Studies in the sociology of housing have increasingly incorporated the recognition that "housing" comprises much more than physical shelter and that it relates to a broader residential setting (Foley 1980). When households consume "housing," they purchase or rent more than their dwelling units, as each residential location is associated with such issues as neighborhood and social relations, community facilities and security, access to jobs and healthy environment (Pynoos et al 1973). Being ill-housed may lead to deprivation on any one of these dimensions. Thus, by the 1970s federal legislation, such as the Fair Housing Act of 1968, was couched within a broader community development framework that recognized fair and equitable housing as a basic civil right. As a result, HUD's siting regulations for public housing changed to prohibit building new units in racially concentrated neighborhoods. Nevertheless, the standards also allowed subsidized housing to be built in segregated and/or low-income communities if "sufficient, comparable opportunities" existed outside areas of minority concentration or if showing was made of "overriding need" for housing that could not otherwise have been met in the region (Tegeler 2005). Thus, federal housing policy, as it stands, incorporates two separate and, in some instances, incompatible goals: revitalizing deteriorating neighborhoods through the construction of new affordable housing while at the same time promoting spatial deconcentration of poverty and minority residents (Vernarelli 1986).

Despite the ongoing debate regarding the benefits of affordable housing construction, the incremental effects of adding low-income units to a neighborhood have not been well understood. As Goering et al have pointed out, there is only limited knowledge of which neighborhood effects most likely appear first, what types of households or family members are affected, under what circumstances they are affected, and what the durability and persistence of neighborhood effects are within and across neighborhoods (Goering et al 2002). Developing a better understanding of these mechanisms is crucial in assessing not only the site selection policies for new assisted housing construction but also the effectiveness of the government's rental voucher and certificate programs in allowing tenants to move to less segregated neighborhoods.

My analysis estimates the effect of the presence of subsidized housing units on the spatial concentration of minorities in the surrounding neighborhood by predicting the change in the percentage of the non-Hispanic white population living adjacent to assisted housing units between 1980 and 2000 in eight American cities (Atlanta, Chicago, Cleveland, Dallas, Detroit, Los Angeles, New York, and Seattle). Although areas that contain assisted developments are likely to have been disadvantaged before they received new affordable housing, the existence of subsidized units is hypothesized to have a discernible independent effect on the level of the neighborhood racial mix by inducing the movement of whites out of a neighborhood.

It must be mentioned, however, that the change of the percent whites in a neighborhood may not be driven necessarily by a behavioral response of whites to the introduction of subsidized housing units in their neighborhoods. For example, if the number of whites stays the same, but new housing is built which mostly houses minorities, the percent white in a neighborhood would fall mechanically even if no one moves out. Second, if housing is destroyed in the neighborhood and this housing is

disproportionately white-occupied, the movement of whites will not be a response to introducing subsidized units but rather to changes in non-subsidized housing. Third, whites might leave after subsidized housing is built leaving a space for minorities to move in which is the behavioral response I am trying to capture. Therefore, my analysis will attempt to separate out the effects of adding subsidized units versus adding other types of housing.

The explanatory variable of interest is the change in assisted housing units between 1980 and 2000. I express it as the change in the percent of assisted housing units in a census tract to the total housing stock within that tract. Preliminary results show that the change in assisted housing units, expressed as a continuous variable, does not have a linear relationship with the change in percent white within a census tract. Therefore, I express the change in subsidized housing units as a categorical variable capturing a decline or increase at certain cut-off points of the percent distribution: a drop greater than 50% of total neighborhood housing stock, between -50% and -25.1%, -25% and -0.1%, 0%, an increase between 0.1% and 25%, 25.1% and 50%, and 50% and above). In addition, I separate out the effects of adding/subtracting building-based ("fixed" units) versus person-based (voucher) units. Building-based subsidies, as opposed to person-based ones, are much more visible to the residents in a neighborhood and are hypothesized to produce the behavioral changes of whites moving out described above.

In addition to the assisted housing explanatory variable, I include controls for the race/ethnicity, and socioeconomic characteristics of the surrounding neighborhood. First, the racial and ethnic composition of a tract is likely to be a strong predictor of subsequent changes in that composition, as the level of ethnic or racial composition of a neighborhood may affect the area's perceived desirability to different racial/ethnic groups. For example, past research has indicated that "white flight" peaks when the percentage of blacks reaches between 20 and 40 percent (Farley et al. 1978). Similarly, white home seekers may be reluctant to move to neighborhoods with significant percentages of minorities, while minority home seekers may desire to live with neighbors of their own race and/or ethnicity at least up to some point (Farley et al. 1978). Thus, I control for the percent change in black, Hispanic and Asian residents in a census tract. Second, I include the following demographic variables based on theories about mobility propensities. As the elderly are more likely to vacate their dwellings because of changes in their health, physical capabilities, and marital status (Porell 1982), I control for the percent change of whites in the tract, who are over 64. Moreover, those who have occupied their homes for a longer period are less likely to move in the future; thus, the percent change of households in the tract who had moved in more than 5 years ago (prior to 1975 and 1995, respectively) is included in the model. Variation in any of the mobility control variables is expected to have an association with the opportunity for minorities to move into the given neighborhood.

The location of assisted housing and the demographic characteristics of people receiving rental subsidies can be obtained from HUD's Picture of Subsidized Households, which contains information on Public and Indian Housing, Section 236, Section 8 New Construction and Substantial Rehabilitation, FHA, LIHTC developments and Section 8 voucher and certificate users. HUD's database of subsidized households includes information for 1977 and 2000, which I use to estimate the changes in the assisted housing stock within census tracts. The 1977 HUD file includes only information

about Public and Indian Housing, as all other programs listed above were authorized in subsequent years. The 2000 HUD file includes information on a substantially greater variety of housing subsidies, which not only include building-specific subsidies, but also person-specific assistance in the form of vouchers and certificates.

Additional information on the socio-economic characteristics of census tracts is obtained from the US Census for 1980 and 2000. In order to run my analysis on the same geographic units, I utilize the Neighborhood Change Database, developed by Geolytics, which takes into account the boundary changes of census tracts between different collections of the US Census. The Census data are merged with the information obtained from HUD's data files on the number and type of subsidized units. Table 1 presents the number of census tracts with complete information for the number of subsidized units in them. As mentioned above, these census tracts are found in eight different cities, which I chose as representative of different geographic areas of the United States. This allows me to tell a story about each city and explore variations in the effects of subsidized housing across geographic areas having different populations and different racial/ethnic mixing.

Table 1. Census tracts by city

City	N	Percent
Los Angeles	2,032	26.25
Atlanta	282	3.64
Chicago	1,323	17.09
Detroit	613	7.92
New York	2,145	27.71
Cleveland	492	6.35
Dallas	482	6.23
Seattle	373	4.82
Total	7,742	100.00

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