RELATIONS BETWEEN THE TRADING AREA POPULATION OF DIFFERENT TYPES OF SHOPPING CENTERS

by

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ABSTRACT

Relations between the Trading Area Population of Different Types of Shopping Centers by Edwin Dreyfus Abrams

The purpose of this Thesis is to inquire into the possible relation that may exist between the quality of a shopping center and the characteristics of the people living in proximity thereto.

The argument is developed by first assigning some measure of quality to several centers located in the Boston Metropolitan Area and then examining the characteristics of the people living in the respective trading areas.

It was concluded that there exists no discernible difference between the "quality images" of the several centers studied and the trading area populations.

A suggestion for further research is made: this includes the suggestion that the accepted planning practice which translates medium-sized shopping centers into trading areas of medium-size ought to be researched further in the light of rapidly increasing mobility.

A postscript has been added to inform the reader of the various drawbacks that the author feels exist within the analysis. (It has been arranged on a section basis and the author suggests that upon reading each chapter one should turn to the respective section in the Postscript.)

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INTRODUCTION

Since the end of World War II the suburban shift of population in the United States has precipitated the development of shopping centers and these new retailing islands have been viewed in many different ways. To some investors the shopping center became the haven of the "get-rich-quick" scheme while others found themselves in a bewildering state of receivership. Suburbanites were generally relieved that the long, tortuous shopping trip to the downtown was no longer necessary and today they enter eagerly and gratefully the spacious free-parking areas provided. On the other hand, the cavalier defenders of the downtown have pointed their lance-like pens at the suburban shopping center and "charged" both the dullness and homogeneity of the center as being something above and beyond a state of immorality. Still others have had another reaction, and members of the D.A.R. are seemingly relieved to find that they are no longer jostled by negroes whose ancestors didn't even go so far as to purchase a boat ticket upon embarking for the New World.

But likes and dislikes aside, the modern shopping center has caused traffic-jams and the further destruction of green-space that city planners (among others) had preserved, in thought and deed, for the idyllic and leisured posterity projected for future years.

One criticism of shopping centers is that they have not been "....properly related to immediate housing or to a preordained population;" [1.] that is, a situation where the planning of a retailing complex is relegated to some push-button scheme of probability technique.

But despite the preaching of a "properly related probability" the criticism remains nebulous, for in what way or ways may a shopping center be "related"? Is the size of the center the result of the number of potential shoppers? Should one assume that a high income population dictates a high-class center and a low class income group the opposite? Should there be different lay-outs of stores and different levels of services? Should a highly educated population be served by a center that looks like a campus and a low educational group be served by one looking like an "asphalt jungle"? In other words, the criticism often employed is seldom explained or supported in argument.

Irrespective of such criticism, it is a fact that the development of a shopping center is usually preceeded by an economic analysis of the population living in proximity to the potential retail site. [2.] The economic information,once gathered, is then transformed, by various "rules-of-thumb" into a figure relating the total square footage of retail area to be erected. In this way, the economic character of the trading area population is "related" to the development of shopping centers.

But this sequence has led some individuals to make an additional assumption: namely, that the quality of stores located in a center reflects the economic as well as the social characteristics of the population living within the trading area; that is, that the merchandise sold, the stores that locate, the degree of amenity and, in general, the quality image projected by the center is a reflection of something above and beyond the mere economic situation of the proximate population. [3.]

The purpose of this Thesis is to inquire into the possible relation that may exist between the quality of a shopping center and the characteristics of the people who live in proximity thereto.

The argument will be developed by viewing several centers in the Boston Metropolitan Area and assigning to them some measure of quality. This will be followed by an examination of the characteristics of the people living in the trading areas with a view toward establishing a relation between the stores and the people living in proximity to them, or, put another way, the question will be asked as to whether the people living in a trading area of certain stores with different qualities have in fact different population characteristics.

The results of this investigation should be of interest to the city planner. Any illumination of the how and why of peoples' behavior is appropriately of interest to the broadness of the planning mind. In addition, the establishment of constraints with a view toward more meaningful shopping is of direct concern to the planning endeavor; (for if the planner remains unaware of the ways by which the physical setting may be manipulated to provide additional meaning to the people who must use it then the planning profession has lost a large part of the ideology that makes it a worthwhile profession). It must be remembered that it is not sufficient to have simple physical yard-sticks for retail development--one must have a "simpatico" type of feeling for the thing being planned; there exists beyond the yardstick a knowledge that enables the planner to see the relationship of site, building, tenant, and shopper, a knowledge that should aid in the projection of land areas for retailing purposes. It is toward meeting this planning land requirement that this Thesis is directed.

SECTION ONE----

ESTABLISHING THE BASIC ARGUMENT

CHAPTER I.

Shopping Centers: Definition and Types

Before continuing the analysis it is important to define the term "shopping centers."

One definition states that a shopping center is "a group of planned, retail locations that contain a common cooperative spirit and that have facilities common to all." [4.] This definition does not go so far as to suggest that there is a relation between the quality of a shopping center and the population that lives in proximity to it, but other definitions do. Thompson, for example, defines a shopping center in the following manner: i.e., ".....a group of commercial establishments planned, developed, and managed as a unit and related in location and size and type of shops to the surrounding trade area which it serves." [5.] This definition focuses attention upon the "trading area", and, in addition, establishes the existence of a relationship between shoppers and stores.

For convenience of analysis, suburban shopping centers will be classified in three categories: large, medium and small. These can be identified by such criteria as: type of major tenant (i.e. the "lead" store); the total number of stores; the size of the site on which the center is located; the number of square feet of floor area; and, of prime importance, the total area from which the center can draw shoppers...i.e., the trading area. [6.]

Large Centers

The "large" suburban shopping center is the biggest in terms of size, of site area, and total number of stores. Generally, this center needs a trading area population that may vary from between 250,000 and 1,000,000 persons within a roughly 30-minute driving time from the center.[7.] The center will consist of somewhere between 400,000 and 1,000,000 square feet of retail area with an overall site which is in excess of 40 acres. The 50-100 stores will be formed around one or two department stores; in addition, there exists a wide variety of fashion, home furnishings and household equipment stores, plus specialty stores ranging from tobacco to pets. This type of center represents a direct competitor for the CBD and, in fact, many of the CBD stores have located branches within such centers.

Medium Centers

A center of this type is generally expected to have a trading area of from 20,000 to 100,000 persons within a driving time not in excess of 20 minutes. The total number of stores will range between 30 and 40 and the total square footage of building area will be between 75,000 to 300,000 square feet on a site that varies from 10 to 30 acres.

In the past, this type of center was generally formed around a variety or junior department store such as J.C. PENNEY, W.T. GRANT, or F.W. WOOLWORTH. At the present time, however, many centers of this size are developing around a discount store,[8.] which is either a chain or non-chain operation.[9.] In the past, this center was more in competition with the sub-centers of the CBD,[10.] but the discounters have changed this to such an extent that this kind of center is in competition with both the CBD and the large center.[11.]

