

RESIDENTIAL REDISTRIBUTION OF SOCIOECONOMIC STRATA IN METROPOLITAN AREAS

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RESUMEN

Este trabajo es un informe preliminar sobre un análisis ecológico de los cambios recientes en la distribución espacial de los estratos económicos dentro de 363 áreas estadísticas metropolitanas standard (o unidades substituidas) en los Estados Unidos. La hipótesis central del estudio es que ciertos subgrupos de población dentro y alrededor de grandes áreas urbanas están cambiando sus lugares de residencia en direcciones predecibles. Los cambios en la distribución de los niveles educacionales entre la ciudad o ciudades centrales y sus anillos circundantes de 1950 a 1960 se determinaron mediante los datos censales. Un aspecto especial del análisis lo constituye la inclusión de 163 áreas cuasimetropolitanas con centro en ciudades que tenían entre 25.000 y 50.000 habitantes en 1960.

Los resultados iniciales indican que la redistribución de la residencia de acuerdo con la clase social está ocurriendo en todas estas áreas metropolitanas y que el patrón de cambio varía sistemáticamente. Las diferencias regionales son pronunciadas y como lo sugieren estudios anteriores, la edad de las ciudades y el tamaño de la población son factores importantes. El porcentaje de adultos en enseñanza secundaria (high school) y universitaria (college) en los anillos de las áreas metropolitanas más grandes y viejas aumentó desproporcionadamente en comparación con la ciudad central. En cambio, entre las áreas metropolitanas más jóvenes y pequeñas se encontró toda una variedad de patrones de cambio.

Análisis subsecuentes contendrán: (a) métodos alternativos para controlar las características de raza y localización regional, (b) otras medidas para las variables dependientes e independientes usadas aquí, y (c) análisis de variable múltiple para identificar el poder explicativo de las variables independientes adicionales, el cual incluirá: crecimiento de población, tasa total de descentralización, historia de la anexión, base económica y características del anillo. La magnitud y dirección del cambio serán estudiados también. Por último, se le dará atención similar a la confiabilidad que merezca la cuantificación de una "secuencia de evolución" de la distribución de las clases sociales.

SUMMARY

This paper is a preliminary report on an ecological analysis of recent changes in the spatial distribution of socioeconomic strata within 363 Standard Metropolitan Statistical Areas (or substituted units) in the United States. The central hypothesis guiding the study is that certain population subgroups in and around the larger urban areas are shifting their residential locations in predictable directions. Changes in the distribution of educational classes between the central city (or cities) and their surrounding rings from 1950 to 1960 are traced by using census data. A special feature of the analysis is the inclusion of 163 "quasi-metropolitan areas" centered on cities that had 25,000-50,000 inhabitants in 1960.

The initial results indicate that residential redistribution according to "social class" is occurring in all these metropolitan areas and that the pattern of change varies systematically. Regional differences are pronounced, and, as prior research has suggested, age of the city and population size appear to be important factors. The percent of adults in the high school and college categories in the rings of older and larger metropolitan areas generally increased disproportionately compared to the central cities. A variety of patterns of change, however, occurred among the younger and smaller metropolitan areas.

Subsequent analyses will include (a) alternative methods of controlling color and regional location, (b) other measures of the independent and dependent variables used here, and (c) a multivariate approach to the problem of identifying and assessing the explanatory power of additional independent variables (including population growth, the over-all rate of decentralization, annexation history, economic base, and the character of the ring). The extent as well as the direction of change will also be investigated. Finally, the feasibility of quantifying an "evolutionary sequence" in the distribution of social classes will also receive attention.

* University of Wisconsin and University of Missouri, respectively. The research was supported by National Science Foundation Grant No. GS921 ("Ecological Patterns in American Cities") to the senior author. We are indebted to Miss Carmen V. Dennison for statistical assistance. The development of the basic typology

and the bulk of the work on the 200 largest areas were carried out by Mr. Pinkerton in connection with his doctoral dissertation, completed at the University of Wisconsin in 1965. The 163 new "quasi-metropolitan areas" were delineated by Mr. Schnore.

