAN AREA CASE STUDY - CHADSTONE SURVEY

#### QUESTIONNAIRE FORMS

#### QUESTIONNAIRE III (1965)

**Shopping Habits Survey**

<table>
<thead>
<tr>
<th>Section No.</th>
<th>Date</th>
<th>Interviewer</th>
<th>Street</th>
<th>No.</th>
<th>Respondent</th>
</tr>
</thead>
</table>

1. Where do you normally shop for your weekly supplies? ............


3. How do you get there when you go shopping? Walk, public transport, car.

**If a Car Shopper**

4. When you go shopping by car do you drive yourself?
   - Yes.
   - No.
   - Sometimes.

5. How long does it normally take you to find a place to park the car?
   - varies
   - right away
   - 5 minutes

6. How near can you normally park to your main shopping destination?
   - Right at it
   - close
   - 5 minutes walk

7. Does anyone normally go shopping with you? No. Yes. Who?

8. Do you have any good delivered? Paper Milk Bread Meat
   - Comparison Goods
   - Groceries
   - Green Groceries
   - Other.

9. Is any shopping normally done by other members of the Household?
   - No
   - Yes
   - By whom? ...... What do they buy? ........

10. How often do you shop in Melbourne? weekly fortnightly monthly quarterly 6 monthly yearly less frequently ...

11. How do you get to Melbourne when you go shopping?
   - Public Transport
   - Car
   - Public Transport and Car.
QUESTIONNAIRE III (1965) (continued)

12. Where do you shop now for

<table>
<thead>
<tr>
<th></th>
<th>Wholesale</th>
<th>City</th>
<th>Suburb (Name)</th>
<th>City and Suburb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clothing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elect. Appl.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Furniture</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hardware</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If NOT a Chadstone Shopper for weekly supplies

13. Do you ever go to the Chadstone Centre?
   (a) if Yes How often do you go there?
   (b) When at Chadstone what do you buy or do?
   (c) What do you like about the Chadstone Centre
       Dislike?
   (d) How long do you normally spend at the Chadstone Centre?
   (e) if No Why don't you shop at Chadstone?

If a Chadstone Shopper for weekly supplies

14. (a) Where did you shop for your weekly supplies before Chadstone opened?
    (b) When at Chadstone what do you buy or do?
    (c) What do you like about the Chadstone Centre
        Dislike?
    (d) How long do you normally spend at the Chadstone Centre?

15. Would you like to go shopping in the evenings if the shops were open?
    Don't know
    If no why wouldn't you?

Comments:
APPENDIX G

METROPOLITAN AREA CASE STUDY: CHADSTONE SURVEY

INSTRUCTIONS TO INTERVIEWERS

The Street lists give the part of the street to be sampled.

EXAMPLE

Section No. "20" Street: "Audrey Cres."

Part of Street to be sampled: "N. side East of Brandon St."

District: "Ashburton".

PROCEDURE: 1st interview

First dwelling unit adjacent to the corner of Audrey Cres. and Brandon St., on the North side of Audrey Cres. going East from the Brandon St. Corner.

Note: "Dwelling Unit" = house, flat, dwelling behind shop, etc.

2nd interview

Going East, miss 2 dwelling units and interview the 3rd.

(i.e. interview every third)

Where no answer to any dwelling, try next door, going in the direction of the interviews, until someone home.

Then for the next interview, miss 2 dwelling units as above and try the third.

If there are not enough Houses on one side of the street to give enough interviews come back on the other side of the street.

Proceed in this way until 8 interviews have been made in the street.

Note on each interview form the Street or Lot Number.

Preamble to interview should be as follows, with smiles, good afternoon as required.

"I am from the University, Department of Town and Regional Planning. We are making a shopping survey. Would you mind answering a few short questions about shopping?"

Should anyone refuse to answer questions, treat house as if no one home, (try next door).

Interviewer should note street number of dwelling after making rather than before interview in case house approached unoccupied.
### APPENDIX H

