This study examines the early effects of seven scattered-site public housing developments on the receiving neighborhoods in Yonkers, New York, where opposition to court-ordered desegregation was particularly hostile over the last decade. Because people keep their neighborhoods strong by investing in them—financially, to be sure, but in other ways as well—we use a unique, two-part analysis to examine effects of public housing on neighborhood expectations, sense of community, and homeowner plans to move, as well as effects on sale prices of nearby homes over a twelve-year period. Happily, reports by homeowners showed no signs of neighborhood withdrawal or "flight." Moreover, while effects on particular "panic sales" are certainly possible, none of the controversial sites show generalized effects on home prices.

Briggs is acting as the Assistant Secretary in Policy Development and Research at the U.S. Department of Housing and Urban Development and is a faculty member (on leave) at the John F. Kennedy School of Government at Harvard University. A sociologist and planner, he writes, teaches, and consults on a variety of urban policy issues and has held fellowships of the National Science Foundation and American Sociological Association. Darden is a professor of geography and former Dean of Urban Affairs Programs at Michigan State University. He received his Ph.D. in urban geography at the University of Pittsburgh and was a Danforth Foundation Fellow at the University of Chicago. His research interests are urban and social geography. Aidala is a Research Scientist in the Department of Sociomedical Sciences, Columbia University. A sociologist, her interests are in urban research methods and the links among culture, race/ethnicity, neighborhood, health, and quality of life.

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In the Wake of Desegregation

Early Impacts of Scattered-Site Public Housing on Neighborhoods in Yonkers, New York

Xavier de Souza Briggs, Joe T. Darden, and Angela Aidala

Interest in the "geography of opportunity" across metropolitan areas is nothing new. Discussions of the spatial dispersal of public housing residents from poor, predominantly nonwhite neighborhoods to middle-class, predominantly white neighborhoods date back to the 1950s (Abrams 1955), and these discussions have become more prominent since enactment of the Civil Rights Act of 1964. Advocates for the "seeding" of poor households into nonpoor areas have asserted numerous benefits, including access to better jobs and schools, reduced fear of crime, greater residential satisfaction among the poor, and enrichment of the lives of (primarily) white, middle-class residents in the receiving neighborhoods through exposure to more diverse populations (Kain 1968; Downs 1973; Goering 1986; Burby and Rohe 1989; Rosenbaum and Popkin 1991; Kingsley and Tatian 1997; Briggs 1997,1998).[1] The Department of Housing and Urban Development's "Moving to Opportunities" (MTO) demonstration project, now running in five cities, is the latest federal initiative to reflect these aims (Gallagher 1994; HUD 1996); about fifty new HUD Regional Opportunity Counseling, Vacancy Consolidation, and litigation-based voucher programs are up and running in thirty metropolitan areas (Turner and Williams 1998); an unknown number of voucher-based "mobility" programs are run by local housing authorities without special federal funding or oversight; and many local scattered-site public housing programs, some now thirty years old, have been driven by the same concerns (Burchell, Listokin, and Pashman 1994; Hogan 1996).

Despite the presumption of housing mobility's powerful benefits for participating low-income families, most public housing for low-income African American and Hispanic families has been built in racially segregated inner-city areas—or areas that became mostly nonwhite after residential turnover. White families in public housing, on the other hand, who were dis-

proportionately elderly, have been able to leave inner cities for housing in middle-class neighborhoods. Because of racial discrimination in housing markets (Rubinowitz 1973; Yinger 1995), a decline in the production of new public housing following the enactment of fair housing laws (Goering, Kamely, and Richardson 1997), and vigorous political resistance to the siting of public housing in a wider variety of neighborhoods (Meyerson and Banfield 1964; Cuomo 1974), that choice was often unavailable to low-income people of color.

Housing mobility strategies received a boost when, in 1969, the courts ordered deconcentration of public housing in Chicago in the landmark Gautreaux case (Gautreaux v. Chicago Housing Authority 1969). The Gautreaux order created a voucher-based mobility program that has had a variety of favorable effects on participants (Rosenbaum and Popkin 1991; Rosenbaum 1995) at no *known* cost to receiving or "host" neighborhoods. Such favorable early evaluation has fueled enthusiasm for MTO and related programs. Students of occupancy trends in "severely distressed public housing" around the nation have called for more Gautreaux-like interventions to reduce extreme cases of poverty concentration and joblessness (Vale 1993; Turner and Williams 1998) and to give residents access to "social capital," including ties to informal job networks (Spence 1993). Such calls have taken on added urgency in the wake of federal welfare reform, out-of-court settlements by HUD in public housing desegregation cases nationwide, a shift toward "vouchering out" many distressed housing projects, and emerging discussions of the place of affordable housing concerns (including fair housing) in regional problem-solving and sustainable growth efforts.

But NIMBY-ism—the politics of property—stands in the way.[2] Minority residents of public housing continue to live in very poor, racially isolated neighborhoods nationwide (Goering, Kamely, and Richardson 1997), and efforts to increase the scale of mobility programs face an uncertain political future. Despite the paucity of empirical evidence to support the view, opponents of housing mobility contend vigorously that subsidized housing lowers neighborhood property values, reduces property investment by owners, increases crime, and threatens "community fabric"—that even small-scale, scattered-site public housing inevitably depresses home prices and leads to white flight and neighborhood decline.[3] And consistent with the current concern for "takings," some question whether government's first and foremost role is to protect homeowners' rights or public interest in land use (Yandle 1982; Krueckeberg 1995; Strong, Manelker, and Kelly 1996).

Although the effects on host neighborhoods may not be the stuff of social policy dreams, such effects are awfully important to the local officials and civic groups whose support is critical to program success. Impacts on property values seem especially important, since about 56 percent of the nation's wealth is in real estate.[4] As Mike Davis describes so compellingly in *City of Quartz* (1990), threats to wealth, whether real or imagined, are perceived as threats to family security, independence, and even community identity or "way of life." In general, though, we suggest that these effects be considered in light of the two related kinds of investment that people make in their neighborhoods: (1) *financial* (reflected in property values, residents' reinvestment decisions, and more); and (2) *nonfinancial* (reflected in residents' participation in neighborhood improvement activities, psychological "sense of community," plans to move, expectations of neighborhood change, etc.). Decisions by realtors, mortgage lenders, and others who typically do not reside in the "target" neighborhoods are also critical in determining the effects of subsidized housing, or a new transit stop or shopping center, on the receiving neighborhood, but reliable data on the behavior of these critical, outside actors—for example, possible "steering" by realtors and "redlining" by lenders—was not available at this stage of our work.

This article tests claims about the early effects of scattered-site public housing on receiving neighborhoods using two kinds of data—real estate sales and homeowner-reported attitudes and expectations—in the city of Yonkers, New York. There, fears about the negative effects of public housing were especially strong, and political resistance was particularly hostile, following court-ordered desegregation (United States v. City of Yonkers et al. 1985; McFadden 1988). Sale prices near seven low-rise, public housing complexes in Yonkers are compared to prices citywide, holding various price predictors equal. Next, the telephone survey responses of a sample of homeowners living near the new complexes are compared to responses gathered citywide. Early data provided by the county Multiple Listing Service showed little evidence of "panic sales" around the scattered-site housing (in terms of sales volume), and there was some anecdotal evidence from owners and real estate professionals that homes within a block of the sites were selling slowly and at discounted prices (Sheingold 1993). But ours is the first empirical analysis of price effects in Yonkers, as well as the first study we know of to consider both financial and nonfinancial effects on homeowners' investments in neighborhoods that receive subsidized housing.

This study is part of a larger, multi-year effort to understand the range of social and economic effects of the widely-publicized Yonkers court order as a housing mobility intervention—the effects on occupants of the new

housing, on receiving neighborhoods, and on governance and race/ethnic relations citywide (Yonkers Family & Community Project 1997; Briggs 1997,1998).[5]

Empirical evidence on how scattered-site public housing affects neighborhoods is sparse. Many studies have examined the effects of racial change or subsidized housing on property values, though, and since these have been discussed in two distinct veins of the literature, we begin by treating them separately here. Because we know of no studies on the effects of subsidized housing or racial/ethnic transition on sense of community or related measures of what we have called *non*financial investments in one's neighborhood, we discuss related research in that vein in the section on our methods.

Views and Evidence on Race and Property Values

As for race/ethnicity, beliefs about the negative effects of nonwhite arrivals on property values clearly arise in part from attitudes long prevalent in the real estate industry. Several classic real estate manuals assert the powerful role of race in sales price determination. The American Institute of Planners' widely used *Appraisal of Real Estate* (1964) held, for example, that "the value levels in a residential neighborhood will be influenced more by racial characteristics of the people occupying or in prospect of occupying the areas than by any other factor" (27). Babcock (1932) came to the same conclusion, specifying that while other demographic traits can lower sale prices, racial change alone induces *rapid* decline.

Some later trade references are more encouraging. For example, a 1951 version of McMichael's appraising manual holds that while sale prices may suffer in the short run following racial turnover, "as the neighborhood takes on its new character, and assuming equal maintenance of all property, value trends may reverse" (169). Some appraisers have concluded, in fact, that African American occupancy of neighborhoods *raises* values; that an initial period of price stagnation is followed by continued stagnation or slight declines that leads eventually to a period of rising prices (Beehler 1945; Stern 1946). After undertaking the then most comprehensive analysis of the effects of race on property values, Weaver (1948) concluded that "the effect of Negro occupancy upon property values varies from one sector of the city to another and from one time to another. There is no one universal effect of Negro occupancy upon property values" (293). Abrams (1955) also concluded that the notion that particular racial groups inevitably affect local real estate prices, whether favorably or unfavorably, disregards the complexity of race-related factors which determine prices. These include: the relative number of minority versus majority households in a neighborhood; the minority group's capacity for "social improvement and assimilation"; the size of the city and the physical condition of its neighborhoods; and the spatial distribution of nonwhites citywide (215).

Regardless of "true effects," of course, beliefs about the negative price effects of nonwhite in-movers can become self-fulfilling prophecies. If enough white homeowners *believe* that their new neighbors will cause neighborhood property values to drop, they may panic, frantically list their homes for sale, and compete with each other for buyers, thereby discounting prices substantially. There is research to show that decisions by prospective in-movers—usually, white avoidance of certain neighborhoods—may be as important to local dynamics as flight by current residents (Molotoch 1972; Ellen 1996).[6] Either way, these dynamics bring a fall in prices, at least in the short term, reinforcing homeowners' beliefs that racial minorities *inevitably* lower property values (Laurenti 1960, 25). In Merton's (1946) classic formulation of the collective psychology of this sequence, a situational response becomes a generalized tenet of property ownership. The process is so effective precisely because it is unconscious: the majority group has rigged the game.