INTRODUCTION

President Johnson recently proposed to Congress an ambitious new program aimed at rebuilding urban areas. He was quoted as suggesting that "we focus all the techniques and talents within our society on the crisis of the American city." Among other things, the presidential message calls for (a) legislation to bar discrimination in the sale or rental of housing, (b) a rent-supplement program to assist low-income families, (c) federal mortgage insurance for planned suburban communities to be built by private investment, and (d) extension of last year's urban mass-transit program.

At first glance, some of the goals enunciated in the message would appear to be in conflict with each other, and this is particularly evident in the case of the President's discussion of cities and suburbs. A "rebirth of cities," according to the message, would mean a number of things, including (1) "giving to both urban and suburban families the freedom to choose where they will live" and (2) "the possibility of retaining middle-income families in the city, and even attracting some to return."¹ Freedom of "choice" for all is apparently to be modified by strong "inducements" for some.

If men of practical affairs are not entirely clear about urban issues—especially about questions pertaining to cities and suburbs—it should come as no great surprise. The plain truth is that the scholarly community is even more confused about the main trends. A recently completed review of the literature demonstrates this confusion in embarrassing detail.² Most of the difficulties in determining the nature of recent trends in the redistribution of social classes stem from (1) a lack of con-

sensus regarding the appropriate areal units, time intervals, and measures of "social class"; (2) an obtuse reliance upon cross-sectional data for testing inherently longitudinal propositions; and (3) a heavy dependence on case studies of individual urban areas, usually larger and older metropolitan complexes.

It is clear that work on the subject of this paper would benefit by simultaneous attention to three requirements:

1. Studies should be *comprehensive* in scope, that is, the largest possible number of areas should be investigated simultaneously.
2. Investigations should be *comparative* in design, that is, a full range of metropolitan areas by size, and different types of areas, should be represented.
3. Explicitly *longitudinal* studies should be executed, that is, we should no longer rely upon static or cross-sectional information to test ideas that are intrinsically concerned with trends over time.

This paper comprises a progress report on a larger study that attempts to meet these three criteria. It is concerned with *measuring recent trends in a large number of areas with respect to the redistribution of educational subgroups*.

AREAL UNITS AND METHODS

The "sample" of areas considered in this study is the largest yet examined in any study of this subject. It consists of (a) 200 Standard Metropolitan Statistical Areas (or substituted units, as described below) having central cities of 50,000 or more inhabitants in 1960, together with (b) 163 quasi-metropolitan areas," specially devised for this study and centered on cities containing 25,000–50,000 people in 1960. These latter areas had an aggregate population of almost 13.4 million, or about 8 percent of the total population of the United States in 1960.³

¹ All quotations were taken from a news story in the *AFL-CIO News* (Washington, D.C., January 29, 1966), p. 12.

² James R. Pinkerton, "City-Suburban Residential Patterns by Social Class: A Review of the Literature" (paper prepared for the annual meetings of the Midwest Sociological Society, Madison, Wisconsin, April 23, 1966).

³ These units are virtually identical with the "small metropolitan areas" independently devised by Parker G. Marden in "A Demographic and Ecological Analysis of the Distribution of Physicians in Metropolitan America, 1960,"

Standard Metropolitan Statistical Areas.—The 200 larger units consist of 1950 Standard Metropolitan Areas, 1960 Standard Metropolitan Statistical Areas, 1950–60 State Economic Areas in New England, or specially created areal substitutions for the foregoing types of units. We assume that the “rings” of most of these areas provide at least a fair representation of “suburbia” as the latter is commonly discussed in the urban literature, but we are subjecting this assumption to empirical test in the larger study now in progress.

