

# Inner-City Reinvestment: Neighborhood Characteristics and Spatial Patterns Over Time

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**Summary.** Renovation activity within 68 census tracts comprising old New Orleans, Louisiana, neighborhoods, as measured by real estate transfer (sales) rates, were estimated from a series of social, demographic, housing and locational characteristics of the tracts. The physical remnants of the nineteenth-century city – as measured by architectural design, age of housing and to some extent location of earlier wealthy neighborhoods – were more predictive of the popularity of an area for renovation than were the current social characteristics of the tracts as reflected in their racial composition, lack of poverty and age structure characteristics. It is concluded that while gentrification supports the belief from ecological theory that the wealthy may find many 'niches' within the urban area to be optimal residential locations, especially if the structures are considered very architecturally desirable, the renovation movement has brought into question earlier assumptions about the importance to middle-income home buyers of the social characteristics of a neighborhood.

Urban gentrification, as the process of middle-class ecological 'invasion' of lower-class, central-city neighborhoods in the 1970s has come to be called (Pattison, 1977), is an alteration of the twentieth-century trend in which the wealthy are more likely to live in the suburbs than in the central city. The expansion of urban business and industry into adjacent residential zones induced the wealthy to abandon core residences in favor of the benefits of less crowding and more space (internal and external) at the periphery, once it became accessible through improved transportation (Burgess, 1929). Now, however, there are signs that this pattern may be changing.

The effect of housing renovation on inner-city neighborhoods in old US (Black, 1975; Lipton, 1977) and some Canadian, Australian and European cities (Williams, 1976; Greater London Council, 1977;

Centre for Urban Research and Action, 1977; Pitt, 1977; Carlson, 1978) may challenge the adequacy of classical ecological theory to explain the residential spatial distribution of social classes. It is the goal of our research to (i) demonstrate theoretically that gentrification is less a refutation of the traditional urban growth theory than a reflection of more fundamental causal mechanisms already present in the theory; and (ii) apply the urban growth theory in conjunction with residential location theory in an effort to predict the spatial and social characteristics of the residential choices which renovators make in old inner-city neighborhoods.

Similar to gentrification's challenge to the expected metropolitan location of the homes of the wealthy are the challenges posed by Sjoberg (1960) and Schnore (1967), who observed that preindustrial cities demonstrated a reverse pattern in which the

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elites dominated the center of the city. While no adequate theory presently exists which accounts for both the preindustrial and industrial patterns of social class distribution (Schnore, 1967; Berry and Kasarda, 1977), the importance of the elites' values and their ability to make residential choices which optimise satisfaction of these values may be a common thread of both preindustrial and industrial patterns as well as of the more recent gentrification phenomenon.

The spatial distribution of social classes takes note of the qualities of the valued locations within the city and the differential abilities of the social classes to compete for them. Sjoberg (1960, pp. 98-99) states: 'The highly valued residence . . . is where fullest advantage may be taken of the city's strategic facilities.' For the preindustrial urban elite, that location was at the center of the city. For the industrial elite, transportation and communication have permitted a greater 'field' from which to choose a location, and the reduced land costs at the periphery have given direction to their choices. However, industrial elites' access and preference utilities may not always be higher at the periphery. Rather, any number of locations at varying proximities to the center may be desirable residential locations and the higher social classes have a higher degree of locational freedom as compared with the lower classes (Firey, 1947; Schnore, 1967; Guest, 1977).

Assuming then that the more affluent have the entire urban 'field' from which to select their residential 'niche', where can we expect that location to be if the normal peripheral site is not selected and what qualities will the location and structure possess? The answer lies in (i) a determination from urban growth theory of the location and co-occurrence within locations of amenities of urban residence and (ii) an understanding of the similarities and differences between the participants in gentrification and other movers with regard to the value they place on particular place and residence amenities.

### **Residence and Location Preferences of Gentrifiers**

Residential location researchers have proposed a convergence of family, occupational and status changes as reasons for the new interest in central-city residential locations. Such changes include a shrinking family size with a concomitant decline in

the preoccupation of obtaining child-related residential amenities and an increase in spare time available for non-child-related activities; greater numbers of two journeys to work (Long, 1980); and the seeming devaluation of the status of suburban location by the generation raised in the suburbs (London, 1980).

Surveys of the renovators in several cities have supported these speculations (Fichter, 1977; Laska and Spain, 1979; Gale, 1980). Renovators are single individuals or couples without children, generally employed in middle-class professional positions in central-city firms who characterise suburban housing as unattractive and proximity to cultural and recreational inner-city amenities as important. They are generally seeking to buy their first homes.