Small Centers

This "small" center may contain as many as ten stores built around a drug-store or supermarket and its trading area is limited to a small area...usually a five- to ten-minute drive.[12.]

(This paper is limited to an analysis of the newer suburban shopping centers as opposed to those retailing areas which grew in a past era serving as a supplement to the CBD.)

CHAPTER II.

The "Lead" Store

By the "lead" store is meant the largest single store located within the center; [13] the store with the largest variety of goods (other than food). It is this store which has the ability to attract other stores to the center thereby setting the standard of development for the center and if the center filters shoppers it is the character of the lead stores that establishes the criteria for the filtering process. Thus it is due to the enormous impact of the lead store that its "quality image" may serve as an index for describing that of the whole shopping center.

In the preceeding chapter it was pointed out that there were four store types capable of performing the lead function -- department, junior-department, variety and discount stores. However, for the purposes of this Thesis, only the department and discount stores will be considered. The reason for this is that if only one store in a metropolitan area sells a television set, then all persons wishing to buy one will have to go to that one store. But, if one is desirous of investigating a relationship between stores and shoppers, it is necessary to compare two distinct types of "lead" stores that carry approximately the same type and variety of goods, in order that the shopper may choose in which type of store he will buy the item in question.

For this purpose, the full-line department store (which is the only store type serving the "lead" function in the large center) is most closely approximated by the full-line discount store; [14] in fact, these two types of stores are presently engaged in a very tough competitive battle. [15]

(Neither the junior-department store nor the variety store type is so roughly equal to the department store and hence the images that they produce will not be discussed in this paper.)

What differences of image do the two stores project? At the 32nd Annual Boston Conference on Distribution, the following observation was made:

> "The discount stores raise a basic question for all department stores. The department store industry has always been rather enamored of the idea that a store is a place where women go for the fun and pleasure of shopping. But most discount retailers have treated stores as places where people go to pick up the things they want as quickly as possible. One view treats shopping as an end in itself, the other simply considers it as a means to an end. Both views are reasonable and either one may be true in any given case, depending upon the customer, the item, and the time." [16]

The fact that the discount store exists on one level (as opposed to the multi-level approach of the department store) would seem to indicate a shorter stay within the store on the part of the shopper. This type of construction also facilitates the use of grocery baskets, which cannot be taken up the escalator or the elevator, a function which characterizes the department store operation.

The entire image created by a large center (in which the department store is invariably located) is one of leisure. Tree-lined malls, with stores on both sides, a wide variety of possible purchases and periodic free entertainment, implant an image of not only leisure but also expense. On the other hand, the customer coming to the discount center, is greeted by a long row of stores, in addition to large, blatant and abounding "sale" signs. One could say in fact that the whole concept of amenity in the discount-oriented center has been given studious neglect. [17.]

The department store attracts to its center stores of substantial quality and reputation. In this way, the large centers of Boston's Metropolitan Area include Paine Furniture, Thayer-McNeil Shoes, Charles Perkins Tobacco, and Conrad-Chandler Women's Wear, etc., and these stores further supplement an image of expense and quality. This is opposed to a discount-oriented center which attracts such lower-quality tenants as Town Clothes (Medford) and the Foam Rubber Center (Natick). [18.]

The differences found to exist thus far involve the type of construction and the ability to attract "quality" tenants; there are other differences. It has been generally assumed that the overall purchase price of goods is lower at a discount store than at a department store. This is born out by a recent Fortune article which states that the "discounters operate on gross margins of 18 to 25 percent (calculated as a percentage of selling price, not cost of merchandise), compared to 36.4 percent for department stores." [19.]

At first glance, the lower prices of the discount-oriented center, in combination with the lack of amenity, could lead one to make the assumption that the character of the person shopping there is related to the "quality of image" projected by the retailing facility; that is, that the quality of the store and center is a reflection of the people shopping in it. This same sentiment has been expressed by Thompson who states that, "..the income of the population (living in proximity to a center) is closely related to the type of merchandising which will be most successful in the shopping center."[20]

It is the verification of this "first glance" which forms the basis of this Thesis.

CHAPTER III.

Measuring the Trading Area Population

In order to establish that the degree to which a shopping center is a reflection of the trading area population, it is necessary to analyze the characteristics of the population in question. There exist innumerable statistics through which a population may be classified and some are more precise than others. For example, when one considers the amount of money that a family may spend over a certain period for various purchases the use of "disposable income" will serve as a more precise indicator than "median income". But the use of any indicator is complicated by the analysts' ability to secure the figure desired in addition to considering its currency.

Due to these reasons the population analysis in the next section is limited (with one exception) to the information derived from the published reports of the 1960 census. As a result, data dealing with median income - supplemented further by the percent of population earning less than $3000 and over $10,000 annually; the percent who completed four years of high school or more; the percentage with automobile ownership to the total trading area population -these are the indices that shall be used to re-present the respective trading areas.

The income of a population is important as it is so closely related to the type of goods purchased.,[21.] even if it says nothing of where people do their shopping. But as Thompson states, [22.] there is a relationship between income and the "modus operandi" of the stores located in the center.

Also, some authors have assumed that there is a direct relation between the amount of education and the degree of sophistication of a trading population. [23.] This too, will be analyzed, by the 1960 census, which provides a section giving the "percent who completed four years of high school or more."

It should be noted that the suburban shopping center is oriented almost exclusively to shoppers who arrive at the center by auto. For this reason, it appeared reasonable to view the percent of auto ownership of the trading area as being of prime importance in the effort to establish a population characteristic.

CHAPTER IV.

Conclusions

Thusfar, in relating the quality of the center to the quality of the population in the trading area, there have been criteria established for viewing both the center and the population.

If there is a direct relationship between a "quality image" and a trading area population, then the department store center should be surrounded by persons of higher income, a higher educational level and a higher degree of auto ownership than the population surrounding a discount store shopping center.

It is toward proving or disproving this assumption that specific cases within the Boston Metropolitan Area are undertaken.

SECTION TWO---

DETAILS OF THE ARGUMENT

CHAPTER V.

Shopping Centers of the Boston Metropolitan Area

Three large centers exist to the north, west and south of the city of Boston, [24.] and all fit the definition of the large shopping center. [25.] In terms of occupancy, these centers show a marked degree of similarity. [26.] The South Shore center has 52% of its space devoted to department store activity while Shopper's World has 63%. The percent of the total floor area occupied by apparel goods remains constant at approximately 15%. Foods occupy anywhere from 9-14% of the total floor area.

In these three categories, one may view approximately 85% of the total shopping center floor area as consisting of similar occupancies. It is in the remaining 15% of floor area that different categories of occupancy begin to exhibit themselves. For example, 1% of the floor space at the North Shore is devoted to the "special" category, none at the South Shore, and 5% at Shopper's World.

It is possible, also, to view shopping center occupancies from the view-point of "convenience" vs. "shoppers" goods. [27.] It was found that "convenience" goods occupy various percentages of the total floor area that range between 26-35% of the total. "Shoppers" goods in the three centers occupied somewhere between 64-69% of the total floor space. [28.]