Quasi-metropolitan areas.—The 163 smaller areas developed for this study consist mainly of “central cities” between 25,000 and 50,000 inhabitants, together with the counties in which they are located. Three multiple central cities are recognized: Oxnard–San Buenaventura, California; (2) Biloxi-Gulfport, Mississippi; and (3) Beloit–Janesville, Wisconsin. In most cases, a single county is involved; in the three areas just mentioned, for example, the counties selected are (1) Ventura County, California; (2) Harrison County, Mississippi; and (3) Rock County, Wisconsin. In eight cases, however, two counties are recognized,⁴ and in one case (St. Cloud, Minnesota) three counties are employed to delineate the “quasi-metropolitan area.” Assuming that the rings of these areas are suburban in character involves greater hazards, but we

American Journal of Sociology, LXII (November, 1966), 290–300. A list of the areas used in this study may be secured from the senior author.

⁴ The two-county “quasi-metropolitan areas” (together with their “central cities”) are: Cole-Callaway (Jefferson City), Missouri; Jasper-Newton (Joplin), Missouri; Cabarrus-Rowan (Kannapolis), North Carolina; Nash-Edgecombe (Rocky Mount), North Carolina; Marion-Polk (Salem), Oregon; Washington-Carter (Johnson City), Tennessee; Calumet-Outagamie (Appleton), Wisconsin; and Chippewa–Eau Claire (Eau Claire), Wisconsin.

In Virginia, the city-county combinations employed were: Charlottesville city plus Albemarle county; Danville city plus Pittsylvania county; and Petersburg city plus Dinwiddie and Prince George counties.

feel that the advantages of working with a larger sample covering a greater size range makes the risk worthwhile. Moreover, the character of the ring can be investigated directly with census data, and, as indicated, we intend to treat it as a variable in our analysis.⁵

Methods.—The basic technique employed in this progress report consists of a detailed comparison of changes in the relative numbers found in three broad educational groups in cities and rings between 1950 and 1960. From these changes, six exhaustive types or patterns are distinguished. The relative frequencies of these patterns are then related to three selected independent variables: (1) location, (2) population size, and (3) age of the urban center.

The basic measure of socioeconomic status—educational attainment—has been divided into three classes: (1) those adults who have completed 0–8 years of grade (elementary) school, (2) those who have completed 1–4 years of high school, and (3) those who have completed one or more years of college. Most of the previous studies dealing with the residential redistribution of social strata have discussed such changes in terms of two or three classes. The educational data show heavy clusterings of persons in the categories “Grade School 8” and “High School 4”; therefore, it is reasonable to believe that these serve as important breaking points for dividing the population into “social classes.” A three-category classification of the population in the central city and surrounding ring also provides the basis for showing a wide variety of possible patterns of residential shifts.

Table 1 shows the technique that has been used in this study for measuring city-ring changes in the location of socioeconomic strata between 1950 and 1960.

⁵ See the discussion of “overbounded,” “underbounded,” and “truebounded” metropolitan areas in Allan G. Feldt, “The Metropolitan Area Concept: An Evaluation of the 1950 SMA’s,” *Journal of the American Statistical Association*, LX (June, 1965), 617–36.

The indexes are derived by taking the differences between the city and ring proportions in each educational class in 1950 and 1960 and then subtracting the results for 1950 from those for 1960. Table 1 has been arranged so that the indexes of disproportionate change apply to the ring, as has been the procedure throughout this study. These same figures, however, with opposite signs, apply to the central city. For example, the indexes for Chicago reveal that between 1950 and 1960 the percent of the *ring's* adult population in the grade school class decreased disproportionately relative to the changes in the percent of the central *city's* adult population in that class. In other words, in 1950 the ring's grade school proportion was 6.45 percent lower than that of the city. By 1960 it had become 12.79 percent lower, for a net difference of -6.34 percent.

This technique indicates the extent to which the 1960 educational profiles for city and ring differ from those of 1950. The indexes of change do *not* measure the absolute changes that have occurred in the proportions in the various educational classes. For example, Table 1 reveals that the proportions in both the ring and city high school and college categories increased between 1950 and 1960, and the proportions in their grade school cate-

gories decreased. The fact that both the city and ring experienced increases in the higher educational classes is almost certainly the result of the general upgrading in educational levels that has been occurring for many years throughout the United States. The technique used to derive the indexes of change, however, provides a control on changes of this kind that are common to both the city and ring, because it only reveals how the class structures of the two areas changed in regard to their similarity to each other.

