Homeownership, Race, and Housing Inequality in Metropolitan U.S.

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A substantial amount of research has been conducted on the general subject of residence, housing inequality, and race in cities of the U.S. Examples in the sociological tradition include the series of studies undertaken for the Commission on Race and Housing(summarized in McEntire 1960), the literature on racial residential succession(e.g. Duncan and Duncan 1957, and Taeuber and Taeuber 1965), the more general "housing" literature (e.g. Duncan and Hauser 1960), and the extensive literature dealing generally with the overall social and economic condition of blacks as compared to the rest of the society. While this literature has documented extensively the general patterns of housing inequality between the races, and over different areas of the city, there has not been much focusing on specific factors, to search for the ways in which they may influence what emerges as the general pattern. It should be noted, so as not to misrepresent the literature, that some attempts have been made to bring several demographic and socioeconomic characteristics of population and some basic characteristics of housing to bear on analysis of overall patterns of housing inequality between races. However, the need still exists for more in-depth exploration of specific factors, and for attempts to explicate the role which these play in the complex of factors and processes involved in the ecological dynamics of the metropolitan community. To paraphrase for the present context a recent statement(Taeuber 1969, p.146) of continuing research needs in the general area of "race relations:" statistical documentation of white-black differences in total housing and changing patterns of residential distribution is ample; what is now needed is increasingly detailed analysis of identifiable central factors having far-reaching implications in this overall complex.

The factor chosen for investigation here is homeownership. The supporting argument for this choice runs as follows: in the aggregate, the quality of housing obtained by whites is better than the quality of housing obtained by blacks; in terms of occupancy of the total housing inventory, the housing obtained by blacks in metropolitan areas has for the most part come to them via a turnover process from previously white-occupied housing; this turnover process occurs gradually on a neighborhood basis; the blacks who have pioneered in this process of neighborhood change have been of generally high socioeconomic status - clearly higher, also, than the rest of the black population; homeownership has been found to be positively associated with socioeconomic status. As specific questions to explore, therefore, the following might arise: (a) what role does homeownership play in this process of neighborhood change? and (b) what identifiable role does homeownership thereby play in upgrading the quality of housing obtained by blacks? It is the purpose of this paper to explore these questions. Stated otherwise, the research intent here is to analyze the implications of patterns of homeownership for the trends in racial residential distribution, and the corresponding distribution of housing and neighborhood amenities.

The plan of analysis will be first to review the recent trends in homeownership and in some general factors that have some bearing on the homeownership trends and on the overall role of homeownership: trends in the representation of blacks in the local population, changes in family income, and changes in the overall housing inventory. Then, after a review of the general trends in the quality of housing obtained by blacks and whites, the analysis will be carried out on a neighborhood basis: given a classification of local areas according to stage in the turnover process from white to black occupancy, trends in levels of homeownership will be examined for the different stages, and then the analysis will focus on the areas undergoing the first stages to review the trends in family income and in housing quality. Finally, this area-wise analysis will be articulated with an aggregate-level examination of the implications of homeownership for the quality of housing obtained by blacks and whites.

The review of trends in homeownership will include data for the U.S. - total and nonfarm - and for the nonfarm areas of the four regions, to provide a general overview of the national and regional context. The local-area analysis will deal with four major cities, each in one of the four regions of the country: Atlanta, Ga., Boston, Mass., Cleveland, Ohio, and San Francisco, Cal. The data will refer to the city proper only.

Note on Data

The data for this study were drawn entirely from publications of the U.S. Bureau of the Census from the decennial censuses of population and housing. Thus their character and scope are circumscribed by the limitations inherent in census data. Especially problematic here is the issue of reliability and comparability in the measurement of quality of housing. The categorization of housing quality on the basis of condition and plumbing has been different for each of the three census years to be dealt with in the analysis here(1940, 1950, 1960), with the result that the level of comparability of data between censuses is indeterminate. Furthermore, the rating of each unit has rested solely with the census enumerator with the result, in this case, that the level of scorer reliability is largely indeterminate. The many problems of measurement involved in the assessment of quality of housing are discussed at length in a Census Bureau Working Paper(No. 25, 1967).

As a conventional measure widely used in the literature, the condition and plumbing measure will also be used in this paper subject, of course, to the limitations discussed. In an attempt to amelicrate(to the extent possible) some of these problems, another measure will also be used as an indicator of housing quality. If the argument is made that for such various reasons as normal wear, disrepair, over-use, etc., housing tends on the whole to deteriorate in quality with time, then the age of the structure may serve as at least a rough indication in the aggregate of quality.

Indeed, the tabulations of age of structure against the corresponding condition and plumbing measure in census reports from the three census years supports this conjecture.

Yet a third measure of housing quality will be used in this paper. Whereas the condition and plumbing measure and the age of structure refer to the physical characteristics of the housing unit itself, the aim this time is to find a measure which reflects the pattern of living implied by occupancy of the unit by the household involved. The extent of room crowding is one such measure, and an indicator is available for it in the form of persons per room in census reports. This measure also has limitations(e.g. it ignores possible differences in the sizes of the rooms), but it should reasonably serve as at least a rough indicator.

Where the data are available, all three measures will be used in the analysis below. The hope is that the different perspectives which they represent concerning the general issue of quality of housing should make for a more rounded view than any one of them could provide singly. The attendant risk of compounding errors must of course be kept in mind.