Further, the developing body of case studies of renovators indicates that while *housing* is important, other characteristics of the *neighborhood* and its *location* may be considered as they are by movers in general (Berry and Kasarda, 1977). We discuss each of these criteria in turn.

### *Housing*

The structures most valued by renovators are those which are 'distinguished' (White, 1978), historically valuable (Travis, 1973; Bradley, 1978), of suitable size and room arrangement (Clay, 1979) and restorable without tremendous cost (White, 1978).

### *Community/neighborhood*

Renovators likewise are concerned that the neighborhood be physically attractive (Hodge, 1978) or that it be located near such physical amenities as trees, hills, parks or water (White, 1978). Labeled as 'place utility factors' by Travis (1973), other amenities of the neighborhood considered important include 'quality of schools, safety and cleanliness of the neighborhood' (O'Laughlin and Munski, 1979). Conversely, renovators prefer to avoid proximity to industry or heavily commercial areas (Clay, 1979) and proximity to highways or proposed sites of them (Langley, 1976).

Other qualities of the community/neighborhood which renovators would be expected to seek can be labeled as social. Renovators are expected to share with other middle-class movers the preference for socially and racially homogeneous neighborhoods, a

pattern found to be consistent nationally both for the inner city and the suburbs (Farley, 1977). While limited survey research exists to examine the extent to which the renovators may be different, research indicates that they are similar to other movers in desiring such homogeneity (Biggar and Martin, 1976; Laska and Spain, 1979; Spain and Laska, 1982). Finally, as with the physical amenities/deterrents contrast, it would be expected that the renovators would attempt to avoid poverty neighborhoods. Both Clay (1979) and Bradley (1978) suggest that neighborhoods containing sizeable lower-income black populations – Clay adds public housing – will be less likely to be privately renovated.

### *Locations*

The location of a particular residence *vis-à-vis* other points within the urban environment is the third quality of a residential choice. Renovators are concerned that their residential location be central to services (Travis, 1973), employment (Hodge, 1978) and commercial and cultural activities (White, 1978). Is there, however, a direct distance gradient of centrality or does location anywhere within the central city satisfy the centrality preference?

### **Co-occurrence of Residential Characteristics**

Thus while renovators may, as a result of their values, prefer to obtain all of the house and locational amenities reviewed above, city growth over time results in the location of the desired old housing in proximity to poverty and commercial/industrial activity. While the old housing represents the 'highly durable' physical structure of the past (Richards, 1963), a new social organisation, as well as new physical structure, is superimposed upon the city over time. Filtering occurs whereby the poor and ethnic and racial minorities inherit the residences of the rich as they have moved farther to the perimeter of the city (Lowry, 1960) to avoid the encroachment of the non-residential land uses which have expanded from the original central business district and industrial/commercial sectors closer to and sometimes into the old wealthy residential neighborhoods.

Given then that the co-occurrence of many of the usual home buyer preferences, and specifically the

renovators' preferences, is unlikely in the same location, the choice to live in an inner-city neighborhood will result in more serious 'trade-offs' than would be expected if a suburban location had been desired. Tentatively, we propose that the distinctiveness of the house will emerge as most important; and to the extent that this is the case, proximity to the center(s) of historically valuable residential neighborhoods will be more important than centrality to the core of the city, once the central-city location is opted for.

Third, given the small likelihood that housing in need of renovation is located in middle-class neighborhoods, the renovator will not be able to satisfy that class-related preference but will, however, attempt to avoid the neighborhoods containing dire poverty. To the extent that such poverty and race co-occur, it will be expected that avoidance of predominately black neighborhoods will be the case as well. Fourth, environmental attractions/detractions, while important, will rank lower in importance for the renovator than the house and social characteristics of the neighborhood. Finally, given the proposed primacy of the house to the renovator, the pattern of neighborhood popularity over time should reflect concentric rings around the center(s) of historically-valued housing.

### **The Setting**

New Orleans has architectural and ecological remnants of both its eighteenth-century European city as well as its nineteenth-century American city (Gilmore, 1944). Characteristics relevant to the current research include both a nucleus of historically valuable housing near the central business district – the French Quarter – and one farther away from the core of the city containing housing stock of more recent, although old, distinctive construction – the Garden District. New Orleans is a city in which 50 per cent of the housing stock dates before 1939 (US Bureau of the Census, 1972). The oldest structures are confined to the natural levee along the Mississippi River and to the ridge of land – Esplanade Ridge – which wedges inland at the point where the river turns (Lewis, 1976).