#### CAR REGISTRATIONS: VICTORIA, 1955-1965

<table>
<thead>
<tr>
<th>Year</th>
<th>New Registrations</th>
<th>Total Registrations</th>
<th>Valid Licences</th>
<th>Population*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1955</td>
<td>51,894</td>
<td>450,661</td>
<td>725,826</td>
<td>1,590,895</td>
</tr>
<tr>
<td>1956</td>
<td>52,860</td>
<td>493,002</td>
<td>801,852</td>
<td></td>
</tr>
<tr>
<td>1957</td>
<td>47,029</td>
<td>522,100</td>
<td>831,847</td>
<td></td>
</tr>
<tr>
<td>1958</td>
<td>53,530</td>
<td>556,550</td>
<td>879,779</td>
<td></td>
</tr>
<tr>
<td>1959</td>
<td>55,584</td>
<td>593,470</td>
<td>908,343</td>
<td></td>
</tr>
<tr>
<td>1960</td>
<td>73,225</td>
<td>646,387</td>
<td>967,952</td>
<td></td>
</tr>
<tr>
<td>1961</td>
<td>68,543</td>
<td>696,664</td>
<td>1,032,431</td>
<td>1,796,734</td>
</tr>
<tr>
<td>1962**</td>
<td>73,206</td>
<td>681,124</td>
<td>1,079,751</td>
<td></td>
</tr>
<tr>
<td>1963</td>
<td>33,718</td>
<td>734,918</td>
<td>1,112,750</td>
<td></td>
</tr>
<tr>
<td>1964</td>
<td>91,501</td>
<td>789,327</td>
<td>1,162,448</td>
<td></td>
</tr>
<tr>
<td>1965</td>
<td>93,174</td>
<td>937,185</td>
<td>1,215,435</td>
<td>1,924,400</td>
</tr>
</tbody>
</table>

Note: *The population figure is for people 21 years and over, but note that driving licences are available from 18 years.

**The figures from 1962 on refer to all cars and station wagons and not just private cars.

In 1962 the total cars registered in the Melbourne Metropolitan Area was 444,608, as compared to 681,124 in the state as a whole.
**APPENDIX I**

**SELECTED TABLES FROM THE SOCIAL SURVEY NS84 (1947)**

DAVID GINSBURG, "SHOPPING HOURS SURVEY"

**TABLE 1 - TYPES AND TOTAL NUMBERS OF SHOPPERS (page 3)**

<table>
<thead>
<tr>
<th>Type of Shopper</th>
<th>Total</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mainly responsible for household shopping</td>
<td>47</td>
<td>4</td>
<td>76</td>
</tr>
<tr>
<td>Helps with the household shopping</td>
<td>19</td>
<td>29</td>
<td>12</td>
</tr>
<tr>
<td>Only personal shopping</td>
<td>31</td>
<td>62</td>
<td>10</td>
</tr>
<tr>
<td>Total doing some shopping</td>
<td>97</td>
<td>95</td>
<td>98</td>
</tr>
<tr>
<td>No shopping at all</td>
<td>3</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Whole sample: (100%)</td>
<td>2007</td>
<td>816</td>
<td>1191</td>
</tr>
</tbody>
</table>
### APPENDIX I
(continued)

**TABLE 4 - TYPES OF SHOPPING CENTRE VISITED (page 5)**

<table>
<thead>
<tr>
<th>Use of Centre</th>
<th>Type of Centre</th>
<th>Local</th>
<th>Main</th>
<th>Central</th>
<th>Additional</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Uses</td>
<td></td>
<td>31</td>
<td>34</td>
<td>57</td>
<td>41</td>
</tr>
<tr>
<td>Does not use</td>
<td></td>
<td>19</td>
<td>16</td>
<td>43</td>
<td>59</td>
</tr>
<tr>
<td><strong>Total shoppers with centre (100%)</strong></td>
<td></td>
<td><strong>1488</strong></td>
<td><strong>1864</strong></td>
<td><strong>749</strong></td>
<td><strong>1221</strong></td>
</tr>
<tr>
<td>Total with centre</td>
<td></td>
<td>77</td>
<td>96</td>
<td>39</td>
<td>63</td>
</tr>
<tr>
<td>Total without centre</td>
<td></td>
<td>23</td>
<td>4</td>
<td>61</td>
<td>37</td>
</tr>
<tr>
<td><strong>Total shoppers (100%)</strong></td>
<td></td>
<td><strong>1939</strong></td>
<td><strong>1939</strong></td>
<td><strong>1939</strong></td>
<td><strong>1939</strong></td>
</tr>
</tbody>
</table>

**TABLE 5 - FREQUENCY OF VISITS TO DIFFERENT TYPES OF CENTRES (page 6)**

<table>
<thead>
<tr>
<th>Number of visits</th>
<th>Local</th>
<th>Main</th>
<th>Central</th>
<th>Additional</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Every day</td>
<td>32</td>
<td>18</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>2-3 times a week</td>
<td>29</td>
<td>26</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Once a week</td>
<td>14</td>
<td>22</td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td>Less than once a week</td>
<td>6</td>
<td>17</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>No answer</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Does not visit</td>
<td>19</td>
<td>16</td>
<td>42</td>
<td>59</td>
</tr>
<tr>
<td><strong>Number of shoppers with centres available (100%)</strong></td>
<td><strong>1488</strong></td>
<td><strong>1864</strong></td>
<td><strong>749</strong></td>
<td><strong>1221</strong></td>
</tr>
</tbody>
</table>
TABLE 6 - FREQUENCY OF VISITS TO MAIN SHOPPING CENTRES (page 6)