If, as Abrams (1955) suggests, no fixed rules determine the price effects of nonwhite in-movers, we should turn to case-by-case empirical evidence. Unfortunately, relatively few studies have directly tested Abrams' assertions; most of these have been limited to African American in-movers, and few have used what we now consider adequate multivariate analysis to hold "all but race" equal when comparing neighborhoods. Still, these studies make some effort to distinguish race from class, and they suggest patterns for current, and more sophisticated analyses to test. In general, they provide evidence, across a wide range of cities, that racial change may have no detectable effect or even positive effects on home prices.

Gillette (1957), for example, reported positive price effects of racial change, or what he termed "Negro invasion," in Kansas City neighborhoods. He also reported that white homeowners who did not sell and leave their neighborhoods said that their stereotypes of African Americans were dissolved over time. Laurenti's (1960) seven-city study found no effects of racial change per se as long as the neighborhoods' physical character was preserved. Palmore and Howe (1962), in a study of nine recently integrated New Haven neighborhoods, found that in eight of those, sale prices for homes had increased as fast as or faster than prices citywide. All of these studies compared integrated areas to some benchmark—either "control" areas or the larger urban area as a whole.

Ladd (1962), in a before-and-after study of houses that sold twice, one half in integrated and one half in all-white neighborhoods, found that prices were higher relative to assessed values in the racially integrated areas. Palmore (1966) reported similar results in a study of six census tracts in Washington, DC.

Studies conducted in the 1970s used more sophisticated analytic techniques. Downing's (1970) multivariate analysis of property values in Milwaukee showed no effects of nonwhite in-movers on property values. Phares' (1971) analyses compared price appreciation in "stable" and "transition" areas at varying levels of racial integration to citywide rates. He found greater price appreciation in more integrated areas. Mullendore and Cooper (1972), in a study of middle-income neighborhoods in Dallas, found that, holding other factors equal, the effects of African American in-moving were positive; but they also suggested that the nature of local housing markets is critical to the price effects of race on particular transactions and neighborhoods. Finally, Berry (1976) examined prices in core African American, white, and Latino submarkets in Chicago as well as in "racial transitional" markets over the period 1968–1972. He found that net of housing traits, resident income, and other factors, house price increases were highest in peripheral white areas, lower in "threatened" white areas, modest in zones of African American expansion, and lowest in core African American and Latino neighborhoods. Berry hypothesized that the filtering of white households out of transition neighborhoods may slow during recession, when what we might call "attractive exit options" for white homeowners are presumably fewer, and accelerate when white households (or any other would-be movers) are doing better financially.

The most recent studies in this domain—and there are few—further caution against simple assumptions about the link between race and property values. Chambers (1992) argues that most studies in this vein have been hampered by the limited availability of key data. The frequent failure to apply measures of neighborhood quality and amenities, for example, may bias earlier analyses significantly. To avoid such problems, Chambers uses versions of the 1975 and 1979 Chicago Housing Surveys that include neighborhood amenity measures along with racial composition and many other variables. After tracking changes in racial composition, Chambers concluded that race and housing prices were not associated in any consistent way over time, once neighborhood quality was held constant. In some submarkets, prices actually rose with greater nonwhite neighborhood composition; in others, especially where rapid racial transition occurred adjacent to an area that was already majority African American, prices fell. Chambers hypothesized that demand by whites slackened because of uncertainty as to whether such areas would be incorporated into a larger "ghetto."

Beyond the technical imperfections, this literature can be fairly characterized as quite partial. For example, few studies focus on nonwhite groups other than African Americans. In general, though, the studies available confirm Abrams' conclusions that the effects of an influx of people of color on home prices, if any, are not inexorably negative, but rather quite dependent on local market conditions. What is more, some empirical evidence points to prices rising more in integrated areas than in nonintegrated ones—i.e., to the price benefits of owning property in integrated neighborhoods and to price gains through strong new sources of demand (class and other factors being held constant). As for race effects per se, therefore, the hard evidence supports the view that price effects vary in both direction and magnitude.

Evidence on Subsidized and Special Housing and Property Values

Nourse (1963) assessed trends in the prices of property near public housing in St. Louis for the period 1937–1959 and found no significant price differences, with the exception of one comparison in one year. Relatively few studies have been done since then on the price effects of public housing *per se*. But much evidence on the price effects of other subsidized housing has been generated, and the preponderance of this evidence supports the view that such effects are also context-dependent—i.e., that no *consistent* relationship exists between property values and proximity to subsidized housing.

In a review of fifteen studies of subsidized, special-purpose, and manufactured housing, Martinez (1988) reported that fourteen of the studies showed "no significant negative effects" and that, in some cases, subsidized housing appeared to upgrade recipient neighborhoods, raising sale prices. For example, De Salvo (1974) found upgrading effects in a study of sixty-two subsidized, middle-income Mitchell Lama projects in New York City. He noted, however, that these positive effects were weak in higher rent areas, which presumably had less to "gain" in strictly financial terms. Rabiega, Lin, and Robinson (1984) also found upgrading effects in a study of mostly white-occupied, low-rise public housing and neighboring property values in Portland, Oregon. They observed that "public housing is not minority housing or a renewal device in Portland" (179) and underlined the importance of conducting similar studies in a variety of local contexts. Lyons and Loverage (1993), in a study of subsidized housing in St. Paul, found both positive and negative effects of subsidized sites on neighboring prop-

erty values. In this, the only completed study we know of to include Section 8 voucher/certificate holders, Lyons and Loverage found no detectable effects of the location of Section 8 tenants on nearby assessed values.[7]

Similarly, Goetz, Lam, and Heitlinger (1996), in a study comparing different types of subsidized housing in Minneapolis, found that multifamily housing rehabilitated by nonprofit groups generally upgraded central-city Minneapolis neighborhoods, with positive effects on property values, but that *public* housing appeared to have depressing effects. The researchers attributed this difference to several factors: as compared to nonprofit-run complexes, public housing had much weaker ties to leaders of surrounding neighborhoods, weaker management performance (owing in part to a history of underfunded maintenance), and a more negative public image. Cummings and Landis (1993), in a study of six affordable housing complexes developed by nonprofits in the San Francisco Bay Area, found positive effects on neighboring property values at two sites, no effects at three, and a substantial negative effect at one (an estimated cost of $49,500 to the sale price of homes within one-half mile of the subsidized housing development). Their study also emphasized the role of good design and maintenance:

> Poorly designed, poorly maintained, and poorly managed projects can affect neighborhood property values—regardless of whether... [the projects] are affordable or market rate. Conversely, well-designed, well-managed, and well-maintained projects should not affect neighborhood property values, regardless of whether they are affordable or market rate. (17)

Marous (1996), in a study of four very low-income housing complexes in four growing Chicago suburban markets, found no evidence of lowered home prices, and no reduction in new investment, in the surrounding neighborhoods. Like Cummings and Landis, Marous stressed the role of good site design, construction, and management. Marous' innovative analysis included interviews of local developers, real estate brokers, and assessors in addition to the tracking of home prices. A recent study of mixed-income housing developments in Montgomery County Maryland suggests no effect of subsidized units on the appreciation of adjacent and nearby homes in a strong market (Innovative Housing Institute 1998). Unfortunately, the analysis merely looks at small-area median home price trends, failing to control for property traits or other factors affecting price. We have no way of knowing whether the area price trends describe comparable homes.

Several studies stress the role of *occupancy* features in determining price effects. Guy, Hysom, and Ruth (1985) found that market-rate townhouse units near subsidized housing appreciated less than comparable units that were not near subsidized housing, although the effects were small in absolute terms. They ranged from $1,100–$4,800, on average.[8] Guy et al. attributed these negative effects to perceived differences in socioeconomic status, noting that occupants of the subsidized units earned perhaps 50 percent less than the median income of their neighbors.

Galster and Williams (1994) found significant negative effects on home prices near two of nine group homes for the severely mentally disabled (SMD) they studied. One of the two was in a high-value census tract, and the other had many "problem tenants" assigned to it, the researchers indicated. Beyond being statistically reliable, the price effects were substantively large, above the level of statistical reliability: during the nine months following the complexes' opening, single-family homes within a two-block radius of the SMD complexes sold for 40 percent less, on average, than comparable homes. The authors cautioned that the size of their sales samples for these two sites were small, and that "the observed effects were short-run and may not persist indefinitely " (475). They found no evidence of pre-operation "announcement effects" near any of the SMD sites; negative price effects were found only after the sites opened. In a national study, Kamely (1995) found that only public housing projects with high vacancy rates and large proportions of households headed by single females with children had small, statistically significant negative effects on neighboring home prices.

Next, and solidly in the category of mechanically rigorous but conceptually barren research, Waddell and Murdoch (1996) found that sale prices of Dallas-area homes for the years 1979–1995 were associated with census tract poverty rates and racial make-up. From there, the authors purported to offer "an assessment of the potential housing price impact of scattered-site public housing in North Dallas," referring to the two 40-unit sites proposed under a high-profile housing desegregation settlement (Walker v. HUD 1995), which had been staunchly opposed by some area homeowners. We cannot know whether the intent was to give local fear mongering some sort of academic legitimacy, but we can hope that litigation and property rights activism nationwide does not lead policymakers and scholars to create an industry of such specious "projections"—defensible neither as science nor as legitimate policy advice.

Finally, in the study most directly comparable to ours, Puryear (1989) analyzed price trends in four neighborhoods with scattered-site public housing developments alongside three control neighborhoods, similar

in all respects except for the presence of public housing, in Charlotte, North Carolina. Over 90 percent of the public housing residents were African American, and the neighborhoods receiving scattered-site complexes were 70 to 95 percent white. Puryear examined proximate residential sales five years before and after public housing's construction period (1978–1993) and found no relationship between proximity to scattered-site public housing and property values. Prices in all the neighborhoods increased considerably over the study period, indicating strong housing demand. Puryear concluded that the anticipated white flight did not occur, in part because the courts, civic groups, and community officials openly and consistently supported the scattered-site plan.

To summarize: these earlier results suggest several determinants of the price effects of public housing on receiving neighborhoods: local housing market dynamics, property management effectiveness, and occupancy details, to be sure, but also local political context and public image.