A final note on data concerns notational convention. The bulk of the census data relevant to the analysis below is tabulated by color ("white" vs. "nonwhite"), but the orientation of the discussion leans towards interpretations for races("white" vs. "black" or "Negro"). The problem of equivalence which arises is negligible for the purposes of analysis at the level of aggregation involved here in areas where the representation of "Other Nonwhite" in the total nonwhite population is small. Atlanta, Boston, and Cleveland fall in this category. In San Francisco, However, "Other Nonwhites" constitute a substantial proportion of the total nonwhite population. Thus whereas it is legitimate to use "black" and "nonwhite" interchangably for the other three cities, the equivalence breaks down for San Francisco. This distinction should be borne in mind in reading through the discussion below. Parenthetically, however, it should be interesting as a subsidiary research question to see whether or not the white-nonwhite differentials observed in San Francisco are similar enough to the white-nonwhite differentials observed in the other cities to warrant the conclusion that for the purposes of the kinds of issues dealt with in the analysis below, the "Other Nonwhite" population of San Francisco may as well be considered "black."

Review of Broad Trends: 1940-1960

Homeownership levels are measured as the percentage of occupied units which are owner-occupied. Table 1A shows trends in homeownership between 1940 and 1960 for the U.S.(total and nonfarm) and for the four regions(nonfarm only).

On the whole, rates of homeownership increased between 1940 and 1960. This was true for the country as a whole, for nonfarm areas of the country, and for the nonfarm areas of each region of the country, but the specific patterns differed markedly between the two decades spanned by the total period of study. The decade of the 1940's marked a sharp rise in the levels of homeownership, but these levels actually declined slightly between 1950 and 1960. For the U.S. total, for instance, the level increased by eleven percentage-points between 1940 and 1950, but decreased by six-tenths of a percentage-point in the 1950's. Perhaps the most pronounced rise-and-fall pattern was evidenced by the West with changes of 10.5 and 4.3 percentage-points respectively.

To compare the different areas, ownership of nonfarm housing, first, is understandably at somewhat lower levels than ownership of total housing. Over the regions, the pattern of ownership(nonfarm housing only) falls in the order of lowest levels in the Northeast, followed by the South and West, with levels in the North Central region being the highest. This pattern is consistent through the three census years reviewed, but the clustering of regions by levels changes over the period: in 1940 the Northeast and the South fall relatively close together, at some remove from the West and North Central which are close together. In 1950 the pattern is of the Northeast separated from the South which is in turn separated from the West and North Central which fall together. In 1960 the South and West are clustered together with the Northeast falling below at some remove, and the North Central above.

Table 1B shows the trends in homeownership, by color, between 1940 and 1960 for the four cities under study. There are parallels between the homeownership trends in these four cities and the larger nationwide and regional trends, but there are also some departures. Generally, the levels rose between 1940 and 1960, but there were clear differences between the two decades involved. Between 1940 and 1950 there were relatively substantial increases in levels in Atlanta and Cleveland, and somewhat smaller increases in Boston and San Francisco. The levels in Atlanta, Boston and Cleveland continued to rise in the 1950's, although at a much reduced pace than in the preceding period. Over this period, the increase in Atlanta was somewhat larger than the increase in the other two cities. But in San Francisco the level declined slightly between 1950 and 1960. Thus the ranking pattern wherein overall levels of homeownership were highest in Cleveland and lowest in Boston clearly held true for 1940 and 1950, but was modified in 1960 by the emergence of Atlanta with a slightly higher level than Cleveland.

The data by color reveal first that the trends in white ownership levels paralleled quite closely the trends for the total population: the levels increased over the total period in all four cities, but the increase over the 1940's was generally greater than the increase between 1950 and 1960, and in San Francisco the level actually fell slightly in the latter period. For the nonwhite population the pattern of substantial increase in levels between 1940 and 1950, followed by a reduced increase over the 1950's also occurred in Atlanta, Boston, and Cleveland, but the distinction of San Francisco this time is that the per-

centage-point increase between 1950 and 1960 actually exceeded the comparable figure for the first decade of study. Thus although in 1940 the level of nonwhite homeownership in San Francisco was distinctly below the comparable levels in the other cities, by 1960 it was clearly higher than the comparable level in Boston, and not much lower than the levels in Cleveland and Atlanta.

As a final note on homeownerhip trends by color, mention should be made of the fact that there have been marked and persistent differentials in levels between whites and nonwhites, with nonwhites owning their own homes much less than whites. In 1940 the differences were of the order of twenty to thirty percentage-points, and the highest nonwhite level(Atlanta) barely exceeded 10%. Given the different patterns of change in levels over the period 1940 to 1960, the differentials in 1960 were narrowed somewhat to the range of between ten and twenty-five percentage-points, but the highest nonwhite levels(Atlanta and Cleveland) were still under 30%.

Tables 2 and 3 show data relevant for a review of overall trends in some major population and housing characteristics. As the significant units competing on the market for housing, households are used here as the basis for indicating trends in the representation of nonwhites in the local population. Concerning the total number of households, it should be noted that the first impression given by the trends in Atlanta are misleading: the apparent large increase between 1950 and 1960 resulted from the annexation of territory during that period. The actual patterns of growth in numbers of households were quite similar among all four cities. In Atlanta, Boston and Cleveland, the overall increase was of the order of between 10% and 15% between 1940 and 1960, and the overwhelming bulk of this growth took place in the first of the two decades involved. San Francisco displayed a generally similar pattern, but the levels involved were higher: there was a 25% increase in total number of households between 1950 and 1960, and an overall increase of about 40% between 1940 and 1960.