Changes that result from general educational upgrading are not reflected, except for any specific and differential upgrading between the city and ring that has occurred. Some differences in the class structures of the two areas may also be the result of fertility and mortality differences in each class in the ring compared to the same class in the city. Net migration, however, has probably been the most important influence in bringing about changes in the class composition of the city and ring.

Classifying types of change: Six possible patterns.—Using the above technique with a trichotomous classification of educational groups allows the identification of six patterns of disproportionate change. The upper panel in Table 2 shows the six possible patterns of change, viewed from the

Table 1.—INDEXES OF DISPROPORTIONATE CHANGE FOR THREE EDUCATIONAL CLASSES IN THE CHICAGO METROPOLITAN AREA, 1950-60: A METHODOLOGICAL ILLUSTRATION¹

Population (aged 25 and over) by years of school completed ^{2/}	Percent of city population, 1950	Percent of ring population, 1950	City-ring difference, 1950	Percent of city population, 1960	Percent of ring population, 1960	City-ring difference, 1960	Indexes of disproportionate change, 1950-60
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Total.....	100.00	100.00		100.00	100.00		
Grade.....	46.80	40.35	-6.45	42.92	30.13	-12.79	-6.34
High.....	39.99	41.41	+1.42	42.80	47.90	+ 5.10	+3.68
College.....	13.21	18.24	+5.03	14.28	21.97	+ 7.69	+2.66

^{1/} The 1950 Standard Metropolitan Area (and its equivalent, the 1960 Standard Consolidated Area) for Chicago and Northwestern Indiana.

^{2/} "Grade"=0 through 8 years; "High"=1 to 4 years of high school; "College"=1 to 4 or more years of college.

Source: James R. Pinkerton, *The Residential Redistribution of Socioeconomic Strata in Metropolitan Areas* (unpublished doctoral dissertation, University of Wisconsin, 1965), Table II-1, p.31.

standpoint of the metropolitan ring. The first pattern of change ("1")—or minus, plus, plus—indicates a decrease in the ring's grade school component and increases in its high school and college components. It may be regarded as the "expected" pattern of change.⁶ The remaining five possible types of change are also identified by number and by signs; note that the array is ordered, reading from "1" through "6," with "6" appearing as the mirror-image of "1," and so on.

The lower panel in Table 2 shows the numbers and proportions of areas found to exhibit each individual pattern. The "expected" type, previously identified as pattern "1," is found in six out of every ten cases. However, pattern "2" is exhibited by almost three out of every ten areas and thus represents a significant deviant pattern, one in which only the high school group is increasing in the ring while the grade school and college classes are declining. Finally, over one out of every ten areas is found in one or the other of the four remaining types. These results suggest that the "expected" pattern—the product of what has been called "the great exodus of the middle and upper classes" from the city—is not nearly so common as one might suppose on the basis of the existing urban literature. But what are the correlates of these different patterns?

Independent variables.—We have examined three variables that might be expected to produce variations in the patterns identified here. They are (1) the regional or divisional *location* of the area; (2) the *population size* of the metropolitan area; and (3) the *age of the central city*.

The four regions and nine divisions used here are those traditionally recognized in publications of the United States Bureau of the Census. In those metropolitan areas which lie in more than one region or division, the location of the (largest) central city was decisive.⁷ The measure of size shown here refers to the aggregate population of the metropolitan area in 1960; in other words, the combined populations of central cities and rings are employed.⁸ The measure of "age" is the number of decades that have passed since the central city (or cities) first reached 10,000 inhabitants, as reported in the decennial census. This indicator seems preferable to others that could be used, such as the date of incorporation or the first

⁶ See Pinkerton, *op. cit.*

⁷ In later work on this project, regional variations will be examined according to the scheme advanced in Donald J. Bogue and Calvin L. Beale, *Economic Areas of the United States* (New York: Free Press of Glencoe, 1961).