Yonkers Background

Because the court-ordered construction of scattered-site public housing in Yonkers was strongly opposed by city council members and many civic leaders, as well as by many white homeowners, negative price effects are perhaps more likely in Yonkers than in the Charlotte case described above. Yonkers' political climate was not only very hostile but widely publicized (see Feld 1989; Stern 1991), a fact that should be relevant for housing market response and perhaps, therefore, for the effects on receiving neighborhoods.

With a population of 189,000 in 1990, Yonkers, New York is the largest city in mostly suburban Westchester County. (See figure 1.) Racial/ethnic segregation is high in Yonkers and in some respects has worsened over the last two decades (Dentzer 1992; Li, Bakalas, and Darden 1995). Built along the Hudson River, the city is divided by highways into four large quadrants that reflect the city's racial imbalance. African Americans and Latinos make up only 14 percent and 17 percent of the city's total population, respectively, but constitute over 62 percent of the population of the southwest quadrant. Between 1980 and 1990, segregation in Yonkers did not change for African Americans but worsened for Latinos, following high rates of immigration from the Dominican Republic, Mexico, and other parts of Latin America—most of them into the southwest.

Since the 1980s, Yonkers has been subject to several important court cases designed to reduce racial segregation. These cases have focused on the relocation of low-income, mostly nonwhite residents from public and private housing in southwest Yonkers to other areas of the city and county. In 1985, in the most highly publicized decision to date, Federal district Judge Leonard B. Sands found several government parties guilty of deliberate racial segregation, linking the siting of public housing to the attendance areas of public schools. In his 665-page opinion, Judge Sands concluded that city and state entities had deliberately concentrated the location of public housing projects in nonwhite neighborhoods in southwest Yonkers over a period of thirty years. (See United States v. City of Yonkers 1985.) Sands noted that in 1982 the city had 6,800 units of subsidized housing and that of these, 6,566 units (97 percent) were located in or adjacent to southwest Yonkers.

Judge Sands concluded that racial segregation of schools and public housing was de facto policy in Yonkers—the first time that any court in the land had found a direct link between these two forms of segregation (Feld 1991). In addition to the immediate desegregation of public schools, which Yonkers accomplished by establishing magnet schools and citywide busing, Sands ordered the construction of 200 units of scattered-site public housing (SSPH) in areas of the city outside the southwest quadrant.[9]

Although busing in the public school system proved unpopular in Yonkers, the resistance to the school order paled in comparison to the turmoil sparked by Sands' public housing order. The fiercest opposition to the scattered-site plan came from white-led homeowner groups and white elected officials sympathetic to their cause. Opponents of the court order claimed that the new public housing would cause a constellation of problems—decline in property values, white flight, increase in crime, and even a weakening of the social fabric. Putting it most succinctly, one city councilman wondered aloud whether the court order would, in effect, "erase the line" between Yonkers and its infamous southern neighbor, The Bronx—an exemplar, he implied, of flight, disinvestment, and decay (McFadden 1988).

Despite the efforts of conciliatory civic groups in town, Yonkers was excoriated in the national press, becoming, among fair housing advocates in particular, a virtual synonym for racial bigotry—a "Mississippi on the Hudson" (Mondros and McGuffin 1992). For several years, the Yonkers City Council resisted the court-ordered construction of public housing in mostly white neighborhoods. Only when Judge Sands threatened the City with large and exponentially increasing fines, which threatened to bankrupt the City, did public officials relent, signing a consent decree in September 1988. In the years following the City Council's reluctant consent, opposition remained strong and pro-desegregation leaders active. One particularly influential local civic group,

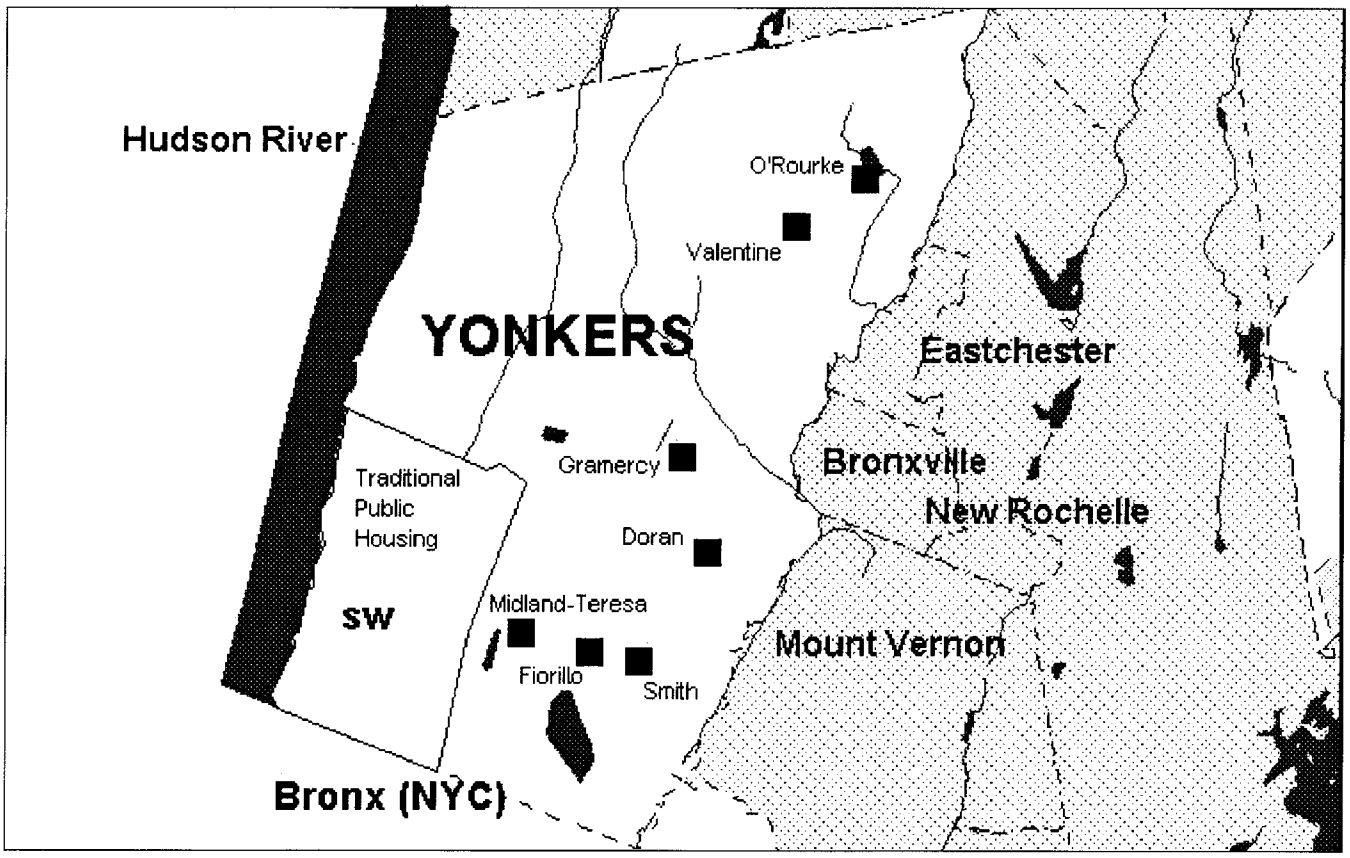

FIGURE 1. Context map of Yonkers, New York, showing neighboring cities, the southwest quadrant of Yonkers, and the seven complexes (black squares) built under the court-ordered SSPH program.

Yonkers Interfaith Education and Leadership Development (YIELD), even submitted a citywide housing plan that called for increased homeowner access to credit, public education, greater police presence at public housing complexes, studies of "redlining" by local banks, and a "stability pact" from 5,000 Yonkers homeowners to discourage abandonment of neighborhoods and blockbusting by realtors (Barron 1988; Cortissoz 1988). Several political campaigns during this period were run on the single issue of public housing; one would-be mayor promised to lie down in front of bulldozers to stop public housing construction (Newman 1996).

Built between 1990 and 1993, and occupied between 1992 and 1994, the public housing units on the east side of Yonkers consist of two- and three-bedroom, factory-built townhouses featuring: "as much brick as possible"; small, private backyards; the occasional bay window; and other features intended to make them look like single-family homes that would blend into the surrounding neighborhoods (Stern 1991; Newman 1996). The 200 units are scattered across seven sites, which range in scale from fourteen to forty-eight units each. Construction costs for the first developments were approximately $110,000 per unit, and this relatively high cost was a point of considerable controversy. The weakness of Yonkers' housing market during the late 1980s would have made the acquisition of co-ops and other existing units cheaper than building new public housing—and arguably done less to arouse political opposition from any one neighborhood, since the acquired units could have been more widely "scattered" than the seven clusters ultimately built.[10] Land acquisition costs were also hotly debated. The City of Yonkers refused to allocate city-owned sites for the housing, insisting upon the purchase of land from private owners (Polikoff 1995, 93).

Tenants of scattered-site public housing were chosen by the Yonkers Municipal Housing Authority from two pools: 50 percent from the pool of current public housing residents and 50 percent from the waiting list for public housing. Choice was made by a lottery, once families met income, family composition, payment record, and housekeeping requirements.

Data and Method

Financial Investments Among Homeowners in Receiving Neighborhoods

We analyzed data on real estate sales and phone survey responses within the city of Yonkers, New York. Data on real estate transactions were obtained from the *Multiple Listings Sales Books* for Westchester County. All single- and multi-family Yonkers home sales between January 1985 and December 1996 were entered. Cases with missing data on key variables and the elimination of transactions below $10,000, which very likely did not represent market-value "arms-length" deals, yielded a final usable sample of 3,101 cases. Yonkers has a diverse housing stock and neighborhoods that vary widely in terms of perceived quality. The median price for sales citywide during the study period was $208,000, but prices ranged from $50,000 at the low end to $908,000 for the most expensive home.

In addition to building and lot characteristics, sales date, zoning code, and building address were entered. MapInfo™ software was used to match each address to a census tract, and via circular buffers, a dummy variable was generated indicating whether the property sold was within one-quarter mile of any of the seven SSPH complexes. (See figure 2.)[11] Following Galster and Williams (1994), we ran several models using the local zoning designation as a proxy for expected future land uses in the immediate environs of each property, to distinguish housing submarkets within the city.[12] Because of errors in the source data, zoning codes were later dropped as unreliable.

Assuming that a conservative real estate market would not await the construction of public housing to respond, we created dummy variables to indicate whether each proximate sale took place before or after the announcement and occupation of the SSPH site nearby. Although occupancy of the first SSPH complex dates to April 1992, the seven sites were for all practical purposes known to the public (and to realtors) about five years earlier. One important question we seek to address is whether fear of the unknown, indicated in "announcement effects" on prices, is more serious from a market standpoint than the presence of public housing once tenants have moved in.

