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NEIGHBORHOOD RACIAL CHANGE, SEGREGATIONIST SENTIMENTS,
AND AFFIRMATIVE MARKETING POLICIES

by

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Visiting Scholar, 1986-1987
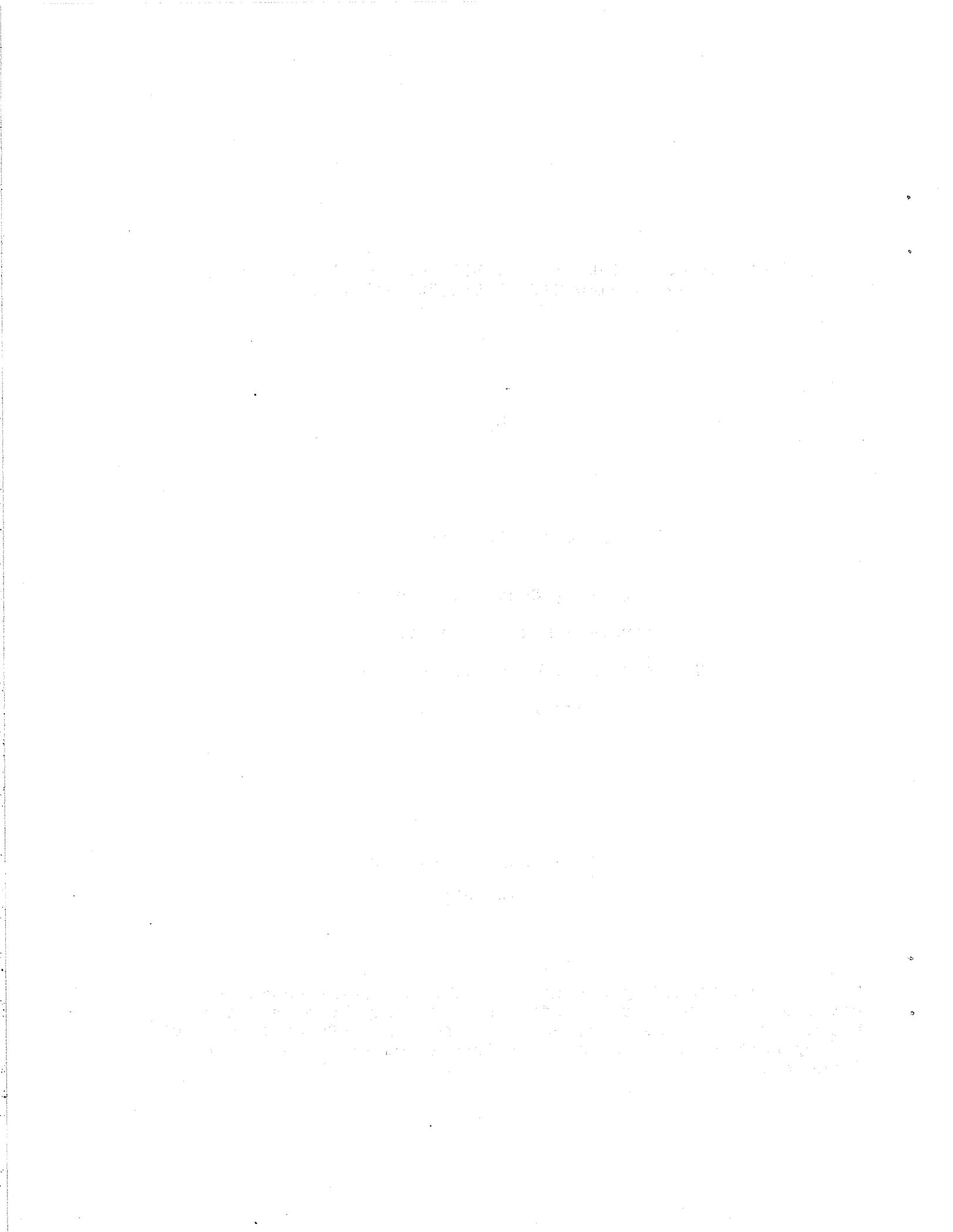
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ABSTRACT

Neighborhood Racial Change, Segregationist Sentiments, and Affirmative Marketing Policies

An econometric model of 1970-80 neighborhood racial changes is estimated for census tracts in Cuyahoga County (Cleveland), Ohio. Results indicate that 1970 tract percentage black, interacted with estimated segregationist sentiment for white residents, is the dominant explanatory variable, with its maximum marginal impact on loss of whites occurring at 35% black. Proximity to majority black tracts and intensity of white segregationist sentiments are also strongly associated with large variations in decadal racial changes. These racial contextual factors apparently both abet white out-migration and deter white in-migration to such an extent that there are few prospects for maintaining stable, integrated areas without interventions. A set of such "affirmative marketing" interventions conducted by the Shaker Heights and Cleveland Heights jurisdictions during the period proved generally efficacious in this regard. *Ceteris paribus*, Heights tracts had greater integration of initially all-white areas and less racial change in substantially integrated areas.

The changing racial composition of neighborhoods has been the subject of numerous social scientific investigations in past decades (see Aldrich 1975 and Wilson 1983 for reviews). This literature can be bounded roughly by the early descriptive works categorizing stages of neighborhood racial change (Duncan and Duncan 1957; Taeuber and Taeuber 1965) and the most recent multivariate statistical analyses attempting to isolate correlates of pre-1970 neighborhood racial changes (Steinnes 1977; Guest 1978; Schwab and Marsh 1980; White 1984). In spite of the magnitude of this corpus, some central issues regarding the mechanism of neighborhood racial change in contemporary American metropolitan areas remain unresolved.

Clearly, for the proportion of nonwhite residents in a given neighborhood to grow over time, either of two necessary and sufficient conditions must be fulfilled. For the existing stock of dwellings, the average probability that any out-mover is a white (instead of a nonwhite) must be greater than the average probability that the resulting vacancy will be filled by a nonwhite homeseeker, rather than by a white one. For net additions to the stock, the average probability that these additional dwellings will be occupied by a white (instead of a nonwhite) household must be less than the current proportion of whites currently in the neighborhood. The *rate* at which such racial change proceeds over time will be a function not only of these two relative differences, but also of the total number of vacancies appearing during the period in the given neighborhood.

The debate in the literature has centered on the empirical importance of these components of white/nonwhite in- and out-migration propensities and how they might interrelate synergistically. Several early studies (Mayer 1960; Wolf 1963; Damerell 1968) have supported the widely-held view that the appearance of successively more nonwhite in-migrants to a neighborhood encouraged progressively more whites to move out of the area who otherwise would have remained. Opinion poll evidence (Farley et al. 1978; Wurdock 1981) also has indicated that many whites would become "uncomfortable" and would consider moving if their neighborhood became occupied by higher and higher percentages of nonwhites. But other work has concluded that white mobility propensities in integrating areas were no higher than what would normally have been expected in the absence of integration (Rapkin and Grigsby 1960; Molotch 1969, 1972; Wolf and Lebeaux 1969; Guest and Zuiches 1971).[1] In the most sophisticated study to date, Wilson (1983) discovered that white out-migration rates from integrated tracts in ten large SMSAs during the 1960's were significantly higher than from all-white ones, but only for those tracts which would have been predicted to have low mobility in any event. The differential progressively disappeared when tracts of successively higher predicted mobility were contrasted.