The trends in representation of nonwhites in the local population seem to reflect in these four cities the population shifts which took place on a larger scale. Specifically, with the great migration of blacks from predominantly the rural South into the urban North, coupled with the continuing suburbanization of the white population, the proportion black of the population of central cities rose steadily between 1940 and 1960 in the North and West, but did not change much in the South, showing only a slight upturn in the 1950's (see Farley 1968). Thus the proportion nonwhite of households in Boston, Cleveland and San Francisco increased substantially between 1940 and 1960, and decreased by one percentage-point in Atlanta over the same period(N.B. the annexed territory in Atlanta had a smaller proportion nonwhite than the rest of the city). Data not reported here indicate that the representation of blacks among the nonwhite population of San Francisco also increased over the period: in 1940 the overall representations of Negro and Other Nonwhite households among all households were 0.7% and 3.1% respectively, and in 1960 the comparable representations among total population were 10.0% and 8.3% respectively.

The rather sketchy data available indicate that family income(in current dollars) generally rose for both whites and nonwhites between 1940 and 1960. In raw percentage terms, the increase in median family income seems to have been greater for nonwhites than for whites. However, given the extremely low levels(relatively and absolutely) from which the nonwhite figures started at the beginning of the period, very substantial differentials persisted through the end of the period between the white and nonwhite levels. These differentials seem to have been at their worst in Atlanta: whereas the median family income for whites fell within a relatively narrow range across cities, the nonwhite level in Atlanta was substantially lower than the corresponding levels in Cleveland and San Francisco. Comparable data by color are not available for Boston.

Trends in characteristics of housing are reported in Table 3. The measure of proportion of all units which are in one-unit structures attempts to indicate the general representation in the overall housing inventory of units suitable for owner-occupancy. The levels involved there are distinctly lower in Boston than in the other three cities. Part of the explanation for Boston's generally lower levels of homeownership may lie in this fact. Further, the increase in the levels involved was very slight for Boston and San Francisco between 1940 and 1960, but was quite substantial in Atlanta and Cleveland. Thus by 1960 somewhat over half of the housing units in Atlanta were in one-unit structures, and the corresponding levels for Cleveland, San Francisco and Boston followed at intervals of roughly fifteen, ten, and twenty percentage-points respectively.

Construction of new units took place at a fairly vigorous pace over the two decades of study in San Francisco(roughly 61,000 units authorized), somewhat less in Atlanta and Cleveland(47,000 and 39,000 units authorized, respectively), and relatively much less in Boston(21,000 units authorized). Vacancy rates in all four cities fell to below 2% in 1950 from levels of roughly between 3% and 7% in 1940, and then rose again to between 3% and 5% in 1960. These trends may perhaps partially reflect pressures on housing resulting from the trends in numbers of households in the cities.

The final item of review in this section will be the general trends in housing quality in the four cities of study between 1940 and 1960, on the basis of three indicators(see Table 4). Consider first the age of structure. There was not much change in the proportion of all units which were in structures ten years old or older in Boston over the period 1940-60. In Cleveland the corresponding proportion declined somewhat - more so between 1940 and 1950 than in the 1950's. In San Francisco it fell slightly over the first decade of study and rose again in the second, and in Atlanta it fell steadily over the entire period. Concerning racial differentials, it seems from the data available for 1960 that there really was not

much difference on the whole in the age of housing occupied by whites and nonwhites.

Since the condition and plumbing measures are not comparable between census years, it is not possible to discuss the time-trend in quality of housing as indexed by that measure. Looking within census years, however, it becomes quite clear that in the aggregate the quality of housing occupied by nonwhites has been distinctly poorer than the quality of housing occupied by whites. This conclusion holds true for all four cities of study, and for all dates in the period of study for which data are available. And to compare cities, the gap between whites and nonwhites in occupancy of basically sound housing was largest in Atlanta(with more than a twenty-five percentage-point difference on both the 1940 and 1960 measures), and was progressively less in San Francisco and Cleveland. From the data available, it seems that the nonwhite population of Boston was relatively the least disadvantaged of the four.

The trends in room crowding paralleled closely the trends in occupancy of sound housing: in Atlanta, San Francisco and Cleveland the proportions of nonwhite-occupied units housing more than one person per room were clearly larger than the corresponding proportions of white-occupied units. And this was true for the two census years between 1940 and 1960 for which data are available. This differential between whites and nonwhites persisted even as overall levels of room crowding decreased for both groups over the period of study. Boston also emerges as an exception to the patterns evidenced by the other three cities: there was hardly any difference between the white and nonwhite levels of occupancy of units with more than one person per room in 1940. In fact, the differential that did exist(six-tenths of one percentage-point) was in the direction of whites being at a disadvantage. Unfortunately, no more color-specific data are available for Boston, and statements about the rest of the 1940-60 period are therefore precluded.

In summary, therefore, the review undertaken in this section has revealed the following: first, homeownership levels have generally increased over the period 1940-60. The specific patterns have differed between regions and between the four cities studied, but the general statement holds true for the total population in each area, as well as for the white and nonwhite segments of the population. Differentials were observed between whites and nonwhites in initial levels of homeownership and in amounts of increase over the period, and consequently in final levels. The figures for nonwhites in all cases were lower than the corresponding figures for whites, except for amounts of increase in homeownership level over the period for San Francisco.

These trends in homeownership took place in the face of continued growth in the numbers of households in the four cities, and also of both an increasing representation of nonwhite households in the local population(Boston, Cleveland, San Francisco), and of no particular change in representation of nonwhite households(Atlanta). At the same time, income levels generally rose, but the available data indicate that although the percentage increase between 1940 and 1960 in median family income was greater for nonwhites than for whites, the dollar-difference between white and nonwhite levels of median family income actually widened over the period.

Construction rates varied between the four cities over the two decades, the proportion of all units which were in one-unit structures increased appreciably for two of the four cities(Atlanta and Cleveland) but did not change much for the other two, and vacancy rates fell somewhat in the first of the two decades, then rose again(still without attaining high levels) in the second.

