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# RESEARCH AND PRACTICE

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## The Impact of Historic District Designation on Property Values: An Empirical Study

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*It is often thought that historic preservation and economic interests are competing values. This case study of a large Chicago neighborhood provides evidence that National Historic District designation was beneficial to properties in the district. Substantial external benefits were also found. The designation of two smaller areas within the study area as Chicago Historic Districts had a negative effect on property values, however, indicating that the impact depends on the restrictions imposed by preservation measures.*

The reasons for preservation vary.<sup>1</sup> Pride in historic events or enjoyment of architecture and aesthetic often outweigh financial considerations. In an important article, Firey describes conflicts between preservation and development interests, using events in historic Boston neighborhoods as illustrations.<sup>2</sup> Conflicts are not unavoidable. There exist situations when preservation yields tangible economic benefits for property owners and the community. This article presents a case study that tests for the presence of economic benefits in a historic residential district in Chicago. It estimates the effect of historic district designation on sales prices. Data limitations made a cost-benefit analysis impossible. In particular, no information about enforcement and compliance costs were available. However, the results presented here constitute an important part of a comprehensive comparison of costs and benefits.

### CASE STUDY AREA

The case study area consists of two Chicago neighborhoods. Beverly Hills and Morgan Park are located adjacent to each other on Chicago's southwest side, 12 miles from downtown. Because of similarities in their histories and housing designs, they are often regarded as one neighborhood (see Figure 1 for location map). Interstate highway 57 serves the study area through the 111th