The conclusion reached in this analysis, then, is that the large centers in the Boston Metropolitan Area project approximately the same image of quality.

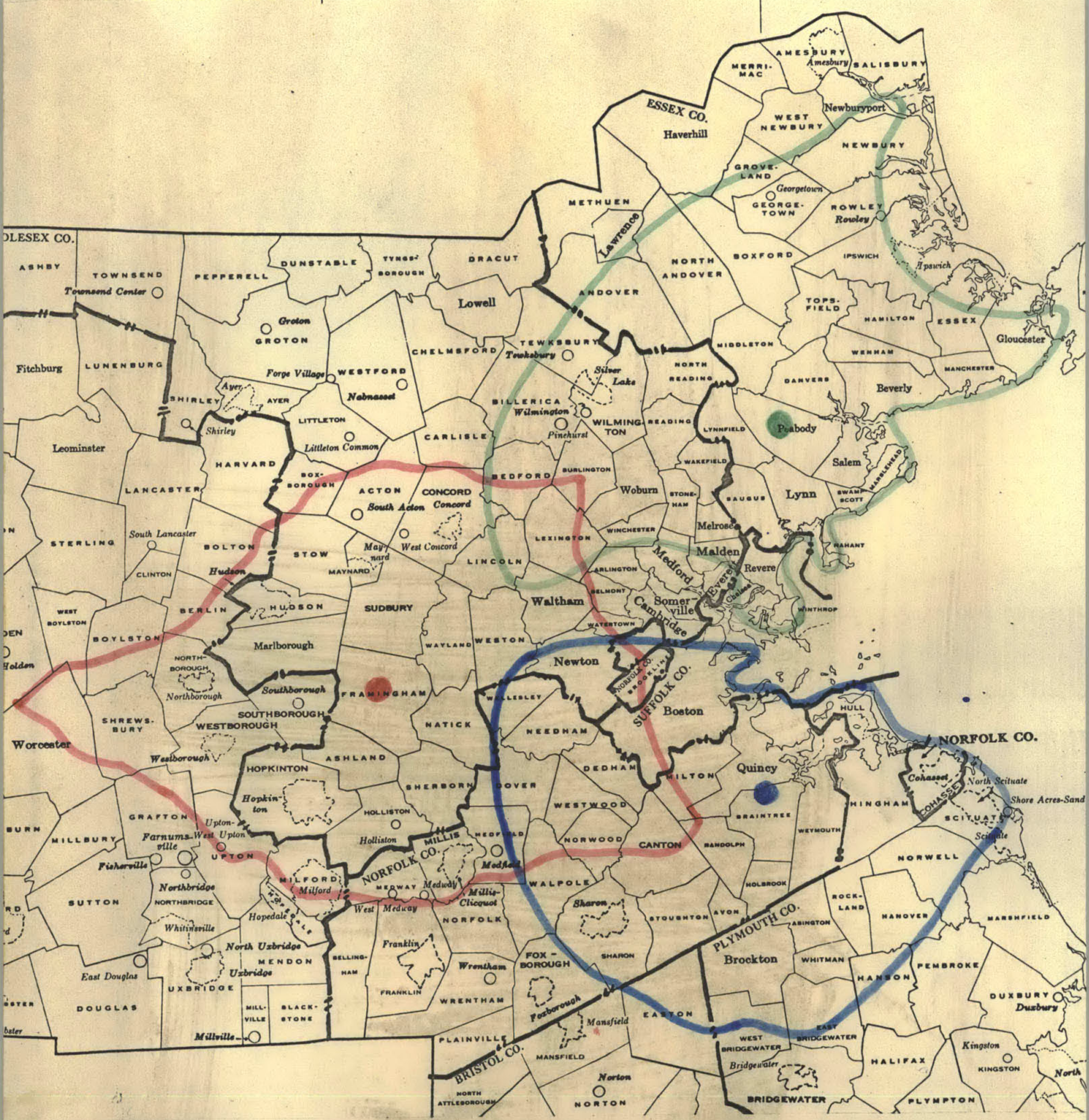
There are many medium-sized shopping centers in the Boston Metropolitan Area but only a limted number are led by a discount operation. Hence, the choice of centers to analyze is restricted. The total number of full-line discount chain stores in the area comes to three: Zayres, J.M. Fields and Turnstyle. The Turnstyle stores do not exist within a shopping center complex and as a result they must be excluded from this analysis. It is also true that at the present time not each of the Zayre or Field's locations is part of a retailing complex that may, according to the previous definition, be correctly labled as a medium-sized shopping center. Representatives of Field's would not say whether their present sites would be expanded to conform to the medium-sized center standards but this was answered in the affirmative by the Zayre management.

For this reason, each of the Zayre locations within the Boston Metropolitan Area,[29.] will be considered as a medium-sized center and that eventually they will follow the same developmental pattern as the Fellsway Shopping Center in Medford.[30.]

The extent of the trading area of a large shopping center is a function of the amount of time people will spend in order to reach the retail facility. Although everybody appears to agree that the trading area should be expressed in terms of time spent in travel, few seem to agree on a definite time figure. Thompson mentions that the typical large center will have an isochrone of thirty minutes while the figure of forty-five minutes was considered conservative in the analysis of the King of Prussia shopping center in Pennsylvania.

All agree, however, that the trading area of the large center is relatively larger than that of other shopping center types. Admittedly, the sage-like question of "how large is large?" comes into consideration at this point, but the use of a thirty-minute radius from the center includes such a large population of any metropolitan area that the addition of another ten or fifteen-minute interval probably will not bring into consideration people whose character varies substantially from that living within the thirty-minute radius. For this reason, the population living within a 30-35-minute isochrone from each of the three large centers will form the basis of the following population analysis.

With this assumption in mind, the North Shore trading area would include parts of Middlesex, and Essex Counties; the South Shore has a trading area consisting of parts of Bristol, Middlesex, Norfolk and Plymouth Counties; and Shoppers' World consists of pats of Middlesex, Norfolk and Worcester Counties. (See the following map.)[31]