More consensus exists among researchers investigating the determinants of white vs. nonwhite demands for vacancies within a given neighborhood. Opinion polls (Farley, et al. 1978; U.S. Department of Housing and Urban Development 1978, Schuman, et al., 1985) have

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[1]Regression studies that have examined more aggregate population flows between central cities and suburbs (Marshall 1979; Frey 1979; Goodman and Streitweiser 1983) have concluded similarly that whites' suburban mobility propensities were not correlated with central city racial composition.

consistently shown that virtually all whites prefer to locate in
predominantly white neighborhoods, while a majority of both blacks and
Hispanics favor areas with approximately equal proportions of whites
and nonwhites. These conclusions have been supported by econometric
evidence of what races are willing to bid for comparable housing in
areas of differing racial compositions (Galster 1982). Studies of
actual mobiltiy have revealed that whites are less likely to choose
neighborhoods with higher nonwhite percentages, all else equal (Katzman
1980; Wilson 1983).

Thus there is substantial empirical agreement that, in the past,
the mechanism of neighborhood racial change has involved at least one
synergistic component: as the proportion of nonwhite residents has
risen in a neighborhood the average probability of any given vacancy
being filled by a nonwhite vs. a white homeseeker also has risen.
Whether the out-migration rate of whites initially in the area also has
been directly related to the percentage of nonwhites appears less
certain. But, even more importantly, it is unclear whether these
patterns which have almost exclusively been identified prior to 1970
still persist in the more contemporary scene.

There have been several important developments since 1970 that
spawn this uncertainty. First, there has been a decrease in the rate of
nonwhite population growth in most large SMSAs, compared to that
evidenced from 1940-1970, coupled with moderate to negative growth
rates for whites in many SMSAs. Second, real personal income growth has
come to a virtual halt for most households, comcomitant with severe
inflation in the real costs of housing. Third, since 1968 housing
market racial discrimination has been a federal crime; of special
relevance here are the proscribed acts of "exclusion," "block-busting,"

and "steering" which previously worked in tandem to "tip" integrated areas. Fourth, the expressed toleration of whites toward residential integration has accelerated (Taylor, Sheatsley and Greeley 1978; Converse, et al., 1980; Schuman, et al., 1985). Fifth, in many cities community organizations have been established with the explicit goal of encouraging stable, racially integrated neighborhoods (Saltman 1978).In concert, these changes likely have created a new psychological, economic, legal, and institutional context in which neighborhood racial change transpires.[2]

In light of this new metropolitan racial context, several questions readily emerge. Do current racial composition and proximity to predominantly nonwhite areas continue to shape the demographic future of a neighborhood? What role, if any, do the racial attitudes of white residents still play in the dynamics of their neighborhood? Have life-cycle, tenure, and economic variables become the dominant determinants of stability in integrated areas? Are racial "tipping points" obsolete as empirical constructs? What effect have new, institutionalized "affirmative marketing" strategies for promoting integration had on neighborhood racial changes?

It is the purpose of this paper to investigate these questions. The first section describes a conceptual model of neighborhood racial change. This model is specified in the second section as a three equation econometric model that explains census tract: overall decadal change in the proportion of white residents, white out-migraton rates,

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[2]One piece of evidence supportive of this assertion is Lee's (1985) finding of unusually large numbers of racially-diverse neighborhoods that remained stable from 1970-1980. Another is Goodman and Streitweiser's (1983) finding that the racial composition of the central city had a much less potent effect on 1974-1976 white city-suburb mobility patterns than during the 1960's. For a complementary rationale why the 1970s represent a new context for racial change, see Taub, et al., 1984:ch. 1.

white in-migration rates. The specificaton is unique in its treatment of white racial attitudes and of community integration strategies as explanatory variables. The parameters are then estimated empirically for 1970-1980 using tracts in Cuyahoga County, the principal county in the Cleveland, OH, SMSA. Discussion of these results and their implications follows.

A CONCEPTUAL MODEL OF NEIGHBORHOOD RACIAL CHANGE

In order to specify properly an empirical model the underlying structural relationships must be made explicit. Here the goal is to set forth in heuristic terms such a structural model for neighborhood racial change, before it is made operational with particular variables.

As explained at the outset, the overall result of in- and out-migration actions undertaken by households of all races in a neighborhood during some period is the (potential) change in the percentage of some given race residing there. Considering, e.g., the change in the percentage of whites (W) in the area, such a change can be decomposed functionally into two elements: the relative white (W) and nonwhite (NW) out-moving rates and in-moving rates during the period. Or, in shorthand:

(1)   Change In W% = f_1(W & NW Out-moving Rates, W vs. NW
                          In-Moving Rates

This overall indicator can, in turn, be decomposed further so as to focus on factors of traditional research concern. The rate at which whites move out of a neighborhood during the period can be specified as

a function of their "non-racial turnover" (presumably mainly influenced

by life-cycle and tenure features[3]) plus their "racial turnover"

(influenced by their perceptions and evaluations of the current and

expected future racial composition of their area):

(2)   W Out-moving Rate = f_2(W Non-Racial Turnover, W Racial Turnover)

(3)   W Non-Racial Turnover = f_3(W Demograhic & Tenure Features)

(4)   W Racial Turnover = f_4(Neighborhood Racial Context)

The second term in (1) can be decomposed as well. The relative

probability that any given vacancy will be filled by a white instead of

a nonwhite homeseeker will be a function of the ratio of whites to

nonwhites who search for housing in the given neighborhood and who

make the first acceptable offer to the agent of the dwelling in

question:

(5)   W vs. NW In-Moving Rates = f_5(#W vs. #NW Searching in the

                    Area & Making Acceptable Offers)

The relative search probabilities likely are influenced by four

elements. Nonwhites may be deterred from searching in an area if they

expect to be discriminated against by agents there, or if they perceive

their prospective neighbors to be hostile (Weisbrod and Vidal 1981,

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[3]For reviews of supporting evidence on the determinants of intraurban
mobility, see Forell (1982: ch. 2) and Galster (1987: ch. 8). Non-
racial turnover also could include displacement due to, e.g., dwelling
demolition or conversion. Unfortunately, Census reports provide no
data here.

Lake 1981). Undoubtedly as a result of discrimination, nonwhites have been observed to search closer to their current residences than comparable whites (Lake 1981; Cronin 1982; Vidal 1983) and to rely more heavily on friends already living in an area for information (Zonn 1980; Lake 1981; Cronin 1982). This means that nonwhite searches will be most prevalent in neighborhoods already having substantial numbers of minorities and those located nearer predominantly minority areas. As for the relative probabilities of making acceptable offers, exclusionary forms of discrimination may, once again, prevent minorities from occupying housing that they are willing and able to occupy.[4] Offers will also depend upon the cost of housing in the area relative to household purchasing power. Higher priced dwellings should, all else equal, be more likely to elicit bids by whites, given the typical interracial economic disparities. Amenities of the neighborhood will influence offers, and one is of special interest here: racial composition. The aforementioned evidence indicates that a substantially integrated area (especially if it is near established black areas) renders it more attractive to minorities, but less so to whites. Finally, the presence of "affirmative marketing" public policies designed to promote stable, integrated areas may influence the homeseeking behaviors of both races. (These policies will be discussed more fully below.) The above can be summarily expressed:

(6) #W Search & Offer = f_4(%NW in Area, Proximity to NW Areas,

Affordability & Amenities of Area, Affirmative Marketing)

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[4]For example, an agent can falsely claim to a nonwhite homeseeker that an apartment has already been rented when, in fact, it has not. For more illustrations, see Newberger 1984.