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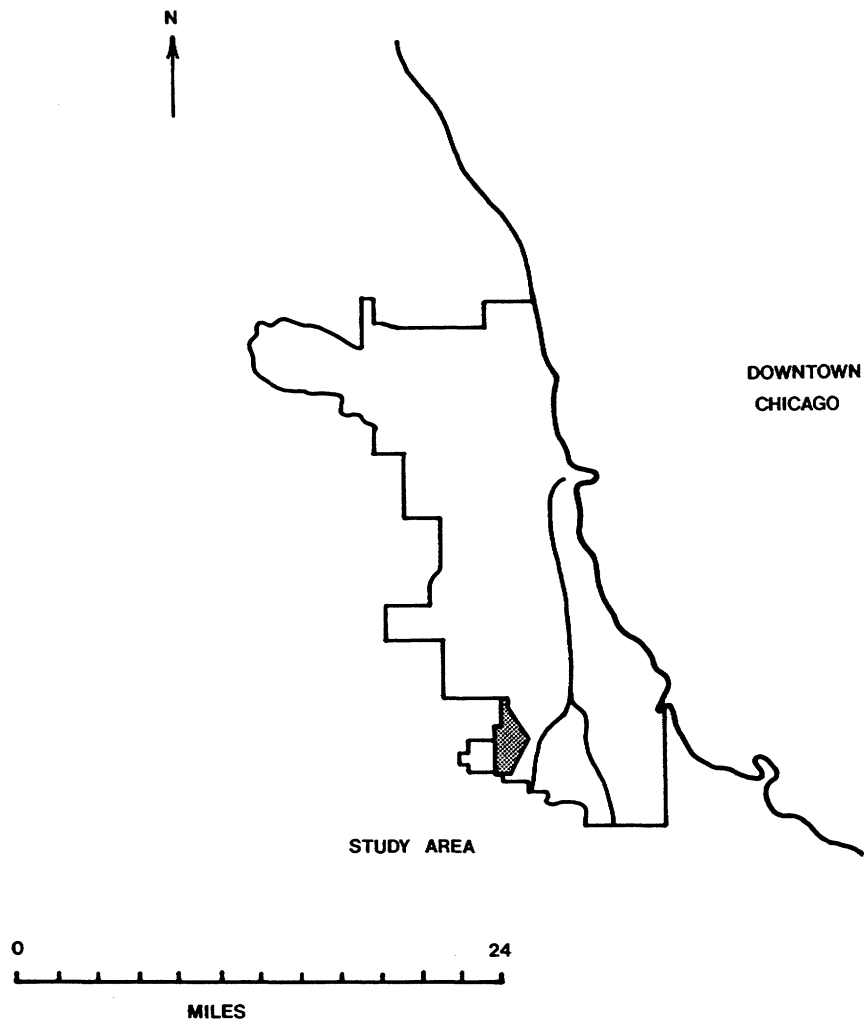
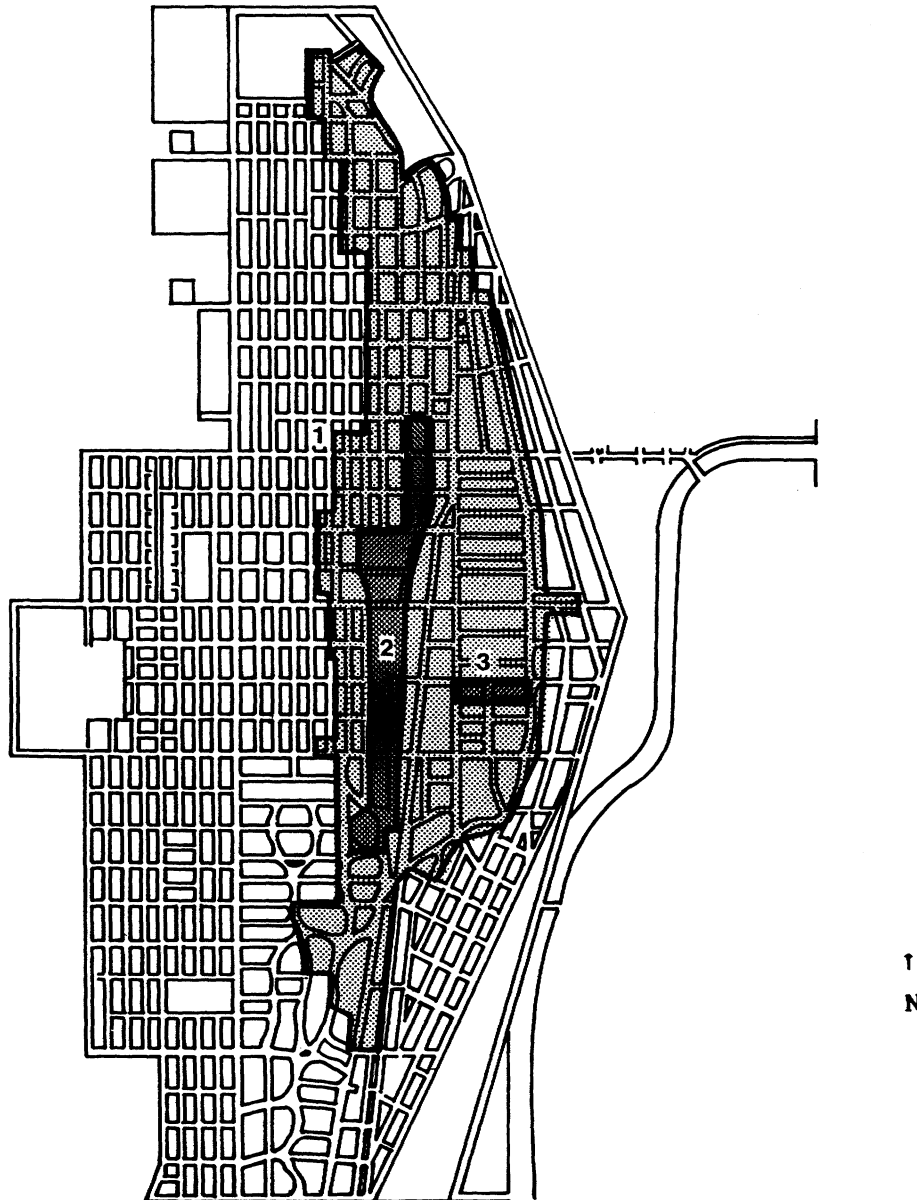


Figure 1: Location of Beverly Hills-Morgan Park

Street and the Halsted exits. This highway merges with I-94 (Dan Ryan Expressway) leading into downtown Chicago. Access to downtown and Lake Michigan is considered to be about the same from all locations within the study area.

The study area is almost identical with the area covered by census tracts 7201-7207 and 7502-7505. It has traditionally been a middle-class neighborhood, with high rates of owner-occupancy, ranging from 46.7% (tract no. 7207) to 97% (tract no. 7204) in 1970. The typical rate was between 70% and 90%. The average for Cook County in 1970 was 45.7% and 56.2% for Illinois. Most dwellings are single family homes. High interest rates and property taxes in the 1960s, and the energy crises in the 1970s, increased the cost of owning large homes.<sup>3</sup> In reaction to fears of a serious downturn, the Beverly Area Planning Association (BAPA), established in 1947, was

many valuable comments and suggestions. Special thanks are due to Bernadette Fitzsimmons of Doris Brown Realty, for making available the data for the study. An anonymous referee of this journal made several very helpful suggestions. An earlier version of this article was presented at the 1988 Meetings of the Association of Collegiate Schools and Planning. We acknowledge the thoughtful comments of participants at these meetings. Any remaining errors are our responsibility.



**Figure 2: Location of National and Chicago Historic Districts**

NOTE: 1. Ridge National Historic District; 2. Longwood Drive Chicago Historic District; 3. 104th Place Chicago Historic District.

reorganized in 1971 as a umbrella group for a dozen community organizations. The Ridge Historical Society was also incorporated in 1971.

