Discrimination, poverty, and ethnic attachment or choice have been identified as 3 factors that might explain residential segregation. This paper purported: (1) to comparatively document the nature and extent of metropolitan segregation of Mexican Americans and Blacks in the Southwest; (2) to perform an exploratory analysis of the significance of one of these 3 factors in determining residential segregation; and (3) to provide some speculation on the contributions of the remaining 2 factors. For 31 cities, expected indexes based on income and education were computed to explain residential segregation by socioeconomic status. It was concluded that: (1) a uniformly high degree of Black segregation was found for all cities, while Mexican American segregation was less extreme and more variable from one metropolitan area to another; (2) Mexican Americans were usually more segregated from Blacks than from Anglos; (3) the levels of segregation of both groups appeared unrelated to the size of the city; (4) socioeconomic status cannot account for the observed levels of Black and Mexican American segregation; (5) Mexican Americans have higher median incomes and yet lower median education levels than Blacks in almost all areas; and (6) income as a component of residential segregation is of no greater importance in Mexican American segregation than in Black segregation. (HBC)
A COMPARATIVE ANALYSIS OF BLACK AND MEXICAN AMERICAN RESIDENTIAL SEGREGATION IN SOUTHWESTERN CITIES

Michael Meier

and

Joe Feagin

The University of Texas at Austin

June 1972
A COMPARATIVE ANALYSIS OF BLACK AND MEXICAN AMERICAN RESIDENTIAL SEGREGATION IN SOUTHWESTERN CITIES

The arrival of millions of immigrants in American cities in the last few centuries was characterized by settlement in identifiable ethnic colonies. The cityward migration of black Southerners in this century also resulted in their ecological separation in cities. Similarly, ecological processes since the annexation of the American Southwest have also propelled the Mexican American population into separate urban tracts. Both blacks and Mexican Americans comprise substantial portions of the populations of most southwestern cities, which cities will be the focus of this analysis.

Recognizing the importance of the spatial isolation of blacks from the dominant white population in American cities, Gunnar Myrdal identified three factors that might explain residential segregation: discrimination, poverty, and ethnic attachment or choice. Surprisingly, this intriguing delineation has not lead to subsequent research on the relative importance of these three determinants of residential segregation.

The purpose of this paper is threefold: (1) comparative documentation of the nature and extent of metropolitan segregation of these two minorities in the Southwest, (2) exploratory analysis of the significance of one of Myrdal's three important factors in determining residential segregation of the two groups and, (3) some speculation on the contributions of the remaining two. We will first present a brief overview of the relevant literature on Mexican American and black segregation in Southwestern cities; then, an indirect assessment of the importance of socioeconomic status in residential segregation will be attempted.
Prior Research on Segregation.

Nationally, the characteristics of residential segregation have focused the attention of researchers on the universally high degree of black segregation in every American city. Utilizing the Index of Dissimilarity—a common segregation index indicating the percentage of one of two groups which would have to change areas of residence to achieve total residential similarity with the other—Lieberson documented the nature of segregation of black and immigrant populations in several cities over an extended period of time. Examining the period before 1950, he found gradually decreasing levels of segregation for European immigrant groups contrasted with constant or growing separation of blacks from the rest. Indexes of segregation of immigrant populations from native whites in 1950 ranged from below 20 to above 50; for nonwhites in the same period the indexes were concentrated between 80 and 90. ² Subsequently, the Taeubers studied the unique position of blacks in terms of residential segregation in a number of American cities; they found black segregation to be singularly and uniformly high among U.S. cities in 1960.³

The aforementioned studies dealt almost exclusively with segregation of black American or white immigrant populations. In their brief description of Mexican American segregation in two cities, Los Angeles and San Antonio, Taeuber and Taeuber observe that segregation of blacks from whites (excluding Mexican Americans) is greater than that of blacks from Mexican Americans.⁴ Reversing this emphasis in their important pioneering study of residential segregation, Moore and Mittlebach note that segregation of Mexican Americans from blacks is greater than that of Mexican Americans from Anglos.⁵ In a separate work Moore points out that differences between black and Mexican American patterns of segregation are the result of historical contrasts in
settlement; the distinctive residential patterns of Mexican Americans in barrios reflects "a varied and complex historical pattern rather than the typical Negro or eastern or midwestern ethnic push into cheap housing near the center of the city." Mexican settlement often predates the major growth of the city; different processes of urbanization have contributed to their separation.

Voluntary and Involuntary Segregation. Measurement of Myrdal's three determinants has been an unsolved research problem in the three decades since publication of An American Dilemma. Gist and Fava define voluntary segregation as that occurring when "the individual, on his own initiative seeks to live with others of his own kind apart from those who are different in some fundamental respect...This emphasizes preference and not prejudice." In one of the few studies of this component of segregation, Moore and Hittlebach attempt unsuccessfully to measure the relative importance of a "taste for segregation" in the separation of Mexican American minorities.