⁸ Subsequent work will also consider the size of the central city alone, 1950 and 1960, and the size of the metropolitan area in 1950, the beginning of the period of observation.

Table 2.—SIX POSSIBLE PATTERNS OF RESIDENTIAL REDISTRIBUTION OF THREE EDUCATIONAL CLASSES, BASED ON INDEXES OF DISPROPORTIONATE CHANGE FOR THE METROPOLITAN RING, 1950-60

Type of pattern:	"1"	"2"	"3"	"4"	"5"	"6"	Total
Grade:	-	-	-	+	+	+	
High:	+	+	-	-	-	-	
College:	+	-	+	-	+	-	
Number of metropolitan areas by type.....	216	100	12	16	9	10	363
Percent of metropolitan areas by type.....	59.5	27.5	13.0				100.0
			3.3	4.4	2.5	2.8	

A minus sign(-) indicates a disproportionate decline in the ring; a plus sign(+) indicates a disproportionate increase in the ring.

date at which the place was reported in the census.⁹ It also strikes us as superior to another commonly employed measure—the number of decades since a place first became “eligible” for inclusion in the group of cities under study. In this case, that would mean the census date at which a place first reported 25,000 inhabitants.¹⁰

FINDINGS

Table 3 shows the variations in pattern according to *region and division*. Perhaps the most striking thing about the regional data is the fact that all four regions exhibit each of the three main patterns—“1,” “2,” and “3”–“6” combined.

The nine divisions naturally show considerably more variation. The “expected” pattern, for example, is particularly evident in the Middle Atlantic division. The main deviant pattern (Type “2”) is found with especially great frequency in the

⁹ See Leo F. Schnore and Philip C. Evenson, “Segregation in Southern Cities,” *American Journal of Sociology*, LXXII (July, 1966), 58-67.

¹⁰ For a comparable treatment of SMA’s, SMSA’s, and urbanized areas, see Leo F. Schnore, *The Urban Scene: Human Ecology and Demography* (New York: Free Press, 1965), chaps. v, vi, xi, xii, xiii, and xvii, together with references cited therein.

West North Central states. Finally, the Mountain division has fully a third of its metropolitan areas in one or another of the four unusual patterns (Types “3”–“6” inclusive).

But these are purely descriptive results, and one would be hard pressed to assess their meaning without further information. What factors lie behind these marked regional and divisional differences? In an effort to provide some answers, we have embarked on a study of analytical factors that may account for variations in the type of change experienced between 1950 and 1960. Two of these factors are size and age.

Table 4 shows the results of our tabulation of variations in pattern of social-class redistribution by size of the metropolitan area in 1960. It is quite evident that size is a fairly good predictor of patterns of change. At the very least, the proportion of metropolitan areas displaying the “expected” pattern declines rather markedly as one descends the size scale. Over eight out of every ten very large areas exhibit the “expected” pattern (Type “1”), but this fraction falls to half that figure in the very smallest areas (under 50,000 inhabitants). The “de-

Table 3.—PATTERNS OF RESIDENTIAL REDISTRIBUTION OF EDUCATIONAL CLASSES IN METROPOLITAN AREAS, 1950-60, BY REGION AND DIVISION

Region and division	Type of pattern:	"1"	"2"	"3"	"4"	"5"	"6"	Total (=100%)
	Grade:	-	-	-	+	+	+	
	High:	+	+	-	+	-	-	
	College:	+	-	+	-	+	-	
Percent distribution by type				}				
Northeast.....		72	17		11			57
North Central.....		56	37		7			112
South.....		60	25		15			140
West.....		52	26		22			54
New England.....		56	22		22			23
Middle Atlantic....		82	15		3			34
East North Central.		62	31		7			73
West North Central.		46	46		8			39
South Atlantic.....		60	27		13			62
East South Central.		48	32		20			31
West South Central.		68	17		15			47
Mountain.....		41	26		33			27
Pacific.....		63	26		11			27

viant" patterns do not fall out in equally clear-cut fashion. It is true that Type "2" tends to become increasingly frequent with smaller size, but Types "3"- "6" (combined) do not show the same sort of patterned variation. The exceptions to an ordered series are numerous.