(7) #NW Search & Offer = f_7(NW Perceptions of Discrimination in

     Area, %NW in Area, Proximity to NW Areas, Affordability

     & Amenities of Area, Affirmative Marketing)

EMPIRICAL SPECIFICATION AND DATA

Data

   All data used for estimating parameters of the above conceptual

model were gathered for Cuyahoga County, the principal county of the

Cleveland, OH, SMSA. For the county in 1980, blacks constituted 23% of

the total population and 93% of the minority (including Hispanic)

population. In this context, therefore, racial change can be thought of

as white-black change.[8]

   The pre-1970 history of neighborhood racial change in the

Cleveland area has been traced by Taeuber and Taeuber (1965: ch. 5,

Appendix D) and Schwab and Marsh (1980), who noted the distinctive,

wedge-shaped area of ghetto expansion extending eastward from the CBD.

Lee (1985) found for the City of Cleveland that this achetypical

pattern of "invasion" and inevitable ultimate "succession" continued

during the 1970's. Kain (1985) has observed that many previously all-

white Cuyahoga County tracts had black in-migrants during the 1970's,

but that the preponderance of suburban blacks lived in well-established

enclaves or in "transitional" areas on the boundary of the central city

ghetto. Almost three-fourths of all blacks in the metropolitan area

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[8]From 1970-1980 the Cuyahoga County white population declined from
1.38 to 1.13 million, and the black population rose from 328 to 341
thousand. This resulted in an increase in the percentage of County
population black from 19.1% to 22.8%.

continued to live in this latter area. Not surprisingly, the 1980

Dissimilarity index of segregation for the Cleveland SMSA continued to

register an extremely high value of 87.5 (Taeuber, et al., 1984).

Since a primary goal of this research was to employ proxies for

white racial attitudes, only those Cuyahoga county tracts for which

data might be viewed as indicative of white population characteristics

were selected. The specific sample selection rule was to select all

tracts for which specific data for blacks were available[6] (these could

then be subtracted from totals to obtain proxies for whites only data),

plus all tracts with whites comprising a majority.[7] The resultant

sample had N=257.

Cuyahoga County was selected for study not only because of its

comparatively simple, two-group interactions that have taken

archetypical ecological forms, but because it represented a "natural

experiment." As explained further below, two of its sizeable suburban

municipalities adopted prior to 1970 policies designed to promote and

maintain stable, integrated neighborhoods. There is, therefore, a rare

opportunity to investugate whether these policies had any impact on the

observed racial dynamics transpiring within these municipalities during

the 1970s.

Dependent Variables

Unfortunately, census tract data are unavailable for estimating

each of the seven structural equations (1)-(7) above, but reasonable

measures for the dependent variables in (1) and (2) can be specified.

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[6]That is, tracts have 400 or more blacks in 1970.
[7]In fact, only four tracts chosen under the second criterion had black
percentages in excess of 10%.

In addition, a variable that is (presumably) highly correlated with the dependent variable in (5) can be specified feasibly. Each is considered in turn.

As for equation (1), the change in the percentage white (CHANGEW%) is measured directly as the percentage of a tract population that is white in 1970 minus the corresponding percentage in 1980. As such it can be thought of as the *loss* in percentage white in a neighborhood during the decade, or, equivalently, as the *gain* in percentage black.[8]

The dependent variable in (2) is proxied for[9] by the white turnover rate (WTURNOVER), defined as:

$$WTURNOVER = 100 \times [1 - (\#W \text{ households in tract in 1970 still there in 1980} / \#W \text{ households in tract in 1970})]$$

If all white households initially in a tract moved out during a decade, the above parenthetical term would equal zero, and WTURNOVER would take the value 100. Conversely, if no whites changed their residence WTURNOVER would equal zero.[10]

Finally, there is no feasible, close proxy for the dependent variable in (5). Presumably, however, it should be reasonably correlated with the degree to which white households succeed in outbidding blacks for formerly white-occupied dwellings that became vacant during the decade. This white "replacement rate" (WREPLACE) is defined as:

[8]The sample extrema for CHANGEW% were -8 and 65, with a mean of 8.
[9]WTURNOVER is not identical to the white out-moving rate, since the former overlooks those whites who move in and also leave during the decade.
[10]Both the turnover and forthcoming replacement rate measures have been employed by Wilson (1983). The sample extrema of WTURNOVER were 0 and 100, with a mean of 62.

WREPLACE = 100 x (#W households in tract in 1980 who arrived

during 1970s / #W households in tract in 1970)

If no white households moved into a tract during a decade, this would mean that all vacancies appearing were filled by blacks, and WREPLACE would assume the value zero. Alternatively, if the racial occupancy of vacancies was such that the initial number of whites was maintained (though not necessarily the same households), WREPLACE would be 100. Finally, if many new vacancies appearing due to new construction in the tract were occupied by whites, WREPLACE could take on values greater than 100.[11]

Independent Variables

Discussions of independent variables will be categorized so as to correspond to the heuristic explanatory factors cited in equations (1)- (7) above. Attention will be focused on the role these variables are expected to play in the two "structural equations" for white turnover and replacement rates (proxies for equations (2) and (5), respectively). Their straightforward substitution into the "reduced form equation" (1) for changes in percentage white yields their expected signs there.[12] The reader wishing an introductory overview of the model's specification and expected relationships is referred to

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[11]The sample extrema of WREPLACE were 2 and 208, with a mean of 59. WREPLACE could also exceed 100 if black out-movers were disproportionately replaced by white in-movers, although this is unlikely in the present sample.
[12]Due to data limitations, there was no way to make the NW out-migration term in (1) operational. If this omitted term is uncorrelated with variables included in the model, their coefficients will be unbiased, however.

equations (8)-(10) below.

White Racial Attitudes. The key racial attitude for the present study relates to whites' aversion to residential integration; what I shall call "segregationist sentiment." An aggregate, tract-level indicator of such sentiment was generated for this study through the following two-step procedure. The first step involved estimating a regression model that explained individual responses to the questions posed by NORC interviewers concerning residential integration.[13] Explanatory variables included age, education, income, sex, marital status, employment status, national origin, region, and indices of status discrepancy, alienation, and authoritarianism. Parameters were estimated using ordinary least-squares for the combined 1972-1983 National Opinion Research Center (NORC) sample, stratified to include only whites living in SMSAs of 250,000 or more.[14]

The second step employed the coefficients estimated over individuals for all the socioeconomic and demographic variables to form weights for the tract index of segregationist sentiment. The key logic employed was this. All these variables were specified as categorical dummies, thus for any individual one need only insert the correct zero's and one's into the appropriate positions and multiply by their respective coefficients in order to obtain the expected value of the

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[13]The three NORC items investigated were: 1) "White people have the right to keep blacks out of their neighborhoods if they want to, and blacks shoud respect that right," 2) "A homeowner has the right to sell his/her home to whomever s(h)e wants, even if s(h)e prefers not to sell to blacks," and 3) "Blacks shouldn't push themselves where they are not wanted." Each item was used in a separate regression, and coefficient estimates were very similar across the three models. The specific coefficient estimates employed in this paper were based on item 1).