One of the results of the activities of the BAPA and the Ridge Historic Society was the 1976 designation of the Ridge Historic District and its listing in the National Register of Historic Places. It is the largest urban National Historic District in the United States, and it includes portions of Beverly Hills and Morgan Park. In 1981, two smaller areas within the Ridge Historic District were designated as Chicago Historic Districts (see Figure 2). The two Chicago Historic Districts are known as the Longwood Drive District and the 104th Place District. The latter is also called the Walter Burley Griffin District. The Longwood Drive District was chosen because of its rich

“mixture of the building styles that were popular from 1870 to 1930.”<sup>4</sup> The 104th Place District was cited as having “the largest concentration of Prairie School houses in Chicago, most of which were designed by Walter Burley Griffin.”<sup>5</sup>

### EFFECTS OF HISTORIC DISTRICT DESIGNATION

Property owners are concerned with the size of the returns to and the risk of their investment. Returns are not measured in financial terms alone. Some people derive enjoyment from a historically significant building or neighborhood. They are willing to accept lower financial rewards or higher risks to own property that yields such enjoyment. This does not imply, however, that worthy buildings and neighborhoods automatically will be preserved through private action. First, people who prefer historic buildings and neighborhoods, and who also have the means to maintain and restore properties, may comprise an insignificant segment of the home buyers market. Second, the uncertainties that are part of ownership in old, heterogeneous neighborhoods, may be too high to lead to preservation.

Owner-occupants receive most of their return in the form of housing services and neighborhood amenities. The prestige and recognition associated with a historic district may by itself add to owner satisfaction (“psychic” returns). Historic designation changes public perception and sends a signal that the community recognizes the area’s significance. Such a designation constitutes an implicit commitment by public authorities to a district’s preservation, thus reducing the risks perceived by home buyers. A demonstration of public commitment may be necessary to stimulate private investments.

The lower the cost of purchasing, upgrading, and maintaining property relative to that of comparable properties, the more likely is its preservation. Characteristics that influence the market value of residential property include lot size, square footage, number of baths, size of garage, built-in amenities such as fireplaces, architectural style, and quality of construction. Homes with desirable attributes and built to a high standard are more likely to be preserved than properties of lesser quality, because maintenance costs are inversely related to building quality, and because the cost of alternative housing with similar attributes is high. It is also more likely that such homes have been designed by well-known architects, or that the original owners were important figures in the history of a city or town. Hence, besides the physical attributes, there may also be what one calls “sentimental” reasons that contribute to the likelihood of preservation.<sup>6</sup>

Listing an area on the National Register of Historic Places requires that projects receiving federal assistance be reviewed for possible effects on historic properties. The rehabilitation of income-producing properties that are listed on the National Register qualifies the owner for federal income tax credits. The Commission on Chicago Historical and Architectural Landmarks is an advisory board that administers the Chicago Historic Districts. Its nine members are appointed by the mayor. Building permits for a Chicago Landmark must be reviewed by the commission to prevent alterations that might detract from the value of a protected property. The commission also has the right to review new construction within a Chicago Historic District to minimize intrusive structures that may alter its character. The ordinance that regulates the designation and administration of Chicago Historic Landmarks and Districts provides tools to protect buildings from being demolished which are under consideration for landmark status. It defines grievance procedures if landmark status is conferred on a property against the owner’s will.

In summary, historic district designation contributes to the prestige of a neighborhood, and it makes it politically more difficult for governments to neglect the area in the provision of basic services and the maintenance of infrastructure. Listing on the National Register provides access to some federal support programs. Designation as a Chicago Historic District provides even more protection for the character of the neighborhood, hence, reducing uncertainty for property owners about future development, and also encouraging neighborhood pride. On the negative side, restrictions limit the options of owners. The hypothesis put forward in this article is that, for the property owners, the benefits obtained from historic district designation outweigh the costs under

**... historic district designation contributes to the prestige of a neighborhood, and it makes it politically more difficult for governments to neglect the area in the provision of basic services and the maintenance of infrastructure.**

the rules and regulations now in force. Given the data, the analysis could not be extended to test the same hypothesis for the entire community.

## DATA

Net benefits to property owners were measured by the effect of historic district designation on sales prices (housing values). Data were collected from the files of Doris Brown Realty, Chicago, on the sale of properties. Sales figures are more detailed and reliable than appraised values. Brown Realty is a major realtor in the study area and handles a large percentage of all sales. The data are therefore thought to be representative. Data were collected for the period 1960 to 1986. The usable size of the sample was 252. The housing stock in 1970 in Beverly Hills-Morgan Park consisted of 13,914 dwelling units. Most are single family, owner-occupied dwellings. Of the 252 observations, 107 (42%) are outside the Ridge Historic District and 145 (58%) are located within the district. Of these 145 observations, 42 (17% of all observations) are in the two Chicago Historic Districts. Table 1 presents a summary of the data.