Date-of-sale data were used to control for seasonal and time-trend variations that might confound SSPH effects, since site construction began during a deep recession in the regional real estate market. We created quarter-of-sale dummies for the twelve-year period to control for these trends.[13]

In the study of house price dynamics, conceptual and technical hurdles abound (Cho 1996). Our analytic model makes the standard, simplifying assumption that price is a reliable proxy for the quality or "hedonic value" of a home (Rothenberg et al. 1991). Furthermore, the model assumes that prices are a function of structure or property-specific traits, as well as characteristics of the surrounding neighborhood and the quality of municipal services:

$$Price = f(Structure, Neighborhood, Local\ Services)$$

Structural traits used in the regression model were: building and property size; number of bathrooms and other rooms; residence type (single- versus multi-family); and building age. Previous research has suggested non-linear price effects of building age (Goodman and Thibodeau 1995) and number of rooms (Li and Brown 1980). Therefore, squared versions of these variables were generated for use in the regression. Neighborhood traits are captured by the aforementioned dummy variables for zoning code, census tract, and proximity to SSPH. No direct measures of the quality of local services were obtainable, but Yonkers has a single tax, service, and public school system. This is not to say that service quality is uniform across neighborhoods. Like earlier researchers, though, we assume that most *inter*-neighborhood differences in service quality are captured by the census tract variable.

A more fundamental challenge in these analyses is adequately sorting out what drives what—causation, in the jargon. Might subsidized housing account for what appear to be lower home prices, holding other factors equal, or might below market-rate housing have been deliberately sited in lower valued areas? The latter might be true for various reasons, including the lower cost of acquiring land (which frees up funds for better design and construction), less political resistance, or other factors. A study now underway by Galster applies several analytic innovations to compare the impacts of distinct subsidized housing programs (acquisition rehab, Section 8 tenant-based assistance, and more) in distinct submarkets in Denver and Baltimore, controlling for this causation problem.[14] Although the state-of-the-art is constantly evolving, our results detail the analytic steps we took to address this particularly thorny challenge.

Nonfinancial Investments by Residents of Receiving Neighborhoods

People keep their neighborhoods vital not just through financial investments but through social and psychological ones as well (Taub, Taylor, and Dunham 1984; Grigsby et al. 1987; Galster 1990; Temkin and Rohe 1996, 1997). Figure 2 shows how these two forms of investment are interdependent, how each can be shaped by a variety of forces, and how both affect neighborhood vi-

tality and are, over time, affected by it. One possible influence on levels of investment is the intervention under study—a particular housing program, say—but others include changing demographics (market demand), patterns of investment metro-area wide (actions by banks, buyers, realtors) which favor some neighborhoods over others, industrial restructuring, and more. Often, actions by those outside the neighborhood are most determinant and most difficult for neighborhood residents to reshape. The "investments" by residents of the immediate neighborhood, then, are highlighted in our model to reflect the priorities of this study and *not* relative impact on the outcomes of interest: outsiders' actions may be far more powerful than those of neighborhood residents in determining the effects of subsidized housing (or any other factor) on home prices. A key implication of the model in figure 2 is that few if any changes in a neighborhood's vitality are *irreversible*—that effects, if any, of particular interventions are neither fixed nor final. Another is that residents of a given neighborhood are not simple pawns of larger forces, whether public or private, but can help choose the future they want. There is compelling evidence in earlier studies, for example (see above), that the economic spillover effects of subsidized housing depend on people's attitudes about race, class, and markets at particular moments in time.

Supplementing the data on home sales is a telephone survey of 691 Yonkers residents conducted July–December 1994, which included a random-digit dial citywide sample of 544 residents (with response rate of 60 percent of eligible households) and a purposive sample of 147 residents, both owners and renters, living near the seven SSPH sites (with response of 75 percent of eligible households). Consistent with census data on the SSPH-receiving neighborhoods, 90 percent of the "neighbors of scattered-site public housing" in our phone survey identified themselves as non-Hispanic white. The survey respondents are in many other ways representative of the city as a whole.[15]

Our roughly thirty-minute phone interviews fo-

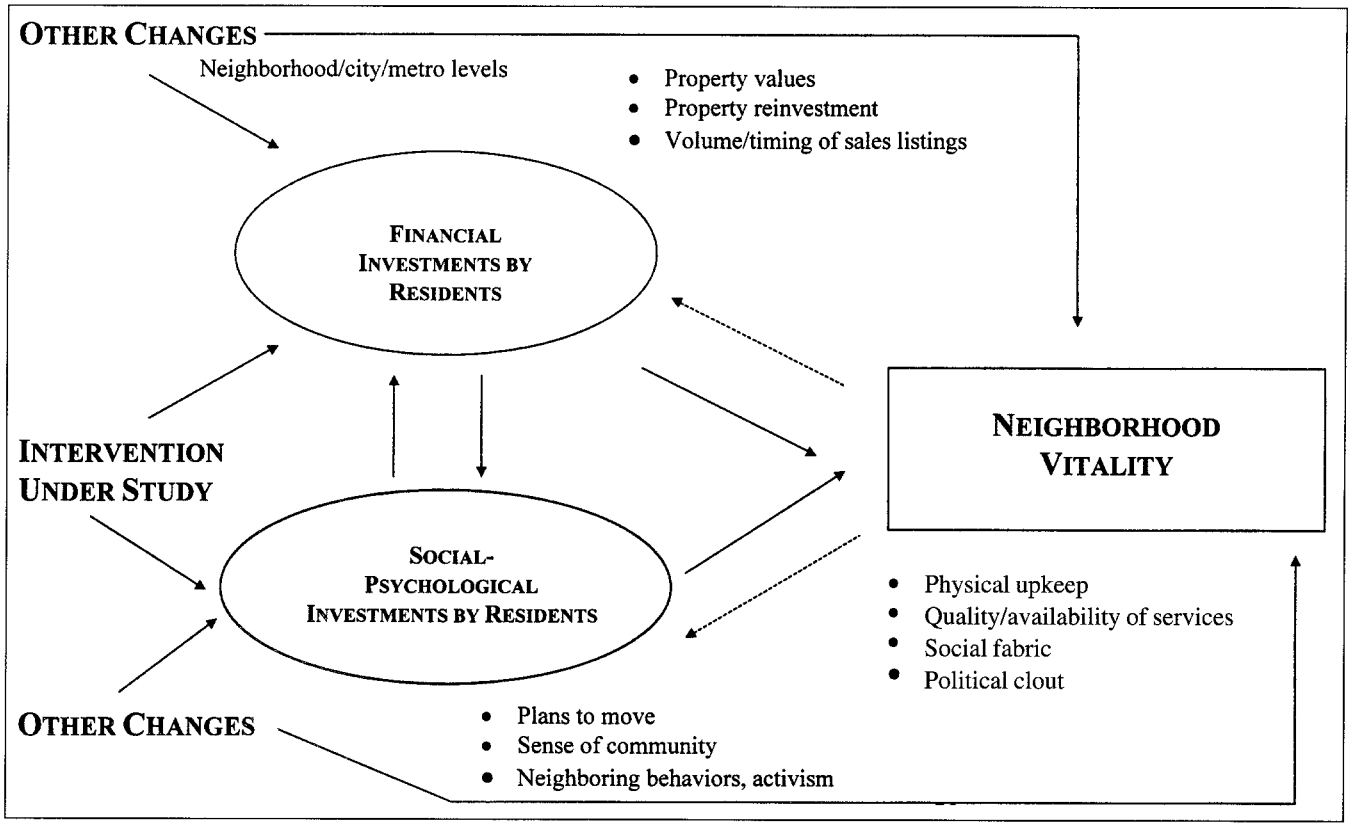

FIGURE 2. Assessing Effects: A Heuristic Model of Neighborhood Change. Financial and non-financial (social-psychological) investments—reflected in measures of the bulleted variables—are interdependent. The intervention under study is but one force affecting each, and such investments affect and, over time, are affected by a neighborhood's vitality—both real and perceived. A key implication is that the effects of an intervention such as an SSPH development, if any, are not fixed, so that few, if any, changes in neighborhood vitality are irreversible.

cused on neighborhood perceptions and expectations, but also included a range of questions about the respondent's personal outlook and family life, current economic circumstance, plans to move, and attitudes toward politics, race, class, public housing (in general), and the Yonkers desegregation controversy in particular.

Our analyses of these data were driven by an interest in residents' attitudes toward their neighborhoods and expectations for the future. In addition, we were interested in concrete plans to move, which might signal neighborhood abandonment or "flight," and in psychological "sense of community." The latter refers to the social and psychological connectedness to neighbors that is known to be associated with active neighboring and participation in community groups, whether established block associations or short-run improvement activities (Chavis and Wandersman 1990). The analyses reported here draw heavily on earlier work by members of our Yonkers research team (see Darden et al. 1994; Aidala, Howard, and Callender 1996).

Forecasting Price Effects: Ambiguous Clues to Neighborhood Context

The more careful prior research in this domain has argued that negative spillover effects, if any, generated by subsidized housing relate closely to local context, including the socioeconomic and financial character of the receiving neighborhoods. Table 1 shows that the areas that received SSPH in Yonkers are quite diverse with regard to recent proximate sales. In addition to median traits, this table shows the total number of sales neighboring to particular sites before and after site announcement dates.[16] Most striking is the fact that median sale prices by site (not standardized for property characteristics) range from a low of 78 percent of the citywide median (near the Smith site) to a high of 134 percent (near Gramercy). These two SSPH areas also represent the extremes on a key structural determinant of sale price—lot size. Average lot sizes are almost three times greater for sales near the Gramercy site than for those near the Smith site. So our "proximate sales" include a range of home types and price levels. Sales volume also varies widely. Several sites abut mostly multifamily homes that are primarily renter-occupied and appear to sell less often than do single-family, owner-occupied homes in Yonkers.

We suggested earlier that demographic and other traits of the "neighbors" of SSPH might provide clues to price effects. Table 2 gives a limited view of the demographic traits of block groups that received SSPH. Note that while table 1 considers only proximate sales (a subsample of all homes near these sites), the census data in table 2 includes all residents—those who own and those who rent their housing, those owners who sold their homes after the census survey and those who did not.

