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A Comparative Study Of Three Suburban Malls: The Influence of Physical Environment On Pedestrian Behavior

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ABSTRACT

This study proceeds from the assumption that physical environments effect human behavior; and, in general, the study is concerned with discerning how the environmental characteristics of three different suburban shopping mall systems influence pedestrian behavior patterns. In particular, the study is interested in learning which of the three mall forms is most effective in generating pedestrian activity on the mall itself.

The malls included in the study are located in a densely populated suburban area east of Los Angeles, California. The data used in this study was acquired by observing pedestrian behavior patterns on the three malls over a two year period. The results of these observations were then compared and analyzed within the context of each mall's environmental system.

The analysis suggests that as the quality of the symmetrization and integration of the structural components of a mall increases, the capacity of a mall's overall environmental system to facilitate the merger of human activity onto the mall increases.

Introduction

The maturation of urbanization in metropolitan regions spawns traffic congestion in the older suburban downtown business districts. Then a multitude of shopping centers emerge near the surrounding suburban housing developments. Frequently, the emergence of these suburban shopping centers has acted as a catalyst for a corrosion process which effects both the economic and environmental health of suburban central business districts.

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The "Downtown Mall" is a concept utilized by many suburban communities to revive the downtown area. However, these downtown malls are increasingly experiencing competition with the newly developed regional shopping malls, whose environmental qualities are a marked improvement over the structural characteristics of the traditional suburban shopping centers. A common objective of the regional shopping mall and the converted suburban central business district mall is to sustain a healthy economic posture by providing for the citizen an agreeable environmental context within human scale in which he can shop. This necessitates that pedestrianism becomes the main mode of transportation in a mall system with the mall itself serving as the nucleus of the system.

This paper analyses data obtained from a survey made in 1970 and 1971 which included two forms of the converted suburban central business district mall (SCBDM) and a regional shopping mall (RSM). The converted SCBDM's are those in El Monte, and Pomona, California; the RSM is the Montclair Plaza in Monclair, California. The accompanying line sketches are not scaled replicas of the malls, but do delineate the basic physical characteristics of the Montclair Plaza, and the El Monte and Pomona Malls. The three malls are in the San Gabriel Valley, a densely populated suburban region east of Los Angeles.

This study assumes that physical environment affects human behavior, and thus is concerned with discerning the nature of human behavior as it is influenced by the environmental characteristics of the malls included in this study. In particular, we are interested in learning which of these mall forms is most effective in generating pedestrian activity on the mall proper, and then attempt to determine why.

After observing the three malls to acquire an understanding of their structural differences, 18 pedestrian counts were made at each mall. The sites for the counts were chosen by selecting a store's name or address out of a tumbler. However, at the El Monte and Pomona Malls the names of stores within 20 yards of the ends of the Malls were not placed in the tumbler. This was done to ensure the integrity of the mall; and to obtain behavioral data which reflected to the fullest extent the influence of the mall's environment.

On 24 different occasions at each mall, numerations were made of the number of people who during the same observation period, entered a store's mall and rear entrances. These stores were selected by the same random process mentioned above.

In addition, 200 persons were interviewed at each mall as they were about to enter a retail establishment: 100 persons at the mall entrances of the stores and a hundred at the rear entrances. These persons were asked about their shopping intentions; e.g., were they going to visit one store or more, and those entering stores from the parking lot area who indicated they intended

visiting one or more other stores were asked how they would reach their other destinations.

Lastly, in the parking lot area of each mall a 100 persons leaving the malls were asked if they had visited stores they did not intend to visit.

All observations, interviews, and numerations were made between 10:00 a.m-12:00 p.m. and 2:00-3:00 p.m., on Wednesdays; 2:00-4:00 p.m., and 6:00-8:00 p.m., on Fridays; and 10:00 a.m.-12:00 p.m., and 2:00-3:00 p.m., on Saturdays. The time periods selected represent those periods in which (after several familiarization observations) the largest number of people usually appeared on the malls; Friday and Saturday represent the busiest shopping days, and Wednesday the "Typical mid-week day." The observations and numerations were made during half hour sessions divided as equally as possible over the time periods. In addition, due to the mild climate in Southern California, and scheduling, no numeration was made during inclement weather.