[14]Detailed regression results are available upon request; they corresponded closely to those of comparable studies (e.g. Middleton 1976; Wilson 1984).

attitude for the "average" person with the given characteristics. For an aggregation of whites in a census tract, one can extend the above interpretation in a straightforward way. By simply inserting the *mean* values for whites in the tract as values for these categorical dummies, one generates the expected response for the "average white" in the tract as a whole. This expected value was used to define the extent of segregationist sentiment in the tract (SEG). [15]

Racial/Ethnic Neighborhood Context. The racial composition of a tract at the beginning of the decade is simply measured by the percentage of the population that is black (%BLACK), and its squared value (%BLACK^2). The tract's location relative to predominantly black areas is proxied for by the dummy variable ADJACENTB, which takes the value one if one or more adjacent tracts have 50% or more black population in 1970 or become so during the 1970's (zero otherwise). White ethnicity is measured by the percentage of whites in the tract who identify countries in southern or eastern Europe as their national origin (%ETHNIC).

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[15]The equation used was:

SEG = -1.533 + .168(% with less than h.s. diploma) - .362(% with
 college degree) + .168(% with 1970 income below $5,000) - .295
 (% with 1970 income over $20,000) + .043(median age) - .068
 (% females) - .078(% unemployed) + .023(% foreign born)

where all variables refer to whites and SEG is scaled so that the tract with the least segregationist sentiment has SEG=0. Of course, there are no census data on alienation, authoritarianism, or status discrepancy. Nevertheless, their inclusion in the first stage regression served to reduce the potential bias (from omitted variables) of the coefficients that were employed in the second stage. Of course, whenever employing aggregate proxies for individual data the specter of the ecological fallacy arises. But there is independent micro-evidence in this case which supports the contention that the aforementioned characteristics do correlate with racial attitudes that, in turn, are related to actual mobility behavior. Leven et al. (1976:ch. 5) found that the only white out-movers who cited the primary cause as "racial change" were those who had lower educations and incomes.

As for the turnover of whites already living in the given area, both the percentage of blacks in the neighborhood at the beginning of the decade and the existence of an adjacent, predominantly black area should be associated with an abetted sense on the part of white residents that the neighborhood has or soon will become integrated to an undesirable extent, and concomitantly with greater propensities for racially motivated turnover. The literature suggests that such white perceptions typically peak when the black percentage exceeds 20-40% (Goering 1978; Farley, et al., 1978; Wurdock 1981). If true in this case, such would imply that white turnover rates have: a positive correlation with percentage black, a negative correlation with its squared value, and relative coefficient magnitudes such that the implied functional maximum occurs in the aforementioned range. Of course, these indicators should not produce similar effects upon all white residents. Rather, their power should be directly related to white aversion to residential integration. Thus the above three racial context variables are multiplied by the aforementioned segregationist sentiment index (SEG) to produce the final proxies for neighborhood racial context effects. Finally, higher percentages of white ethnics in an area would be predicted to be associated with lower turnover rates, presuming an attractive power for specialized cultural institutions and collective solidarity sentiments.

As for white searchers who might potentially replace white outmovers, the above variables could be predicted to generate similar consequences. Whites would be more likely to unfavorably assess integrated areas (especially if they were near established black areas), and thus would manifest lower demands there, all else equal. Certainly the degree of racial prejudice manifested by a given white

homeseeker would influence the degree to which an area's racial composition would be evaluated as a disamenity. Thus one would ideally like to have a measure of such searchers' prejudices and interact it with the racial composition variables, as was done above. Although no such direct measure is available, there is reason to believe that SEG should be a reasonable proxy. Socioeconomic status is a central determinant of housing demand, thus for a given quality of housing stock in a neighborhood one would normally expect to see white in-movers evidencing roughly similar socioeconomic characteristics as current white residents. But since SEG loads heavily on such characteristics, one would also expect to see roughly comparable racial attitudes for the two groups. Put differently, for the white replacement rate equation SEG should be interacted with the racial context variables since whites who most likely will move into the area will broadly mimic the socioeconomic status (and thus attitudes) of whites already in the area.[16] The likely impact of ethnicity on replacement rates is less clear. A white homeseeker of the *same* national background as the predominant group in the given neighborhood would probably find it more attractive as a result. But whether whites in general find such ethnic enclaves more desirable is questionable.

Of course, the observed rate of white replacements is a net result of whites outbidding blacks for vacancies in the area. Thus, one must consider how the neighborhood's racial-ethnic context affects black as well as white demands. Fortunately, the same racial factors that would seem to repel whites would be predicted to attract blacks, hence their ultimate expected affect on white replacement rates is unambiguous. For

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[16]As a practical matter, whether SEG is interacted with the racial context variables or not makes little difference in the magnitude or statistical significance of the relevant coefficients, although the interacted forms perform somewhat better.

blacks searching for housing, neighborhoods located adjacent to existing black areas and having higher black percentages should be translated into larger information flows and a less intimidating environment, thereby abetting black housing demands. Progressively higher black percentages are likely, however, to be associated with successively smaller increments in information and, once past 50%, are likely to be associated with increasing disamenity from the perspective of most blacks who prefer racially balanced areas. Thus, for black demand the correlation with %BLACK should be positive; negative with %BLACK². An area with a high percentage of white ethnics would be expected to yield just the opposite: less information and a higher sense of intimidation in blacks' view.

Affordability/Amenities. Given that the average black homeseeker has less purchasing power than the typical white one, it can be predicted that tracts with higher property values would evidence higher white/black ratios of searches, bids, and replacement rates. The median 1970 value of single-family homes in the tract (MEDVALUE) is specified to control for this effect. Although this variable undoubtedly proxies for a variety of neighborhood amenties as well, a dummy variable (CLEVELAND) is included that takes the value one if the tract lies within the City of Cleveland, zero otherwise. During the 1970's there were two traumatic events that could have affected white mobility rates out of the city: court-ordered busing to achieve school desegregation and extreme fiscal distress culminating in the municipal default of 1979. Thus, independent of many inter-tract variations in values, one might expect higher (especially middle-class) white turnover rates and lower replacement rates in Cleveland tracts.

Demographic/Tenure Characteristics. Several attributes of white households are controlled for based on recei ed theory concerning intraurban mobility propensities. Younger households tend to move more frequently, and aged ones are more likely to vacate their dwellings due to changes in physical capabilities and marital status, compared to those in middle life-cycle stages. These aspects are proxied for by the percentage of whites in the tract who are under age 25 (%YOUNG) and over age 64 (%ELDERLY), respectively. Those who have occupied their home for a longer period are less likely to move in the future, thus the percentage of white households in the tract who have lived in their 1970 residence for ten years or more (%PRE1960) is included in the WTURNOVER equation. Finally, since homeowners move less often than renters, the percentage of white households in the tract who are owner-occupants (%OWNERS) is employed as a control variable.