Future research in this vein should note that census data provide a broad snapshot of those who live near subsidized housing but few clear directions for hypothesizing about price effects. Homeowners might be less nervous about nonwhite in-movers, even poor ones, if they had nonwhite neighbors before, or the presence of a "critical mass" of nonwhites at the time of public housing construction might signal a neighborhood already in racial/ethnic transition, and so more readily trigger negative price effects. Six proximate neighborhoods are 6 percent or less non-Hispanic white, but nearly one-fifth (17 percent) of O'Rourke residents were nonwhite as of the census in 1990, two years before the SSPH site there opened. Data indicate that most of these were renters in a large block of low- to moderate-income apartments, however, and this group may have had limited social contact with white homeowners. As for the financial status of neighbors, median household incomes varied substantially, and so did homeownership rates. Still, more than a third of homeowners near the O'Rourke, Valentine, and Smith sites spent more than 30 percent of their income on housing. While it is risky to extrapolate from these aggregate census data to the small samples of owners who sold their homes during the study period (our data), it may be the most financially strained owners who feel most threatened by public housing. On the other hand, owners of the most expensive homes (see table 1) may have the most equity (wealth) at stake, regardless of their mortgage burdens, and wealth may be a better predictor of the panic-selling dynamics that tend to depress prices (see Galster and Williams 1994).[17] Other important household-level indicators—of recent financial fortunes, for example—are not available in the census.

The implications of these demographic data for price effects are frankly ambiguous, in part because census measures of central tendency mask diversity within neighborhoods, because people's "social neighborhoods" often bear little resemblance to units of census geography (Fava 1958; Gans 1962; 1967; Tienda 1991; Briggs 1997), and, more generally, because census measures are poor proxies for the social and psychological processes and other factors that drive household-level decisions—about real estate or anything else.

Results

Effects on Home Prices

Dissatisfied with ordinary least squares and weighted least squares models for their handling of heteroskedastic error, we settled on robust regression equa-

TABLE 1. Volume and traits of home sales near SSPH sites in Yonkers, New York, 1985–1996

SSPH Site	Median Sale Price ($1,000) (SD)	Price Index[a]	No. Proximate Sales Pre-Announcement[b]	No. Proximate Sales Pre-Occupancy[c]	No. Proximate Sales Post-Occupancy	Median Lot Size (Sq. Ft.) (SD)	Median No. Rooms (SD)
O'Rourke	$225.0 (38.5)	1.08	17	46	45	7841 (5062)	7.0 (1.5)
Fiorillo	202.0 (42.6)	0.98	0	14	15	4792 (1972)	7.0 (3.2)
Smith	182.8 (40.0)	0.88	0	7	33	5000 (2253)	8.0 (4.3)
Gramercy	268.0 (178.5)	1.29	5	23	10	12000 (13705)	8.0 (1.9)
Valentine	225.0 (58.6)	1.08	9	20	31	7750 (4954)	8.0 (1.6)
Doran	239.0 (111.4)	1.15	2	10	21	6098 (8612)	8.0 (3.5)
Midland-Teresa	220.8 (93.0)	1.06	2	12	10	8712 (3158)	8.0 (1.4)

a. Median sale price for proximate sales (within one-quarter of a mile) as a fraction of the citywide median sale price for the 1985–96 study period ($208,000). These prices are not standardized for property traits.

b. April 15, 1987 was used to distinguish pre- and post-sales for the sites. On this, a conservative date for our purposes, court-appointed architect Oscar Newman announced an "alternative plan" with fifteen potential sites, seven of which were eventually confirmed by the Yonkers City Council. Gramercy, the seventh site, was confirmed in October 1988; all other sites by January 1988.

c. Occupation of the sites began in April 1992 (for O'Rourke, Doran, Smith, Valentine); June 1992 (Fiorillo); February 1994 (Midland-Teresa); and July 1994 (Gramercy). Gramercy, the final site built, was fully occupied by November 1994.

Sources: Yonkers City Planning Department and Municipal Housing Authority.

TABLE 2. Traits of neighbors: census data on block groups with SSPH

SSPH Site	White, non-Hispanic Households (%)	Median Household Income in 1898 ($)	Owner-Occupied Households (%)	Owners Paying > 30% of Income on Home Housing Costs (%)
O'Rourke	83%	$44,634	25%	43%
Valentine	94	45,117	54	38
Gramercy	99	46,152	54	13
Doran	94	67,164	36	22
Midland-Teresa	96	61,034	64	26
Smith	98	40,749	65	34
Fiorillo	97	37,993	56	29

Source: United States Census Bureau, Summary Tape File 3A (1990).

tions (table 3). (See Rousseeuw and Leroy 1987; Hamilton 1992.)[18] Model 1 shows the price differentials associated with overall proximity to scattered-site public housing (any one of the seven SSPH sites) before site announcement, prior to occupancy, and following occupancy. These are price differentials *relative* to the remaining area within the census tract. Coefficients for most structural traits are highly significant, including the variable distinguishing single-family homes from other types.[19] The proximity coefficients indicate the cost or benefit of selling a home in those micro areas but do not isolate the presence of SSPH, since other traits of the micro area may be driving the differential (see earlier discussion). The effect of an event that may have price impacts, such as SSPH site announcement, is the difference between pre-event [B_1] and post-event [B_2] coefficients for this micro area, under the reasonable assumption—informed by our observations and informal interviewing in Yonkers—that, during the study period, the construction of scattered-site public housing was the most significant *change* in these micro areas that might affect home prices.[20] A statistically significant difference between pre and post coefficients would indicate a *reliable* effect of the subsidized housing (though not necessarily a large one in dollar terms).

In place of the standard test (null hypothesis) that the regression coefficient is not different from zero at a high confidence level (95 percent or more), we test whether the difference between pre and post coefficients is different from zero at that level, accounting for standard errors [SE_1 and SE_2] associated with each coefficient. Symbolically, the null hypothesis is:

$$H_0: B_1 - B_2 = 0$$

The confidence interval for each coefficient [B_1], say, is found using the t-statistic at the 95 percent confidence level, as follows:

$$B_{1\,\max,\min} = B_{1\,\text{pred}} \pm t_{.025}\,(SE_1)$$

And the confidence interval for the difference, or event effect [E], at the given level of confidence is calculated as follows:

$$B_{1\min} - B_{2\max} < E < B_{1\max} - B_{2\min}$$

If this 95 percent confidence interval does not bound zero, we may conclude that scattered-site public housing had a statistically significant effect (positive or negative) on sale prices of nearby homes. Effects of SSPH site announcement and occupancy (two "events") are calculated in turn: first, the difference between pre- and post-announcement coefficients (announcement effect) and second, the difference between post-announcement and post-occupancy coefficients (occupancy effect).

Following this logic, *overall* proximity to scattered-site public housing is shown to have no detectable price effect during the study period, neither after announcement nor after occupancy. In the years following site announcement (pre-occupancy), homes within one-quarter mile of SSPH sites sold for $12,000 less, on average, than did comparable homes outside those areas, but the direct interpretation of this sequence of calculations is that the complexes were sited in lower value areas within the respective census tracts.

Still, the aggregate model obscures the considerable variation among the SSPH sites in scale, median value of local homes, average household income, and other factors that may be important to the spillover effects of public housing development. Model 2 considers price effects site-by-site wherever sales were recorded, distinguishing only the pre- and post-announcement periods.[21] Here, we find no reliable evidence that the announcement of particular sites had price effects.

Model 3, our final specification, adds a test for post-occupancy effects. Whatever the effects of site announcement, did SSPH discount nearby home prices after public housing residents moved in? Our analyses suggest not. To appreciate the implications, consider the O'Rourke site. The post-announcement coefficient indicates a cost to sellers of over $22,000 for homes in this micro area relative to the larger census tract, traits of the homes themselves held equal. But the pre-announcement coefficient suggests a possible negative effect of some other micro area trait, and the difference between coefficients is not reliably different from zero. It is impossible to determine with these data, then, whether the discount on home prices owes to SSPH or to the school, reservoir, and/or blocks of low-rise, moderate-income apartment buildings that lay in the same micro area. In simpler terms, each of the following scenarios is possible: SSPH further depressed prices in an already depressed micro area, SSPH had no particular effect (so prices remained discounted for reasons that precede the announcement, construction, and development of SSPH), or SSPH had an upgrading effect on the micro-neighborhood relative to the larger census tract. Our numbers suggest the middle scenario—no effect large or robust enough (across multiple sales) to be detected.

The seven sites feature uniform design and occupancy traits. It is neighborhood context, site scale, and politics that varied in important ways. Consider the traits of proximate sales discussed above. (See tables 1 and 2.) O'Rourke, Doran, and Gramercy are in comparatively high-value areas. These three are the largest sites (at 44, 24, and 48 units respectively). But O'Rourke was the first of the seven sites to be built and occupied. It was targeted by a bomb scare in the early spring of 1992. Al-

TABLE 3. Robust regression results for home sales prices in Yonkers, New York, 1985–1996 (Dependent Variable = Sale Price in Dollars)