However, there is evidence on the role of involuntary causes of segregation: discrimination against, and socioeconomic levels of, urban minorities. The Taebuers concluded that patterns of economic residential segregation do not adequately account for observed levels of black segregation. In their research they have noted that the steady increase in the residential segregation of blacks over the years has accompanied their gradual advances in socioeconomic status. In a separate article Tauber reported that by applying the technique of indirect standardization on the basis of income and cost of housing, the poverty explanation alone could not account for existing levels of Negro segregation. Earlier, Lieberson obtained the same results from this test.
cities Zelder estimated using similar techniques that approximately 30-50 percent of the urban residential segregation indexes for blacks in those cities could be attributed to the economic status of households. However, those who have heretofore looked at segregation coefficients have generally ignored the possibility that segregation cannot be attributed solely to exclusion factors but involves self-segregation as well.

In contrast to discussions of socioeconomic factors in black segregation, a number of those looking at Mexican Americans have emphasized the relatively smaller role of discrimination in their case. For example, McEntire states that Mexican Americans have suffered "a great deal of discrimination, but it has been based mainly on their lower class character rather than their ancestry." Otherwise, Mexican Americans have little difficulty living where they choose:

Poverty and cultural traits seem to be the dominant factors also in the segregation of Mexican Americans in the Southwest. Not only are Mexican Americans one of the most impoverished groups in the country, but their cultural tradition of rural Mexico also seems to handicap them in the competitive struggle. Others have suggested similar arguments.

In summary, at least two of Myrdal's three determinants seem to be inadequate as comprehensive explanations, at least in explaining the segregation of black Americans. For Mexican Americans, the evidence is not clear. Here self-segregation has not been discarded as an element in the residential pattern, and this minority's socioeconomic position seems to assume an even larger significance.

The Method. The development of segregation indexes in the literature has adequately met the need for a measurement of the degree of segregation; other statistical and analytical methods must be developed to determine the
relative influence of the determinant factors. Because of its widespread current use, we employ the Index of Dissimilarity, often called the Duncan Index or delta, as our measure of residential segregation in Southwestern cities. Determination of what index values constitute "high" and "low" segregation is necessarily somewhat arbitrary. Kantrowitz, in applying the index to racial and ethnic segregation in New York, concludes that the pattern of results it has yielded as well as its interpretation in previous literature justifies assigning "deltas upward of 70 (which usually segregate Negroes from whites) as 'high,' deltas of 30 or less as 'low,' and variations in level of less than five points as unimportant, unless otherwise correlated." We will use these rough standards in the analysis which follows.

Application of the Index of Dissimilarity to measure the degree of separation of one population from another is obviously limited in any instance to the available census data. Data on nonwhite and Spanish surname populations, in spite of certain weaknesses of which we are well aware, must be used as surrogates for black and Mexican data because of the lack of alternatives in the 1960 census tract manuals. However, extrapolating from nonwhite to black populations for analytical purposes is justifiable in most Southwestern cities, where the nonwhite population is overwhelmingly black. For comparative purposes (especially in San Francisco and certain other California cities), indexes of black segregation have been included. Tracts have been chosen as the areal units for computing the segregation index since socio-economic characteristics needed in further analysis are not available for the smaller units of city blocks.

In addition to quantifying the degree of real residential segregation, it has been necessary to coordinate several methods to meet the need for measures
of the relative influence of Myrdal's three determinants of segregation.

Since blacks and Mexican Americans are of much lower socioeconomic status than Anglos on the average, they can be expected to be over-represented in lower income residential areas. Some (including real estate interests) have even contended that virtually all of residential segregation can be attributed to economic factors. To attribute some component of residential segregation to socioeconomic factors, we have applied the technique of indirect standardization of census data. Through knowledge of the proportions of nonwhite and Mexican American families among the total number of families in each census income division (i.e., below $1,000, from $1,000 to $1,999, from $2,000 to $2,999, and so on) computer generation of the expected populations of nonwhites, Mexican Americans, and Anglos based on income is possible. Perhaps clearer, if we order the total number of families of a city in a matrix with rows representing income divisions and columns representing tracts, the expected matrices of nonwhite and Mexican American families can be obtained by multiplying each row by the proportion of nonwhites or Mexican Americans in that income division in the city as a whole. The proportional factor (p) by which we multiply can be defined as

$$p = \frac{\sum_{j=1}^{n} t_{ij}}{\sum_{j=1}^{n} t_{ij}}$$

where $M$ is the number of minority families, $T$ is the total number of families, $i$ is the income division (row), $j$ is the tract (column), and $n$ is the total number of tracts (columns). After multiplying, the expected number of the minority in each tract is the sum of each column of the expected matrix. From this hypothetical population, it is possible to calculate an expected Index of Dissimilarity based on income. In this study expected indexes based
on income and education will represent that portion of residential segregation that can be "explained" by socioeconomic status.

Real indexes of segregation were computed for the 38 tracted central cities of SMSAs in the Southwest in 1960; ordinarily this is the same as the legal city for which the SMSA is named. Expected indexes were computed for only 31 of the 38 cities because of lack of sufficient populations of one or both minorities for inclusion of city-wide data on income and education for the minority.