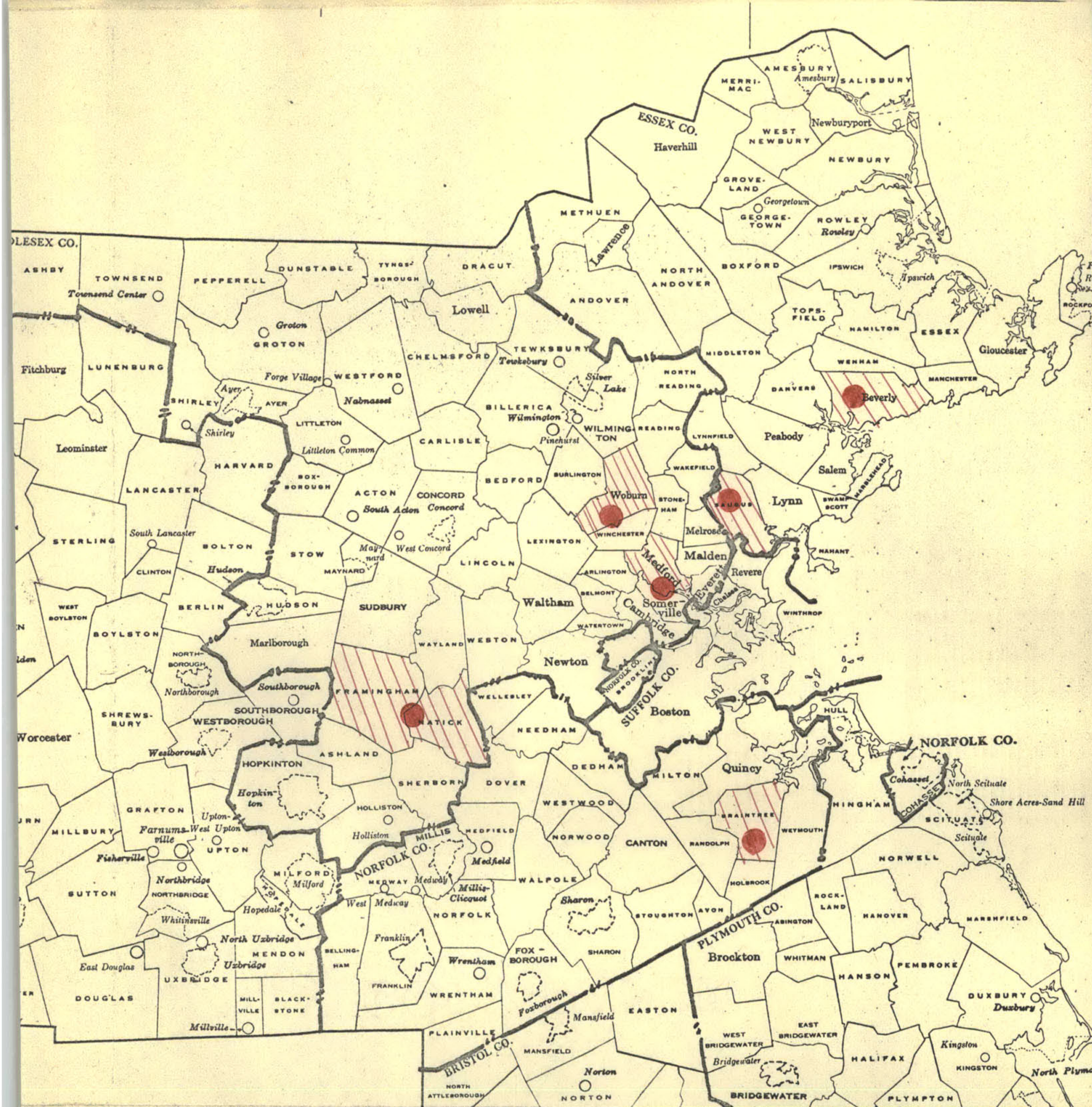
LOCATION AND TRADING AREAS* OF 3 LARGE SHOPPING CENTERS IN THE BOSTON METROPOLITAN AREA

*based on 30-35 minute isochrone.

Location	Name of Shopping Center	County Lines
FRAMINGHAM	SHOPPER'S WORLD	
BRAINTREE	SOUTH SHORE SHOPPING CENTER	
PEABODY	NORTH SHORE SHOPPING CENTER	

The establishment of trading areas for the medium centers presented difficulties of various kinds. If one were to assume the twenty-minute isochrone mentioned previously by Thompson, one would be imprisoned by the fact that the centers at Beverly, Saugus, Medford and Woburn would have a substantially large part of their individual trading areas in common. As no information was available as to where each person in these areas did his shopping, and as there was no time to make a survey of the shoppers at the time this research was undertaken, it was decided to force an arbitrary solution to what became "the trading area problem" of the medium-sized centers.

For these reasons, the population considered as being in proximity to the Zayre Centers is taken to include the town or city in which the center is located. (The single exception to this is the Zayre Center located in Natick, for this center is located directly on the Framingham-Natick line. Hence, in this case, the trading area included a combination of the two towns.) (See the following map.)



LOCATION OF ZAYRE Medium-Sized Shopping Centers

LOCATION

County Lines

the trading area

CHAPTER VI.

Establishing the Character of the Trading Area Population

A comparison between the populations living in proximity to the two different types of centers cannot be made until the trading populations of each center type have been considered.

The following information gives the essential population characteristics of those persons living in proximity to the regional shopping centers.

Population Characteristics of the Large Trading Area*

Large Center	Total Trading-Area Population	Median Income	% Under $3000	% Over $10,000	% who completed four or more years of highschool	% of auto registration
North Shore	674,000	$6500	11%	19%	48%	31%
Shopper's World	852,000	$6700	10%	20%	51%	35%
South Shore	728,000	$7000	9%	23%	58%	36%
The range of Difference	178,000	$500	2%	4%	10%	5%

* For the basic information from which this data was derived see Appendix IV: Large Centers - The Character of the Trading Area Population.

It should be noted that the North Shore Shopping Center, which is the largest of these three centers, [32.] has the smallest total population living within the 30-35-minute isochrone, the lowest median income, the highest percentage of persons earning less than $3000 annually, and the lowest percentage earning over $10,000 annually. In addition, the population within the trading area showed the lowest percentage of auto ownership and of school completion.

The variations however, which do exist between the trading area population of the North Shore and the others, do not appear significant enough to necessitate a reduced quality image. It is true that the North Shore Center has the largest number of square feet per one-hundred population, but there is little evidence to ascertain if this is important. [33.] From the statistics gathered it is difficult to say if the other centers should have been built with additional square footage; it may be that the largeness of the North Shore is a function of the lack of competitive facilities which existed in that area at the time of construction. Certainly, Shopper's World is surrounded by retail facilities of quality such as the Wellesley Center and this may account for the square foot total per one-hundred population being substantially lower than that of the North Shore.

The fact that the "range of difference" remains slight and that it may be explained to a reasonable degree allows one to consider whether the Zayre medium-sized center is located in an area of different trading characteristics than those of the large centers.

Population Characteristics of the Medium-Sized Trading Area*

Zayre, Medium-Sized Center by Town Location	Total Trading Area Population (i.e. pop. of town)	Median Income	% Under $3000	% Over $10,000	% Who completed 4 years of high school or more	% of 1960 auto registrations
Beverly	36,100	$6710	11%	18%	59%	30%
Braintree	31,000	$7470	7%	24%	60%	33%
Medford	70,000	$6690	9%	20%	50%	29%
Natick and Framingham	73,400	$7500	7%	26%	63%	34%
Saugus	20,700	$6890	7%	17%	51%	35%
Woburn	31,200	$6650	8%	16%	55%	30%
The Range of Difference	52,700	$850	4%	10%	13%	6%

* For the basic information from which this data was derived, see Appendix V - Zayre Medium-Sized Centers: The Character of the Trading Area Population.

CHAPTER VII.

Conclusions

Despite the fact that the "range of difference" for the medium-sized center is wider than that of the large center, the trading area populations appear similar statistically. This indicates that, although the "lead" store (and hence the whole shopping center) has a definite and discernible character, the population of their respective trading areas do not coincide.