While residential racial segregation was limited in the old city due to the 'back yard' pattern of poor blacks living behind their white employers (Gilmore, 1944), twentieth-century trends have increased

segregation and there has developed a black residential belt inland from the river in the backswamp on either side of the ridge (Spain, 1979) but overlapping the original affluent neighborhoods adjacent to the historic district cores. A sector of upper-middle-class housing extends beyond the newest of the two original wealthy areas mentioned above until it reaches a large park and university section. Lower-income whites settled on the river side of this sector as well as 'down river' from the French Quarter similarly adjacent to the docks and warehouses. They live there today as well.

As would be expected from urban theory, commercial and industrial (in the case of a port city such as New Orleans, warehousing and transportation) activities expanded into the old residential neighborhoods. Concurrently, these neighborhoods were abandoned by the wealthy and filtered to the lower classes. As a result of the disinvestment, several public housing complexes were constructed during the 1950s in these same neighborhoods. (See Fig. 1 for the location of other physical characteristics.)

## Methods

### *Renovation Eligibility*

The unit of analysis for the study is the census tract. All tracts within the boundaries of Orleans Parish (the county line coterminous with the city line) which contained residential structures were considered for inclusion. Tracts were defined as *eligible for renovation* based on the age/period of the housing and whether the housing was in need of renovation. The

eligible age/period was determined by examination of an 1890 US Geological Survey map of the New Orleans urbanised area (Lewis, 1976, p. 24) and a determination by several New Orleans architects<sup>1</sup> of the boundaries of neighborhoods which contained principally units constructed before 1939 or in a style considered traditional – i.e., conforming to the long house or 'shotgun' design and exhibiting considerable detail to exterior trim. Whether the housing was in need of renovation was determined by a median value for single, owner-occupied dwellings of \$36,500 or *less* (US Bureau of the Census, 1972).<sup>2</sup> No minimum value was set for renovation eligibility because even the most visually dilapidated, inexpensive housing is generally structurally sound due to the quality of construction and the materials used – usually weather-resistant cypress or thick planks from abandoned barges. Sixty-four full tracts and four partial tracts were thus designated as eligible for renovation.<sup>3</sup>

### *Renovation Activity*

Renovation activity within the 68 tracts was determined by a one-in-seven systematic sample<sup>4</sup> of the chronologically-ordered property transfer records maintained by the Conveyance Office of City Hall from 1 January 1970, to 31 December 1978.<sup>5</sup> All transfers of property containing a structure, which were identified as sales – as opposed to inheritance or a retainership – were recorded and used to calculate the rate of real estate activity within each tract, both for each year and the total for all nine years. The total sample of transfers recorded was 2,225.<sup>6</sup>

<sup>1</sup> Architect and Tulane University School of Architecture doctoral candidate George Hopkins and his associates, all actively involved in residential renovation, kindly evaluated each tract's housing for its architectural attractiveness.

<sup>2</sup> Ten tracts containing old housing were removed on this basis – four comprising the two original historic districts of the French Quarter and the Garden District and six surrounding the large park/university complex.

<sup>3</sup> As a result of the architects' determination of the boundary line of the old housing stock, four tracts were divided and only the old portion used. Real estate transfers were standardised only by the structures within the old section.

<sup>4</sup> Sample size was determined in order to maintain a standard error of < 5 per cent.

<sup>5</sup> While it is obvious that equating total real estate activity with renovation may be questioned, it is believed that within the old residential neighborhoods of New Orleans no other reason for an increase in real estate activity of any sizeable magnitude has existed during this decade except for speculation about the construction of a new span parallel to the current Mississippi River Bridge and a performing arts center at the top of the French Quarter (see Fig. 1). Consequently, we proposed that the increases in activity – two to three fold during the decade – are due primarily to renovation-related reasons (Black, 1975, p. 8). Four principal renovation-related reasons are: (i) purchase of houses for renovation and owner-occupancy, (ii) purchase of houses of multiple-unit structures for renovation and rental, (iii) purchase of commercial structures for renovation and the establishing of business responsive to renovators (Chernoff, 1980), and (iv) the purchase of the last two for existing use – lower-income rental and commercial – in anticipation of future sale for renovation.

