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Racial Composition and Occupational Segregation and Inequality across American Cities

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The major purpose of the present research is to estimate and compare several measures of race–occupational differentiation across American cities and to examine their relationships to structural and compositional characteristics of cities, especially to the size of the Black population. Using the 1990 PUMS for American cities (MSAs), we estimated measures of nominal segregation and ordinal inequality that were used in past research. The measures used in our analysis include the index of dissimilarity, size standardized index of dissimilarity, index of net differences, and the ratio index that was proposed recently in the literature. The findings reveal considerable differences between the standardized and unstandardized measures. The meaning of the findings and their implications for theoretical conclusions are discussed. © 2000 Academic Press

Researchers in the human ecology tradition have long studied the relationship between the structural characteristics of the labor market and inequality. Studies in this tradition employed a variety of measures to estimate the rate of occupational inequality between the races. The most widely used measures of inequality have been the index of dissimilarity (Duncan and Duncan, 1955; Gibbs, 1965) and the index of net differences (Lieberson, 1975). Recently, Charles (1992) and Charles and Grusky (1995) introduced a new measure of occupational differentiation—ratio index—which is computed within the log-linear framework.[1]

Although the various indices were designed to measure occupational inequality, each captures a somewhat different dimension of occupational differentiation. Whereas the index of dissimilarity and the ratio index pertain to nominal segregation irrespective of occupational ranking, the index of net differences measures hierarchical differentiation in a rank-ordered occupational system (Fossett, 1984; Fossett and South, 1983; Fossett et al., 1989; James and Taueber, 1985; Charles and Grusky, 1995). Since the indices capture different aspects of

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[1] The ratio index was applied by Charles and Grusky to estimate gender–occupational differentiation. Indeed, it can be used to estimate race and occupational differentiation as well.

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differentiation, it is likely that their distributional characteristics and their relationships to attributes of local labor markets will vary. For this reason it is important to examine each index separately and to compare the results.

Comparative studies of racial occupational inequality have focused mostly on the relationship between the relative size of the Black population and their occupational disadvantages. Most of these studies were conducted in the 1960s and 1970s. No study, however, has compared various indicators of race-linked occupational differentiation across American cities using the data for the 1990s. This neglect is especially significant in light of the debate concerning the impact of social policies (affirmative action, job training, etc.) on the position of Blacks in the American labor market (e.g., Melvin et al., 1994; Collins, 1983; Zipp, 1994; Herring, 1997; Herring and Collins, 1995). The present study is aimed at bridging this gap. In particular, it will focus on the relationship between the relative size of the Black population and various indicators of race-linked occupational segregation and occupational inequality across American cities.

Structural Determinants of Racial Occupational Inequality

Two alternative explanations have been offered in the sociological literature for the association between the relative size of the minority population in the community, and the extent of its occupational disadvantage. The first explanation is sociopsychological and was introduced and discussed in detail by Williams (1947), Allport (1954), and Blalock (1967). All three suggested that an increase in the size of the minority population increases the fear of competition over jobs and resources. This enhances prejudice and the motivation to discriminate against members of the minority group. The rationale underlying this approach was most succinctly summarized by Blalock (1967, p. 183) who observed three decades ago that: "Provided that minority competition underlies prejudice, there should be a positive relationship between minority percentage and discrimination."

The second view derives from the structural perspective on the social organization of occupational labor markets. It contends that labor markets are organized along racial lines and that job queues are ordered by race, with superordinate groups at the top and subordinate minorities at the bottom of the occupational hierarchy (Lieberson, 1980; Hodge, 1973). Thus, an increase in the size of the minority population increases the supply of less employable workers (from the employers' perspective) who are likely to fill low-status, low-paying jobs (Spilerman and Miller, 1977). That is, whenever Blacks are used to fill the low-status occupations, Whites can abandon the less-desired jobs and concentrate in disproportionate numbers in high-status, lucrative occupations (Glenn, 1962, 1966). Thus, the superordinate population benefits from the presence of subordinate groups in the labor market. At the same time, however, an increase in size of the Black population may result in a "spillover" of Blacks into additional occupations (including intermediate and high-status occupations). The spillover may lead, in turn, to a decrease in rate of nominal segregation. Nonetheless repre-

sentation of Blacks at the top of the occupational hierarchy relative to the size of the entire Black population will tend to decline.[2] Thus, occupational inequality is expected to rise with an increase in the size of the minority population.