If the "quality image" projected by the shopping center was related to the population which are in their trading area, it would be logical to assume that the Zayre medium-sized centers would have located in those twenty towns with a lower median income.[34]

The inescapable conclusion is that the "quality image" of the shopping centers studied is not reflected by the character of their trading area population. The data does not prove or disprove that a relationship exists between shops and shoppers.[35] But the data does show that the question of whether shops should be related to shoppers when considering the location of large centers is an inconsequential consideration for the planner to make. The data presented herein indicates that a city planner cannot make the assumption that the full-line discount store will locate in areas where the population has a very "low" (or "high") economic character.

SECTION THREE---

SUMMARY AND SUGGESTIONS FOR FURTHER RESEARCH

The basic hypothesis set forth in Section One was that the "quality image" projected by a shopping center might serve as an indicator of the character of the trading area population. In the Conclusion of Section Two, it was shown that centers of dissimilar quality were located in the midst of trading areas with unvarying population characteristics.

But one is limited by being unable to view a trading area population as being representative of actual shoppers. Although the gross population statistics were similar despite the type of trading area, it may be that the shoppers who frequent the centers, compose only a small fraction of the gross statistics. There is nothing in this Thesis which contradicts the fact that stores and centers possibly filter the type of purchaser who buys from them, but the gross population figures do not corroborate this relationship.

If one assumes that the actual shoppers at a center are related in kind to the character projected by that center, then the city planner must make certain the appropriate land areas are reserved for the development of retail sites of substantially different character; these reserved areas should be probably in proximity to the people who will use them.

But this assumption may be incorrect. As one commentator states, ".... when most of our population was quite unsophisticated, shopping was a form of entertainment, highly regarded entertainment. But in recent years, among more and more shoppers (and always in direct ratio to the advance in public

intelligence) shopping has become very much of a chore and even a bore." [36]
This same commentator continues in the same vein when he mentions that "it was the better-informed shopper who led to the appearance and subsequent growth, of the various forms of discount retailing." [37]

The question becomes then, whether or not shoppers and shops have a predictable relationship in terms of the quality image projected by the shops. Perhaps the answer lies not so much in our comprehension of such factors as income, education and marital status but rather our comprehension of mobility which is a product of the combination of rising income, increased auto ownership and increased leisure, taking advantage of the time that mobility requires. The continuation of these factors means that the choice of shopping location will increase correspondingly as additional retail facilities come within "target" distance.

But as mobility increases the concept of trading area must correspondingly decrease. There comes a point where mobility increases the size of a trading area population until it becomes a hollow concept. In addition, it may be that one store within a shopping center is unique. This uniqueness then generates a trading area far in excess of that of the rest of the center; but a person coming to that one store may also go into the other stores of the center and the idea of a fixed trading is further dissolved.

Moreover, some commentators speculate that there does not seem to be any relation between shops and shoppers. Weiss, for example, states that it was the high-income, sophisticated person whose purchases led to the advancement of discount retailing,[38.] and if this is true, then these shoppers must have traveled relatively longer distances to get to the original, out-of-the-way locations that signify (because of low capitalization, poor credit, etc.) the beginners of any retail revolution.

How does this affect present city planning practice? Planners have long assumed that there are generally three shopping center types - i.e., the large, medium and small centers mentioned in Part One of this paper - and that their trading areas exist within certain predetermined limits. According to this assumption, small centers which carry "convenience" goods have a small trading area while large centers carrying predominantly "shoppers" goods have a large trading area. The medium center, which carries a mixture of "convenience" and "shoppers" goods supposedly has a medium-sized trading area.

These trading area assumptions in regard to centers of the "mixed" and "shopper's" goods variety should be reviewed. It is my contention that rigidity of trading area does not exist and that planners are incessantly worried and trying to prove a retail need on an inadequate basis.

Although this Thesis does not contain information which will lead to a proof of the claim made, it is strongly suggested that further research be undertaken toward a view of proving or disproving the idea of fixed trading areas.

Perhaps the best method of investigation would be to inventory all the license plates of all the vehicles coming in and out of various shopping centers, and to do this over an extended period of time. The place of auto registration can be established and a map drawn showing the location of the center in respect to where the shoppers came from can be made. (The addition of a questionnaire might be used to investigate whether shops and shoppers are related.)

This method would be tedious and would require excessive personnal stationed at all hours of a shopping center's business day. The problems of securing the personnal and the money concomitantly involved might serve as an uncrossable barrier in respect to conducting the investigation in this manner.

This type of investigation may be avoided in part by conducting an on-the-spot sampling designed to reveal both the place from which shoppers come and their median income.

A second method of investigation could begin with the annual sales volume of the centers to be studied. After securing the sales figures one could proceed by asking how large a trading area must there be in order to support "that" volume? Care should be taken to include competing retail facilities as their volumes will force a broadening of the "trading area" necessary to support the center in direct question. It might be even more useful to classify the amount of sales by types of goods and show the different trading areas necessary to support each type.

The central problem in this method is to secure the sales volumes, for the real estate and retailing world regard these figures in much the same way as the OSS regarded the names of their secret agents.

Another subject of investigation would be to compare the location of various medium-sized centers which project different quality images. It should be pointed out that in this thesis large centers have been compared to medium-sized ones which does not allow for conclusions based on a comparison of different medium-sized shopping facilities.

SECTION IV--

POSTSCRIPT: A CRITICAL VIEW

The author is perfectly aware of the fact that questions will arise concerning the validity of certain statements contained within this paper. The purpose of this section is to acquaint the reader with these areas of controversy in the hope that they will clarify the content of the paper to an additionally significant degree, for the most important result of an academic work is not the beguiling of readers into the acceptance of a particular viewpoint, but rather making an attempt to increase the understanding of the subject-matter at hand.

Part I.

Although a comparison of discount vs. department stores is used within this paper, the distinction will probably not be valid in the future due to an upgrading of discount stores and a downgrading of department stores.

There do exist, in any metropolitan area, centers which project a quality image far above and beyond that of a large shopping center. In the Boston Metropolitan Area the older centers of Wellesley and Belmont would serve this function. It may have been useful to compare such centers to the quality image of the shopping centers mentioned in order to establish a more precise definition of "high, medium and low" quality.

A definition of a discount and department store is missing. It is only done by innuendo and yet the comparison between the two, forms the basis argument of the paper.

There may exist additionally sensitive indices of a particular population's character other than those used from the 1960 census. (They still seem adequate to this author however).

There exists also a problem of broad scale averages. Averages over a scale as large as the trading areas either of the large or medium-sized centers are quite likely to be similar no matter where in the region their averages are taken. On the other hand the statistics for the Zayre locations are similar to those of the large center trading areas because Zayre has secured locations in median municipalities.

Part II.

It was assumed that the 15% of total floor space in which differences between the occupancies of the large centers were insignificant; this may have been an incorrect assumption.

The medium-sized centers were limited to those in which a Zayre filled the function of lead store. In this respect a unique situation was analyzed and several principles were then applied to obtain the results.