Finally, clear and persistent differentials in general quality of housing obtained have been observed between whites and nonwhites over the period of study for three of the four cities. The scanty data available for the fourth city(Boston) suggest that the differential has perhaps not been as marked there as in the other cities.

All the processes so far reviewed in broad terms(trends in homeownership levels, in general housing and population characteristics, and in quality of housing) necessarily had parallel manifestations on an areal basis: the housing inventory as well as the population resident in it was necessarily distributed in some way over the area of the city. Thus for the purposes of fuller explication of these trends it should be interesting to study their ecological parallels. In addition, there are aspects of the trends in the ecological pattern which are not shown by aggregate data of the sort so far reviewed, but which are important for shedding meaningful light on issues relevant to the central concerns of this paper. Therefore the analysis will now turn to examination of areal data pertaining to these issues for the four cities involved, over the period of study.

Spatiotemporal Patterns

The analysis in this section will be based on a grouping of census tracts according to stage in the process of racial residential succession. The overall thrust of the analysis will be to start by taking the process of neighborhood change as given, and then to study the changes that occur during this process in the character and color-tenure distribution of the housing inventory, and in the socioeconomic profile of the resident population. Specifically, the plan is to review changes in homeownership over all stages, and then to study closely the changes in nature and character of housing, and in family income, in areas undergoing the first stages of the process.

The scheme by which census tracts are classified is designed to distinguish between areas of established and unchanging white and nonwhite residence, stable interracial areas(where they exist), areas undergoing a general loss or gain of population of both races, and areas undergoing the classical racial change-over process(white to black, or black to white where such is the case). Details of the classification scheme are shown in

Figure 1. Scheme for Classification of Census Tracts According to Succession Stage.

Classification	Initial Year of Period		Terminal Year		
	NW pop	%NW	NW pop	%NW	W pop
I. Early Integration	<250	<2 %	≥250	increased	decr or stable
II. Integration		2-49.9%	≥250 incr or stable	incr	decr or stable
III. Succession	≥250	50-89.9%	incr or stable	incr	decr or stable
IV. Stable Interracial	≥250		stable		stable
V. Growing			incr		incr
VI. Declining			decr		decr
VII. Re-segregation			decr or stable	<90% decr	incr or stable
VIII. Segregated black		≥90 %		≥90%	
IX. Segregated white	<250	<2 %	<250	<2%	
X. Penetration	<250		incr <250	incr	decr

Notes:

1. The population - white or nonwhite - of a census tract is defined as stable over the period if it changes by less than 100 persons and less than 10 per cent of its original level. Conversely, it is defined as increased or decreased if it changes in excess of any of these two criteria in the applicable direction.
2. On the basis of this definition, it is possible that some of the tracts designated "segregated white," or "segregated black," for example, may also be growing or declining. In a strict sense, therefore, the "growing" and "declining" tracts are mixed growing and declining.
3. The category labelled "re-segregation" may also include three different alternatives: "pure" re-segregation would involve the situation wherein the nonwhite population decreased over the period, and the white population increased. The two other possibilities are that the nonwhite population may remain stable while the white population increased, or the white population may remain stable while the nonwhite population decreased. The nonwhite percentage would decrease in all three cases.
4. In view of the many possible questions that may arise regarding the total set of logically possible combinations of patterns of change, the order in which the factors are checked for assignment of census tracts to their appropriate categories is: per cent nonwhite first, nonwhite population second, and white population third.
5. The development of this classification scheme clearly owes much to the work of Duncan and Duncan (1957) and of Taeuber and Taeuber (1965).

Figure 1. It should perhaps be mentioned explicitly that the specific cut-off points used in this scheme are essentially arbitrary. However, their choice has been informed not only by some generally similar precedents in the literature(Duncan and Duncan 1957, and Taeuber and Taeuber 1965), but particularly also by the constraints inherent in the nature of the available data: data by color were only published separately for census tracts having at least 250 nonwhites in 1940 and 1950, and having at least 400 nonwhites in 1960. Thus the "Penetration" category, for instance, holds particular interest as the very earliest identifiable stage in racial residential succession, but it unfortunately cannot be studied in depth owing to the unavailability of separate tabulations of data by color for such tracts.

Some further comments should be made on methodological issues. First of all, to minimize classification errors census tracts are excluded from the analysis if changes in their boundaries alone accounted for a change of fifty or more dwelling units and/or ten per cent of the total number of units in the tract. These cut-offs have been chosen to articulate with the cut-offs associated with whether or not the population of a census tract will be considered stable or changed(see Fig. 1, Note 1). Secondly, census tracts are excluded from the analysis if 10% or more of their population resides in group quarters. The basic intent here is to concentrate the analysis on the population actively in the general housing market, and to eliminate areas in which that part of the population not actively in the market might distort significantly the factors under study. Finally the two periods 1940-50 and 1950-60 will be treated separately for the analysis below since the differences between them in the processes reviewed above may have resulted in different forms of neighborhood change in any given area.

Tables 5A and 5B show the trends in homeownership over the periods 1940-50 and 1950-60 for the different groupings of census tracts by stage in racial residential succession. Comparisons among classes within census years reveal the following general patterns: the areas of generally highest homeownership levels(for both whites and nonwhites) were predominantly the areas of segregated white residence. At the least, the homeownership levels

in those areas were consistently relatively high through both decades. But there were two outstanding exceptions to this general pattern: for whites in Boston at the end of the decade of the 1940's, and also for blacks in Atlanta at the beginning and at the end of the 1950's, homeownership levels were lowest in these segregated white areas than in any other grouping of census tracts. A further exception is that in San Francisco the highest homeownership levels for whites at the beginning and at the end of the 1950's, and for nonwhites at the end of that decade fell in areas that underwent re-segregation over the period. For nonwhites in San Francisco at the beginning of the period, the highest level of homeownership occurred in stable interracial areas.