(PLACE TABLE ONE ABOUT HERE)

The Data. Analysis of data procured through application of the Index of Dissimilarity to the 38 southwestern cities provides support for some of the existing work on residential segregation. (Table 1). There is near uniformity in the high levels of residential segregation of nonwhites from the Anglo population, particularly in the largest cities. Only 2 of the 10 largest cities in the Southwest have Anglo-Nonwhites indexes below 70, the level usually considered to be "high." San Francisco and Oakland both have indexes over 70 for Anglo-black segregation, but their indexes for nonwhites are obviously affected by the presence of other races. Much greater variation is evident among levels of Mexican American segregation in the 10 largest cities studied; the deltas range from 38.1 in San Francisco to 66.8 in Dallas. Also predictably, in every city in the Southwest blacks are more segregated from Anglos than are Mexican Americans, although the difference varies somewhat from city to city. Furthermore, in most of the cities Mexican Americans are more segregated from nonwhites than from Anglos. Good examples of this are available in nine of the ten largest cities in Table 1. The major exceptions to this generalization are El Paso, Phoenix, Tucson, and Corpus Christi,
cities with unusually large Mexican American minorities. Segregation of blacks from Anglos is the highest index obtained in every city.

The usual order of indexes by magnitude after blacks from Anglos, then, is nonwhites from Anglos, Mexican Americans, from nonwhites, and Mexican Americans from Anglos. These results are generally in accord with those of the study by Moore and Mittlebach. However, San Antonio's and Corpus Christi's large number of Mexican Americans and relatively smaller number of blacks combined with fairly high levels of segregation of both groups, as well as San Francisco's large proportion of blacks and orientals and fewer Mexican Americans with somewhat lower segregation of both from the dominant population, do not support the argument made by Moore and Mittlebach that a large Mexican American minority and a small black minority result in less segregation than the opposite. Indeed, San Francisco's indexes suggest that a large oriental population may have some effect in diminishing overall segregation.

In addition, there appears to be no significant correlation between the size of the city and the level of the indexes obtained; there also is no linear relationship between the relative size of a given minority and its degree of segregation from the dominant Anglo population. Illustrative of this point is the fact that one of the lowest indexes of Mexican American segregation is found in Laredo and only average indexes in Tuscon, San Antonio, and El Paso, all with large Mexican American populations. The highest indexes are to be found in cities such as San Bernardino, Odessa, and Dallas. Among the highest indexes of black segregation are those in Lubbock and Corpus Christi, with proportionately small black minorities, while Houston and Galveston rank in the middle range.
A regional difference is also detectable in Tables 1 and 2. Real indexes of dissimilarity are noticeably higher in many Texas cities, when compared to cities in California, Arizona, New Mexico, or Colorado. Of the 19 Texas cities included on Table 1, nine have indexes of segregation of Mexican Americans from Anglos above 60, including two above 70. Only four of the 19 non-Texas cities had indexes over 60 for Mexican Americans from Anglos. In regard to segregation of blacks from Anglos, four of the 19 Texas cities had indexes above 90, while only two of the non-Texas cities show indexes this high. At the same time, expected indexes (based on education and income) for Texas cities are somewhat higher, indicating that the more pronounced segregation here has greater socioeconomic reason.

We can also see that there is little difference between the levels of segregation of nonwhites from Anglos and blacks from Anglos outside the few centers of oriental and American Indian population (e.g., San Francisco and Phoenix). For these two cities the value of indexes based on nonwhites as a substitute for black population in the analysis which follows is somewhat diminished.

The Socioeconomic Factor in Segregation. Given the lack of previous research on the comparative influence of socioeconomic variables in Mexican American and black segregation, there were bound to be not only unanticipated results, but also gaps in our ability to interpret their significance. The application of indirect standardization to the 31 cities with sufficient data yielded the expected indexes based on income and education shown in Table 2.

(PLACE TABLE 2 ABOUT HERE)

Expected indexes provide insight into the importance of income and educational deprivation in determining residence. All of the expected indexes are
substantially lower than their corresponding real indexes. In the majority of cases, but not all, both expected indexes suggest the lesser role of socioeconomic status in determining residential segregation, at least when compared to the real indexes. Focusing only on unweighted averages for the 31 cities, we see that while the real index for Mexican Americans was 53.1, the expected indexes for income and education were, respectively, 10.7 and 19.1. These expected figures account for only 20.2 percent and 36 percent of the real index. Looking at nonwhites, the real index of segregation from Anglo whites was substantially higher than for Mexican Americans at 74.0, while the expected figures were 14.9 for income and 10.8 for education, accounting for 20.1 percent and 14.6 percent of the real index. In every case the expected indexes were less than 20. Since education and income can be viewed as indicators of the same underlying SES determinant, and are correlated, one cannot simply add the expected indexes; we had no feasible way to determine what the combined expected indexes would be.

Moreover, in all but three of the cities the expected index based on income is higher for blacks than for Mexican Americans; and in most cities the expected index based on education is higher for Mexican Americans than for blacks. The unweighted averages for all the cities taken together show a similar ranking. This doubtless reflects the peculiar situation that exists throughout the Southwest: Mexican Americans have higher median incomes and yet lower median education levels than blacks in almost all areas. Shannon and Krass observe that although education is positively related to socioeconomic status for most groups, a high educational level is of more economic value to whites than to blacks or Mexican Americans. Similar studies may further discover that education is more valuable for Mexican
Americans than for blacks. Moreover, the differences in residential segregation of these two minority groups suggest that improved educational levels may have a substantially greater effect in diminishing the overall residential segregation for Mexican Americans than for blacks; this seems particularly true for certain cities such as Lubbock, Abilene, and El Paso.