<sup>6</sup> The range per tract for the total nine-year period was 9–62. Multiplied by the sampling ratio (7), it would then be estimated that the actual range per tract was 63–427. Thus, the maximum mean transfers per year for any one tract was 47. The total transfers per year for all 68 tracts combined ranged from 149 in 1970, before any of the tracts were determined to be renovating, to 330 in 1978. Again the actual rates (sample times seven) are estimated to be between 1,043 and 2,310.

### Tract Characteristics

Each tract is characterised by 22 variables. Three indicators of *renovation* were used: (i) the existence of 'unusual' real estate activity, (ii) the extent of real estate activity, and (iii) the timing over the decade of such activity. The existence of renovation was measured in three ways: (i) total number of transfers per tract in comparison to all tracts considered, (ii) whether real estate activity increased from one year to another, and (iii) the volume in the peak year of activity in comparison to all tracts considered.<sup>7</sup> Forty-nine tracts were determined to have some renovating activity occurring, 19 did not. For the 49 renovating tracts (1 = renovating, 0 = not renovating), calculations were done to determine the total number of transfers per tract during the nine years standardised by the number of structures in each tract (US Bureau of the Census, 1972)<sup>8</sup> and the peak year of transfers (coded as the year in which the greatest number occurred).

The *locational* characteristics of the tracts included in the analysis are the distance from the midpoint of the central business district (measured in millimeters on a map) and the proximity of five locations, three expected to contain the most desirable structures – two historic districts and the park/university section and two locations expected to contain 'detractions' – the nine public housing projects and the large industrial/warehouse/dock areas. Proximity to these five locations was measured by means of a three-point scale (2 = item within tract, 1 = item within adjacent tract, 0 = item neither within nor in adjacent one).<sup>9</sup> Four measures resulted; proximity to an historic district, large park, public housing project or industry/warehousing.

The *social* characteristics of the tract's residents in 1970 (US Bureau of the Census, 1972) selected for inclusion are: per cent black, per cent 60 years of age or older, median school years completed, per cent unemployed, median income of families and unrelated individuals, median number of persons/unit in

rental, per cent units with greater than 1.01 persons per room, median contract rent and per cent owner-occupied structures.

The characteristics of the *housing per se* in the tracts are: per cent of structures lacking some or all plumbing, median number of rooms, per cent of the structures built before 1939, and per cent of the structures which contain only one unit (US Bureau of the Census, 1972). One additional measure of housing not contained in the census – architectural attractiveness – was included because of the importance attributed to it by renovators (Fichter, 1977; White, 1978; Laska and Spain, 1979; Gale, 1980). The architecture of the tracts was evaluated on a four-point scale (1 = most attractive)<sup>10</sup> by the same panel of architects which evaluated the age of the housing.

### Findings

#### *Existence of Renovation Activity*

Three stepwise multiple regressions were calculated for (i) the existence of real estate activity, (ii) the amount of such activity, and (iii) the peak year of its occurrence. The locational, social and housing characteristics of the tracts were the independent variables. The stepwise multiple regression of the 19 predictor variables on the existence of renovation (0 = none, 1 = some) accounted for 67 per cent of the variance. Table 1 presents the standardised regression coefficients for the first nine variables entered into the equation.  $R^2$  for this set of variables is 0.632.

Analysis of the beta weights indicates that renovating tracts can be differentiated from non-renovating tracts by determining whether a public housing project exists in the tract or in an adjacent one ( $\beta = -0.644$ ). While the strong correlation for housing projects with the existence of renovation ( $r = -0.643$ ) also suggests that they are avoided as locations of dire poverty and the expected accom-

<sup>7</sup> The list of tracts so selected was then compared with the neighborhoods determined to be renovating by recent surveys (Thayer and Waidhas, 1977; O'Laughlin and Munski, 1979; Laska and Spain, 1979). Eight tracts about which there was some uncertainty as to their renovation status as a result of this comparison were examined by a visual inspection of the exteriors of a sample of the transferred structures.

<sup>8</sup> Personal communication with a Census representative resulted in the method used for determining the number of structures in the tract from the reported group data.

<sup>9</sup> Such a short radius was used because it is believed that the impact of the location of both attractions and detractions is not linear but rather declines sharply after a short distance. However, this limited measure may be less useful when used to examine the possible concentric pattern of renovation over time (see Discussion).

<sup>10</sup> Originally a five-point scale was used but as all tracts receiving a value of one were eliminated from the study on the basis of the median value of the housing (greater than \$36,500), the final scale utilised in the analysis was reduced to four categories.

panying social problems, the strength of the statistics for other socioeconomic measures does not suggest a complete avoidance of the poor. Only one purely social measure emerges as a predictor and the direction is negative: education ( $\beta = -0.402$ ) negatively predicts renovation. Income and unemployment as well as race are weak predictors.