A second general pattern that emerges from time-constant inter-class comparisons is that homeownership levels for both whites and nonwhites in segregated black areas were generally low in relative as well as absolute terms. In San Francisco, in fact, they were the lowest among all classes of census tracts, at all date-points of the two decades of study, and for both whites and nonwhites, except for the nonwhite population at the beginning of the 1950-60 period. An outstanding exception to this general pattern of homeownership levels being lowest in segregated black areas is in Cleveland where, between 1940 and 1950, homeownership levels were consistently lowest in re-segregating tracts than anywhere else for both whites and nonwhites, and for whites in 1940 the level in segregated black areas was actually higher than anywhere else.

The general patterns of change in homeownership levels may be summarized briefly as follows: between 1940 and 1950, first, the general increase in homeownership levels in these four cities(see discussion above) was closely paralleled by the trends in virtually all areas of the cities. Of the sixty-eight color-by-succession-stage categories in Table 5A, the level of homeownership failed to increase over the decade in only twelve. These departures from the overall trend occurred with the highest frequency(three and four respectively) in succession tracts and in growing areas. Otherwise they were evenly distributed over all the other classes of census tracts excluding early integration and integration tracts, stable interracial areas, and declining areas. The range in the overall magnitudes of the percentage-point changes in homeownership is such that the simple arithmetic average of these percentage-point changes, computed within classes of census tracts (disregarding city and color), would vary between a low level of 0.0% for re-segregation tracts to a high of 15.7% for integration tracts. The broad racial differentials over these four cities in the patterning of change in homeownership levels between 1940 and 1950 were such that the percentage-point increase in levels for nonwhites was generally higher than the increase for whites in all classes of census tracts except growing areas and re-segregation tracts.

Over the decade of the 1950's, the patterning of change in homeownership levels within groupings of census tracts by stage in racial residential succession over the decade differed substantially from the corresponding patterns for the decade of the 1940's. First of all, there were many more instances of declines in homeownership percentages: in all, twenty-nine of the sixty-eight color-by-succession-stage categories in Table 5B showed decreases in level of homeownership over the period, and in two more the ownership level at the end of the period remained the same as at the beginning. In Atlanta in fact, homeownership percentages declined over the decade in all classes of census tracts, for both whites and nonwhites, with only two exceptions: there were very slight increases for whites in segregated black areas, and for blacks in declining areas.(N.B. In comparing the city-wide trend implied by these changes with the data reported in Table 1B, it should be noted that Table 5B excludes the annexed territory which is included for Table 1B, and in which homeownership levels were higher than in the rest of the city).

In terms of relative frequency, these declines in homeownership were fairly evenly spread out over all the classes of census tracts, with the sole exception of the one set of stable interracial areas which exists in the table. However, there were substantial differences between classes of census tracts in the magnitudes of the changes involved, with the result that the simple arithmetic average of percentage-point changes in homeownership levels, within groupings of census tracts, (disregarding city and color), would range from -5.4% for succession tracts up to 14.3% for growing areas. These patterns of change in ownership percentages within classes of census tracts do not fall into any clear pattern of systematic differentials or regularities by race, except perhaps for the observation that in growing areas the direction of the change in levels(increase or decrease) was consistently the same in each city for both whites and nonwhites.

It is interesting to note, parenthetically, that among the various color-by-succession-stage categories of Tables 5A and 5B, there are scattered cases of quite dramatic changes in homeownership levels within a decade, some of which represent strikingly anomalous departures from predominating trends. For example, it was noted above that homeownership levels generally tend to be highest in segregated white areas than in other areas of the city. But for the white population of such areas in Boston between 1940 and 1950, the change in homeownership levels over the decade took the form of a sharp decline that resulted in the ownership level in that category being the lowest of all at the close of the decade. A closely comparable decrease in ownership levels also took place between 1940 and 1950 for the nonwhite population of growing areas in Cleveland - and this happened in a period when homeownership levels(particularly among blacks) were generally rising. There are also examples of outstandingly high increases in the level of homeownership in a particular class of census tracts as, for instance, for both the white and nonwhite populations of growing areas in Cleveland between 1950 and 1960. Indeed, it seems that growing areas have exhibited at least one instance of each of a range of possible patterns of change in homeownership levels. In addition to the rapid

increase and drastic decrease already mentioned, there are cases where the level remained high (relative to other areas of the same city) over the entire period(San Francisco, white, 1940-50 and 1950-60; Atlanta, nonwhite and white, 1940-50, and nonwhite, 1950-60), and there are cases where the level remained low over the period(Boston, white, 1940-50, and nonwhite, 1950-60).

On the whole, however, a general conclusion which emerges concerning growing areas is that they quite clearly evidenced the largest overall percentage-point increases in homeownership levels between 1950 and 1960, for both whites and nonwhites. But between 1940 and 1950 the pattern was less distinctive. A large increase in levels for nonwhites in Atlanta, for instance, was countered by an equally large decrease for nonwhites in Cleveland. For whites, a large increase in Atlanta and a more modest increase in Cleveland were countered by slight decreases in Boston and San Francisco.