Affirmative Marketing Policies. During the 1970s only two municipalities in Cuyahoga County had implemented comprehensive policies designed to create and maintain racially integrated neighborhoods of high quality: Shaker Heights and Cleveland Heights. These two communities are adjacent to Cleveland on the east, border on the contiguous clustering of predominantly black tracts in Cleveland, and lie in the historical path of black neighborhood sectoral expansion. During the 1960s both towns voluntarily initiated roughly comparable, comprehensive, publicly funded plans for what may be called "affirmative marketing." Components of the plans included: 1) information dessemination designed to convince blacks that the communities welcomed integration and to convince whites that integration would not lead to transition and tipping; 2) aggressive enforcement of tough fair housing laws; 3) stringent housing codes

coupled with home maintenance subsidies; 4) emphasis on enhancing public service quality (especially education; 5) housing brokerage services that explicitly attempted to allocate vacancies in ways that created and maintained racial balances in all neighborhoods.[17]

To discover whether these affirmative marketing plans had any effect on white turnover or replacement rates, first a dummy variable HEIGHTS is given the value one if a tract lies in either of the two above jurisdictions (zero otherwise). Independent of the current neighborhood context, the mere location in an actively pro-integration jurisdiction may have impacts on both white turnover and replacement rates. As for the former, it is conceivable that whites in the Heights who disliked the (likely) prospect of more integration would be more prone to move out before the prospect became a reality. As for the latter, a municipal-wide affirmative marketing plan may mean that it is more or less likely to attract white instead of black homeseekers to constituent neighborhoods. On the one hand, if most whites would not prefer to live in substantially integrated communities, yet the Heights explicitly promote such as a policy goal, white demands may be stifled. Conversely, blacks may be more likely to bid for housing in a jurisdiction that touts affirmative marketing, all else equal. If these postulates are correct, HEIGHTS would be negatively correlated with white arrival rates. On the other hand, if the advertising campaigns and public amenity improvements are particularly effective in luring prospective white homeseekers, the correlation might prove to be positive.

But the potential impacts of affirmative marketing are far too complex to be captured adequately by a simple dummy variable.

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[17]The last was practiced in Shaker Heights only.

Concerning first potential white out-movers, the plans' desired effect was to reduce their fear that integration meant inevitable neighborhood "tipping" and resegregation. That is, if successful the affirmative marketing programs in the Heights should have produced a different white out-migration reaction to the same neighborhood racial context than would be observed elsewhere. To put this in terms of variables defined above, the coefficients of the variables (SEG x %BLACK), (SEG x %BLACK^2) and (SEG x ADJACENTB) should all be permitted to differ between tracts in the Heights and elsewhere.

This is accomplished simply by creating three new variables that multiply each of the above by the HEIGHTS dummy variable. In the resultant specification the relationship between the given independent variable and white turnover rates in the Heights is given by the *sum* of the coefficients from the given variable and from the same variable interacted with HEIGHTS; for non-Heights tracts only the former is relevant.

Given the various possible consequences of affirmative marketing, it is impossible to predict coefficient signs of the above two HEIGHTS-interacted percentage black variables in the turnover equation. If, e.g., the policies completely voided the impact of racial composition on white mobility, one would predict that the coefficients of the two HEIGHTS-interacted variables would be opposite in sign and equal in magnitude to their counterparts in the non-interacted ones, thereby producing a nil net effect in the Heights. Or, if the policies tended to encourage more integration of initially low-percentage black areas but had no effects elsewhere, the coefficient of (SEG x %BLACK x HEIGHTS) would be positive and statistically significant, whereas that of the other would not be statistically significant. If affirmative

marketing successfully allayed fears generated by proximity to majority black areas, the coefficient of (SEG x ADJACENTB x HEIGHTS) would be negative.

In the case of the white replacement rate equation the prediction of coefficient signs for the three aforementioned HEIGHTS-interacted racial context variables is clearer. Potential white in-movers' assessment of a tract's desirability, based on its racial composition, should vary depending on whether it is in the Heights or not. Specifically, if the affirmative marketing strategies were successful in defusing their fears about imminent racial transition in an integrated neighborhood they were considering, the expected negative correlation between the three racial context variables and replacement rates would be weakened. This suggests opposite coefficient signs from those evidenced by the non-interacted variables in the replacement rate equation.

Other Control Variables. Two other independent variables complete the specification of the white replacement rate equation. First, a dummy variable WEST is defined as one for any tract located west of the Cuyahoga River, zero otherwise. It is a conventional belief that the river represents a symbolic boundary between the "white and black sides" of the county (Schwab and Marsh 1980), and as such a powerful cognitive barrier that inhibits housing searches by blacks in west-side neighborhoods. These neighborhoods should have, therefore, higher rates of white replacements, all else equal. Second, a variable (POPGROWTH) is added to control for the fact that replacement rates will be higher tautologically in (typically suburban) areas where new construction is spawning substantial population increases. POPGROWTH is defined as the percentage increase in the white population of the tract (1970-1980) if

this figure is positive; zero otherwise.[18]

Summary of the Specification.

Given the aforementioned discussion of variables, the model to be estimated may be expressed in summary symbolic form:

(8) $CHANGEW\% = c_1 + (SEG \times \%BLACK) \pm? (SEG \times \%BLACK^2)$

$+ (SEG \times ADJACENTB) \pm? \%ETHNIC + \%YOUNG + \%ELDERLY$

$- \%OWNERS - \%PRE1960 + CLEVELAND - WEST - MEDVALUE$

$\pm? (SEG \times \%BLACK \times HEIGHTS) \pm? (SEG \times \%BLACK^2 \times HEIGHTS)$

$- (SEG \times ADJACENTB \times HEIGHTS) \pm? HEIGHTS + e_1$

(9) $WTURNOVER = c_2 + (SEG \times \%BLACK) \pm? (SEG \times \%BLACK^2)$

$+ (SEG \times ADJACENTB) - \%ETHNIC + \%YOUNG + \%ELDERLY$

$- \%OWNERS - \%PRE1960 + CLEVELAND \pm? (SEG \times \%BLACK \times HEIGHTS)$

$\pm? (SEG \times \%BLACK^2 \times HEIGHTS) - (SEG \times ADJACENTB \times HEIGHTS)$

$\pm? HEIGHTS + e_2$

(10) $WREPLACE = c_3 - (SEG \times \%BLACK) \pm? (SEG \times \%BLACK^2)$

$- (SEG \times ADJACENTB) - CLEVELAND + WEST + POPGROWTH$

$+ MEDVALUE \pm? \%ETHNIC + (SEG \times \%BLACK \times HEIGHTS)$

$\pm? (SEG \times \%BLACK^2 \times HEIGHTS) + (SEG \times ADJACENTB \times HEIGHTS)$

$\pm? HEIGHTS + e_3$

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[18]The asymmetric specification is justified, because for negative values of POPGROWTH the corresponding WREPLACE is assumed to apply to only the original housing stock. But for positive values, WREPLACE measures in-migration into both original and newly appearing stocks. It is only the former type that is assumed to be influenced by the original racial context.

where c_i are constants, e_i are random error terms with the usual assumed properties, signs represent the expected correlation (if any) between the given independent and dependent variables, and all acronyms are as defined in text above.