However, for further analysis of factors in observed levels of real segregation, it is necessary to select one of these two expected indexes as the more representative measure of socioeconomic status. The use of any single variable as a measure of socioeconomic level has certain limitations, but previous research has usually emphasized income as the best single indicator. Attention to the expected index based on income reveals approximately the same proportion of the real segregation of Mexican Americans from Anglos can be attributed to their income differences from the dominant population as in the real segregation of blacks; the percentage "explained" by the expected index on the basis of income averages about one fifth for both Mexican Americans and blacks. Contrary to arguments in the literature, the conclusion that poverty plays a proportionately larger role in the segregation of Mexican Americans than in that of blacks is not supported by these data.

Interestingly, a much smaller percentage of the segregation of Mexican Americans from blacks can be explained in terms of socioeconomic differences. A great deal of segregation between them might be considered to be the result of what could be termed "mutual discrimination," or perhaps strong ethnic attachments.

It is also of some interest to examine variations in the level of the several indexes across the southwestern cities we examined. As expected, we
found a high degree of correlation (Pearson's r) between both types of expected indexes and their corresponding real indexes in segregation of both minorities from Anglos. There is a strong tendency for the three indexes to go up and down together, as one moves from one city to the next.

**Voluntary Factors in Segregation.** The relative contributions of the factors of social and economic status and discrimination, however, do not represent the universe of all possible determinants. Ethnic attachment, or personal choice, may also play a role in the level of the real indexes of dissimilarity in Table 1. A few studies assessing this issue through survey interviews and similar materials have suggested that blacks and Mexican Americans do have a "consciousness of kind" which affects their residential and geographical mobility, apart from the question of discrimination. More over, one study utilizing residential segregation measures similar to ours, that by Moore and Mittlebach, failed to isolate the importance of a taste for segregation in determining the urban residence of blacks and Mexican Americans.

A rough and admittedly speculative approximation of the effects of self segregation might be obtained from the observed level of segregation of some white ethnic groups. Those groups as nearly ethnically and physically indistinct from the dominant population in the Southwest (i.e., Canadians, Germans, British) probably would not suffer from discrimination in the housing market. Even in these examples, not all the segregation observed would result from choice; socioeconomic factors would be important here too. On the other hand, the very indistinctness that frees such groups from discrimination may simultaneously deny them the group cohesion to segregate which is present in culturally better-defined minorities.
In our study detailed measurement of segregation of first and second
generation Canadians, German, and British populations for these same cities
of Southwest produced indexes that averaged less than 20 (well below the
index level previously defined as "low"--30). Using the average of these
indexes as minimum levels of voluntary segregation, one might speculate that
a substantial portion of the observed segregation of both Mexican Americans
and blacks cannot be attributed to either socioeconomic factors or voluntary
segregation.

We cannot assume, however, that the three determinants of socioeconomic
status, self-segregation, and discrimination are mutually exclusive and
exhaustive causes of residential segregation. The total level of black and
Mexican American segregation probably results from an interaction of these
and other factors. Voluntary segregation may be partially the result of fear
of discrimination and certainly some degree of socioeconomic differentiation
is attributable to discrimination. Therefore, even given a better measure of
the effects of self-segregation than the one above, we could not combine it
with our measure of socioeconomic influences to leave a residual estimate of
discrimination. Further research should be directed at sorting out these
determinants.

Conclusion. This comparative analysis of black and Mexican American
residential segregation in more than two dozen large southwestern cities
has produced evidence which in some ways substantiates the findings of
previous research. As anticipated, a uniformly high degree of black segre-
gation was found for all cities; and Mexican American segregation was less
extreme and more variable from one metropolitan area to another. In addition,
we found that Mexican Americans were usually more segregated from blacks than from whites. The levels of segregation of both groups appeared unrelated to the size of the city. Moreover, we also found that socioeconomic status cannot account for the observed levels of black and Mexican American segregation and that it is difficult to estimate the importance of choice as a determinant of residential segregation.

At the same time, however, this project has shown results that contradict arguments in the existing literature, or suggest ideas beyond those so far suggested. Indeed, we found that poverty (income) as a component of residential segregation is of no greater importance in Mexican American segregation than in black segregation, contrary to prominent evaluations of the determinants of Mexican American segregation in urban areas. Furthermore, we found that in some cities the existence of a proportionately large Mexican American minority and proportionately small black minority meant high levels of segregation for both groups.