Variable	Unstandardized Coefficient	Standard Error
Model 1: By Overall Proximity to Scattered-Site Public Housing and Announcement/Occupancy#		
Structure		
AGE (years)	-336.1	(138.6)*
AGE_SQUARED	-0.64	(1.17)
ROOMS	10609	(778.0)***
ROOMS_SQUARED	-296.1	(29.70)***
BATHROOMS	-150.5	(2182)
BATH_SQUARED	3016	(437.0)***
INTERIOR_SIZE (square feet)	14.54	(0.90)***
LOT SIZE (square feet)	2.55	(0.233)***
LOT SIZE_SQUARED	1.3E-05	(4.8E-06)**
SINGLE-FAM HOME	7816	(2446)***
Proximity		
Close Pre-Announce	-6165	(6479)
Close Pre-Occupancy	-12494	(3499)***
Close Post-Occupancy	-6885	(3129)*
Calculated Effect—announcement	—	
Calculated Effect—occupancy	—	
Constant	-16518	(11398)
Adjusted R-square	0.74	
Sample Size (N)	**(3101)**	
Model 2: By Site Proximity and Announcement Date		
Structure		
AGE (years)	-340.2	(138.5)*
AGE_SQUARED	-0.61	(1.17)
ROOMS	10497	(777.7)***
ROOMS_SQUARED	-291.6	(29.7)***
BATHROOMS	-12.00	(2181)
BATH_SQUARED	2952	(436.6)***
INTERIOR_SIZE (square feet)	14.50	(0.90)***
LOT SIZE (square feet)	2.48	(0.23)***
LOT SIZE_SQUARED	1.3E-05	(4.76E-06)***
SINGLE-FAM HOME	7738	(2446)**
Proximity		
Fiorillo Pre-Announce	N/A	N/A
Fiorillo Post-Announce	-3658	(8035)
Fiorillo—announcement effect	N/A	
Valentine Pre-Announce	2007	(12347)
Valentine Post-Announce	1293	(5442)
Valentine—announcement effect	—	
Smith Pre-Announce	N/A	
Smith Post-Announce	-128.7	(7151)
Smith—announcement effect	N/A	
Midland-Teresa Pre-Announce	-14208	(24320)
Midland-Teresa Post-Announce	-2638	(8551)
Midland—announcement effect	—	
Gramercy Pre-Announce	-13782	(19778)
Gramercy Post-Announce	-5968	(6574)
Gramercy—announcement effect	—	
Doran Pre-Announce	-2959	(26720)
Doran Post-Announce	-3345	(10092)
Doran—announcement effect	—	
O'Rourke Pre-Announce	-10632	(8873)
O'Rourke Post-Announce	-24170	(4199)***
O'Rourke—announcement effect	—	
Constant	-15639	(11420)
Adjusted R-square	0.74	
Sample Size (N)	**(3101)**	
Model 3: By Site Proximity and Announcement/Occupancy		
Structure		
AGE (years)	-338.2	(138.7)*
AGE_SQUARED	-0.61	(1.17)
ROOMS	10412	(778.8)***
ROOMS_SQUARED	-288.2	(29.7)***
BATHROOMS	121.3	(2185)
BATH_SQUARED	2922	(437.5)***
INTERIOR_SIZE (square feet)	14.53	(0.90)***
LOT SIZE (square feet)	2.47	(0.23)***
LOT SIZE_SQUARED	1.3E-05	(4.78E-06)**
SINGLE-FAM HOME	7802	(2454)***
Proximity		
Fiorillo Pre-Announce	N/A	
Fiorillo Pre-Occ	-4798	(10563)
Fiorillo Post-Occ	-3343	(9981)
Fiorillio—occupancy effect	—	
Valentine Pre-Announce	-1789	(12355)
Valentine Pre-Occ	2158	(8589)
Valentine Post-Occ	1031	(6544)
Valentine—*occupancy effect*	—	
Smith Pre-Announce	N/A	
Smith Pre-Occ	-3783	(7613)
Smith Post-Occ	4125	(7536)
Smith—*occupancy effect*	—	
Midland-Teresa Pre-Announce	-14506	(24336)
Midland-Teresa Pre-Occ	-9134	(11564)
Midland-Teresa Post-Occ	3604	(11258)
Midland—*occupancy effect*	—	
Gramercy Pre-Announce	-14121	(19795)
Gramercy Pre-Occ	-3783	(7613)
Gramercy Post-Occ	-12374	(11542)
Gramercy—*occupancy effect*	—	
Doran Pre-Announce	-1871	(26740)
Doran Pre-Occ	1157	(14029)
Doran Post-Occ	-3764	(10751)
Doran—*occupancy effect*	—	
O'Rourke Pre-Announce	-10616	(8878)
O'Rourke Pre-Occ	-25601	(5747)***
O'Rourke Post-Occ	-22756	(5509)***
O'Rourke—*occupancy effect*	—	
Constant	-13819	(11516)
Adjusted R-square	0.74	
Sample Size (N)	**(3100)**	

All models include control variables, not shown, for census tract (to indicate "neighborhood quality"), and quarter-of-sale (to capture time-trend market effects). For full tables, please contact the first author.

* $p < .05$ ** $p < .01$ *** $p < .001$

N/A = not applicable (i.e., no home sales "pre-announcement")

Source: Westchester County Multiple Listings Sales Books, 1985–1996 inclusive.

though the local homeowner group eventually came out in favor of the scattered-site plan and worked, in tandem with the housing authority, to educate homeowners about public housing in-movers, O'Rourke may have been the flashpoint for resistance to the SSPH plan, generating negative price effects among early panic sellers. The clustering of proximate sales on particular block-faces near several sites, but especially near O'Rourke, supports this notion of limited panic selling. (See figure 3.) It is entirely possible that particular sales of nearby homes were discounted—even sharply—in the period following SSPH announcement or construction. The point of our statistical analysis is that no *generalized* price effect can be found.

Apart from the extraordinary events related to local political response, the matter of scale deserves some attention. While design of the SSPH complexes was uniform, scale was not, for political reasons. Despite the court-appointed architect's concerted effort to minimize the scale of any one SSPH complex, HUD and the City of Yonkers, both named liable in the court order, insisted that the architect accommodate 200 units on only seven sites, thereby forcing greater concentration (Newman 1996). HUD and the City thought that concentrating the units on fewer sites would limit negative effects, as well as political resistance, to a few neighborhoods—in other words, would spare additional areas the "contagion" of public housing. In retrospect, although we can find no reliable statistical evidence of generalized price effects, this does not rule out effects on particular sales, and it seems that greater dispersion (more sites, lower densities at each) would have been wise. One moral of the story—thus far—is that small is beautiful.

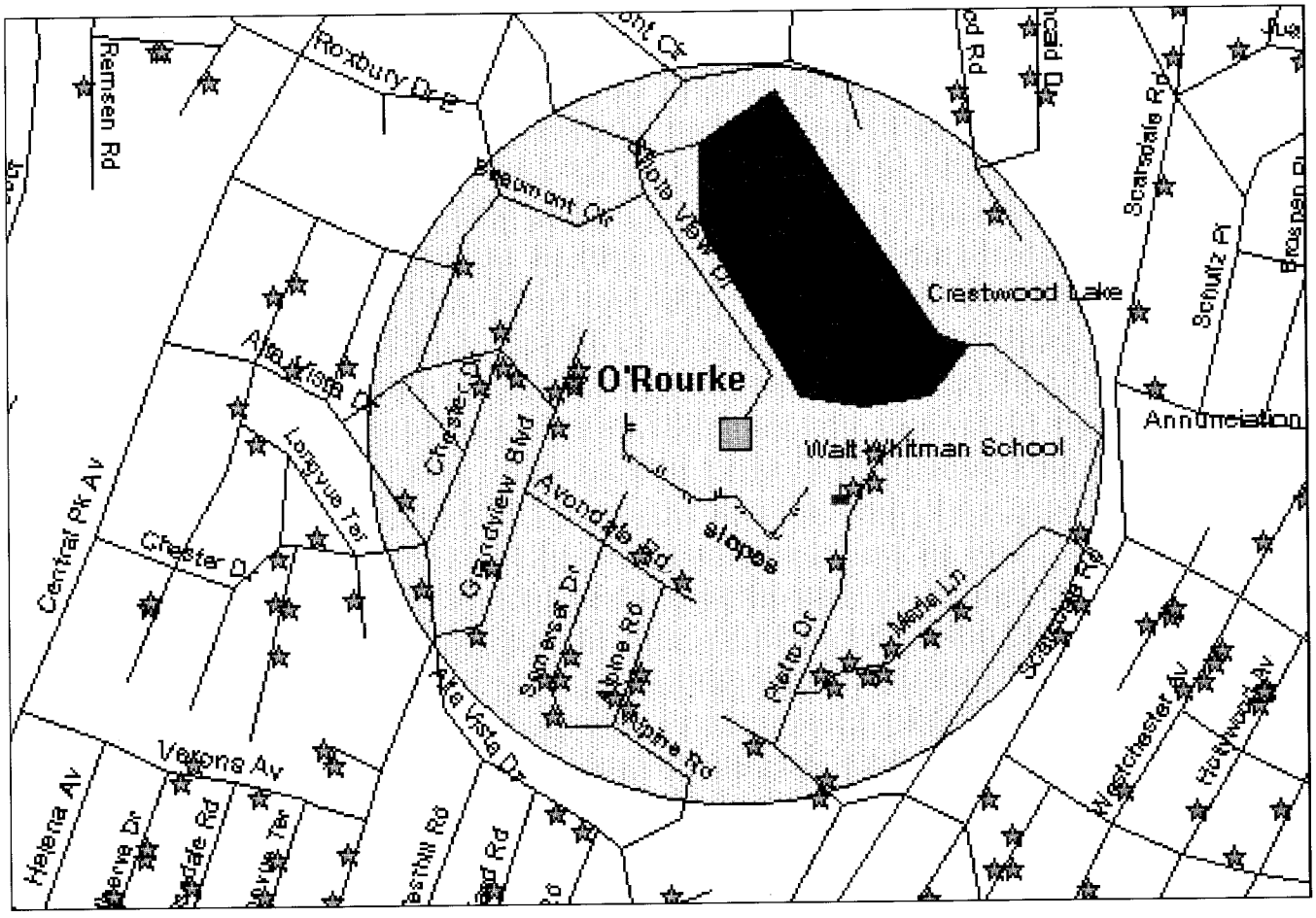

FIGURE 3. The O'Rourke public housing complex and surrounding neighborhood, showing proximate sales 1987–1996 (in a quarter-mile buffer). Stars indicate residential sales. Note the clustering of proximate sales on particular block-faces close to the public housing complex, which may indicate "panic sales" by some homeowners.

Effects on Neighbors' Attitudes, Plans to Move, and "Sense of Community" (Social and Psychological Investments in Receiving Neighborhoods)

From analyses of our 1994 phone survey (Darden et al. 1994; Aidala, Howard, and Callender 1996), we can find no evidence to support the doomsday scenarios proffered by opponents of court-ordered desegregation in Yonkers.[21] White homeowners living near SSPH were not particularly concerned about racial tipping of their neighborhoods, nor were they more likely than their counterparts citywide to have plans to move. (See table 4.) A large majority of all homeowner subgroups would recommend their neighborhoods to friends as good places to live. If anything, these seven neighborhoods remain among the most desirable in the city—a story which may be important for interpreting early "announcement effects" on particular property sales that may be observed in our aggregate analyses. When owners who would like to move were asked *why*, those near SSPH were no more likely than owners citywide to cite "declining property values" or "concern about public housing residents." In addition, both groups were about as likely to cite high taxes as any other reason for moving. Yonkers property taxes are notoriously high for the region, a factor that depresses sales citywide, say local realtors.