RESULTS

The parameters for equations (8)-(10) as estimated via ordinary least-squares are presented in Table 1, along with means and standard deviations of all independent variables. Overall, each of the equations explained roughly half of the sample variation in the respective dependent variable, and no coefficients proved to be statistically significant that had signs opposite stong *a priori* predictions. The discussion focuses on the findings for the CHANGEW% equation, with findings for the other two being considered only when they help to elucidate the former.

The percentage of blacks in a tract in 1970 demonstrated a potent relationship with subsequent changes in its racial compositon. Indeed, the two racial context variables had both the largest t-ratios and the largest beta coefficients of all variables in the model.[19] As predicted, the marginal impact of incrementally higher percentages of blacks was not constant. Rather, as shown by the coefficient of (SEG x %BLACK^2), this impact progressively grew, reached a maximum at 35% black, then progressively fell. This relationship between the decadal loss in percentage white (or, equivalently, gain in percentage black) and the initial percentage black can be termed a "white loss/black gain

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[19]Beta coefficients are available from the author upon request.

function." Several are portrayed in Figure 1. For illustration, the
relevant function for a tract where segregationist sentiment (SEG) is
average,[20] is portrayed as line A.[21] It is noteworthy that this
curvilinear result was manifested in both white turnover and
replacement rate equations as well, though not as strongly
statistically.

Proximity to a majority-black tract also proved to be a
statistically significant correlate of racial change. *Ceteris paribus*,
such a context would be expected to be associated with almost a four
percentage point higher loss in whites/gain in blacks for a tract with
average SEG.[22] Another way to see this is to contrast white loss/black
gain function B in Figure 1 (ADJACENTB=1) to function A (ADJACENTB=0).

Higher percentages of white ethnics in the tract were associated
with greater losses of whites/gains of blacks. Surprisingly, such areas
did not evidence significantly lower white turnover rates, *ceteris
paribus*, but had much lower white replacement rates. This finding does
not necessarily conflict with the conventional view that "urban ethnic
villages" are less vulnerable to racial change, since it only examines
the impact of ethnicity while all other factors are being controlled.
The confluence of ethnicity with such stabilizing elements as
homeowners and long term residents (see the coefficients of %OWNERS and
%PRE1960) may be typical.

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[20]To be precise, the SEG value employed in generating A and B in
Figure 1 was .42, the mean for the Heights subsample. The mean for the
entire sample was .48, so for simplicity the two are not
differentiated here.
[21]Note that lines A-D are drawn only for the range of %BLACK values
actually represented in the sample: 0-64%.
[22]The impact is calculated as: coefficient x SEG x ADJACENTB = 9.38 x
.42 x 1.

The role played by white segregationist sentiments in shaping reactions to a given neighborhood racial context can be investigated by examining the estimated white loss/black gain function for different values of SEG. For instance, line A in Figure 1 shows the white loss/black gain function generated with SEG at its mean value and no adjacent majority-black tracts; D does the same for SEG one standard deviation below the mean. The maximum difference (at %BLACK=35%) suggests that the tract with the less segregationist views would have an eight percentage point lower loss of whites during the decade. Another comparison is provided by functions B (mean SEG) and C (mean plus one standard deviation of SEG). They indicate that, in a context where adjacent majority-black tracts are present, the given difference in attitudes could be associated with as much as a fifteen percentage point difference in white losses.[23]

As for affordability/amenity aspects of the tract, the median value of single-family homes proved to have no explanatory power. The dummy variable indicating a Cleveland tract was, however, associated with greater white turnover rates and lower white arrival rates. But since it was not statistically significant in the overall change in racial compostion equation, it can be concluded that Cleveland tracts had higher black turnover rates and/or lower black demands as well. Indeed, the City witnessed absolute decreases in both races' populations during the 1970s, due to a host of reasons which cannot be disentangled here.

Demographic and tenure characteristics of tracts were consistently strong correlates of white turnover rates. These rates were greater the larger the percentages of young or elderly white residents, and were

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[23]SEG also was specified as a non-interactive variable in a trial regression, but provided no added explanatory power.

smaller the larger the percentages of homeowners and those who had moved in prior to 1960. Only the percentage of young whites and, to a lesser extent, the percentage of long-term residents, were statistcally significant in the overall racial change equation, however.

Finally, the results for the affirmative marketing variables were particularly intriguing. Regardless of local racial context, a tract located in the Heights could be expected to have almost a seven percentage point higher loss of whites/gain of blacks, *ceteris paribus*. This appears to be the consequence of accelerated white turnover that was not sufficiently compensated for by higher white replacement rates, given the results for these two equations (Table 1). The relationship between the 1970 racial context of a tract and subsequent changes in racial compositon was also substantially different in the Heights compared to elsewhere in the county. This pattern, computed for the mean value of segregationist sentiment in the Heights in 1970, is shown in Figure 1 by white loss/black gain functions E (when ADJACENTB=0) and F (when ADJACENTB=1).[24] The marginal impact of an additional percentage black in the Heights reached its maximum at 14% black, being associated at this point with a 26 percentage point loss of whites if no adjacent tracts were majority black, and with a 39 percentage point loss if some were. However, this apparent impact declined much more rapidly with higher black percentages in the Heights than elsewhere.[25] The net result was such that for comparable, mean SEG tracts the loss of whites/gain of blacks was higher (lower) in the Heights for tracts that were less than (greater than) 25% black in 1970 (i.e., comparing functions E vs. A in Figure 1).

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[24] Note that both are drawn only for ranges of %BLACK represented in the Heights subsample: 0-32%.
[25] This was due to the comparatively large coefficient of (SEG x %BLACK^2 x HEIGHTS) in the CHANGEW% equation.

DISCUSSION

The Neighborhood Tipping Phenomenon Revisted

It is now commonly believed that there is no single percentage of blacks in a neighborhood that, when exceeded, will result universally in the area ultimately "tipping" to predominantly black occupancy (Goering 1978). The results reported above quantify the myriad of contextual features of urban neighborhoods that support this belief. These findings make it plain that, at least in Cleveland in the 1970s, the degree to which the racial composition of a neighborhood changes depends crucially upon its initial racial composition, its proximity to established black communities, attitudes of its white households, whether any affirmative marketing strategies impinge, and, to a lesser extent, the demographic and tenure characteristics of its white residents.

Figure 1 can be employed to ascertain how, specifically, each of these first four contextual features relate to neighborhood racial transition. Let line RT indicate the various combinations of 1970 tract percentage black and 1970-80 percentage white losses/black gains that sum to 50%. Let line ST distinguish all tracts beginning the decade with less than 50% blacks from those with more than 50%. Any coordinates above and to the right of RT and to the left of ST thus represent tracts that "tipped" during the decade from majority white to majority black occupancy.

Now define the "tipping point" as that minimum 1970 percentage of blacks for which it is predicted that, ceteris paribus, the tract will

become more than 50% black by 1980. These tipping points can easily be seen in Figure 1 as that value on the horizontal axis corresponding to the point of intersection of the relevant white gain/black loss function and line RT.