Economists also argue that there is a positive association between the size of the minority group and the level of inequality. Becker (1971) suggests that employment discrimination against Blacks is the result of prejudice some employers have against them. If there is a relatively small number of Blacks in a certain city, all of them can look for a job with nondiscriminatory employers. However, as the size of the Black population rises, more Blacks need to work for discriminatory employers, and discrimination levels go up as a result.

Several students of ethnic inequality (e.g., Frisbie and Niedert, 1977; Tienda and Lii, 1987) suggested that in addition to the relative size of the Black population, it is important, in a multiracial setting, to consider the racial mix of the locality (i.e., presence of Hispanics). Wilson (1996), for example, noted that employers in U.S. cities prefer hiring Hispanics to Blacks. Thus, it is important to consider the impact of additional minority groups (i.e., Hispanics) on ethnic inequality between Whites and Blacks. More specifically, it is expected that the presence of another disadvantaged minority population, which is located at a similar or lower level in the job queue, would decrease the socioeconomic inequality between the subordinate and the dominant racial groups. By contrast, the presence of a minority group located higher on the job queue is expected to increase occupational inequality between the dominant and subordinate ethnic groups. When studying patterns of occupational attainment in American cities, Frisbie and Niedert (1977) found that Mexican Americans benefited from the presence of a sizable population of Blacks in the labor market, but found that the proportion of Mexican Americans in the community had little or no effect on the relative occupational status of Blacks.

From a theoretical standpoint, the present analysis is concerned primarily with the impact of racial composition on racial occupational differentiation.[3] However, several additional variables have been shown to affect racial differentiation. These include community size, industrial structure, socioeconomic attributes of community residents, and geographic region. Large urban centers and labor markets dominated by manufacturing industries as well as public sector employment are more likely to operate according to universalistic criteria, hence to have lower levels of racial occupational inequality (e.g., Semyonov et al., 1984; Turner, 1951; Frisbie and Niedert, 1977; Boyd, 1993, 1994). Similarly, in places where the educational disparities of the two races are smaller, occupational

[2] This mechanism can be also described somewhat differently. An increase in size of the Black population enables Whites to avoid poorer jobs because the relatively large Black population fills those jobs.

[3] It is important to emphasize that the terms "occupational differentiation," "segregation," and "inequality" were often used interchangeably in the literature. We use occupational differentiation to describe the general phenomenon. However, we make a distinction between occupational segregation and occupational inequality.

segregation as well as occupational inequality are less pronounced (Spilerman and Miller, 1977; Semyonov et al., 1984; Fossett, 1984; Stolzenberg and D'Amico, 1977). Finally, regional differences, especially the South–non-South distinction, are expected to affect patterns of inequality (e.g., Tomaskovic-Devey and Roscigno, 1996; Fossett et al., 1986; LaGory and Magnani, 1979; Wilcox and Roof, 1978).

Measuring Occupational Segregation and Inequality

The literature on occupational differentiation has employed various measures to capture the extent of inequality and differentiation between groups (i.e., race, gender) (Fossett, 1984; Fossett et al., 1989; Fossett and South, 1983; James and Taueber, 1985). Although the measures used are not mutually exclusive, they are somewhat different from each other and each captures a different dimension of differentiation.[4] In the present paper we will examine two measures of nominal segregation that have long been used in the literature (the index of dissimilarity (D) and the standardized index of dissimilarity (DS)), and the ratio index (R) proposed by Charles and Grusky (1995) as an improvement on the segregation measures. In addition, we utilize the index of net differences (ND) which captures ordinal occupational differentiation.