Finally, in addition to being difficult to measure, the components of self-segregation and discrimination in the residential separation of minorities appear to be nonadditive. The interactive relationship between the determinants will complicate attempts at quantification of the contributions of all three. The need for adequate measures may be met only by an entirely new and more imaginative approach to the problem in future research.
### TABLE 1

REAL INDEXES OF SEGREGATION IN SOUTHWESTERN CITIES

(1960)

<table>
<thead>
<tr>
<th>City*</th>
<th>Mexican Americans from Anglos</th>
<th>Nonwhites from Anglos</th>
<th>Mexican Americans from Nonwhites</th>
<th>Blacks from Anglos</th>
</tr>
</thead>
<tbody>
<tr>
<td>Los Angeles</td>
<td>57.5</td>
<td>80.2</td>
<td>66.7</td>
<td>87.6</td>
</tr>
<tr>
<td>Houston</td>
<td>65.3</td>
<td>80.5</td>
<td>70.3</td>
<td>81.3</td>
</tr>
<tr>
<td>San Francisco</td>
<td>56.1</td>
<td>58.7</td>
<td>59.4</td>
<td>71.7</td>
</tr>
<tr>
<td>Dallas</td>
<td>66.8</td>
<td>89.5</td>
<td>74.9</td>
<td>90.2</td>
</tr>
<tr>
<td>San Antonio</td>
<td>63.6</td>
<td>81.9</td>
<td>75.0</td>
<td>84.5</td>
</tr>
<tr>
<td>San Diego</td>
<td>43.8</td>
<td>74.4</td>
<td>48.3</td>
<td>84.0</td>
</tr>
<tr>
<td>Denver</td>
<td>60.0</td>
<td>80.3</td>
<td>60.8</td>
<td>86.8</td>
</tr>
<tr>
<td>Phoenix</td>
<td>57.8</td>
<td>77.6</td>
<td>50.1</td>
<td>90.0</td>
</tr>
<tr>
<td>Oakland</td>
<td>41.5</td>
<td>66.4</td>
<td>50.5</td>
<td>72.2</td>
</tr>
<tr>
<td>Fort Worth</td>
<td>56.5</td>
<td>84.7</td>
<td>77.4</td>
<td>85.4</td>
</tr>
<tr>
<td>Long Beach</td>
<td>32.2</td>
<td>75.9</td>
<td>59.4</td>
<td>86.6</td>
</tr>
<tr>
<td>El Paso</td>
<td>52.9</td>
<td>64.6</td>
<td>51.7</td>
<td>79.2</td>
</tr>
<tr>
<td>Tucson</td>
<td>62.7</td>
<td>73.9</td>
<td>50.7</td>
<td>84.5</td>
</tr>
<tr>
<td>San Jose</td>
<td>42.9</td>
<td>48.3</td>
<td>38.8</td>
<td>64.9</td>
</tr>
<tr>
<td>Albuquerque</td>
<td>53.0</td>
<td>58.5</td>
<td>39.3</td>
<td>81.7</td>
</tr>
<tr>
<td>Sacramento</td>
<td>29.7</td>
<td>40.7</td>
<td>35.0</td>
<td>61.8</td>
</tr>
<tr>
<td>Austin</td>
<td>63.3</td>
<td>71.2</td>
<td>65.3</td>
<td>72.1</td>
</tr>
<tr>
<td>Corpus Christi</td>
<td>72.2</td>
<td>90.3</td>
<td>49.9</td>
<td>91.5</td>
</tr>
<tr>
<td>Fresno</td>
<td>49.0</td>
<td>83.6</td>
<td>42.3</td>
<td>92.0</td>
</tr>
<tr>
<td>Lubbock</td>
<td>66.0</td>
<td>93.2</td>
<td>87.9</td>
<td>94.4</td>
</tr>
<tr>
<td>Beaumont</td>
<td>47.1</td>
<td>70.9</td>
<td>61.9</td>
<td>71.1</td>
</tr>
<tr>
<td>Wichita Falls</td>
<td>64.8</td>
<td>82.9</td>
<td>45.5</td>
<td>86.1</td>
</tr>
<tr>
<td>Waco</td>
<td>59.7</td>
<td>73.9</td>
<td>60.3</td>
<td>74.3</td>
</tr>
<tr>
<td>San Bernardino</td>
<td>67.7</td>
<td>80.3</td>
<td>33.4</td>
<td>83.5</td>
</tr>
<tr>
<td>Pueblo</td>
<td>40.2</td>
<td>50.8</td>
<td>37.5</td>
<td>57.0</td>
</tr>
<tr>
<td>Abilene</td>
<td>58.7</td>
<td>84.2</td>
<td>54.2</td>
<td>86.7</td>
</tr>
<tr>
<td>Stockton</td>
<td>52.9</td>
<td>66.5</td>
<td>21.9</td>
<td>73.9</td>
</tr>
<tr>
<td>Riverside</td>
<td>64.9</td>
<td>73.1</td>
<td>39.9</td>
<td>80.8</td>
</tr>
<tr>
<td>Odessa</td>
<td>77.8</td>
<td>89.6</td>
<td>27.9</td>
<td>90.5</td>
</tr>
<tr>
<td>Colorado Springs</td>
<td>44.8</td>
<td>69.5</td>
<td>49.6</td>
<td>74.0</td>
</tr>
<tr>
<td>Galveston</td>
<td>33.1</td>
<td>73.3</td>
<td>51.7</td>
<td>73.9</td>
</tr>
<tr>
<td>Port Arthur</td>
<td>45.9</td>
<td>89.7</td>
<td>76.2</td>
<td>89.7</td>
</tr>
<tr>
<td>Laredo</td>
<td>39.4</td>
<td>46.2</td>
<td>28.7</td>
<td>60.1</td>
</tr>
<tr>
<td>San Angelo</td>
<td>65.7</td>
<td>75.9</td>
<td>74.0</td>
<td>77.5</td>
</tr>
<tr>
<td>Santa Barbara</td>
<td>46.5</td>
<td>62.8</td>
<td>24.0</td>
<td>76.7</td>
</tr>
<tr>
<td>Tyler</td>
<td>32.1</td>
<td>80.4</td>
<td>80.1</td>
<td>80.5</td>
</tr>
<tr>
<td>Texarkana</td>
<td>40.5</td>
<td>48.9</td>
<td>46.4</td>
<td>49.0</td>
</tr>
<tr>
<td>Ontario</td>
<td>50.6</td>
<td>66.7</td>
<td>23.9</td>
<td>80.1</td>
</tr>
</tbody>
</table>