The other strong predictors of renovation activity are owner occupancy ( $\beta = 0.827$ ), persons per rental unit ( $\beta = -0.553$ ) and unit crowding ( $\beta = 0.663$ ). The latter two of these three variables are perhaps architectural measures as well as social ones; the positive beta weight for crowding and the negative one for persons per rental unit may reflect division of the older structures into many small units; while dense in terms of persons per room, they are not occupied by families as large as would be found in the public housing projects which are located in the non-renovating tracts.

#### *Extent of Renovation*

The second multiple regression analysis utilised the same predictor variables with the dependent variable

this time being the extent of renovation within the 49 tracts which had greater real estate activity. Forty-five per cent of the variance is explained by these variables (Table 2). All of the variables with the strong beta weights are either locational or the variables pertain to the housing itself and to its availability for sale. Again, as in the previous analysis, higher owner-occupancy ( $\beta = 0.630$ ) as well as a smaller per cent of structures currently containing one unit ( $\beta = -0.407$ ) are predictive of a high rate of renovation. The extent of renovation is, likewise, a function of the location of the tracts, but for two measures not in the direction predicted. The beta weight for distance from the historic districts is  $\beta = 0.310$  and in the predicted direction; however, proximity to the parks/university sections ( $\beta = -0.350$ ) and to the warehouses/industry ( $\beta = 0.284$ ) were unexpected. Renovation of structures for commercial use may have contributed to the latter.

Finally, the per cent of residents 60 years old or older in the tract demonstrates a moderately strong beta weight with renovation activity ( $\beta = 0.421$ ). Although it is impossible to determine from

**Table 1**

*Stepwise multiple regression for existence of renovation activity with selected variables (N = 68)*

Variable	R <sup>2</sup>	$\beta$	r
Proximity to housing project	0.414	-0.644	-0.643
Attractiveness of architecture	0.472	-0.262	-0.408
Median years of education	0.552	-0.402	0.189
Per cent single-unit structures	0.564	-0.282	-0.086
Per cent owner-occupied units	0.571	0.827	0.422
Income of residents	0.584	-0.197	0.418
Persons per rental unit	0.601	-0.553	-0.146
Per cent unemployed	0.617	0.172	-0.174
Per cent units $\geq$ 1.01 persons	0.632	0.663	-0.378

**Table 2**

*Stepwise multiple regression for extent of renovation activity with selected variables (N = 49)*

Variable	R <sup>2</sup>	$\beta$	r
Proximity to industry	0.086	0.284	0.293
Per cent residents 60 years +	0.194	0.421	0.207
Proximity to park	0.293	-0.350	-0.251
Architectural attractiveness	0.356	-0.212	-0.249
Proximity to historic district	0.383	0.310	0.214
Distance from CBD	0.410	0.149	-0.021
Per cent unemployed	0.421	0.063	0.137
Rent	0.431	-0.248	-0.149
Per cent single-unit structures	0.437	-0.407	-0.173
Per cent owner-occupied units	0.452	0.630	-0.085

aggregate data whether the elderly own their own homes, it is believed that whether as owners or renters, the existence of housing occupied by the elderly results in a larger stock of available housing on the market as the elderly become unable to live alone (Biggar, 1979).

#### *Timing of Neighborhood Popularity*

In addition to the analysis of the characteristics and location of tracts by the overall nine-year real estate activity rate, the tracts were examined according to the peak year in which the activity occurred.<sup>11</sup> The stepwise regression (Table 3) reflects the importance of the housing variables. The age of the housing ( $\beta = -0.729$ ) and its architectural attractiveness and style ( $\beta = 0.508$ ) explain about one-quarter of the total explained variance which is ( $R^2 = 0.567$ ), with the tracts which peaked earlier more likely to contain such housing as reflected by their respective correlation coefficients (attractiveness  $r = 0.427$ , age  $r = -0.342$ ).

Turning to the social characteristics, while renovating tracts in general can be predicted by a higher percentage of owner-occupied housing than the non-renovating tracts, the tracts which renovated earlier are conversely predicted by a lower percentage of owner-occupancy than those which renovated later in the decade ( $\beta = 0.571$ ). The timing of renovation in renovating tracts also is a function of the percentage black ( $\beta = -0.418$ ) within the tract and persons per rental unit ( $\beta = -0.777$ ), both negative in direction. The locational variable most

predictive of the timing of renovation is *proximity* to industry/warehouse areas ( $\beta = -0.576$ ) as opposed to avoidance of them. While the beta weights for proximity to housing projects and historic districts support the hypothesised association with renovation, they are relatively weak compared with the effects of proximity to industry/warehouses. The location of such activity near the river in the old sector where the oldest housing is located suggests that interest in obtaining old, architecturally-attractive housing supersedes the renovator's desire to avoid 'detractions', controlling of course for all other tract characteristics.