The units for which population statistics were available were large units which on many occasions fell outside, to a significant extent, of the boundaries of the trading area being characterized. It will be recalled that a time estimate, of the part each of these large units contributed to the total trading area, was made. This estimate, because it was gross, may be in error. When census tract data of the towns is listed, a better estimate of the trading area characteristics will be possible.

APPENDICES

Appendix Number I.

Basic Information and Type and Number of Stores

Basic Information

North Shore

Opened August 1958

1,026,000 square feet of retail area

Parking space for 8,000 automobiles

Shopper's World

Opened October 1951

500,000 square feet of retail area

Parking space for 6,000 automobiles

South Shore

Opened March 1961

880,000 square feet of retail area

Parking space for 6,500 automobiles

Number and Type of Stores Located In the Three Large Shopping Centers of the Boston Metropolitan Area

Stores and Activities [1]	North Shore	Shopper's World	South Shore
APPAREL			
children's clothes	1		
men's clothes	3	1	2
shoes	6	4	4
women's clothes	8	8	2
women's hats	1	1	1
women's hosiery	1		1
DEPARTMENT STORES (by name) [2]			
Filene's	1		1
Jordan Marsh	1	1	
R.H. Sterns			1
Sears, Roebuck and Co.		1	
FOOD			
candy and ice-cream	3	1	2
cafeteria or restaurant	1	2	2
liquor	1	1	1
supermarket	2	1	1
HARD GOODS			
furniture	1		1
gift shop and home furnishings	2		1
hardware and paint	1		
jewelry	1	1	2
optical	1		
photography		1	1
radio, TV, records	1	1	2
sporting goods			1

Footnote #1. When a store sells two or more products the major product is the only one included in this list.

Footnote #2. Department stores are listed by name because of the variations that exist between them. For example, Filene's does not sell appliances but Jordan Marsh does.

Number and Type of Stores Located in the Three Large Shopping Centers of the Boston Metropolitan Area, continued:

	North Shore	Shopper's World	South Shore
MISCELLANEOUS			
drug store	1	1	2
florist			1
luggage and hand bags	1	2	1
pets	1		
stationery	2		1
variety or junior dept.	1		2
yarn and textiles	2	1	
SERVICE SHOPS			
banks	2	1	1
barber	1	1	1
brokerage	1		
dry cleaners	1	1	
loan office	1		
tobacco	1		1
travel agency			1
women's hairdresser	1	1	1
shoe repair			1
SPECIAL			
auditorium		1	
church	1		
cinema		1	
vacancies		9 (3.)	
TRANSPORTATION			
gas station		1.	

Footnote #3. The management has plans to rent these stores soon but would not make available those prospects being considered for the space.

Appendix Number II.

Large Centers: Percent of Occupancy by Store Type

The following percentages were derived by adding the square foot totals of the categories found in Appendix I. and dividing by the total number of square feet of retail area in the center.

Percent of Space Occupied

Category	North Shore	Shopper's World	South Shore
Apparel	15%	14%	15%
Dept. Store	62%	62%	52%
Food	9	9	13
Hard Goods	7	1	13
Miscellaneous	4	2	5
Service	2	1	2
Special	1	10	
Transportation		1	
	100%	100%	100%

APPENDIX III.

Large Centers: Percent of Total Floor Area Occupied by "convenience" and "shopper's" goods

The following percentages were derived by assigning to each category in Appendix I. a "shopper's" or "convenience" goods quality and dividing the total number of square feet in the category by the total retail area of the center. In addition, a category entitled "not included" was added for such items as churches, etc... "Shopper's" goods were taken to include the categories of department stores and hard goods. "Convenience" goods were taken to include all of the apparel, food, miscellaneous, and service stores. The "not included" category took into account all of those listed under the heading, "special".

	North Shore	Shopper's World	South Shore
"convenience" goods	30%	26%	35%
"not included"	1%	10%	---
"shopper's" goods	69%	64%	65%
	100%	100%	100%

APPENDIX IV.

Large Centers: The Character of the Trading Area Population

	North Shore	Shopper's World	South Shore
Population living within a 30-35 minute isochrone from the center [1.]	674,000	852,000	728,000
Median Income [2.]	$6500	$6700	$7000
% Earning less than $3000 annually [3.]	11%	10%	9%
% Earning more than $4000 annually [3.]	19%	20%	23%
% who completed four or more years of highschool [4.]	48%	51%	58%
% of population owning automobiles [5.]	31%	35%	36%

Footnote #1. This figure was derived by adding the populations of each town or city within the 30-35-minute isochrone.

Footnote #2. Median income figures were unavailable for each town located within a trading area. As a result the median income figure was derived in the following manner:

1. The median income of the county (available from the 1960 census) was assumed to be that of the total county population living within the trading area in question.

2. The median incomes of the county were then weighted in accordance to the percent of population of the total trading area that they represented.

Footnote #3. As in the case of median income, figures for the population earning less than $3000 and over $10,000 annually were unavailable. As a result the figures were derived in the following manner:

1. The percents of the county population earning less than $3000 and over $10,000 annually (available in the 1960 census) was assumed to be that of the total county population living within the trading area in question.

2. The county percentages were then multiplied by the total county population living within the trading area so as to arrive at the actual numbers of persons who were in each income bracket.

3. The total number of persons in each of these income brackets was added to derive a total trading area figure. This figure then was divided by the total population of the trading area by the number of persons in each income group.

Footnote #4. Only a limited number of towns had percents dealing with this category. In this case the different percentages available for the towns within each county were multiplied by the town population to which they applied. The number of persons, to which this statistic applied, was then added and divided by the total number of persons living within those towns; in each case this number represented more than 80% of the total county population - and, the result was a county-wide percentage. This county-wide percentage was weighted in accordance to the number of persons of the total trading area that it represented. The result was a figure relating the total trading area population who had "completed four years of high school or more."

Footnote #5. The total number of automobiles in each town and city of the State of Massachusetts is available (Auto Registrations in Massachusetts by Cities and Towns: Year 1960, Marketing Division: Boston Record-American-Advertiser) and by simply adding the number of automobiles in each town within the trading area the total number of autos within the trading area was derived. Dividing this figure by the trading area population gives the percentage of auto ownership. It should be noted that the statistics included in this section of the report could have been gathered on the basis of family units as opposed to individuals. However, the number of persons living in families represented a variation of only 1% for the counties included in the proximate area of the regional centers. (See Table No. 82 of the 1960 Census report, titled Massachusetts General Social and Economic Characteristics.) The persons living in families included in the proximate area of the Zayre community centers showed a variation of only 2%. (Ibid, Table No. 72). For this reason, statistics relating to families or to population amount to the same comparison.

APPENDIX V.