White residents near SSPH, whether renters or owners, were just as likely as whites citywide to agree that "it is time for the people of Yonkers to put the housing controversy behind us and figure out ways that all racial and ethnic groups can work together." A large majority of both groups (about 87 percent) feel this way (data not shown). In addition, 71 percent of whites near SSPH feel and 67 percent of whites citywide felt that "the City Council should have obeyed the final court order rather than wasting so much of the city's money trying to fight the law." People of color citywide were most likely to agree that the City should have complied sooner (92 per-

TABLE 4. Homeowner perceptions of neighborhood and plans to move by proximity to SSPH and race/ethnicity

	White homeowners		Nonwhite homeowners
Perceptions	Near SSPH (%)	Elsewhere (%)	Citywide (%)
Neighborhood expectations			
Worry about tipping—think neighborhood will become all African American in a few years	6%	12%	11%
Neighborhood perceptions			
Would recommend neighborhood as good place to live to a friend of similar income, race/ethnicity and family circumstances	74	75	71
Would like to change residence			
Out of present neighborhood	2	4	15
Out of city of Yonkers	58	49	45
Has taken steps to move*			
Has looked for homes to buy or put current residence up for sale	26	38	37
If want to move—reasons cited*			
Declining property values	58	60	50
Worry about public housing residents	47	39	39
Taxes too high	59	58	64
Want better climate	45	54	61
Sample size (N)	**(100)**	**(215)**	**(49)**

* Those who would like to change residence included: 61 white homeowners near SSPH, 108 white homeowners elsewhere in Yonkers, and 26 minority homeowners in Yonkers (near SSPH or elsewhere in Yonkers).

Chi-square analyses indicate no differences between those white homeowners living near SSPH and white homeowners living elsewhere in Yonkers.

Source: Yonkers Phone Survey conducted July–December 1994.

cent). White neighbors of SSPH were no more likely than whites citywide to think that "people using drugs" or "people drinking in public places" were problems in their neighborhood, although, consistent with NIMBY-ist opposition, the former were more likely to *think* that property value decline was a problem (80 percent versus 69 percent, $p<.05$).

Among whites, those most opposed to SSPH were male homeowners who lived near the sites, held fairly conservative ideological views, and apparently subscribed to racial stereotypes. (See table 5.) Specifically, these respondents were significantly more likely than others in the sample to feel that racial discrimination is no longer a serious problem and that poor minorities lack the will power needed to lift themselves out of poverty. We expect that "status anxiety" or a sense of downward mobility among middle-class families (Rieder 1985; Newman 1988; Mondros and McGuffin 1992), has also played an important role in this opposition—a need to protect turf. Future analyses will develop measures to explore this.

What if residents of the receiving neighborhoods came to accept the inevitability of the court order and chose not to move, or wanted to move but had few attractive exit options, yet nevertheless withdrew from neighborhood life and lost a "sense of community"? Thus far, we find no evidence that SSPH has had substantial negative effects on psychological sense of community in receiving neighborhoods. We present the more vivid item-by-item cross-tabulations here (see table 6), not the multivariate results that corroborate these effects (see Aidala, Howard, and Callender 1996). Most whites living near SSPH felt that "my neighborhood is a good place for me to live." People of color in Yonkers were significantly less likely to consider their neighborhoods good places for them to live or to report plans to stay in their neighborhoods "for a long time." The items in table 6 form a reliable scale, with higher scores indicating greater sense of community. In multivariate analyses of the scale, non-Hispanic white respondents show the highest scores, regardless of neighborhood, household income, or other factors. In addition, those with higher scores for sense of community tend to be married, older, more highly educated, middle-income, and members of neighborhood organizations, and they tend to have children in the household. These patterns are quite consistent with previous research in other cities. (See, e.g., Chavis and Wandersman 1990.)

Informal reports by the Yonkers housing authority director and chief of police indicate no increases in crime in the surrounding neighborhoods, only a few noise complaints, and these are as likely to come from neighbors within the SSPH complexes as from surrounding homeowners (Newman 1996). The positive conditions and lack of hostility by neighboring whites were fostered by early investments by the housing authority in tenant counseling pre- and post-move, along with dedicated work by the police in building confidence and more closely patrolling the areas surrounding SSPH in the first six months after each site was occupied. The chief of police visited numerous homeowner groups, reassuring them that he would not allow drug dealing and prostitution to overtake their neighborhoods and that the newcomers to public housing would be good neighbors. In some cases, neighboring homeowners participated as trainers in the tenant counseling, building ties to the in-movers before they occupied their units. This kind of "groundlaying" is not unusual for scattered-site programs around the country (Hogan 1996).

There are several limitations to these data on what we have termed "social and psychological investments" among residents of receiving neighborhoods. First, the phone survey analyses do not include controls for neigh-

TABLE 5. Opposition of white residents only to SSPH (standardized OLS regression coefficients)

Variables	Beta coefficient
Lives near SSPH	1.22**
Male	0.77*
Age	1.20**
Income	0.23
College graduate	-0.45
Homeowner	1.41***
Has children	-0.62
Politically conservative	0.68***
Thinks discrimination not serious	1.81***
Thinks poor minorities lack willpower	1.80***
Adjusted R-square	0.27
Sample size (N)	**(508)**

* $p < .05$ ** $p < .01$ *** $p < .001$

The scale of opposition to SSPH had five items, with scores from 0 to 20 (Cronbach's alpha = .76). Higher scores indicate greater opposition. Overall mean = 7.38 (SD = 4.2). The items are:

- "Property values always go down when public housing is built in a neighborhood, no matter who lives in the housing";
- "The government should not spend tax dollars on providing housing for poor people";
- "I feel that the City Council should have obeyed the final court order rather than wasting so much of the city's money trying to fight the law";
- "I always supported building public housing in different neighborhoods of Yonkers"; and
- "It is time for the people of Yonkers to put the housing controversy behind us and figure out ways that all racial and ethnic groups can work together."

Source: Yonkers Phone Survey conducted July–December 1994.

TABLE 6. Sense of community by proximity to SSPH and race/ethnicity

	White residents[a]		Nonwhite residents[a]
	Near SSPH (%)	Elsewhere (%)	Citywide (%)
Percent who agree with statement			
I think my neighborhood is a good place for me to live.	89%	83%	69%*
People in this neighborhood DO NOT share the same values(believe the same things are important).	43	38	61*
My neighbors and I want the same things from the neighborhood.	89	84	70*
People in this neighborhood generally don't get along with each other.	8	9	24*
I can recognize many people who live in my neighborhood.	75	82	73*
I feel at home in my neighborhood.	80	88	76*
Very few of my neighbors know me.	44	39	52*
I care about what my neighbors think of my actions.	77	81	71*
I have almost no influence over what this neighborhood is like.	52	49	53
If there is a problem in this neighborhood, people who live here can get it solved.	61	68	60
It is very important to me to live in this particular neighborhood.	47	49	43
I expect to live in this neighborhood for a long time.	55	52	39*
Sample size (N)	**(140)**	**(376)**	**(175)**

a. Includes both renters and owners
* $p < .05$ ** $p < .01$ *** $p < .001$.

Source: Yonkers Phone Survey conducted July–December 1994.
Adapted from Chavis and Wandersman (1990), who identify four dimensions to this scale: membership, influence, shared values, and cohesion.

borhood quality. The limited sample size and large number of respondent neighborhoods made it impossible for us to generate such controls in any statistically useful way. Second, these are not impact analyses, strictly speaking—we do not have "before" measures for the neighborhoods that received or did not receive SSPH. These analyses should not be read, therefore, as final evidence of *no* SSPH effects on host neighborhoods, but rather as compelling indications that SSPH has not wreaked havoc in any of the ways that opponents of the court order claimed it would. Most importantly, there are no signs of neighborhood tipping or significant white flight. Taken together, our phone survey results and informal reports by Yonkers insiders suggest that any negative price effects not apparent in our statistical models should be short term. Residents of the neighborhoods surrounding scattered-site public housing are as satisfied, or more satisfied, with their immediate residential environments, and as disgruntled about high taxes and other perceived problems, as Yonkers residents citywide.

Implications and Extension

This study has several clear implications for research, policy, and planning. Previous research has suggested that public housing and other forms of subsidized housing have no consistent effects on property values, and also that nonwhite in-movers have no clear and consistent effects, until *context* factors are consid-

ered. Among the most important factors identified are:

1. *Political* context—whether construction of scattered-site public housing, for example, is supported by public officials, civic groups, and others (Puryear 1989).

2. *Housing* context—whether the housing under study is sited in higher or lower value areas and whether local housing demand is generally strong (De Salvo 1974; Puryear 1989; Galster and Williams 1994), also whether the housing is well designed and managed (Cummings and Landis 1993; Goetz, Lam, and Heitlinger 1996).

3. *Occupancy* context—whether the socio-economic differential between in-movers and their homeowner neighbors is great (Guy et al. 1985; Kamely 1995), or whether, beyond more generalized stigmas associated with the in-mover group, a site is occupied by high concentrations of "problem tenants" (Galster and Williams 1994).

Yonkers represents the extreme case: all seven SSPH sites were built in overwhelmingly white, middle-income areas and occupied by very low-income African American and Hispanic families—this after one of the nation's fiercest political battles over housing desegregation. The regional real estate market experienced both boom and bust in the decade surrounding desegregation, with the worst recession years coinciding with the period of SSPH announcement and construction. Though many conciliatory individuals and groups came to the fore in support of the court-ordered SSPH plan, such support was not as uniform, and did not develop as early, as that reported by Puryear (1989) in Charlotte, North Carolina. Occupancy and political factors clearly weighed in favor of negative price effects at all seven sites in Yonkers, and housing context predicted stronger effects at the three sites located in higher value areas.

Yet our site-by-site price analyses turned up no significant effects, whether of announcement or occupancy, at the seven sites, not even the O'Rourke site—the first built and one of the two largest sites. The direct reading of our price analyses is that the SSPH sites were located in micro areas that were already lower valued relative to the larger neighborhood (census tract). The evidence is that good housing management, the early involvement of police and other public officials in mitigating homeowner fears, and the longer-run comeback of housing demand in the region combined to eliminate any generalized effect of the controversial housing on nearby home prices. We cannot, however, rule out negative effects on particular transactions that may reflect early "panic selling" or flight.

Evidence on the nonfinancial investments made by neighbors of scattered-site public housing in Yonkers is uniformly positive. While no comparable "before" measures are available, there are no indications in our phone surveys that the fabric of community has been damaged, nor that homeowners near the sites are more likely than their counterparts citywide to have plans to move or to have taken steps toward selling their homes. Few neighbors expected racial tipping. A large majority would recommend their neighborhoods as good places to live. These positive perceptions and expectations help support the notion that price effects of SSPH, if any, have been modest and short run.