For example, tracts with whites manifesting the mean level of segregationist sentiment and not adjacent to any black tracts (i.e., function A) can be predicted to tip if they reached 37% black by 1970 (see point Z in Figure 1). Analogous comparisons of other functions indicates the sensitivity of tipping points to context and attitudes. Thus, a context represented by quite segregationist whites living in an area adjacent to a black tract (as shown by function C) would be expected to tip if it was 22% black or more in 1970. On the contrary, an otherwise identical area of only mildly segregationist whites located far from any black areas (function D) would not be expected to tip unless it was 46% black or more in 1970. Thus, the present model easily can explain the range of tipping points observed in previous studies based solely on variations represented by a one standard deviation in white segregationist sentiments and proximity to an established black area.[26]

Note that in non-Heights areas the results provide no evidence of any prospects for long-term racial stability of a tract once it has become integrated.[27] That is, all the relevant white loss/black gain functions indicate that, *ceteris paribus*, racially mixed tracts will

[26]This contradicts the claims by Taeuber and Taeuber (1965: ch. 1) and by Taub, et al., (1984:ch. 7) that the role of white preferences in racial transition has been exaggerated. Their conclusions were based, however, on opinion data concerning hypothetical responses to integration, whereas the present work draws inferences from actual mobility.

[27]These results correspond to those generated by Taub, et al., (1984:ch. 7) in their tipping simulations conducted for "older white neighborhoods with a 2/1 black/white demand ratio."

become inexorably more black over the decade. If these functions

persist as accurate representations of behaviors into subsequent

periods, tipping becomes inevitable. Not so the case of tracts in the

Heights. As function E indicates, affirmative marketing policies do

appear capable of moderating racial transitions in substantially

integrated areas in such a fashion that diversity is maintained. Such

capabilities may be overwhelmed, however, if the stabilization is

attempted in areas nearby predominantly black areas (see function F).

Evaluating the Role of Affirmative Marketing Policies in the Heights

The results for equations (8)-(10) presented in Table 1 allow one

to make inferences about how successful the Heights communities were in

promulgating stable, racially diverse neighborhoods. First, it is clear

that some success was gained in establishing the Heights as "open"

communities. Indeed, whereas a majority of Heights tracts were less

than 1% black in 1970, none were so by 1980, and the coefficient for

HEIGHTS in (8) indicates that, *ceteris paribus*, the average tract

evidenced a seven percentage point higher incidence of black increase

during the decade than would otherwise have been predicted. Second, it

does not appear that the programs were notably successful in abetting

prospective white demand. Although white replacement rates were

slightly higher in the Heights than elsewhere, the coefficient was not

as large as its standard error. Furthermore, there was no difference in

the relationship between replacement rates and neighborhood racial

context variables between the Heights and other tracts. Third, the

programs did not allay the fears of many whites originally residing in

the Heights. A 12 percentage point higher turnover rate was

demonstrated, with possibly even higher rates in tracts with larger

1970 percentages of blacks and in those adjacent to established black

neighborhoods.[28] Fourth, as noted above, the programs were able to

manipulate the net patterns of black and white demands enough so that

significantly more racial stability was gained in tracts that were

already substantially integrated (see Figure 1).

   As a group these findings are consistent with the hypothesis that

the most efficacious programmatic results transpired for policies that

modified the locational patterns of *black* homeseekers in the Heights.

In particular, policies aimed at eliminating the traditional "steering"

practices of real estate agents, and those designed to "affirmatively

steer" clients of the publicly funded housing referral services are

indicated here as most successful. Only (through these policies) by

moderating black demands for the substantially integrated areas could

the Heights have succeeded in stabilizing such neighborhoods, since the

Heights did not appear to be highly successful in persuading atypically

more whites to remain in such areas or to move into them.

                              CONCLUSION

   This paper began with several questions that directed the

research. Based on the analysis of racial changes in Cuyahoga County

census tracts from 1970-80, answers to them can be offered. First, the

beginning-of-period racial composition and proximity to predominantly

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[28]This result may not be general for subsequent periods, if much of
the turnover observed in the 1970s was due to those with especially
segregationist sentiments fleeing the Heights soon after their
policies were enacted. Now that the Heights have established a "track
record" the turnover evidenced during the 1980s may be significantly
less.

black areas were by far the strongest determinants of ensuing racial changes in a neighborhood. Higher black percentages were associated both with higher white turnover rates and lower replacement rates, suggesting synergistic dynamics of racial transition. The importance of being adjacent to majority black areas lends support to conceptual formulations of racial change that employ "border disamenity" effects; see Bailey (1959), Rose-Ackerman (1974), Leven, et al., (1976), Courant and Yinger (1977). By comparison, neighborhood demographic, tenure, and housing stock characteristics held little explantory power.

Second, cross-sectional variations in white racial attitudes continued to make major differences in the degree of racial transition observed over a decade. Note this was the case even though (presuming Cuyahoga County followed national trends) the overall incidence of those expressing segregationist sentiments dropped dramatically before and during the period.[29] Nevertheless, the results offer support to the hypothesis that a long-term withering of whites' segregationist attitudes would encourage the future stabilization of racially diverse communities.

Third, although no *single* racial "tipping point" could be identified, the construct remains an empirically useful one. Controlling for a host of other neighborhood characteristics, there are particular values of 1970 tract black percentages that, if exceeded, would lead to the prediction that the tract would become majority black by the end of the decade. In any given tract, the tipping point will be inversely related to the intensity of segregationist sentiments held by resident whites and to the proximity of majority black tracts.

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[29]Converse, et al., (1980:Table 2.8), e.g., note that such incidence dropped from 26.5% to 8.3% nationally in 1964-76. A 1985 Cleveland Plain Dealer poll found that 54% of respondent whites "favored integration of their neighborhood," while only 23% opposed it.

Furthermore, the estimated white loss/black gain functions gave no indication that any substantial degree of integration would be stable in the long run. Thus, it appears that, many new contextual features in the 1970s notwithstanding, the traditional ecological pattern of invasion and succession continued to predominate in Cuyahoga County.

Fourth, the exception to the above generalization was that the Cleveland Heights and Shaker Heights jurisdictions were able to modify the typical mobility patterns sufficiently such that the inevitability of tipping was invalidated. Higher than expected degrees of integration occurred in initially white Heights tracts, and lower than expected degrees of racial change occured in substantially integrated Heights tracts, thus supporting the hypothesis that affirmative marketing policies can significantly increase and stabilize integration if they alter the traditional mobility patterns of both races.

Of course, it remains for future investigations to assess whether these results are more general across other metropolitan regions. In addition, there are several other aspects in which the present analysis could be improved upon. Beginning of decade tract racial composition is, of course, only an imperfect proxy for the sorts of racial patterns that may ensue at the block level during the decade. Furthermore, it is not clear whether racial composition per se, or other attributes and expectations popularly associated with it, are the source of white flight (Wolf 1963; Taub et al. 1984: ch. 7). The role of housing market discrimination has not been investigated here. That is, whites may not choose to flee in the face of prospective integration but may "fight to protect their turf" through the erection of discriminatory barriers, thereby reducing racial transition (Galster forthcoming). A more definitive investigation into the role of racial attitudes in the

racial transiton process would require disaggregated, explicit survey information on the opinions of individual whites in various racial contexts. Finally, the decade under investigation encompasses only the start-up period for the Heights' affirmative marketing policies, and thus the results may reflect transitory adjustments that may not be representative of the longer-run impacts of these programs. The conclusion is that, far from being an obsolete phenomenon, neighborhood racial transition remains a provocative topic worthy of further sophisticated, policy-oriented investigations.