This study concerns itself with analyzing samples of observed behavior within three varying environmental contexts, and thus assumes an object people system which simplifies the causal relationship between space and behavior. Clearly other variables are involved in mall systems. For example:

1. the quality of architectural design of structures included in the mall;
2. the extent of economic and physical decay present (which is applicable in varying degrees to the El Monte and Pomona Malls):
3. the image the mall projects in terms of the variety and quality of its stores (while the Pomona Mall–due to its size–contains many more businesses than the El Monte Mall or Montclair Plaza, each of the malls retains an approximate proportional balance of retail establishments);
4. the marketing area of the mall (given the continuous high density of population in the contiguous suburban area where the malls under consideration are located, there appears to be little variance among the three malls on this latter variable).

The El Monte Mall represents an effort to transform several blocks of the main thoroughfare in an aging central business district of a suburban community into a mall. This segment of the central business district was predominately of strip commercial character. Along this section of the thoroughfare the sidewalks on both sides were broadened, planters for trees, shrubs, and flowers installed, and indentations for diagonal parking were staggered on alternate sides of the street, thus creating a winding effect in the alignment of the street. Parking lots were constructed at the rear of the stores running parallel to the Mall itself, with walkways to the parking areas running between the stores and located approximately in the middle of each block. The side streets intersecting the Mall were left open to both automobile and

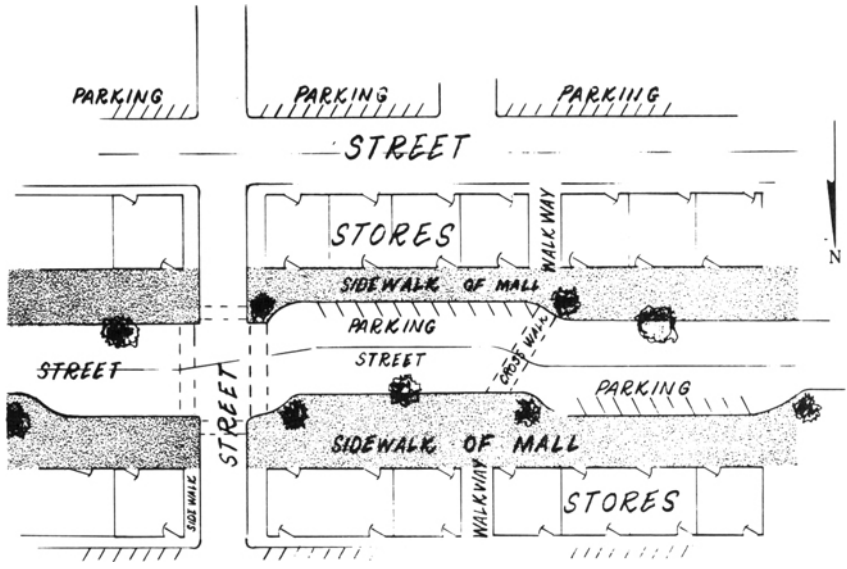

Figure 1. Typical section - El Monte Mall.

pedestrian traffic. In addition, many of the merchants constructed customer rear entrances to provide easy access for the customer to and from the store and rear parking areas. In sum, the El Monte Mall represents an effort to accommodate the automobile and the pedestrian. (See Figure 1.)

The Pomona Mall, like the El Monte Mall, represents an attempt to revive what predominately was a physically and economically decaying major strip commercial thoroughfare caught up in the process of urbanization. Similar to the El Monte Mall, this modified rectilinear commercial thoroughfare has parking lots running parallel to the Mall at the rear of the stores, and many of the merchants have installed customer entrances facing these parking areas. In addition, benches, fountains, lighting fixtures, and planters have been installed at various points along the Mall for citizen enjoyment and utilization.