Finally, Table 5 exhibits our results according to *age of the central city*. The format employed is the same as that in the two preceding tables, and the results are very clear: The older the city, the greater the likelihood that the "expected" pattern (Type "1") will be found in changes occurring between 1950 and 1960. Indeed, almost nine out of every ten of the very oldest places (those that reached 10,000 prior to 1840) reveal the "expected" patterns; this contrasts sharply with the very newest places, where only

one out of every three manifests the Type "1" configuration. The progression is quite marked from one age class to the next. Moreover, the relative frequency of the Type "2" pattern tends to increase as one reads down the second column, that is, with decreasing age. At the same time, it should be pointed out that there is no such regularity in the appearance of the remaining types ("3"- "6," taken together). Compared to size of the metropolitan area, however, the age of the city appears to be a somewhat more effective predictor of the type of change under examination here.

DISCUSSION

The fact that age and size are themselves related is well known, and this immediately suggests the need for control-

Table 4.—PATTERNS OF RESIDENTIAL REDISTRIBUTION OF EDUCATIONAL CLASSES IN METROPOLITAN AREAS, 1950-60, BY SIZE OF METROPOLITAN AREA IN 1960

Population size of metropolitan area, 1960	Type of pattern:	"1"	"2"	"3"	"4"	"5"	"6"	Total (=100%)
	Grade:	-	-	-	+	+	+	
High:	+	+	-	+	-	-		
College:	+	-	+	-	+	-		
Percent distribution by type				}				
500,000 and over.....		84	8		8			49
250,000 - 500,000.....		82	8		10			49
150,000 - 250,000.....		58	27		15			52
100,000 - 150,000.....		54	36		10			72
75,000 - 100,000.....		51	35		14			49
50,000 - 75,000.....		47	39		14			62
Under 50,000.....		40	37		23			30

Table 5.—PATTERNS OF RESIDENTIAL REDISTRIBUTION OF EDUCATIONAL CLASSES IN METROPOLITAN AREAS, 1950-60, BY AGE OF CENTRAL CITY OR CITIES

Census date at which central city or cities first reached 10,000 population	Type of pattern:	"1"	"2"	"3"	"4"	"5"	"6"	Total (=100%)
	Grade:	-	-	-	+	+	+	
High:	+	+	-	+	-	-		
College:	+	-	+	-	+	-		
Percent distribution by type				}				
1790-1830.....		87	0		13			15
1840-1850.....		72	7		21			28
1860-1870.....		68	27		5			66
1880-1890.....		62	30		8			94
1900-1910.....		55	30		15			76
1920-1930.....		49	35		16			63
1940-1950.....		33	33		33			21

ling one factor while examining the effect of the other. Such an effort requires a more sophisticated approach using multivariate techniques. We plan to extend our study in this direction, but, at the same time, there are other variables worthy of consideration.¹¹

Among the other variables that we are seriously considering are the following:

1. *Population growth.*—Metropolitan areas that are growing rapidly may be expected to manifest patterns different from those on view in slowly growing or declining areas. (In part, of course, this may stem from the triangular relationship between age, size, and growth.) In any case, we intend to assess the role of this factor in a multivariate framework by using two measures: (1) population growth or decline, 1950–60, as commonly expressed in the form of rates, and (2) the proportion of 1960 housing found in dwelling units built between 1950 and 1960. The latter measure is not so seriously affected by the initial size of the population under study.
2. *Over-all rate of decentralization.*—We expect to find some differences in the selectivity of decentralization among educational groups according to the over-all rate of decentralization. Metropolitan areas that are showing ring growth far in excess of that of the central city should show less clearly patterned selectivity.
3. *Economic base.*—Although prior work¹² has shown no clear relationship between economic base and type of change, the greater number of cases now available to us makes us hopeful that this factor can be assessed in a more meaningful way. Certainly, an industrial city might be expected to exhibit a pattern of change different from that of a retail center or a college town. (The “quasi-metropolitan areas,” in particular contain quite a number of the latter.)
4. *The character of the ring.*—One factor that should not be neglected, at least as a control, is the residential character of the ring.