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TABLE 1

REGRESSION COEFFICIENTS FOR NEIGHBORHOOD RACIAL CHANGE MODEL
(t-ratios in parentheses)

| Independent Variables	Mean Std. Dev.	Dependent Variables		
		CHANGEW%	WTURNOVER	WREPLACE
SEG x %BLACK	1.71	1.67	.960	-1.71
	5.43	(4.44)^	(2.42)^	(2.72)^
SEG x %BLACK²	4.82	-2.44	-.092	.174
(÷10)	23.7	(3.19)^	(1.13)	(1.35)*
SEG x ADJACENTB	.144	9.38	-2.15	3.20
	.269	(2.60)^	(0.59)	(0.52)
%ETHNIC	13.9	.211	-.078	-.323
	7.96	(2.39)**	(0.82)	(2.18)**
%YOUNG	19.5	.559	.838	NA
	5.00	(3.07)^	(4.69)^	
%ELDERLY	11.3	-.004	.423	NA
	5.10	(0.02)	(2.23)*	
%OWNERS	61.0	-.036	-.210	NA
	23.5	(0.82)	(4.52)^	
%PRE1960	35.8	-.096	-.225	NA
	11.5	(1.30)^c	(3.00)^	
CLEVELAND	.440	-.171	7.65	7.58
	.497	(0.09)	(4.67)^	(2.12)*
WEST	.471	-1.74	NA	7.58
	.500	(1.13)		(2.90)^
MEDVALUE	2.18	.279	NA	-.850
	9.45	(0.25)		(0.50)
SEG x %BLACK x HEIGHTS	.161	5.10	2.78	-.276
	1.01	(1.79)^c*	(0.90)	(0.05)
SEG x %BLACK² x HEIGHTS	2.70	-.218	-.109	.033
	28.0	(2.33)**	(1.07)	(0.19)
SEG x ADJACENTB x HEIGHTS	.018	20.0	10.4	-17.9
	.094	(2.20)**	(1.06)	(1.10)
HEIGHTS	.089	6.79	12.4	6.59
	.286	(1.67)^c*	(2.89)^*	(0.92)
POPGROWTH	2.97	NA	NA	1.15
	12.3			(12.2)^
Constant	NA	-3.92	56.7	62.6
		(0.47)	(8.05)^*	(10.5)^*
R² (adjusted)	NA	.464	.609	.513
		(.430)	(.588)	(.489)
F	NA	24.1	634.6	241.8

^, *, c=coefficient statistically significant at 1%, 5%, and 10% levels, respectively (one tail test)
*=two tail test if no predicted sign or opposite predicted sign
NA=not applicable

FIGURE 1

Relationship Between 1970 Neighborhood Racial Context and Racial Changes 1970-1980, Cuyahoga County
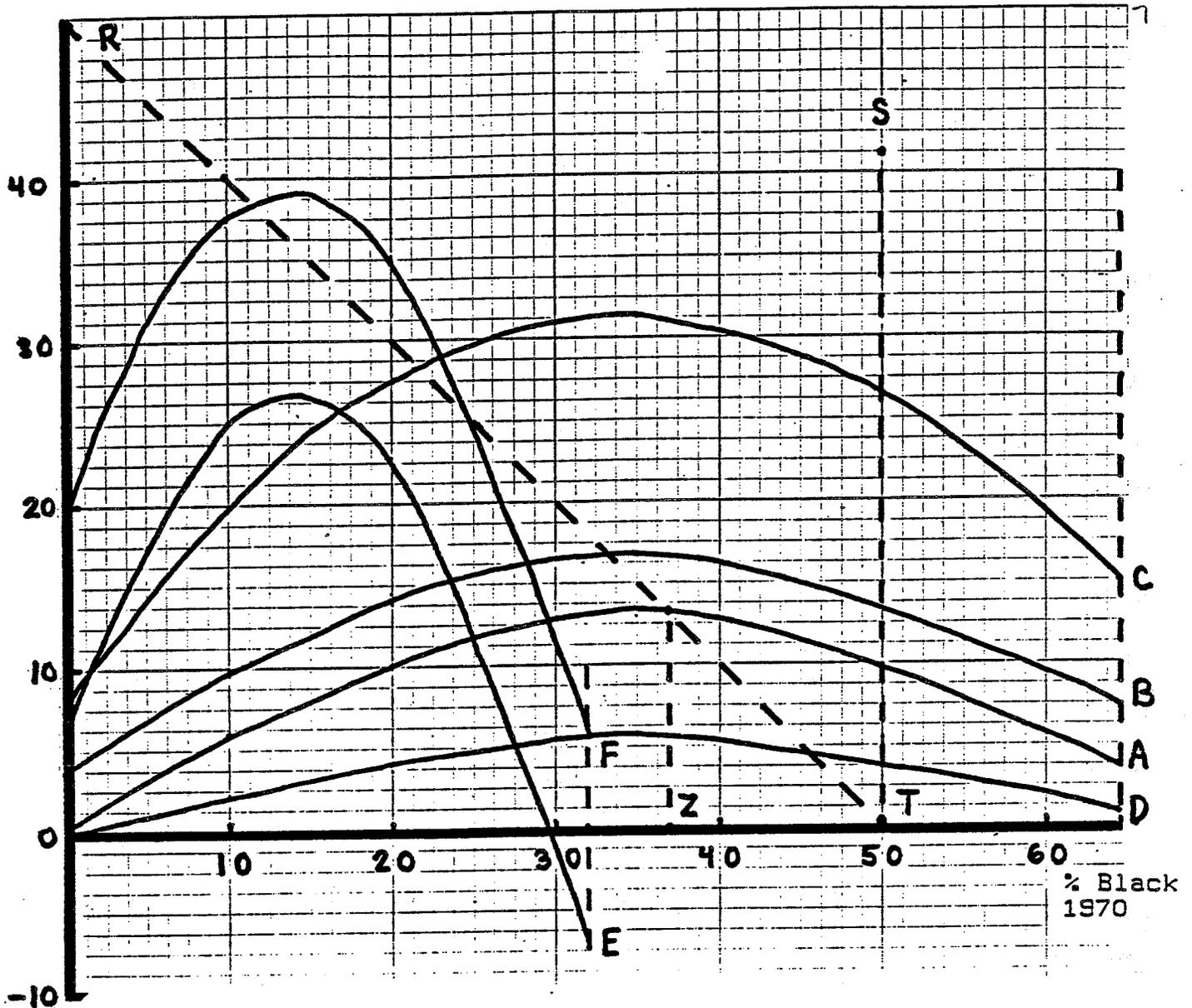
A: SEG = .42, ADJACENTB =0, Heights = 0
B: SEG = .42, ADJACENTB =1, Heights = 0
E: SEG = .42, ADJACENTB =0, Heights = 1
F: SEG = .42, ADJACENTB =1, Heights = 1
C: SEG = .82, ADJACENTB =1, Heights = 0
D: SEG = .14, ADJACENTB =0, Heights = 0

Note: functions above based on parameters shown in Table 1