Finally, analysis of the locational, socioeconomic and housing characteristics within the tracts was undertaken in order to consider the *actual* options from which the renovators made their housing choices at different times during the decade. Examination on a tract map (Fig. 1) of the contiguous areas (as opposed to specific tracts) which peaked at the different times during the decade demonstrate first that many more neighborhoods were renovating at the end of the decade than at the beginning. Those which peaked the earliest were in proximity to either one of the two historic districts or the university/park section. Those which peaked during the middle of the decade were next to either the same three areas or the neighborhoods which had peaked earlier, thus indicating a 'contagion' effect if not a clearly-observable concentric 'ripple' effect from the historic district cores. The area between the 'American' historic district and the university/park area was filled in by renovation during the middle

Table 3

*Stepwise multiple regression for year of peak activity with selected variables (N = 49)*

Variable	$R^2$	$\beta$	$r$
Architectural attractiveness	0.182	0.508	0.427
Per cent units built before 1939	0.236	-0.729	-0.342
Income of residents	0.297	0.123	-0.116
Proximity to housing project	0.332	0.251	0.110
Per cent lacking plumbing	0.379	-0.161	0.037
Proximity to industry	0.425	-0.576	-0.116
Per cent black	0.460	-0.418	0.058
Distance from CBD	0.479	-0.260	-0.223
Proximity to historic district	0.508	-0.122	-0.114
Per cent residents 60 years +	0.521	-0.248	0.019
Per cent owner-occupied units	0.527	0.571	-0.061
Persons per rental unit	0.539	-0.777	0.032

<sup>11</sup> This is considered a tentative measure of the exact year because the sample transfers per year were relatively small – albeit systematically sampled – and the difference between years often no more than one or two transfers.