*Note: Cities are arranged in order of population size

<table>
<thead>
<tr>
<th>City</th>
<th>Mexican Americans</th>
<th>Anglos</th>
<th>Nonwhites</th>
<th>Anglos</th>
<th>Explained</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Real/Expected Indexes</td>
<td>Income/Education</td>
<td>Real/Expected Indexes</td>
<td>Income/Education</td>
<td>% Explained</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>57.5 8.3</td>
<td>12.9</td>
<td>80.2 11.2</td>
<td>5.9</td>
<td>67.7 2.1</td>
</tr>
<tr>
<td>Houston</td>
<td>65.3 16.8</td>
<td>23.3</td>
<td>80.5 22.7</td>
<td>13.7</td>
<td>70.3 6.0</td>
</tr>
<tr>
<td>San Francisco</td>
<td>38.1 4.8</td>
<td>6.6</td>
<td>58.7 7.1</td>
<td>7.0</td>
<td>59.4 10.1</td>
</tr>
<tr>
<td>Dallas</td>
<td>66.8 16.7</td>
<td>25.4</td>
<td>84.7 18.0</td>
<td>12.5</td>
<td>77.4 10.2</td>
</tr>
<tr>
<td>San Antonio</td>
<td>63.6 17.0</td>
<td>26.4</td>
<td>81.9 19.0</td>
<td>10.0</td>
<td>75.0 2.0</td>
</tr>
<tr>
<td>San Diego</td>
<td>43.8 5.8</td>
<td>11.7</td>
<td>74.4 10.1</td>
<td>6.9</td>
<td>48.3 4.5</td>
</tr>
<tr>
<td>Denver</td>
<td>60.0 9.8</td>
<td>16.1</td>
<td>80.3 9.3</td>
<td>5.7</td>
<td>60.8 4.3</td>
</tr>
<tr>
<td>Phoenix</td>
<td>57.8 9.2</td>
<td>20.1</td>
<td>77.6 13.2</td>
<td>13.6</td>
<td>50.1 4.2</td>
</tr>
<tr>
<td>Oakland</td>
<td>41.5 5.9</td>
<td>10.6</td>
<td>66.4 9.7</td>
<td>8.0</td>
<td>50.5 4.3</td>
</tr>
<tr>
<td>Fort Worth</td>
<td>56.5 8.3</td>
<td>18.6</td>
<td>84.7 18.0</td>
<td>12.5</td>
<td>77.4 10.2</td>
</tr>
<tr>
<td>Long Beach</td>
<td>32.2 2.2</td>
<td>5.2</td>
<td>75.9 10.7</td>
<td>4.4</td>
<td>59.4 8.9</td>
</tr>
<tr>
<td>El Paso</td>
<td>52.9 13.6</td>
<td>29.1</td>
<td>64.6 13.6</td>
<td>9.4</td>
<td>51.7 2.0</td>
</tr>
<tr>
<td>Tucson</td>
<td>62.7 5.3</td>
<td>21.2</td>
<td>73.9 13.6</td>
<td>9.4</td>
<td>50.7 4.3</td>
</tr>
<tr>
<td>San Jose</td>
<td>42.9 7.6</td>
<td>16.3</td>
<td>48.3 6.4</td>
<td>4.7</td>
<td>38.8 1.5</td>
</tr>
<tr>
<td>Albuquerque</td>
<td>53.0 13.3</td>
<td>19.0</td>
<td>58.5 16.2</td>
<td>13.0</td>
<td>39.3 3.3</td>
</tr>
</tbody>
</table>