<table>
<thead>
<tr>
<th>Number of visits</th>
<th>Urban Areas</th>
<th>Rural Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Every day</td>
<td>22</td>
<td>4</td>
</tr>
<tr>
<td>2-3 times per week</td>
<td>26</td>
<td>22</td>
</tr>
<tr>
<td>Under once a week</td>
<td>15</td>
<td>28</td>
</tr>
<tr>
<td>Once a week</td>
<td>21</td>
<td>28</td>
</tr>
<tr>
<td>Does not use</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td>No answer</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Total shoppers with centre available (100%) 1505 359

TABLE 7 - TIME TAKEN TO REACH SHOPPING CENTRES (page 7)

<table>
<thead>
<tr>
<th>Type of Centre</th>
<th>Time Taken</th>
<th>Local %</th>
<th>Main %</th>
<th>Central %</th>
<th>Additional %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Up to 12 mins.</td>
<td>87</td>
<td>41</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>13 - 24 mins.</td>
<td>9</td>
<td>34</td>
<td>35</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>25 - 36 mins.</td>
<td>2</td>
<td>16</td>
<td>26</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>37 - 48 mins.</td>
<td>1</td>
<td>6</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>49 - 60 mins.</td>
<td>-</td>
<td>1</td>
<td>4</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>1 - 2 hours</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>Over 2 hours</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Can't say</td>
<td>1</td>
<td>2</td>
<td>11</td>
<td>11</td>
</tr>
</tbody>
</table>

Total shoppers using centre (100%) 1203 1568 429 502

Median time 7 mins. 18 mins. 24 mins. 57 mins.
<table>
<thead>
<tr>
<th>Frequency of visits</th>
<th>Numbers using these shops (100%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Every day</td>
<td>2-3 per week</td>
</tr>
<tr>
<td>Food</td>
<td>43</td>
</tr>
<tr>
<td>Clothing etc.</td>
<td>1</td>
</tr>
<tr>
<td>Furniture</td>
<td>0</td>
</tr>
<tr>
<td>Ironmongery etc.</td>
<td>0</td>
</tr>
<tr>
<td>Books etc.</td>
<td>13</td>
</tr>
</tbody>
</table>
### APPENDIX J

**APPROXIMATE PRIMARY TRADING AREAS FOR SUPERMARKETS ACCORDING TO LOCATION TYPE**

<table>
<thead>
<tr>
<th>Type of Location</th>
<th>Primary Trading area (radial) (miles)</th>
<th>Percentage of Total Sales within one mile radius</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neighbourhood Freestanding</td>
<td>½ - ¾</td>
<td>70 - 75</td>
</tr>
<tr>
<td>Community Business District</td>
<td>½ - ¾</td>
<td>65 - 70</td>
</tr>
<tr>
<td>Neighbourhood Business District</td>
<td>¾ - 1</td>
<td>60 - 65</td>
</tr>
<tr>
<td>Secondary Business District</td>
<td>1 - 1½</td>
<td>60 - 65</td>
</tr>
<tr>
<td>Highway business string</td>
<td>1 - 1½</td>
<td>55 - 60</td>
</tr>
<tr>
<td>Highway Freestanding</td>
<td>1 - 2</td>
<td>40 - 45</td>
</tr>
<tr>
<td>Edge of Downtown</td>
<td>1½ - 2</td>
<td>50 - 55</td>
</tr>
<tr>
<td>Commercial Shopping District</td>
<td>1½ - 2</td>
<td>50 - 55</td>
</tr>
<tr>
<td>Discount Department Store</td>
<td>1½ - 2</td>
<td>40 - 45</td>
</tr>
<tr>
<td>Supermarket Centre</td>
<td>1½ - 2</td>
<td>40 - 45</td>
</tr>
<tr>
<td>Regional Shopping Centre</td>
<td>1½ - 2½</td>
<td>35 - 40</td>
</tr>
</tbody>
</table>

**Note:** The American terminology has been retained in this Table for types of location.

The primary trading area boundary is the zone where the markets' drawing power experiences a sharp decrease, but in the cases of supermarkets located at the higher orders of centre, many customers come from beyond this zone.

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SERVICE CENTRES IN METROPOLITAN AREAS

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