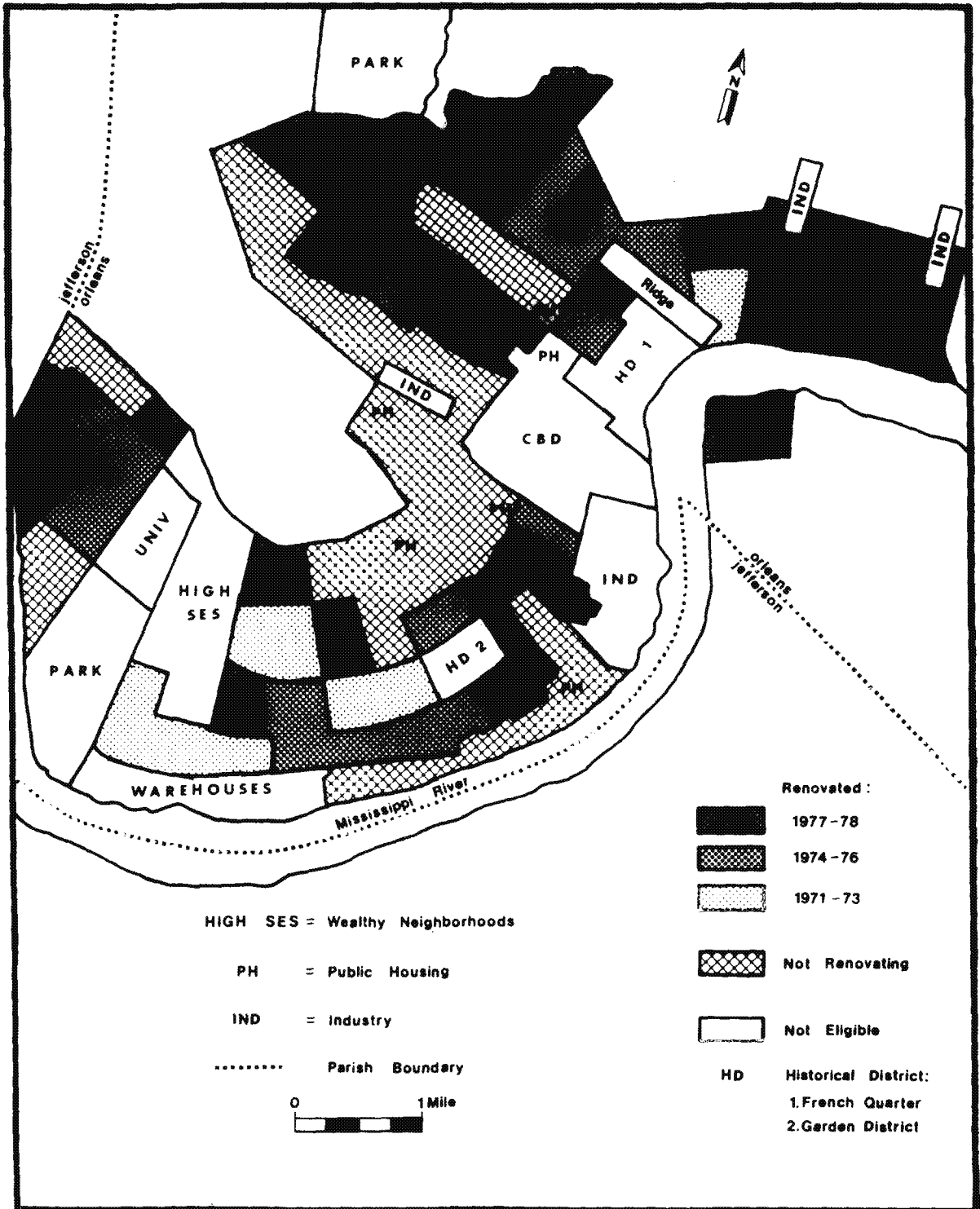


Fig. 1. Year real estate activity peaked in tract



years and renovation began on the out-of-town side of that same university/park area. The area extending from the French Quarter along the Esplanade Ridge had the most renovation activity during that middle 1970s period. And, those neighborhoods which reached their highest turnover rates at the end of the decade (they may have gone even higher after data collection was terminated) were either proximate to non-renovating tracts or ones which contained public housing projects.

While the tracts renovating at different times during the decade did demonstrate differences on several locational measures, there appear to be only slight differences on the socioeconomic characteristics of residents in 1970 (Table 4). The earlier-

**Table 4**  
*Comparison ( $\bar{x}$ ) of early versus later renovating tracts*

	1971-75 (N = 11)	1976-78 (N = 38)
CBD distance	162.00	144.26
Historic district proximity	0.36	0.18
Parks/university proximity	0.09	0.13
Housing project proximity	0.18	0.21
Warehouse/industry proximity	0.91	0.50
Per cent black	36.18	40.28
Per cent 60 years +	19.54	20.34
Median education	10.06	9.89
Per cent unemployed	6.12	6.69
Median income	6681.82	6426.32
Median rent	67.09	67.87
Per cent owner-occupied	26.27	24.87
Per cent lacking plumbing	3.46	4.40
Median number of rooms	4.06	3.99
Median persons/rental unit	2.18	2.21
Per cent units $\geq$ 1 person/room in rental units	11.97	13.01
Per cent structures built < 1939	81.63	75.13
Architectural attractiveness	2.91	3.58
Per cent single-unit structures	34.64	34.29

renovating tracts contained on the average 4 per cent fewer blacks and their residents earned \$250.00/year more. Finally, as indicated also by the strong correlation coefficients (see Table 3), the tracts differed greatly on two housing characteristics. A greater per cent of the housing in the earlier-renovating tracts was built before 1939 and is on the average more architecturally attractive.

## Discussion

Three measures of renovation activity within census tracts were regressed on 19 housing, socioeconomic and locational characteristics of 68 inner-city New Orleans census tracts in order to analyse the strength of the characteristics as predictors of renovation. While the three measures of the renovation – existence of renovation, extent of renovation, and its timing – were predicted by somewhat different sets of variables, we are tentatively able to conclude that the predicted preferences and trade-offs of the renovators have been generally supported.

First, the qualities of the *housing* emerge as good predictors in all three analyses although they are the strongest for the measure of the timing of a tract's popularity.<sup>12</sup> The age of the housing and its architectural attractiveness were strong predictors of renovation as were the most indirect measures of housing 'worthy' of renovation such as owner occupancy, crowding and multiple unit-structures – the latter two reflecting larger subdivided houses as New Orleans has limited multiple-unit apartment buildings.