Properties in the Ridge Historic District have larger than average lots and have been built an average of 8 years earlier; otherwise, their general characteristics do not seem to differ much from the average. Houses within the Chicago Historic Districts, however, not only occupy even larger lots, but they are also more spacious, as shown by their greater number of rooms. They are even older (average date of construction 1920 vs. 1927 for the national district) than the average house (average date of construction 1935).

## ANALYSIS AND RESULTS

Housing has several unique characteristics. For most households, it is by far the most expensive item they will ever purchase. As a consequence, property owners are interested in, and supportive of, measures that they perceive of as protecting their most valuable asset. Because of its high cost, most buyers are able to acquire housing only with the help of a mortgage loan. Hence, the housing market is sensitive to conditions in financial markets, especially to changes in interest rates.

The market value of real estate reflects the quality of property *and* the neighborhood. Returns to investments depend not only on the owner's actions but also on decisions made by other owners and by government agencies.<sup>7</sup> The effect of such neighborhood externalities is thought to be substantial. Mills cites evidence from several empirical studies that estimate that effect to be 10% to 15%.<sup>8</sup> That is, an investment that increases the value of a particular property by \$10,000 will, on average, contribute \$1,000 to \$1,500 to the combined value of other properties. Conversely, if a property decreases in value because of neglect, the effect on other properties in the vicinity is negative. In making an expenditure decision, owners will consider only the value accruing to their properties. From society's perspective, ignoring the benefits received by others leads to an underinvestment in the maintenance and improvement of real estate. What makes this type of externality important is the potential for a vicious cycle of neglect. If a property deteriorates, the market values of other nearby properties will tend to fall compared with values elsewhere. This lowers the returns to maintenance or improvement investments. As spending declines, even more deterioration may result. Local governments sometimes contribute to this downward cycle by responding with neglect of basic infrastructure to the erosion of the tax base in a neighborhood.

To provide for a test of the hypothesis that the net benefits of historic district designation are positive to property owners, a regression model was developed with sales prices as the dependent variable. Because sales were observed over a period of 27 years, sales prices had to be adjusted for inflation. All prices are in 1970 dollars. The Chicago Consumer Price Index was used for this purpose. The explanatory variables are listed below.

1. External economic forces  
INTEREST: Cost of capital.

**TABLE 1**  
**Summary of Data**

	<i>Mean</i>	<i>SD</i>	<i>Maximum</i>	<i>Minimum</i>
<b>Sales Price in 1970 dollars (SALES-PRICE70)</b>				
All observations	32,084	12,782	97,137	11,234
Ridge Historic District	33,285	14,700	97,137	11,234
Chicago Historic Districts	41,927	17,548	97,137	21,004
Outside historic districts	30,457	9,419	69,780	16,562
<b>Lot size in square feet (LOTSIZE)</b>				
All observations	11,004	14,170	117,612	3,750
Ridge Historic District	14,428	17,851	117,612	3,750
Chicago Historic Districts	19,688	17,085	80,000	6,750
Outside historic districts	6,362	2,194	13,125	3,750
<b>Total number of rooms (NO-OF-ROOMS)</b>				
All observations	7.25	1.89	16	5
Ridge Historic District	7.82	2.16	16	5
Chicago Historic Districts	9.10	2.44	16	6
Outside historic districts	6.48	1.05	9	5
<b>Size of garage (GARAGE)</b>				
All observations	1.45	0.74	3	0
Ridge Historic District	1.43	0.80	3	0
Chicago Historic Districts	1.66	0.70	3	0
Outside historic districts	1.48	0.66	3	0
<b>Number of fireplaces (FIREPLACE)</b>				
All observations	0.96	0.74	6	0
Ridge Historic District	1.10	0.79	6	0
Chicago Historic Districts	1.29	0.60	4	1
Outside historic districts	0.79	0.65	2	0
<b>Age at time of sale (AGE)</b>				
All observations	39.75	19.20	108	1
Ridge Historic District	48.19	19.67	108	1
Chicago Historic Districts	55.40	20.47	106	1
Outside historic districts	28.32	10.85	65	3
<b>Interest (INTEREST)</b>				
All observations	8.86	3.74	18.87	4.50
Ridge Historic District	9.13	3.91	18.87	4.50
Chicago Historic Districts	8.77	3.72	18.87	4.50
Outside historic districts	8.49	3.48	18.87	4.50
<b>Trend variable (YEARSOLD)</b>				
All observations	1974.96	6.59	1986	1960
Ridge Historic District	1975.26	6.88	1986	1960
Chicago Historic Districts	1975.07	6.82	1986	1961
Outside historic districts	1974.57	6.19	1986	1961
<b>Median income in 1970 (MEDIAN-INCOME70)</b>				
All observations	12,826	2,396	19,246	8,525
Ridge Historic District	12,357	2,405	19,246	8,525
Chicago Historic Districts	11,347	1,765	13,666	8,536
Outside historic districts	13,462	2,242	18,811	9,088
<b>Percentage of black population in 1970 (BLACK70)</b>				
All observations	2.27	7.43	34.90	0.00
Ridge Historic District	1.24	4.25	34.90	0.20
Chicago Historic Districts	1.64	5.47	34.90	0.20
Outside historic districts	3.66	10.14	34.90	0.00
<b>Percentage of owner-occupied dwellings in 1970 (OWNER-OCCUPIED70)</b>				
All observations	68.80	15.90	97.00	46.70
Ridge Historic District	63.95	14.66	92.20	46.70
Chicago Historic Districts	55.80	9.81	67.50	46.70
Outside historic districts	75.37	15.20	97.00	46.70