Zayre Medium-Sized Centers: The Character of the Trading Area Population

	Beverly	Braintree	Medford	Natick & Framingham [1]	Saugus	Woburn
Population living within the town in which the Zayre medium-sized shopping center is located [2]	36100	31100	70000	73400	20700	31200
Median Income of the town population [3]	$6710	$7470	$6690	$7500	$6890	$6650
Percent of persons in the town earning less than $3000 annually [4]	11%	7%	9%	7%	7%	8%
Percent of persons in the town earning more than $10,000 annually [5]	18%	24%	20%	26%	17%	16%
Percent of population of town who completed four years of high school or more [6]	59%	60%	50%	63%	51%	55%
Percent of town population owning automobiles [7]	30%	33%	29%	34%	35%	30%

Footnote #1. The statistics pertaining to each of these towns were weighed in accordance to their respective populations.

Footnote #2. The source for this information is the 1960 Census for Massachusetts.

Footnote #3. Ibid.

Footnote #4. Ibid.

Footnote #5. Ibid.

Footnote #6. Ibid.

Footnote #7. See Footnote #5 in Appendix IV.

APPENDIX VI.

The Median Income of Various Towns Located Within the Boston Metropolitan Area in Relation to Those Towns Where the Zayre Medium-sized Centers are Located

The Median Income of Various[1] Municipalities Located Within the Boston Metropolitan Area in Relation to Discount Store Locations.

Median Income	No. of Cities and Towns in Each Group	Location of Zayre Medium-Sized Centers	Location of Other Discount Stores in the Boston Metropolitan Area
$3,000- 3,500			
3,500- 4,000			
4,000- 4,500			
4,500- 5,000			
5,000- 5,500	2		
5,500- 6,000	8		1
6,000- 6,500	10		1
6,500- 7,000	10	4	2
7,000- 7,500	10	2	1
7,500- 8,000	6		2
8,000- 8,500	4		
8,500- 9,000	1		
9,000- 9,500	3		
9,500-10,000	1		
10,000-10,500			
10,500-11,000			
11,000-11,500	1		
11,500-12,000			
	56	6	7

1. Municipalities for which a median income was available.

2. Location of other discount stores in the Boston Metropolitan Area Lynn (1), Cambridge (1), Medford (2), Natick (1), Swampscott (1), Dedham (1)

3. See following page for footnore Number 3.

Because the median income locations of the Zayre stores could be the result of a specific policy on the part of Zayre's management, an inventory of discount stores in the Boston Metropolitan area was made to see if the Zayre policy was unique. It was found that 44% of the other discount stores located at the same levels of median income as the Zayre centers (of the remainder 26% located at levels of lower median income and 26% in higher levels of median income then Zayres.) Those twenty municipalities with a median income of from $6,500 to $7,500 contained approximately 70% of the full-line discount department stores in the Boston Metropolitan area. This would seem to indicate that there is a policy of locating in trading areas with similar population characteristics as the large centers, i.e. that discount stores refrain from locating in those areas where population is very poor or very rich.

FOOTNOTES

1. Jacobs, Jane, The Death and Life of Great American Cities, Random House, New York, 1961, p. 473.
In addition see:
Thompson, R.G., A Study of Shopping Centers; Research Report No. 16, Real Estate Research Program, Institute of Business and Economic Research, University of California, Berkeley, 1961. (In his definition of the term "shopping center" Thompson expounds the idea of the "related" center, p.3.)
Cohen and Applebaum, "Evaluating Store Sites and Determining Store Rents," Economic Geography, Vo. 36, No.1, Jan. 1960, p. 8.

2. Different shopping center types are generally conceeded to draw their shoppers from various distances (see Chapter Two). The total distance (or time) that prospective shoppers will travel (or spend) to reach the center is labled the "trading area".

3. Thompson, R.G., states in his definition of shopping centers (p.3) that this is one of the ways in which a center is related.

Berenson, T.W., states that "quality stores locate in a quality area." This statment was made during an interview on April 20, 1962.

4. Abrams, E.D., An Analysis of Shopping Areas in the Suburbs of Stockholm, City Planning Department of Stockholm, August 1961, p. 3.

5. Thompson, p.3.

6. Thompson, p.4.

Nelson, R.L., The Selection of Retail Locations, New York, 1959, p. 175.

7. This 30-minute driving span is considered by many to be unduly conservative. For example, the original analysis for the King of Prussia Shopping Center in Penn. arrived at a figure of 45 minutes. The study originally made for Shopper's World in Framingham, Mass., arrived at a 29-minute figure but a survey made by Jordan Marsh three years later showed that one-third of that department'store's customers were coming from distances in excess of fifty miles. The source for this information is: Kelley, E.J., Shopping Centers: Locating Controlled Regional Centers, The Eno Foundation, Saugatuck, Conn., 1956, p. 88.

8. It is most difficult to describe a "discount store" with any great degree of accuracy. Let it suffice to say that the operation of one may be characterized as being of a lower-margin, a lower-service level and a higher turnover than any of the other more traditional retail store types. See Fortune Magazine, Vol. LXV, No. 4., April 1962, p.99.

9. A chain store is generally considered to be a retail operation consisting of two or more separate retail outlets.

10. Thompson, p. 6.

11. The following quote will illustrate this point:

> "Accepting the dictum that 'if you can't lick 'em, join 'em', old line retailers are turning into discounters themselves. Discount sellers, who operate with a markup of 19% to 24% (v. 39% in department stores) have already captured nearly one-third of the nation's department store trade, and Fortune predicts this week that their sales in 1962 may well rise another 50%, to $7 billion. Two of the biggest U.S. department store chains - May and Allied - have branched into discounting." Time Magazine, Vol. LXXIX, No. 13, March 30, 1962, p.30.

12. This paper is not concerned with centers of this classification due to difficulties in gathering census tract statistics on a two- or three-block scale, in addition to the relative insignificance (when compared with the other two categories) of this type of center in affecting the shopping habits of a large population.

13. The large centers' department stores occupy over 50% of the total floor area while in medium-sized centers, the lead store occupies anywhere from 40-50% of the total floor area. Thompson, pages 4-5.

14. Fortune Magazine, April 1962, p. 100.

15. There are innumerable articles on this subject in almost all the publications dealing with current trends in retailing. See for example, Shopping Center Age, Vol. I, No.4, April 1962, p. 30.

16. Report on the 32nd Annual Boston Conference on Distribution, Boston, 1959, p. 65.

17. For a discussion of the differences in the cost of construction of the two types of store see Fortune Magazine, April 1962, p. 101.

18. In all fairness to the discount-oriented center, however, one should remember that it is more difficult for the discount center to attract tenants and in some cases they (the discounters) are even discriminated against. As Discount Store News states, Jan.1, 1962, p. 12, "Including a large discount store as a tenant would hurt other tenants, some developers feel, and all but eliminate chances of getting a traditional department store as a tenant..." But, as the trend seems to be moving in the direction of allowing discounters to move into large centers, the diagnostic value of the discount store vs. the department store as used in this thesis will decrease. (See Shopping Center Age, April 1962, p. 33).

19. Fortune, April, 1962, p. 102 ( ) part of quote.

20. Thompson, p. 11 ( ) mine.

21. "The....income of the population within the trading area...of the shopping center is indicative of the present and future sales volume which may be developed." Thompson, p. 7.