The intergroup patterning of change in homeownership levels among census tracts grouped according to stage of racial residential succession was such that the highest levels of increase for both whites and nonwhites in the 1940's occurred in the areas which underwent early integration and integration over the decade. But in the 1950's the general trends in such areas were not particularly distinct from the trends in other areas. For succession tracts, the general patterns were of modest increases in levels in the 1940's for both whites and nonwhites, but of a general increase for whites and a general decrease for nonwhites in the 1950's. Stable interracial areas, to the extent that they existed, evidenced modest but consistent increases in both periods. Declining areas also evidenced modest but consistent increases on the whole over both periods, and their 1940-50 levels of increase in fact ranked quite close to the highest levels for that period. Finally, except in Boston, the homeownership levels for nonwhites in penetration tracts generally increased over both decades of the period between 1940 and 1960. But for whites, although the same general statement can be made for the decade of the 1940's, the overall pattern in the 1950's was of a slight decrease in levels over the period.

Turning now to focus the analysis on the areas which were undergoing the early stages of racial residential succession, time-constant interclass comparisons, first of all, indicate that at the beginning of the 1940-50 period, homeownership levels over the four cities of study were generally highest(disregarding color) in penetration tracts. The levels in early integration and integration tracts were alternately higher and lower than each other an equal number of times. At the end of the period, the predominant pattern was of levels in early integration tracts being the highest of the three, followed by levels in integration tracts, and the levels in penetration tracts were the lowest. For the decade of the 1950's, the most prevalent pattern was for the levels of homeownership in these areas to fall in the same rank order at the beginning and at the end of the period: highest in early integration areas, next in penetration areas, and lowest among the three in integration areas.

If distinctions are made among these levels of homeownership on the basis of the color of the occupants, the observed pattern for the decade of the 1950's is not altered. The predominant ranking of the three types of areas at the beginning and at the end of the period, for both whites and nonwhites, is still: early integration-penetration-integration. For the decade of the 1940's, however, there are substantial differences. At the beginning of the period, the prevalent ranking of levels for whites is: penetration-integration-early integration; but for nonwhites, no clear pattern is noticable. At the end of the period, one clear observation emerges: the levels for whites were generally lowest in integration tracts, but the nonwhite levels were generally highest in those areas.

The patterning of change in homeownership levels over the periods of study also differed somewhat among these three classes of census tracts. Direct comparisons of the actual percentage-point differences from Tables 5A and 5B would yield only two specifically observable rankings: first, for nonwhites, the percentage-point increases over the 1940's were highest in early integration tracts, next highest in integration tracts, and lowest in penetration tracts; secondly, the same ranking of areas would be obtained for the percentage-point increases in white homeownership levels between 1950 and 1960. On the basis of these direct comparisons of the changes in homeownership levels, no clear or consistent patterns of change can be said to have occurred for whites in the decade of the 1940's, or for nonwhites between 1950 and 1960. However, as manifested through the simple averages of the percentage-point changes in levels, the increases for whites between 1940 and 1950 were highest in integration tracts, next highest in penetration tracts, and lowest in early integration tracts. And for nonwhites between 1950 and 1960, comparisons of the simple averages of the percentage-point changes in levels would yield the ranking: penetration-early integration-integration.

Some further data are shown in Tables 6A and 6B for the trends in selected characteristics of population and housing in areas undergoing the early stages of racial residential succession. For reasons noted above, these data are available for only the early integration and integration tracts.

In terms of the representation of one-unit structures, the housing inventory of these areas did not undergo very pronounced changes between 1940 and 1950: except for integration tracts in Atlanta, the changes involved were of the order of less than five percentage-points in any direction. It seems to be the case that the proportions of units which were in one-unit structures were generally lower in early integration tracts than in integration tracts. In the 1950's, however, these patterns were different: the proportional representation of one-unit structures in the housing inventory was generally higher in early integration tracts than in integration tracts in all cities except Boston, the changes in these levels over the decade were on the whole somewhat more substantial than in the previous decade, and in every case except one(early integration, Atlanta) these

changes involved increases.

Vacancy rates generally fell in the 1940's and rose again in the 1950's. The rates in early integration tracts were lower than the rates in integration tracts for Boston and San Francisco in the 1940's, and for Boston, Cleveland and San Francisco in the 1950's. But the reverse was true for Cleveland in the 1940's and for Atlanta between 1950 and 1960.

Concerning quality of housing, the overall conclusion is that housing located in early integration tracts was of generally higher quality than housing in integration tracts. The specific patterns differed in details between whites and nonwhites, for the two decades of study, and somewhat also with the particular indicator of housing quality involved.

At the close of the 1940-50 period, the proportions of units which were in old structures were actually higher in early integration tracts than in integration tracts, although the differences did not exceed ten percentage-points. But over the 1950's the reverse was the case with only minor exceptions.

The condition and plumbing measure is only shown in Tables 6A and 6B for the close of each period since the measures for the different census years are not comparable. At the close of the 1940's, the overall representation of basically sound housing in early integration tracts was lower than in integration tracts for Boston and Cleveland, and higher for San Francisco. But at the close of the 1950's housing in early integration tracts was of clearly higher quality(as indexed by this measure) than housing in integration tracts.

It is interesting to note that whereas the quality differential in housing between early integration and integration tracts in 1950 was mirrorred in the housing obtained by whites in these areas, nonwhites quite on the contrary obtained better quality housing in early integration tracts than in integration tracts. The difference involved was quite substantial in San Francisco, and somewhat more modest in the other cities. In 1960 the differences were in the same direction for both whites and nonwhites. It is also interesting to note that for all cases except Atlanta, the difference in percentage-points between proportions sound of units occupied by whites and nonwhites was clearly less in early integration tracts than in integration tracts.

On the measure of persons per room, time-trend comparisons by color are only possible for integration tracts, and the overall conclusion there is that nonwhites also benefitted from the general easing of room crowding over time, with two outstanding exceptions: the nonwhite population of integration tracts in Cleveland actually became more crowded over both decades of study, although the change in proportion of units housing more than one person per room was not large in either case. The second exception was in San Francisco where the corresponding proportion rose by six percentage-points between 1940 and 1950.