TABLE 1 Continued

Locational dummy variables (LOCATION<sub>i</sub>):

All observations: 4 variables were defined

LOCATION1 = census tracts 7202-7204, 93 observations

LOCATION2 = census tracts 7205-7207, 74 observations

LOCATION3 = census tracts 7502-7503, 39 observations

LOCATION4 = census tracts 7504-7505, 21 observations

COMPARISON = census tract 7201, 25 observations

Ridge Historic District: 2 variables were defined

LOCATION1 = census tracts 7502 and 7207, 103 observations

LOCATION2 = census tracts 7502 and 7505, 21 observations

COMPARISON = census tract 7201, 21 observations

No observations in other census tracts

Chicago Historic Districts: 1 variable was defined

LOCATION1 = census tracts 7202 and 7207, 35 observations

COMPARISON = census tracts 7502 and 7505, 7 observations

No observations in other census tracts

Outside historic districts: 4 variables were defined

LOCATION1 = census tracts 7202-7204, 35 observations

LOCATION2 = census tracts 7205-7207, 29 observations

LOCATION3 = census tracts 7502-7503, 20 observations

LOCATION4 = census tracts 7504-7505, 19 observations

COMPARISON = census tract 7201, 4 observations

## Number of sales between 1977 and 1982 (SINCE77)

All observations	44 sales (17% of total)
Ridge Historic District	25 sales (17% of total)
Chicago Historic Districts	6 sales (14% of total)
Outside historic districts	19 sales (18% of total)

## Number of sales since 1982 (SINCE82)

All observations	64 sales (25% of total)
Ridge Historic District	42 sales (29% of total)
Chicago Historic Districts	12 sales (29% of total)
Outside historic districts	22 sales (21% of total)

NOTE: The two Chicago Historic Districts are contained completely within the Ridge National Historic District.

YEARSOLD: Year in which a property was sold. This variable was included to capture possible long run trends.

## 2. Influence of location

LOCATION<sub>i</sub>: Location dummy variables. Five location variables were defined. We combined the adjacent census tracts 7202-7204, 7205-7207, 7502-7503, and 7504-7505, respectively. Census tract 7201, containing 25 observations, served as the comparison location.

NATION: Location dummy variable for properties within the Ridge National Historic District.

CHICAGO: Location dummy variable for properties in the Chicago Historic Districts.

BLACK70: The percentage of black population in the census tract where a property is located.

OWNER-OCCUPIED70: The percentage of the housing units in the census tract where a property is located that were owner-occupied in 1970.

MEDIAN-INCOME70: Medium income in the census tract where a property is located in 1970.

## 3. Characteristics of property

LOTSIZE: Lot size in square.

NO-OF-ROOMS: Number of rooms in building. This variable serves as a proxy for building size that was not always available.

GARAGE: Size of garage (number of cars which can be parked in it).



- FIREPLACE: Number of fireplaces.  
 AGE: Age of building at time of sale.
4. Influence of establishment of historic districts  
 SINCE77: Dummy variable for sales taking place after the establishment of the Ridge National Historic District, but before 1982.  
 SINCE82: Dummy variable for sales taking place after the establishment of the Chicago Historic Districts.