However, the length of the Pomona Mall is approximately three times that of the El Monte Mall, and the differentation between the grade levels of the sidewalk and street were eliminated at Pomona. The result, creates one grade level for the surface of the Mall on which only pedestrian traffic and small public shuttle buses are allowed. Planters and fixtures were used as landscaped barricades to close off most of the cross streets at the point where the street would bisect the Mall; thus providing parking facilities adjacent to the Mall and access to the Mall via the side street. Here again we see an attempt to accommodate both the pedestrian and the automobile; with the balance tilted in favor of the pedestrian. (See Figure 2.)

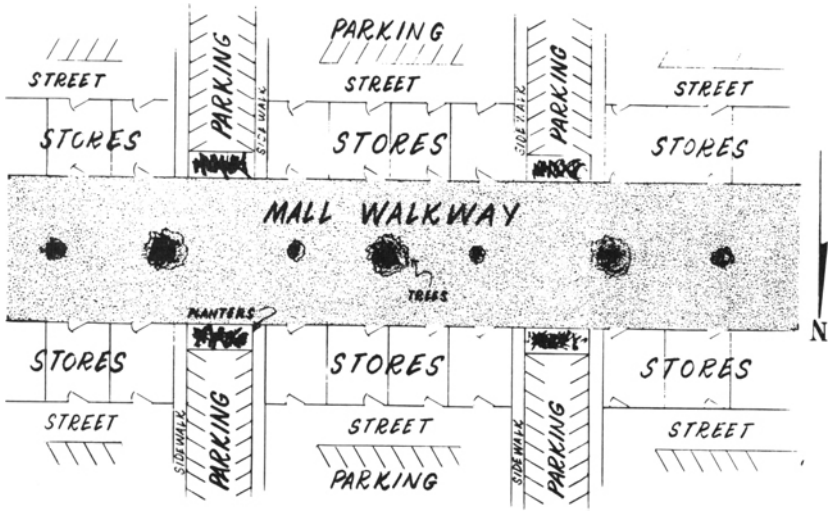

Figure 2. Typical section - Pomona Mall.

The Montclair Plaza was constructed as an integrated pedestrian mall system. This Mall is an inclosed structure, rectilinear in design, centrally located in a large parking area with store facilities on all sides of the Mall. In addition to the five public entrances leading directly onto the Mall from the parking area; the three anchor chain stores, one at each end of the Mall and one in the middle of the south side, have customer entrances from the parking area. In addition, one restaurant has a side customer entrance off a walkway which leads to a Mall entrance. The public must enter the other stores from the Mall. There are benches, planters, and frequently changing displays on the Mall for public enjoyment. The economic motivations for this commercial Mall are obvious, however, the manner in which the automobile and pedestrian are separated, basically differentiate this Mall from the El Monte and Pomona Malls. (See Figure 3.)

At the time the pedestrian observations were made the average number of persons per half hour session crossing a given point on the El Monte Mall was 412, on the Pomona Mall 377, and on the Montclair Plaza 703. At those stores selected for observation during the half-hour sessions where both store entrances were observed, 57% of those entering the stores used the rear entrances at the El Monte Mall, and 43% used the mall entrances; at the Pomona Mall, 61% used the rear entrances and 39% used the mall entrances; and at the Montclair Plaza, 16% used the rear entrances of the anchor stores and 84% used the mall entrances. However, it should be noted that it was more difficult to use rear entrances at the Montclair Plaza since they were not available at most stores.