¹¹ This work will be accomplished as part of a Master's thesis at the University of Wisconsin by Mr. John W. Rabidou.

¹² James R. Pinkerton, *The Residential Redistribution of Socioeconomic Strata in Metropolitan Areas* (unpublished doctoral dissertation, University of Wisconsin, 1965), chap. iii.

The metropolitan ring typically contains both rural and urban territory, and the balance between these two types of residence area could exercise considerable influence on the type of pattern registered. To take only two extreme examples, consider the 1960 composition of the following areas:

Type of Residence Area	New York, New York	Selma, Alabama
<i>Urban</i>	96.9%	50.1%
Central city	52.7	50.1
Other urban	44.2	0.0
<i>Rural</i>	3.1	49.9
Nonfarm	3.0	32.4
Farm	0.1	17.5
Total	100.0%	100.0%

The patterns of change, from 1950 to 1960, may be expected to differ considerably between such areas. Whether such differences are independent of those explainable by reference to age and size remains to be seen, but this is a problem deserving further effort.¹³

5. *Annexation.*—Prior research has suggested that cross-sectional comparisons of similar data can be seriously affected by an area's annexation history.¹⁴ It is commonly assumed that central cities tend to annex high-status areas at the periphery. Whether or not this is true, the presence or absence of annexation over the 1950–60 decade, and the amount of area and population affected, could seriously affect the results. We intend to pursue this question in depth.

Our goal in this whole enterprise is to determine whether or not there is an “evolutionary sequence” in the redistribution of social classes in American cit-

¹³ Some writers prefer a tripartite classification, consisting of the central city, suburbs, and the fringe. See Joel Smith and Herbert Collins, “Another Look at Socioeconomic Status Distributions in Urban Areas” (paper prepared for the annual meetings of the American Sociological Association, Chicago, 1965), and Harold F. Goldsmith and Edward G. Stockwell, “Occupational Selectivity within the Larger 1960 Metropolitan Areas” (paper prepared for the annual meetings of the Population Association of America, New York City, April 30, 1966).

¹⁴ Schnore, *op. cit.*, chaps. xi and xii.

ies.¹⁵ Among other problems in adopting a multivariate approach, we have to consider the feasibility of scoring our "types" as dummy variables. Should only two types be distinguished—Type "1" versus all others? Should we distinguish three main types, as in Tables 3, 4, and 5 in this report? Or should all six types be represented? Choice of the first alternative would permit multiple-regression analysis with the use of dummy variables. Otherwise, discriminant function analysis will be required.

CONCLUSIONS

Although our results tend to contradict some of the assertions in the urban literature, we have found clearly patterned differences in the residential redistribution of socioeconomic strata in 363 metropolitan areas between 1950 and 1960. Age and size have again emerged as appar-

¹⁵ The senior author has spelled out the theoretical reasons for expecting such a determinate sequence in an essay entitled "On the Spatial Structure of Cities in the Two Americas," in Philip M. Hauser and Leo F. Schnore (eds.), *The Study of Urbanization* (New York: John Wiley, 1965), chap. x.

ently important factors. While other variables warrant close attention, these two should certainly continue to be studied in detail.

We shall close this report by a brief reference to other phases of the larger program in which the present study has its place. The senior author is now engaged in a long-term study of "Ecological Patterns in American Cities: Quantitative Studies in Urban History." The present project is one of a number of broad comparative statistical investigations of changes in the recent past. Another parallel study will extend the time coverage by examining occupational (rather than educational) data for the period 1940–60.¹⁶ The possibility of an observation just prior to World War II will permit us to assess the validity of the many propositions that have been advanced concerning pre- versus post-war patterns. In any case, our ultimate aim is to enhance our understanding of the changing ecological structure of American cities.

¹⁶ This work will be accomplished as part of a Master's thesis at the University of Wisconsin by Miss Joy K. Oren.