22. Op Cit.

23. Weiss, Edward B., The New Era of the Sophistication Shopper: Marketing's Stake in the Low-Margin Retailing Revolution, Doyle-Dane,-Bernback, Inc., New York, 1960.

24. North Shore Shopping Center in Peabody (North); Shopper's World Shopping Center in Framingham (West); South Shore Shopping Center in Braintree (South).

25. See Appendix #1- Large Centers: Basic Information plus Type and Number of Stores.

26. The basis for the following information may be found in Appendix III - Large Centers: Percent of Occupancy by Store Type.

27. "The number and type of outlets chosen for the distribution of a particular product depend largely upon consumer buying habits, and in classifying these habits, marketing experts draw a distinction between two kinds of goods. "Convenience" goods are those relatively low-priced items - food, cigarettes, toothpaste, and today even automobile tires - which the consumer normally buys at the nearest available outlet. They tend to be perishable goods or items bought on impulse or in an emergency, and they are usually sifficiently standardized for the consumer to accept another brand if the one he prefers is not in stock...."Shopping" goals, on the other hand, comprise automobiles, appliances, office equipment, and other relatively expensive items in the purchase of which the consumer is likely to shop around and compare brands, deferring the purchase for a considerable time and perhaps traveling considerable distances before making his decision." 75 Harvard Law Review 4 - "Restricted Channels of Distribution under the Sherman Act," p. 795. See also, Nelson, R.L. p. 175.

28. See Appendix III - Large Centers: Percent of Total Floor Area Occupied by "convenience" and "shoppers" goods.

29. Beverly, Braintree, Medford, Natick, Saugus, and Woburn.

30. The Fellsway Shopping Center originally consisted (as do most of the others) of a free-standing Zayre store and a free-standing food store. Three years later the area between the two free-standing units was occupied by approxi-

mately twenty new stores. (According to T.W. Berenson, developer of the shopping center.) In much the same way the Zayre management expects their other locations to become community centers.

31. The inclusion or exclusion of Suffolk County area poses a dillema. An arbitrary decision was made to eliminate the area from consideration because of the complexities presented by the existence of public transportation and a proliferation of competitive retail facilities. In light of these factors guide-lines for establishing the effect of this large population upon the three shopping centers could not be made with any reasonable degree of accuracy. (Note that the trading areas overlap; when overlapping occurred, the population was counted as belonging first to one center and then double-counted to the other.)

32. See Appendix I.

33.

Center	Trading Area Pop.	Total Sq. Ft.	Sq. ft./100 pop.
North Shore	674,000	1,026,000	160
Shopper's World	852,000	500,000	60
South Shore	728,000	880,000	120

34. See Appendix VI.

35. In the material presented by Kelley (p. 87) it is apparent that many potential shoppers of Shopper's World were excluded from the economic analysis which preceeded development due to the fact that they were not considered to be "related" to the type of center envisioned.

36. Weiss, p. 20.

37. Ibid, p. 21.

38. Ibid, p. 23.

BIBLIOGRAPHY

Books, Reports

Abrams, Edwin D. An Analysis of Shopping Areas in the Suburbs of Stockholm, City Planning Department of Stockholm, 1961.

Auto Registrations in Massachusetts by Cities and Towns: Year 1960, Marketing Division, Boston Record-American-Advertiser, Boston, 1961.

Editor and Publisher, Market Guide, New York, 1961.

Gruen, Victor and Smith, Larry. Shopping Towns USA: The Planning of Shopping Centers, New York, 1960.

Hoyt, Homer. A Re-examination of the Shopping Center Market, Washington, Urban Land Institute, 1958, Technical Bulletin, No. 33.

Hoyt, Homer. Marketing Analysis of Shopping Centers, Washington, Urban Land Institute, October, 1949, Technical Bulletin, No. 12.

Jacobs, Jane. The Death and Life of Great American Cities, Random House, New York, 1961.

Kelley, Eugene J. Shopping Centers: Locating Controlled Regional Centers, The Eno Foundation, Saugatuck, Connecticutt, 1956.

McKeever, J. Ross. Shopping Centers: Planning Principles and Tested Policies, Technical Bulletin No. 20, Washington, D.C., Urban Land Institute, July 1953.

McKeever, J. Ross. Shopping Centers Re-Studied: Emerging Patterns and Practical Experiences, Technical Bulletin No. 30, Washington, D.C., Urban Land Institute, Feb. 1957.

Massachusetts: General Population Characteristics, United States Census of Population, 1960.

Massachusetts: General Social and Economic Characteristics, United States Census of Population, 1960.

National Planning and Research Inc. The Center for the North Shore, Boston, 1956.

National Research Bureau. Directory of Shopping Centers in the United States and Canada, Chicago, 1961.

Nelson, Richard L. The Selection of Retail Locations, New York, 1959.

Nichols, J.C. Mistakes we have Made in Developing Shopping Centers, Washington, D.C., Urban Land Institute, Technical Bulletin No. 4, 1945.

Regional Shopping Centers Planning Symposium, The Chicago Region Chapter, American Institute of Planners, Chicago, 1952.

Report of the 31st Annual Boston Conference on Distribution, Boston, 1959, pages 61-89.

Report of the 32nd Annual Boston Conference on Distribution, Boston, 1959, pages 62-81.

Smith, Paul E. Shopping Centers: Planning and Management, East Lansing, Michigan, 1956.

Thompson, R.G. A Study of Shopping Centers, Research Report No. 16, Real Estate Research Program of the Institute of Business and Economic Research, University of California, Berkeley, 1961.

Voorhees, Alan. Shopping Habits and Travel Patterns, Technical Bulletin No. 24, Urban Land Institute, Washington, D.C., 1955.

Weiss, Edward B. The New Era of the Sophisticated Shopper: Marketing's Stake in the Low-Margin Retailing Revolution, Doyle-Dane-Bernback, Inc., New York, 1960.

Magazine and Newspaper Articles

Alevizos, J.P. & Beckwith, A.E. "Downtown and Suburban Shopping Habits of Greater Boston," Boston Herald-Traveler Corp., Boston, 1954.

Applebaum, William and Cohen, Saul B. "The Dynamics of Store Trading Areas and Market Equilibrium," Annals of the Association of American Geographers, Vol. 51, No.1, March, 1961, pp. 73-101.

Cohen, Saul and Applebaum, William. "Evaluating Store Sites and Determining Store Rents," Economic Geography, Vol. 36, No. 1, January, 1960, pp. 1-35.

Discount Store, News of:
January 1, 1962 (this one is quoted)
"The Discounters," Fortune Magazine, Vol. LXV, No. 4, April, 1962.

Harvard Law Review, Feb., "Restricted Channels of Distribution under the Sherman Act, p. 795.

"Discount Houses", Shopping Center Age, Vol.1, No.4, April 1962.

Time Magazine, March 30, Vol. LXXIX, No.30, 1962, p. 30.

Interviews:

Berenson, T.W., President, T.W. Berenson and Associates, 131 State Street, Boston, Massachusetts.

Cohn, Saul, Professor of Geography, Boston University, Boston, Massachusetts.