The total number of rooms was used as a proxy for the square footage of the dwelling unit. Square footage was available for only a subset of the observations. In considering the tradeoff between using the more accurate variable (square footage) or the higher number of observations, we decided for the latter. We defined SINCE77 and SINCE82 to be mutually exclusive because of the high correlation (0.676) between these two variables otherwise. This formulation is a change in the model formulation from an earlier version.<sup>9</sup>

The estimation equation was defined as follows:

$$\begin{aligned} \text{SALES-PRICE70} = & \text{CONSTANT} \times \text{LOTSIZE}^{\alpha_1} \times \text{NO-OF-ROOMS}^{\alpha_2} \times (\text{GARAGE}+1)^{\alpha_3} \times \\ & (\text{FIREPLACE}+1)^{\alpha_4} \times \text{AGE}^{\alpha_5} \times \text{INTEREST}^{\beta_1} \times \text{YEARSOLD}^{\beta_2} \times \\ & \left( \prod_{i=1}^4 e^{\text{LOCATION}i \times \gamma_i} \right) \times e^{\text{NATION} \times \gamma_5} \times e^{\text{CHICAGO} \times \gamma_6} \times \\ & \text{MEDIAN-INCOME70}^{\gamma_7} \times (\text{BLACK70}+1)^{\gamma_8} \times \text{OWNER-OCCUPIED70}^{\gamma_9} \times \\ & e^{\text{SINCE77} \times \delta_1} \times e^{\text{SINCE82} \times \delta_2} \times e \end{aligned}$$

The error term was assumed to take on only positive values. The choice of this particular functional form was motivated by several considerations. If the lot size is zero, then the sales price should be zero, too. This requirement dictated a nonlinear formulation. The effect of location was thought to be in proportion to lot size, number of rooms, and so on. To estimate the above equation, we took the natural logarithm and assumed that  $\ln(e)$  was distributed normally with mean zero. To avoid problems with logarithms for properties without a garage or fireplace, and locations without a black population, we added one (1) to the observed values. This also gives the desired result that the marginal impact of a larger garage, more fireplaces, or a higher percentage of black population is decreasing.

We considered the inclusion of dummy variables for architectural style but dropped them for the final specification. There were too many observations lacking information about styles, and there were so many different styles listed that aggregation without on-site verification would have been inaccurate. Our analyses also suggested that the effect of these variables was not significant.

Standard statistical procedures were used to identify outliers. We checked outliers for shared characteristics. We were concerned that properties sold in any particular year might be more likely to be outliers because our observations are distributed unevenly over time. This was not the case. No observations were available for 1962, and 26 observations were obtained for 1971. The number of observations for other years are between these numbers. We found, however, that properties much larger than the average were most likely to be outliers. These tend to be properties with attributes that are not completely captured by the variables available to us. We estimated the parameters without the outliers and found little difference in the results. The summary of results in Tables 2a through 2d are those of the total sample, outliers included. Parameters were estimated for: all observations combined, the Ridge National Historic District, the Chicago Historic Districts (combined), and outside the Ridge National Historic District.

Generally, parameter estimates have the expected sign. It is initially surprising that the cost of borrowing did not have a stronger effect on sales prices. This effect is not statistically significant, except for properties in the Chicago Historic Districts. Closer examination renders the results more plausible, however. A look at the partial correlations between INTEREST and NO-OF-ROOMS (-0.042), INTEREST and GARAGE (-0.093), and INTEREST and FIREPLACE (-0.037), shows that buyers absorb some of the higher cost by purchasing homes with fewer amenities. We also note the large positive correlation between INTEREST and AGE (0.365) that shows that as the