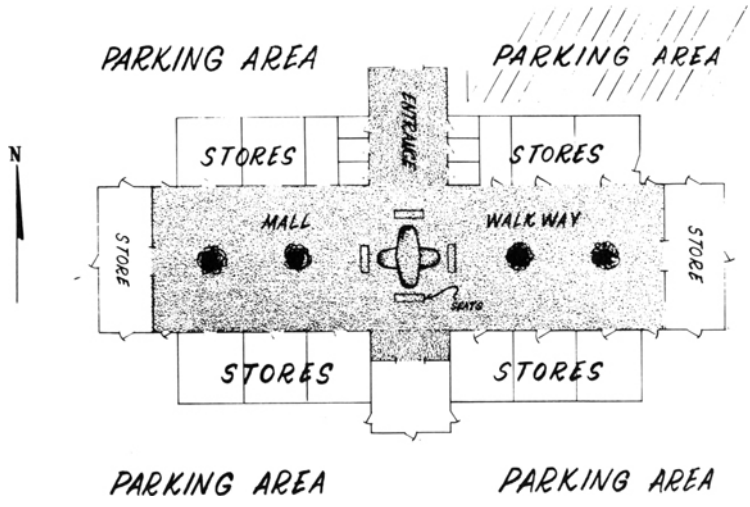

Figure 3. Montclair Plaza.

Of the hundred persons interviewed at El Monte entering stores from the mall 28 indicated they would visit one store while at the Mall, and 72 said they intended on visiting two or more stores. Of the hundred persons entering stores via rear entrances, 53 indicated they would visit one store, and 47 intended on making more than one visit. Of these 47 persons making two or more visits 32 indicated they would reach their other destinations via the mall, nine by walking through the rear parking areas, and six by using their automobile.

At the Pomona Mall 21 of the hundred persons entering stores via the mall entrances indicated they would be making one stop, while 79 said they intended to visit more than one store. Sixty-two of the hundred persons entering stores via the rear entrances said they were visiting one store, and 38 persons said they would visit two or more stores. Of these 38 persons intending to visit more than one store, 26 said they expected to reach their other destinations via the mall, 4 by walking through the parking area, and 8 via automobile.

Turning to the Montclair Plaza, seven of those entering stores via the mall entrances indicated they would make one stop; and 93 said they intended on making two or more stops during their visit to the Mall. Fifteen persons entering the anchor stores from the parking area said they would only visit the store they were entering, while 85 persons indicated they would visit the anchor store and at least one other. All 85 persons said they would reach their other destinations via the mall.

Finally, of the hundred persons in each mall's parking area who were

asked, "if they had visited stores they had not intended to visit"; 89 at Montclair Plaza, 42 at Pomona Mall, and 37 at El Monte Mall indicated they had done so.

Earlier it was suggested that for a mall to effectively meet its objectives the following characteristics should prevail: The overall environment of the mall system must not assail the human senses; the comprehensive design and physical form of the mall ought to be within human scale; pedestrianism must be the main mode of transportation in the mall system; the mall itself must serve as the nucleus of the system; with respect to both human activity and physical form.

What then can be said of the three malls in this study, when their structural design and environmental systemic qualities are measured against the above mentioned criteria? An examination of the El Monte Mall shows that by permitting the major thoroughfare to retain its automobile conveyance function, the designers have essentially bisected and thus fragmented the Mall's environmental system. In addition, the retention of the cross streets that intersect the mall as conveyors of automobile traffic, and the installation of public walkways and rear store entrances to provide access to and from the rear parking areas, have further contributed to the fragmentation of this Mall's environmental system.

Consequently, the fragmentation of the "Mall" and the presence of automobiles on the "Mall" subjugates pedestrian flow, and creates an environmental system which is hostile to the pedestrian by increasing noise and air pollution and endangering public safety.

On the other hand, the Pomona Mall represents a physical design and an environmental system with a greater degree of cohesiveness than found in the El Monte Mall. This condition exists primarily because of the absence of the automobile from the Pomona Mall and the elimination of most of the intersections from the Mall system.

However, while the Pomona Mall design and environmental qualities are more pedestrian oriented and more in line with human scale characteristics than those of the El Monte Mall, the pervasiveness of the overall design of the Pomona Mall (due to the installation of numerous public rear store entrances and the permitting of automobiles on the many side streets which provide pedestrian access to the Mall) prevents the Mall itself from achieving its full potential as the system's focal point or nucleus.

Conversely, the structural design of the Montclair Plaza has achieved the physical separation of automobile and human; with the overall effect resulting in the creation of an environmental system which is agreeable to the human senses. Pedestrianism is the single mode of transportation on the Mall itself. Furthermore, the exclusion of the automobile, along with the element of limited access onto the Mall from the parking area, contributes to the ability of the Mall itself to serve as the environmental nucleus of the Mall system.