* Expected Indexes of Segregation Based on Income and Education
<table>
<thead>
<tr>
<th>City</th>
<th>Drought Resistance (21.6%)</th>
<th>Flood Resistance (38.1%)</th>
<th>Wind Resistance (11.9%)</th>
<th>Earthquake Resistance (10.1%)</th>
<th>Storm Resistance (2.0%)</th>
<th>Total Resistance (18.3%)</th>
<th>% Explained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sacramento</td>
<td>4.7</td>
<td>3.6</td>
<td>6.4</td>
<td>3.9</td>
<td>2.0</td>
<td>18.3</td>
<td>65.2</td>
</tr>
<tr>
<td>Austin</td>
<td>6.3</td>
<td>4.1</td>
<td>2.0</td>
<td>1.8</td>
<td>0.7</td>
<td>15.6</td>
<td>33.0</td>
</tr>
<tr>
<td>Corpus Christi</td>
<td>5.0</td>
<td>3.2</td>
<td>1.2</td>
<td>1.0</td>
<td>0.2</td>
<td>12.6</td>
<td>25.5</td>
</tr>
<tr>
<td>Fresno</td>
<td>7.0</td>
<td>4.9</td>
<td>2.8</td>
<td>1.7</td>
<td>0.4</td>
<td>16.4</td>
<td>30.2</td>
</tr>
<tr>
<td>Lubbock</td>
<td>8.0</td>
<td>5.3</td>
<td>2.4</td>
<td>1.3</td>
<td>0.3</td>
<td>17.3</td>
<td>33.5</td>
</tr>
<tr>
<td>Beaumont</td>
<td>9.0</td>
<td>6.1</td>
<td>3.2</td>
<td>1.9</td>
<td>0.5</td>
<td>21.7</td>
<td>39.5</td>
</tr>
<tr>
<td>Waco</td>
<td>10.0</td>
<td>7.0</td>
<td>4.1</td>
<td>2.4</td>
<td>0.6</td>
<td>27.1</td>
<td>45.7</td>
</tr>
<tr>
<td>San Bernadino</td>
<td>11.0</td>
<td>8.1</td>
<td>5.2</td>
<td>2.7</td>
<td>0.7</td>
<td>33.2</td>
<td>51.5</td>
</tr>
<tr>
<td>Adana</td>
<td>12.0</td>
<td>9.1</td>
<td>6.2</td>
<td>3.2</td>
<td>0.8</td>
<td>38.2</td>
<td>54.4</td>
</tr>
<tr>
<td>Stockton</td>
<td>13.0</td>
<td>10.0</td>
<td>7.3</td>
<td>3.8</td>
<td>0.9</td>
<td>42.1</td>
<td>60.3</td>
</tr>
<tr>
<td>Riverside</td>
<td>14.0</td>
<td>11.0</td>
<td>8.4</td>
<td>4.3</td>
<td>1.0</td>
<td>46.5</td>
<td>66.7</td>
</tr>
<tr>
<td>Colorado Springs</td>
<td>15.0</td>
<td>12.0</td>
<td>9.5</td>
<td>5.0</td>
<td>1.1</td>
<td>50.6</td>
<td>73.1</td>
</tr>
<tr>
<td>Galveston</td>
<td>16.0</td>
<td>13.0</td>
<td>10.5</td>
<td>6.1</td>
<td>1.2</td>
<td>54.7</td>
<td>80.0</td>
</tr>
<tr>
<td>Pert Arthur</td>
<td>17.0</td>
<td>14.0</td>
<td>11.6</td>
<td>7.2</td>
<td>1.3</td>
<td>58.8</td>
<td>86.4</td>
</tr>
<tr>
<td>Santa Barbara</td>
<td>18.0</td>
<td>15.0</td>
<td>12.7</td>
<td>8.3</td>
<td>1.4</td>
<td>62.9</td>
<td>92.8</td>
</tr>
<tr>
<td>Ontario</td>
<td>19.0</td>
<td>16.0</td>
<td>13.8</td>
<td>9.4</td>
<td>1.5</td>
<td>67.0</td>
<td>99.3</td>
</tr>
</tbody>
</table>
TABLE 2

<table>
<thead>
<tr>
<th></th>
<th>66</th>
<th>75</th>
<th>77</th>
<th>85</th>
<th>84</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson’s r.</td>
<td>.24</td>
<td>.66</td>
<td>.75</td>
<td>.77</td>
<td>.78</td>
</tr>
</tbody>
</table>