In Boston and Cleveland, the levels of crowding in white-occupied units were actually higher in early integration tracts than in integration tracts for both decades. As a result, the white-nonwhite differential was less in early integration tracts than in integration tracts, even though the corresponding levels of room crowding among nonwhite-occupied units were not much different from each other. But the differentials involved were not very substantial, and in Boston in 1950 the level of nonwhite crowding in early integration tracts was itself higher than the corresponding level in integration tracts.

For San Francisco in 1950 the overall levels of nonwhite crowding in both early integration and integration tracts were the same, and for Atlanta and San Francisco in 1960, nonwhite-occupied units were less crowded in early integration tracts than in integration tracts.

Concerning family income, time-trend comparisons are only possible for the decade of the 1950's. The income levels of the total populations of both early integration and integration tracts rose substantially between 1950 and 1960. And specifically for integration tracts for which data are available, the income levels of both whites and nonwhites rose in a remarkably similar pattern: the percentage-point increase in proportion of families earning $3,000 or more ranged between thirty and fifty for both whites and nonwhites. In all cases, the percentage-point increase for nonwhites exceeded the comparable figure for whites. The overall result of this trend was that by 1960 the proportion of nonwhite families in integration tracts who earned $3,000 or more was not far exceeded by the corresponding proportion for white families.

At the same time, the corresponding proportions of nonwhite families in early integration tracts were even higher than the proportions in integration tracts. The former, in their case, were high enough that the difference between them and the corresponding proportions for whites had almost disappeared. Indeed, in Atlanta, Boston, and San Francisco in 1960 the proportion of nonwhite families in early integration tracts who earned $3,000 or more exceeded the comparable proportion for whites in integration tracts.

The patterns at the end of the 1940's were less distinctive, but again family income in early integration tracts was generally higher than family income in integration tracts for both whites and nonwhites in Cleveland and San Francisco. In San Francisco the proportion of nonwhite families in early integration tracts having incomes of $3,000 or more also exceeded the comparable proportion of white families in integration tracts. Boston was exceptional in that the respective proportions were less in early integration tracts than in integration tracts for both whites and nonwhites.

In general summary of the main points in this section, it has been observed that across the different stages of racial residential succession in the four cities of study considered together

over the total period of study, white and nonwhite levels of homeownership have tended to be highest in segregated white areas, and lowest in areas of segregated black residence. The pattern of change was such that the largest increases in levels occurred in early integration and integration tracts between 1940 and 1950, but the largest increases in the 1950's occurred in growing areas.

Homeownership levels in early integration and integration tracts were also generally high on the whole, noticably so for nonwhites at the close of each period. And specifically among these areas which were undergoing the first stages of racial residential succession(penetration tracts included), the patterns of change over the periods involved articulated with the initial levels of homeownership in such a way that for nonwhites, the highest levels of homeownership at the end of both periods of study were observed in early integration tracts. For whites, however, this was true only for the 1950-60 period - the homeownership levels at the end of the 1940-50 period were actually lowest in these areas.

On further study of the areas undergoing the first stages of racial residential succession (penetration tracts excluded), the basic character of the housing inventory in these areas was found not to have undergone any drastic changes in the two decades of study. It was also found that with only minor exceptions the quality of housing in areas undergoing the very early stage of succession("early integration" tracts) was generally higher than the quality of housing in areas undergoing the next stage("integration" tracts). Also, the racial differential in quality of housing obtained was generally found to be less in the former areas than in the latter.

Finally the socioeconomic status(as indexed by family income) of nonwhites in early integration tracts was found not only to be quite similar in the aggregate to that of whites in the same areas, but also to be generally higher than that of nonwhites in integration tracts and, indeed, in some instances, higher than that of whites in integration tracts.

The discussion to follow below will aim to articulate the ecological analysis of this section with the aggregate-level analysis of the previous section, and then to bring the collated findings to bear on the basic research questions of this paper.

Discussion

All the materials so far arrayed have sought to explicate the role of homeownership in the various processes involved in the urban housing market and the resulting distribution of housing quality by race of occupants. In that attempt, several intermediate research questions have had to be faced. Considered in order, these may be stated as follows: first, what have been the trends in homeownership? Second, what have been the trends in relevant characteristics of the population, and of the general housing inventory? Third, what have been the trends in housing quality obtained? Fourth, in terms of the ecological manifestations of the larger aggregate processes, what have been the area-specific parallels of these processes? Finally, therefore, what general conclusion may be drawn concerning the implications of patterns of homeownership for the trends in racial residential distribution, and the corresponding distribution of housing and neighborhood amenities?

The review of broad trends revealed a general increase in homeownership levels between 1940 and 1960 for the U.S. as a whole, for the four major regions, and for both whites and nonwhites in the four cities of study. The increase was generally greater for whites than for nonwhites, and the levels of homeownership among nonwhites remained lower over the period than the corresponding levels among whites. Concurrent trends in population characteristics were first of continued growth in the total number of households in each city(the representation of nonwhite households increased in three cities but did not change much in the fourth), and secondly of continued increase in family income. The increase in family income seems to have been greater for whites than for nonwhites.

Concurrent trends in general housing characteristics were of varying construction trends, a substantial increase in the representation of one-unit structures in two of the cities(little change in the other two), and a slight decrease in vacancy rates in the first decade of study, followed by a slight increase in the second decade. The final levels of vacancy remained low. Finally, clear and persistent differentials were observed in the overall quality of housing obtained, with blacks being at a disadvantage.