TABLE 2  
Regression Results

Variable	Coefficient	SE	t statistic
<b>A. All observations</b>			
CONSTANT	8.882	1.942	4.575***
LOTSIZE	0.179	0.035	5.118***
NO-OF-ROOMS	0.441	0.084	5.242***
GARAGE	0.181	0.041	4.426***
FIREPLACE	0.214	0.046	4.635***
AGE	-0.211	0.031	-6.733***
INTEREST	-0.018	0.067	-0.263
YEARSOLD	-0.109	0.041	-2.616***
MEDIAN-INCOME70	-0.059	0.252	-0.233
BLACK70	-0.007	0.028	-0.231
OWNER-OCCUPIED70	0.074	0.186	0.401
CHICAGO	0.166	0.049	3.379***
NATION	-0.145	0.043	-3.358***
SINCE77	0.252	0.052	4.867***
SINCE82	0.217	0.070	3.114***
LOCATION1	-0.010	0.069	-0.150
LOCATION2	-0.071	0.090	-0.786
LOCATION3	-0.135	0.083	-1.622
LOCATION4	-0.212	0.109	-1.948*
Number of observations = 252 $R^2 = 0.583$ ; Durbin-Watson $D$ statistic = 2.195; $F$ ratio = 20.485.			
<b>B. Ridge National Historic District</b>			
CONSTANT	10.117	4.107	2.463*
LOTSIZE	0.166	0.043	3.848***
NO-OF-ROOMS	0.506	0.116	4.379***
GARAGE	0.239	0.056	4.256***
FIREPLACE	0.181	0.070	2.598***
AGE	-0.203	0.042	-4.881***
INTEREST	-0.027	0.106	-0.255
YEARSOLD	-0.087	0.059	-1.473
MEDIAN-INCOME70	-0.380	0.499	-0.761
BLACK70	-0.052	0.105	-0.499
OWNER-OCCUPIED70	0.449	0.254	1.772*
CHICAGO	0.164	0.059	2.775***
SINCE77	0.213	0.094	2.278**
SINCE82	0.163	0.130	1.252
LOCATION1	-0.002	0.120	-0.019
LOCATION2	-0.114	0.211	-0.540
Number of observations = 145 $R^2 = 0.586$ ; Durbin-Watson $D$ statistic = 2.314; $F$ ratio = 14.616.			
<b>C. Chicago Historic Districts</b>			
CONSTANT	11.736	6.845	1.714*
LOTSIZE	0.359	0.080	4.486***
NO-OF-ROOMS	0.251	0.183	1.373
GARAGE	-0.000	0.134	-0.001
FIREPLACE	0.094	0.236	0.397
AGE	-0.175	0.069	-2.549**
INTEREST	-0.276	0.190	-1.452
YEARSOLD	-0.103	0.126	-0.819
MEDIAN-INCOME70	-0.505	0.862	-0.586
BLACK70	-0.082	0.144	-0.570
OWNER-OCCUPIED70	0.256	0.490	0.523
SINCE77	0.425	0.183	2.317**
SINCE82	0.219	0.259	0.845
LOCATION1	-0.134	0.280	-0.478
Number of observations = 42 $R^2 = 0.595$ ; Durbin-Watson $D$ statistic = 2.070; $F$ ratio = 5.624.			

(continued)

TABLE 2 Continued

Variable	Coefficient	SE	t statistic
D. Outside the historic districts			
CONSTANT	5.700	1.963	2.904***
LOTSIZE	0.204	0.086	2.372**
NO-OF-ROOMS	0.291	0.125	2.320**
GARAGE	0.078	0.057	1.376
FIREPLACE	0.219	0.057	3.807***
AGE	-0.191	0.051	-3.757***
INTEREST	0.050	0.080	0.623
YEARSOLD	-0.170	0.057	-2.992***
MEDIAN-INCOME70	0.390	0.256	1.526
BLACK70	-0.000	0.030	-0.014
OWNER-OCCUPIED70	-0.183	0.196	-0.933
SINCE77	0.258	0.056	4.621***
SINCE82	0.217	0.074	2.919***
LOCATION1	0.098	0.104	0.945
LOCATION2	0.062	0.111	0.557
LOCATION3	0.048	0.115	0.417
LOCATION4	-0.075	0.121	-0.616

Number of observations = 107

$R^2 = 0.598$ ; Durbin-Watson  $D$  statistic = 2.086;  $F$  ratio = 10.857.

\*Significant at .1 level; \*\*significant at .05 level; \*\*\*significant at .01 level.

cost of financing increases, people tend to buy older homes that are cheaper, everything else being equal. For properties within the Chicago Historic Districts, fewer substitution possibilities exist. This may explain the much greater impact and statistical significance of the interest rate.

The results show a negative trend regarding property values (YEARSOLD,  $\beta_2 < 0$ ). This effect is highly significant for the combined sample (Table 2a) and for the sample of properties outside the historic district (Table 2d). For properties in the National Historic District (Table 2b), the effect is smaller and less significant (level of significance 0.143). For properties in the Chicago Historic Districts, the parameter is surprisingly large. The statistical significance of the parameter is very low, however (0.420). This illustrates that those two districts consist of the historically and architecturally most significant buildings in the study area, and that home buyers valued their significance. As expected, age has a negative impact on sales prices, whereas lot size and building size have positive effects. The parameters for amenities are also of the expected sign, except for (GARAGE) in the case of the Chicago districts. For properties within the Chicago districts, the coefficient of variation of this variable is low. This could result in an indeterminate result. The coefficient of variation of GARAGE is also low for properties outside of the National Historic District. The parameter  $\hat{\alpha}_3$  for that subsample is also small and has low statistical significance.