Cities are arranged in order of population size.
<table>
<thead>
<tr>
<th>City*</th>
<th>Canadians</th>
<th>Germans</th>
<th>British</th>
<th>Unweighted Averages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Los Angeles</td>
<td>12.4</td>
<td>17.9</td>
<td>14.3</td>
<td>14.9</td>
</tr>
<tr>
<td>Houston</td>
<td>26.8</td>
<td>20.6</td>
<td>20.7</td>
<td>23.4</td>
</tr>
<tr>
<td>San Francisco</td>
<td>13.8</td>
<td>13.0</td>
<td>12.3</td>
<td>13.0</td>
</tr>
<tr>
<td>Dallas</td>
<td>33.6</td>
<td>22.5</td>
<td>28.2</td>
<td>26.1</td>
</tr>
<tr>
<td>San Antonio</td>
<td>23.1</td>
<td>20.7</td>
<td>16.9</td>
<td>20.2</td>
</tr>
<tr>
<td>San Diego</td>
<td>13.5</td>
<td>18.8</td>
<td>20.1</td>
<td>17.5</td>
</tr>
<tr>
<td>Denver</td>
<td>16.8</td>
<td>15.4</td>
<td>17.6</td>
<td>16.7</td>
</tr>
<tr>
<td>Phoenix</td>
<td>14.8</td>
<td>16.2</td>
<td>18.0</td>
<td>16.3</td>
</tr>
<tr>
<td>Oakland</td>
<td>13.7</td>
<td>12.4</td>
<td>12.0</td>
<td>12.7</td>
</tr>
<tr>
<td>Fort Worth</td>
<td>32.0</td>
<td>25.7</td>
<td>27.6</td>
<td>26.4</td>
</tr>
<tr>
<td>Long Beach</td>
<td>10.3</td>
<td>15.2</td>
<td>14.4</td>
<td>13.3</td>
</tr>
<tr>
<td>El Paso</td>
<td>13.1</td>
<td>17.6</td>
<td>20.8</td>
<td>17.2</td>
</tr>
<tr>
<td>Tucson</td>
<td>13.1</td>
<td>14.2</td>
<td>13.3</td>
<td>13.5</td>
</tr>
<tr>
<td>San Jose</td>
<td>13.5</td>
<td>15.9</td>
<td>14.7</td>
<td>14.7</td>
</tr>
<tr>
<td>Albuquerque</td>
<td>17.3</td>
<td>20.5</td>
<td>17.7</td>
<td>13.5</td>
</tr>
<tr>
<td>Sacramento</td>
<td>11.7</td>
<td>14.9</td>
<td>15.0</td>
<td>13.9</td>
</tr>
<tr>
<td>Austin</td>
<td>14.3</td>
<td>16.0</td>
<td>19.3</td>
<td>16.5</td>
</tr>
<tr>
<td>Corpus Christi</td>
<td>21.5</td>
<td>16.7</td>
<td>20.0</td>
<td>19.4</td>
</tr>
<tr>
<td>Fresno</td>
<td>16.5</td>
<td>17.5</td>
<td>18.3</td>
<td>17.4</td>
</tr>
<tr>
<td>Lubbock</td>
<td>35.8</td>
<td>19.7</td>
<td>37.5</td>
<td>31.0</td>
</tr>
<tr>
<td>Beaumont</td>
<td>29.5</td>
<td>26.0</td>
<td>26.7</td>
<td>27.4</td>
</tr>
<tr>
<td>Waco</td>
<td>30.8</td>
<td>20.9</td>
<td>22.3</td>
<td>27.3</td>
</tr>
<tr>
<td>San Bernadino</td>
<td>17.3</td>
<td>17.6</td>
<td>12.2</td>
<td>15.7</td>
</tr>
<tr>
<td>Abilene</td>
<td>37.4</td>
<td>29.5</td>
<td>35.7</td>
<td>34.2</td>
</tr>
<tr>
<td>Stockton</td>
<td>13.9</td>
<td>17.4</td>
<td>15.4</td>
<td>15.6</td>
</tr>
<tr>
<td>Riverside</td>
<td>10.3</td>
<td>11.1</td>
<td>13.4</td>
<td>11.6</td>
</tr>
<tr>
<td>Colorado Springs</td>
<td>22.6</td>
<td>16.6</td>
<td>16.2</td>
<td>18.5</td>
</tr>
<tr>
<td>Galveston</td>
<td>29.5</td>
<td>17.0</td>
<td>21.1</td>
<td>22.5</td>
</tr>
<tr>
<td>Port Arthur</td>
<td>33.2</td>
<td>20.0</td>
<td>26.7</td>
<td>28.3</td>
</tr>
<tr>
<td>Santa Barbara</td>
<td>8.8</td>
<td>11.9</td>
<td>12.5</td>
<td>11.1</td>
</tr>
<tr>
<td>Ontario</td>
<td>12.3</td>
<td>14.9</td>
<td>25.7</td>
<td>17.6</td>
</tr>
</tbody>
</table>

Unweighted Averages 20.3 17.9 19.6 19.2

*Note: Cities are arranged in order of population size.

FOOTNOTES

4 Ibid., p. 66.
9 Moore and Mittlebach, "Residential Segregation in the Urban Southwest," p. 27.

13 Lieberson, Ethnic Patterns, pp. 88-91.


16 Ibid., p. 69.


19 Otis Dudley Duncan and Beverly Duncan, "A Methodological Analysis of Segregation Indexes," pp. 210-217; Cf. also Karl E. and Alma F. Taeuber, Negroes in Cities, p. 8. The Index of Dissimilarity (D) is defined as

\[ D = \frac{1}{2} \sum_{i=1}^{n} |X_i - Y_i| \]

where \(X\) is the percentage of one population within an areal unit and \(Y\) is the percentage of the other population in the unit. \(n\) is the total number of units.


24 Moore and Mittlebach, "Residential Segregation in the Urban Southwest," p. 16. Small discrepancies between indexes obtained by Moore and Mittlebach and those presented here result from differences in tract selection processes. Tracts with totally institutionalized populations, for instance, must be omitted here for two reasons: first, institutionalized populations have no real choice about their residential location and therefore, should not be included in an index of residential segregation; and secondly, they are not housed in family units and, consequently, have no family income characteristics. Since the populations on which real and expected indexes are computed must be entirely comparable, these tracts' populations are necessarily excluded from both.

25 Ibid., p. 35.


27 H. M Bahr and J. P. Gibbs, "Racial Differentiation in American Metropolitan Areas," Social Forces, 45 (June, 1967), p. 522, n. 3. Further confidence in its use here is justified by Zelder's finding that there were only minor differences between the level of segregation attributable to market exclusion by income and that attributable to market exclusion by cost of housing. See Zelder, "Residential Segregation," p. 100.