Support, however, was not so strong for the corollary hypothesis regarding housing – that renovation will begin and be more extensive adjacent to the historic districts and will expand out and diminish in extent from there. While proximity to the historic districts is a modest predictor of the extent of renovation, it is a weak predictor of the timing of it. However, the clustering of the earliest renovation near the historic districts (which can be seen on Fig. 1), while not always immediately adjacent (the only location for which a positive measure would have been assigned), lends some support for the historic district proximity as a predictor of timing as well as extent of renovation. That the tracts immediately adjacent to historic districts did not renovate first may have been due to the speculative prices of those areas which have been perceived as valuable ever since their historic designation many years ago.<sup>13</sup>

*Locational* characteristics of the tracts were overall, as proposed, weaker predictors of renovation than

<sup>12</sup> While it is impossible in such research to avoid completely the problem of ecological fallacy, we have attempted to be cautious about attributing housing characteristics of the tract to individual units, in this case those which are renovating. With respect to the age and architectural attractiveness of the structures, there is less of a problem due to the homogeneity of the units and thus the small variance *within* tracts on these characteristics.

<sup>13</sup> Personal communications with realtors.

were the qualities of the housing. As discussed below with reference to poverty, public housing projects are a definite deterrent to renovation. However, the other proposed negative locational characteristic – industry/warehousing – not only is not a deterrent, but rather is strongly predictive of renovation. To the extent that old housing and industry/warehousing coexist in close proximity, it may not be possible to avoid living near non-residential land uses. The trade-off may be inevitable given the strength of the age of the housing as a predictor of renovation. While movement to the suburbs may have been strongly influenced in earlier decades by the encroachment of industry/warehousing into old inner-city neighborhoods, the current renovation trend suggests that the avoidance of non-residential land uses may have been over-emphasised in explaining the centrifugal movement of the middle and upper classes from the central city.

With regard to the other proximity measures not yet discussed, distance from the central business district appears to be a weak predictor of renovation and proximity to the park/university sections acts as a *negative* predictor. The unavailability and unaffordability of houses near the park/university sections may explain this unexpected finding as was suggested above with reference to the limited proximity of renovation to the historic districts.

*Poverty* does not appear to be a deterrent to renovation as it was measured by the income, education, employment status of the residents and the crowding of units. These findings support our hypothesis. The proximity of public housing projects, however, as also expected is a very strong predictor of whether a tract has had any increase in real estate activity, i.e., is experiencing renovation. As Clay (1979) proposed, dire poverty – as it is symbolically represented in the public housing project – is avoided by renovators (See Fig. 1).

It is interesting to note that not only were the poverty measures such as education, rent, and crowding, as well as the racial composition of the tracts not deterrents to renovation, they were, rather, *predictive* of it. For example, the racial composition of the tracts (per cent black) is negatively predictive of the timing. It is also noteworthy that renovation continued in the later part of the decade in tracts of comparable poverty to the

earlier-renovating tracts but with less desirable housing both with regard to its historic and architectural appeal. It appears that although the renovation movement in New Orleans as such was initiated by the appeal of the old urban homes as has been suggested of the trend in general (internationally), its continuation is extending beyond the availability of the 'choicest' structures.

The considerable increase in real estate activity in old New Orleans' inner-city neighborhoods, a reflection principally of residential choices of middle-income buyers, substantiates urban ecological theory which suggests that the wealthy have a genuine freedom of residential choice. During the 1970s many of these persons in New Orleans chose to live other than at the suburban perimeter. Once, however, the inner-city choice is made, other expectations which would result from the study of ecological theory – such as the desirability of proximity to the central business district, historic districts and other attractions – as well as expectations explained by residential choice theory – selection of neighborhoods composed of residents of comparable class and race characteristics – appear to be less helpful in understanding the renovation trend due to the importance of obtaining an historically valuable house.

To be sure, national evidence does *not yet* indicate that the numbers of whites and middle-income persons inhabiting the central cities has increased significantly from what it has been in the previous decade (Spain, 1980). However, the fact that increases in real estate activity occurred in so many of the old tracts in a city such as New Orleans (49 of 68) and that more-recently renovating tracts differed only in that the housing was less desirable, suggest a trend which may strongly alter the class and racial distribution within the city. Significantly, this trend appears to have survived the depletion of the most valuable housing in New Orleans and, in fact, still to have been occurring at even a more rapid rate at the end of the decade. Many factors such as fuel costs, smaller families and proportionate increases in white-collar central-city employment may all be converging to create changes in the desirable locations within urban regions which, as we have suggested (see Laska and Spain, 1980), are an extension of, but much more encompassing than, the original trend of renovating old historically-valuable houses.

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