Each of these general conclusions held to varying degrees in the different cities, and for each of the two decades covered by the total period of study. Each general pattern also had manifestations on an areal basis - the trends in homeownership levels in different areas of the cities, for instance, paralleled quite closely the overall trends in homeownership levels.

The review of ecological patterns over the period of study further revealed a clear relationship between homeownership and stage in the process of racial residential succession: the highest levels of homeownership tended to cluster in the areas of segregated white residence, and the lowest levels tended to occur in segregated black areas. Particularly for nonwhites, the areas which were undergoing the early stages of residential succession evidenced a rapid increase in homeownership levels over the periods involved, with the result that the homeownership levels in those areas at the close of each period were generally high - distinctly higher, as a general rule, than the overall level of homeownership for the total nonwhite population of the city involved. And in addition, the level of nonwhite homeownership at the end of each period of study was consistently higher in areas that had undergone early integration during the period than in areas which had undergone the next stage of racial residential succession. The conclusion clearly seems warranted that homeownership has been a significant factor in the process of succession

wherein blacks have gained entry into areas of previously all-white residence, and have thereby come to enjoy neighborhood amenities previously unavailable to them.

The analysis of areas undergoing the early stages of succession also established a clear link between succession and the improvement of quality of housing obtained by blacks: the quality of housing obtained in early integration tracts was generally higher than the quality of housing obtained in integration tracts for both whites and nonwhites. Furthermore, the white-nonwhite differential in quality of housing obtained was lower in early integration tracts than in integration tracts, and the quality of housing obtained by nonwhites in early integration tracts was generally higher than the quality of housing obtained by nonwhites in the city as a whole.

With the establishment thus of a linkage between homeownership and succession, and between succession and improvement of quality of housing obtained by nonwhites, a connection is strongly suggested between homeownership and the improvement of quality of nonwhite-occupied housing.

Further evidence bearing on this issue is provided in the direct tabulation in Table 7 of trends in quality of total housing obtained by whites and nonwhites, by tenure, for the four cities of study over the entire period involved. The clear conclusion from this table is that homeowners have enjoyed better quality housing than renters, and this conclusion holds true for both whites and nonwhites. Furthermore, the white-nonwhite differential in quality of housing obtained has been less among homeowners than among renters, and the owner-renter differential has been greater among nonwhites than among whites. The ecological analysis undertaken above essentially details the parallel manifestations and specific explication of these aggregate patterns.

There is still, however, a remaining question to answer. During the review of broad trends above, it was observed that levels of family income had generally risen over the period of study. The ecological analysis also revealed a clear relationship between family income and succession: by the end of each period of study, the family-income profiles of the white and nonwhite populations of each of the areas undergoing the first stages of succession were quite similar. Also, the differences between whites and nonwhites in proportions of all families having incomes of $3,000 or more were less in early integration tracts than in integration tracts, and the nonwhite proportions in early integration tracts were higher than those in integration tracts, and in some cases, than the corresponding proportions for whites in integration tracts. Thus the question arises: what effect does the implied relationship between income and quality of housing obtained(see also Glazer and McEntire 1960) have on the relationship between homeownership and quality of housing?

Table 8 represents an attempt to examine the tenure-quality relationship net of income by showing data for the distribution of housing quality by family income and color of occupants, and by tenure. These data are for 1960, the end of the total period of study, showing thereby the net patterning of these relationships after all the processes reviewed in the analysis above. They also refer to the total SMSA population of the U.S., to give an overall summary of patterns in metropolitan areas. Separate tables for the different cities are omitted for considerations of space, particularly since they would lead to identical conclusions. The major conclusions from Table 8 are clear and definite: at all levels of income, homeownership is associated with better quality housing for both whites and nonwhites. Also, the white-nonwhite differential in quality of housing obtained(excluding age of structure) was less for homeowners than for renters, and the owner-renter differential was greater among nonwhites than among whites, except on the age of structure, and for income classes under $4,000 on the condition and plumbing measure.

On the whole, therefore, it may be concluded that patterns of homeownership have a definite bearing on the differences in quality of housing obtained by whites and nonwhites. In the face of the various distinctive characteristics of the four cities of study over the two decades involved, homeownership has been found to feature quite prominently in the early stages of the process of racial residential succession. Particularly over these early stages, this process has resulted in a definite improvement in the quality of housing obtained by nonwhites. It is also true that particularly in these early stages, this process has involved high levels of socioeconomic selectivity for the nonwhite population, and a question thereby arises as to the extent to which the improvement in quality of housing obtained by nonwhites may be attributed to homeownership independently of the socioeconomic characteristics of the population. But the overall advantage which homeowners enjoy over renters in terms of quality of housing obtained is technically independent of income: the quality differential observed between owners and renters over the total period of study was also found to hold at the end of the period for every level of income, and for both whites and nonwhites.

Thus from the point of view of improving the quality of housing obtained by nonwhites in metropolitan areas of the U.S., homeownership has served as a viable instrument of social change in gradualistic perspective. It may be well to encourage this factor with affirmative national policy, especially inasmuch as nonwhite housing quality is not only improved by homeownership but is also thereby brought closer to corresponding white levels. In addition to the improvement of housing quality on which this study has focused, other reasons may be adduced in support of the desirability of encouraging homeownership among blacks - such as, for instance, the benefit of the accrual of equity to the homeowner(see Kain and Quigley 1970). And if a program of encouraging homeownership is to be undertaken, it should be useful to attempt to delineate the target population toward which such a program may be directed. This is a task for further research.

NOTES

1. Because of the lack of space, the following items have been omitted: (a). a final paragraph dealing with the subsidiary research question of the interchangability of "nonwhite" and "black." (b)Tables 1A through 8. (c). References.

2. The full text and tables are available on request.