This article should not be taken as the final word on the neighborhood effects feared by opponents of the scattered-site public housing program in Yonkers. For one thing, the timing of new public housing construction in Yonkers permitted only a test of short-run price effects at most of the sites, using these data. Also, sales data may understate the neighborhood consequences of Yonkers' housing mobility program. Fears of neighborhood decline may show up in panic listings by homeowners proximate to the new public housing—i.e., in the *volume* of sales listings as well as the prices of properties sold. In fact, where attractive exit options—in the form of affordable new purchases or desirable rental properties—are few, listings may be the best short-run indicator of the desire to flee a neighborhood with public housing "in the backyard," whether or not homeowners actually manage to sell and flee. Unfortunately, reliable data on listings for the study period were not available. There is anecdotal evidence from a few area realtors that owners near several SSPH sites have indeed been unwilling to sell their homes at a substantial loss, but, at least for the 1988–1993 period, the effects of scattered-site public housing on *attempts* to sell would be highly confounded with the effects of the regionwide recession—or exacerbated by the latter effects. Again, if realtors and sellers mistake the cycle of the larger market for the effects of subsidized housing, negative expectations may be self-fulfilling, at least in the short term. And whatever the listings results, our price analyses address what many homeowners say they fear about subsidized housing—real threats to wealth and long-term neighborhood viability.

Data on the racial/ethnic make-up of proximate neighborhoods following the construction of SSPH, on property maintenance by residents, on racial/ethnic steering in the local real estate market, on possible "redlining" by local lenders—all critical in our model of neighborhood change (figure 3)—and on the movement of white students in Yonkers from public into private or parochial schools would allow further tests for racial/ethnic transition and various forms of white disinvest-

ment. Galster and Keeney (1993) found a large association between the location of public housing, the construction of new public housing, and increases in the percentages of African Americans in census tracts in Southwest Yonkers during the 1970s—supporting the federal court's assertion about the role of siting decisions in promoting racial segregation. But the authors' projections for 1990-2000 suggested that little racial transition would occur in the tracts surrounding the court-ordered (new) public housing in east Yonkers. We leave these tests on the agenda of future research.

Beyond what we have added to the relatively sparse fact base in this issue area, this paper has three key messages on how we think about the impact of subsidized housing on receiving neighborhoods—first, that we should consider the nonfinancial as well as financial investments that people make to keep their communities vital and desirable places to live, second that the impacts of housing or other "interventions" should be considered in the context of much larger metro-wide processes of investment and decline that favor some neighborhoods over others, and third, that we should consider the full range of context factors—politics, markets and submarkets, occupancy traits, design quality, management effectiveness, and more—that shape early neighborhood impacts, if any, and determine how they persist. Without some "thick description" of context, as qualitative researchers would call it, many of the numbers presented in prior studies convey a false precision—little more than statistical guesswork from the computer keyboard. Finally, the clear and overriding conclusion of this research on Yonkers, perhaps the most extreme of desegregation cases, is that local residents, and their leaders most of all, help to choose the future they want. They determine the market responses, expectations of decline, and other effects, positive or negative, of subsidized housing on America's neighborhoods.

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NOTES

1. A detailed discussion of the extensive spatial mismatch debate is beyond the scope of our paper. For reference, a variety of studies have essentially upheld Kain's (1968) original argument about the mismatch between black's housing locations and metropolitan job growth (see Straszheim 1980; review in Holzer 1991 and Hughes and Madden 1991). Others suggest that it is race, not space, that matters most for job outcomes (see Ellwood 1986 on youth search; and Kasinitz and Rosenberg 1996 on the importance of social isolation from ethnic job niches), also that race and space *interact* in powerful ways to influence hiring decisions (Kirshenman and Neckerman 1991), or that jobs and housing "co-locate" gradually to maintain equilibrium, despite racial discrimination and other barriers (Gordon, Richardson, and Jun 1991; Cervero 1996).
2. For insightful recent analyses of "not in my backyard" (NIMBY) opposition to "locally unwanted land uses" (LULUs), as well as options for responding to NIMBY-ism, see Lake (1993), Weisberg (1993), and Housing Assistance Council (1994).
3. Scattered-site developments are alternatives to traditional high-rise public housing. Such sites are usually low-rise and small in scale (10 to 50 units). Some have been built in predominantly white, middle-class areas. Generally, these complexes are designed to blend into the surrounding neighborhood. They may be newly constructed or rehabilitated properties (Puryear, 1989; Hogan 1996).
4. United States Census Bureau, Asset Ownership of Households: 1993, Household Economic Studies, September 1995, p. 3.
5. The study includes a survey of occupants of SSPH and a control group of stayers still living in Southwest Yonkers; the citywide phone survey described above; these real estate data; and in-depth interviews with 24 Yonkers leaders across lines of race/ethnicity and occupation.
6. Note that all immigration to neighborhoods is selective and that patterns of racial/ethnic succession have always been driven by this process—the settlement of Manhattan's Lower East Side, for example, from the 1600s to the present day by Dutch, black freemen, Irish, German, Italian, Jewish, and later Asian and Latino families—each new minority group coexisting with and later displacing the prior majority group to become the new majority. At issue here is the matter of how racial/ethnic and class-based impressions shape the process of self-selection into particular neighborhoods and not other ones. Ellen (1996) and others remind us that it is typically the avoidance of certain neighborhoods by would-be in-movers of one ethnic group, and not "flight" from those neighborhoods by current residents of the same group, that drives dramatic neighborhood turnover.
7. A new study, led by George Galster working for the Urban Institute and funded by HUD, will yield far more on the neighborhood impacts of sectioning.
8. Unfortunately, the authors do not report median sale prices for their study clusters. To give some sense of relative magnitude, however, their regression coefficients indicate that being located 100 feet closer to the subsidized housing predicted a roughly $1600 loss of value, while an extra bedroom was worth more than $3000. Also, over the nine years of the study period, the average property ap-

preciated by almost $24,000.

9. A later court order created a voucher-based "Enhanced Section 8" program that enables eligible residents of southwest Yonkers to move to private housing throughout Westchester County (Giddins v. U.S. Department of Housing and Urban Development 1993).
10. A study of a court-ordered scattered-site program launched by the Cuyahoga Metropolitan Housing Authority in Cleveland, Ohio indicated that only 30% of neighborhood residents were aware that public housing existed in their area (Chandler 1991). There, as with other scattered-site programs around the nation, the Housing Authority acquired existing single-family homes instead of building new public housing. The latter has been a controversial element of the Gautreaux court order, which includes new construction within the city of Chicago.
11. There is no universal standard for denoting proximity. Other studies have used "within two blocks," various mile-fraction radii, or linear distance. Qualitative observation of the Yonkers study areas suggested that topography and other factors make properties more than one-quarter mile away from the SSPH sites too far away to be "proximate." None of the sites are visible more than one-quarter mile away, and larger radii left us with overlapping areas, as well as a greater number of land uses (such as shopping centers and high-traffic roadways) to confound tests of the price effects of SSPH. Moreover, parks, schools, major roadways, and other barriers intervene as physical and psychological buffers, suggesting that linear distance, too, would be inadequate to capture externalities associated with SSPH. Finally, radii smaller than one-quarter mile left us with little statistical power, as the number of proximate sales became too small.
12. Unfortunately, many MLS entries were missing zoning information or reported codes that could not be matched to zoning maps provided by the Yonkers planning department.
13. For economy of presentation, census tract and quarter-of-sale variables are not included in our tables here, but full tables are available, upon request, from the first author.
14. Personal communication with the author, George Galster, Wayne State University, Detroit. One notable innovation in this forthcoming study is in the treatment of what the author terms "localized fixed effects"—traits of the micro-area (the area smaller than the census tract or other "neighborhood" proxy) that affect prices but are not related to the subsidized housing under study. Galster's approach is to control for spatial autocorrelation. This is econometric jargon for the appraiser's wisdom that prices of nearby homes tend to "cluster," holding other factors equal. Controlling for such clustering appears to substantially improve the predictive power of home price regression models (Can 1997).
15. Technical details and sample descriptives are in Yonkers Family & Community Project (1997), also available from the first author.
16. Even after we culled archival data and informally interviewed a variety of Yonkers insiders—planners, realtors, and civic activists—it was somewhat difficult to pinpoint the dates by which "the market"—both the public at-large and real estate professionals—could have been aware of the SSPH sites. Many sites were proposed, considered, and rejected in the contentious deliberations of the Yonkers City Council. Our sources suggested that the first six sites were essentially confirmed and announced by January 1988 and that the seventh, the Gramercy site, was added by October 1988. Regression results indicated, however, that negative price effects began much earlier, perhaps as early as April 1987 (the date we use), when a court-appointed architect announced fifteen potential sites for SSPH construction.
17. Note that sellers of high-value homes are not necessarily those with the highest mortgage burden as a percentage of their income (as indicated by census data). The latter, not a wealth but an affordability (cash flow) measure, appears to be less important as a predictor of homeowner response to the public housing under study. It is quite possible that where mortgage burdens are relatively high as a percentage of family income, fewer homeowners can find attractive and affordable "exit options" that would enable them to sell and flee.
18. The models are, not surprisingly, less useful for predicting the prices of very-high-end homes. For these homes, a greater number of features not captured in our data—historical character, views, porches, etc.—are important for pricing. Still, by downweighting gross outliers, robust regression produced more reliable estimators and better overall fit than WLS equations (whether linear or semi-log) weighted by sales price.
19. Note that the variables for building age, number of rooms, number of bathrooms, and lot size are modeled using a *quadratic*, not linear, specification (i.e., $y=ax+bx2$). We will summarize patterns for the covariates not shown here. Given the considerable seasonal and time-trend variation in prices over the twelve years of the study period, most of the quarter-of-sale coefficients were highly significant and substantively large, as expected. Comparable homes sold for about $60,000 more in the final quarter of 1996 than in the first quarter of 1985. Inter-neighborhood variations captured by census tract dummies were also significant and positive for many areas. The referent (omitted) census tract is 5.00 in southwest Yonkers, which is high in poverty, crime, and youth unemployment. It is also home to a large concentration of high-rise public housing projects—the very target of the court order. Note that it is beyond the scope of these analyses to determine whether, for that census tract, low property values drove the decision to site public housing high rises or, conversely, whether the construction of those high rises depressed surrounding home prices.
20. The authors thank George Galster for the feedback on which this analytic refinement is based.
21. Here, sales following occupancy are simply treated as part of the post-announcement pool. This has the effect of increasing the number of sales available for each statistical

test (over model 3) but obscuring possible differences in effect between announcement and occupancy.

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