The above analysis suggests that in terms of generating pedestrian activity on the mall, and in meeting the other criteria set down for an effective mall, the Montclair Plaza ought to outperform the El Monte and Pomona Malls. The analysis further suggests that the Pomona Mall ought to be somewhat more effective than the El Monte Mall.

In general, an examination of pedestrian behavioral data supports these conclusions. For example, with respect to the Montclair Plaza the pedestrian behavioral data reveals:

1. that at the time and place the numerations were made there were almost twice as many pedestrians on the Montclair Plaza as opposed to the Pomona and El Monte Malls.
2. that while 84% of those persons entering stores at Montclair entered from the mall entrance, only 43% and 39% utilized mall entrances at El Monte and Pomona respectively,
3. the behavioral data indicate that a greater percentage of the people entering stores from both the mall and parking area entrances intended on making more than one visit while at the Montclair Plaza.

Furthermore, all those persons making multiple visits and entering stores from the parking area at Montclair indicated they would use the mall to reach their next destination, while approximately a third of those persons making multiple visits from rear entrances at El Monte and Pomona indicated they would not use the mall to reach their next destination.

Moreover, the data signifies that there were twice as many unintended or spontaneous visits on the Montclair Plaza than the El Monte or Pomona Malls.

Thus, there appears to be no question that–according to the criteria set forth in this paper–the Montclair Plaza is a far more effective Mall than the El Monte or Pomona Malls. However, at first glance the behavioral data obtained from El Monte and Pomona seem to contradict the suggestions of the environmental analysis, and portray the El Monte Mall as somewhat more pedestrian oriented than the Pomona Mall. But, on close examination the differentation between the data collected from the two Malls appear slight.

More specifically, the two Malls seem to balance each other off with respect to the data on single and multiple visits to stores on each mall. For example, 72 people at El Monte as opposed to 79 people at Pomona indicated when interviewed at mall store entrances that they intended to make more than one visit while at the mall, while of those persons entering rear store entrances, 38 at Pomona and 47 at El Monte indicated they would make more than one visit. Furthermore, approximately two-thirds of those persons making multiple visits via rear store entrances at each mall said they would reach their next destination via the mall. Similarly, the five point spread between the 42 unintended or spontaneous visits recorded at the Pomona Mall, as opposed to the 37 visits of this nature recorded at the El Monte Mall,

out of the hundred persons canvassed at each mall does not appear to be significant.

However, the pedestrian count shows that El Monte had an average of 35 more persons on the Mall per half hour observation periods than Pomona. Also, El Monte had 4% more people entering stores from the Mall during the store entrance observations than did Pomona. But it seems reasonable to assume that this small apparent increase of "pedestrian presence" on the El Monte Mall can be explained by noting that the El Monte Mall provides automobile parking facilities on the "Mall" itself and that streets carrying automobile traffic intersect the Mall at regular intervals. This environmental characteristic of the El Monte Mall runs counter to the human scale, pedestrian orientation, and environmental criteria set forth for desirable and effective malls. Therefore, by and large the Pomona mall, while in no way equal in effectiveness to the Montclair Plaza, is a better environmental design and thus a more desirable Mall form than the El Monte Mall.

Often the same businessmen who have spent years devising ways to lure customers into their stores end up opposing malls, because they are laboring under the belief that people nowadays will more readily shop from the automobile than on foot. It is hoped that this study will rectify that misconception. The data demonstrates that in a proper environmental context people will remove themselves from the isolation of their automobiles and shop on foot. Furthermore, this analysis demonstrates that neither just the removal, nor the assimilation of the automobile into a mall system can in and of itself create an effective and pleasing environmental system of human scale.

In essence, this study suggests that as the quality of the symmetrization and integration of the structural components of a mall increases, the capacity of a mall's overall environmental system to facilitate the merger of human activity onto the mall increases.

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