Homes in the Ridge National Historic District (NATION, parameter  $\gamma_3$ ) have lower values than properties elsewhere, when adjusted for other factors (see Table 2a). By contrast, properties in the Chicago Historic Districts are more valuable. This shows that the designation of the National Historic District did not follow market, whereas the designation of the Chicago Historic Districts did. Other characteristics of location such as BLACK70, MEDIAN-INCOME70, and OWNER-OCCUPIED70 are not statistically significant for the combined observations. The sign of the parameter for medium income (MEDIAN-INCOME70) is negative but statistically insignificant in three cases. Only for properties outside the historic districts does the parameter have the expected positive sign. The level of statistical significance is higher but still below usual standards. This may be an indication of the special nature of some of the properties in the other three test samples, when objective measures of housing and lot characteristics are insufficient to catch the historic or architectural significance of a building. This interpretation is supported by the observation that the results of the regression on the observation outside the Ridge National Historic District (Table 2d) are generally expected, unlike the results for the other subsamples.

The effect of the percentage of properties that were owner-occupied in 1970 was similarly mixed. It had the expected positive sign except for the sample of properties outside of the historical districts (Table 2d). The statistical significance of the parameter was low, except for the sample of properties in the National District (statistical significance = 0.079).

We note that the parameter of SINCE77 ( $\delta_1 = 0.252$ ) is positive, large, and highly significant. The designation of the Ridge National Historic District increased the average housing value as measured by sales price by 29% (all observations, derived from result reported in Table 2a). This is one instance when outliers did have a large effect on the results. Removal of the outliers and reestimation of parameters changes the value of  $\delta_1$  to 0.322 (increase in property values by 38%). The average increase was 24% in the district (Table 2b); 53% in the Chicago districts (Table 2c), and 29% for properties outside the district (Table 2d). This represents an important external effect on areas adjacent to the National Historic District.

In contrast to the positive impact of National Historic District designation, the establishment of the two Chicago Historic Districts had a negative impact. The value of  $\delta_2$  is smaller than that of  $\delta_1$ . That is, the establishment of the Chicago districts lowered the positive effect of the National Historic District designation. As expected, the biggest impact is on properties within the Chicago Historic Districts (Table 2c). The result is such that we cannot even exclude the possibility that  $\delta_2$  is zero. The level of significance of  $\delta_2$  is only 40.5%. The smallest impact is on properties outside the National Historic District (Table 2d). This negative effect is probably because of the restrictions imposed by the regulations governing Chicago Historic Districts (see the section on the effects of historic district designation). The results suggest that buyers perceive the cost of the Chicago preservation efforts to be higher than the benefits. As noted above, the rules governing National Historic Districts impose only minor constraints on property owners.

## CONCLUSIONS

This empirical study presents an example in which preservation activities have significant positive economic impacts. This is particularly remarkable because the general trend in the study area was one of declining sales prices, and because the area that was designated the Ridge National Historic District had average sales prices that, when adjusted for other factors, were lower than the average of properties elsewhere in the study area. Hence, the increase cannot be attributed to historic district designation following market. This study shows, however, that regulations aimed at preserving a neighborhood can be too restrictive, as seems to be the case with the rules governing Chicago Historic Districts. Unless properties that are of great importance to the public because of their historic or architectural significance are in danger of being lost, the Chicago regulations are likely to yield a negative net benefit not only for property owners, but also for the community. However, a rigorous determination of net benefits would require additional data and analyses.

The positive effect of National Historic District designation is encouraging for preservationists and economic development planners. It shows that assets from a community's past can again be turned into economic assets again. Historic district designation may serve a function similar to that of a designer label: it guarantees the quality of the merchandise, reducing the uncertainty facing the buyer regarding the future value of the purchase. Of course, it would be dangerous to base policy recommendations on a single study. Additional studies of this type are needed, and some of them should cover nonresidential historic districts.

## NOTES

1. Wayne Attoe, "Historic Preservation," in *Urban Planning*, 2d ed., ed. Anthony J. Cantanese and James C. Snyder (New York: McGraw-Hill, 1988), pp. 344-65.
2. Walter Firey, "Sentiment and Symbolism as Ecological Variables." *American Sociological Review* 10 (1945): 140-48.
3. Robert Billings, "Neighborhood Pride — A Tradition." *Chicago Sun Times*, March 24, 1985, p. 11.
4. Commission on Chicago Historical and Architectural Landmarks, *Longwood Drive District* (City of Chicago, June 1980), p. 12.

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5. Commission on Chicago Historical and Architectural Landmarks, *104th Place District* (City of Chicago, February 1981), p. 1.
6. Firey, "Sentiment and Symbolism as Ecological Variables."
7. J. Vernon Henderson, *Economic Theory and the Cities* (New York: Academic Press, 1977).
8. Edwin S. Mills, *Urban Economics*, 2d ed. (Glenview, IL: Scott, Foresman, 1980), p. 127.
9. Peter V. Schaeffer and Cecily P. Ahern, "Historic Preservation and Economic Value" (Paper presented at the 30th Annual Conference of the Association of Collegiate Schools of Planning, Buffalo, NY, October 27-30, 1988).