When applied to the occupational distribution of Blacks and Whites in a given community, the index of dissimilarity (Duncan and Duncan, 1955) computes the proportion of either Blacks or Whites that would have to change occupations in order for the two groups to reach equal occupational distribution, regardless of occupational ranking. D is calculated using the following formulation:

$$D = \sum_{j=1}^{J} \left| (B_j / \sum_{j=1}^{J} B_j) - (W_j / \sum_{j=1}^{J} W_j) \right| \cdot \frac{1}{2}, \tag{1}$$

where B and W are the respective frequency of Blacks and Whites in occupational category j. The index yields an estimate of the proportion of either Whites or Blacks that would have to change occupational categories in order for the two groups to reach equal occupational distributions.

Since places vary in their occupational structure, Gibbs (1965) proposed a size standardized index of DS. The size standardized index of dissimilarity (e.g., Gibbs, 1965; Jacobs and Lim, 1992) is defined as follows:

$$DS = \sum_{j=1}^{J} \left| [(B_j/T_j) / \sum_{j-1}^{J} (B_j/T_j)] - [(W_j/T_j) / \sum_{j-1}^{J} (W_j/T_j)] \right| \cdot \frac{1}{2}, \tag{2}$$

where W, B, and j are the same as in Eq. (1), and $T = W + B$. Although the DS resolves problems associated with variations in occupational structure across

[4] The properties of the various measures that have been used in past research are discussed and debated in detail by Fossett and South (1983), Fossett (1984), James and Taueber (1985), Semyonov et al. (1984), Charles and Grusky (1995), and Watts (1998).

places, it treats each category as if it is of the same size. Thus, it inflates the impact of small occupational categories and devalues the impact of large occupational categories. Furthermore, as observed by Charles and Grusky (1995), the *DS* is also dependent on the minority group participation rate. So its value will change when this rate changes, but all else remains the same.

The *R* that was proposed recently by Charles and Grusky (1995) is margin free and is computed within the framework of the log-linear model. The ratio index was proposed in the original paper to estimate gender occupational differentiation. When applied to Blacks and Whites, the ratio index is defined as follows:

$$R = 1/J \sum_{j=1}^{J} \left|\ln(B_j/W_j) - [1/J \sum_{j=1}^{J} \ln(B_j/W_j)]\right|, \quad (3)$$

where *W*, *B*, and *j* are the same as in the previous equations. The values of *R* represent the sum of occupational-specific deviations from proportional representation of the two racial groups. In other words, the value represents the factor by which Blacks in a specific city are disproportionately represented in an average occupational category. In a fully integrated marked $R = 0$ ($\exp R = 1$); in a fully segregated market, *R* is undefined because $W_j = 0$ in all fully segregated occupations (Charles, 1992). Despite its apparent advantage, the *R* index, like *DS*, gives each category equal weight.

When occupational categories are rank-ordered (say, according to status, prestige, or earnings), Lieberson's (1975) index of net differences (ND) provides a measure of the extent to which the two groups are hierarchically differentiated. The values of *ND* range between 1 and -1 and is defined as follows:

$$ND = \sum_{i=2}^{n} W_i\left(\sum_{j=1}^{n=i-1} B_j\right) - \sum_{i=2}^{n} B_i\left(\sum_{j=1}^{n=i-1} W_j\right), \quad (4)$$

where *W* and *B* represent White and Black distributions, respectively, and *i* and *j* are the counters used to add up the relative frequencies in rank-order occupational categories. The values of the index represent the probability that a randomly selected White person (*W*) would be ranked in higher order categories in comparison to a randomly selected Black person (*B*). When $ND = 0$, the two groups are equally distributed on the rungs of the occupational ladder; a value of 1 indicates that all Whites are ranked higher than all Blacks, and a value of -1 indicates the opposite.

In the analysis that follows we employ all four measures of occupational differentiation. We will estimate their distributions across American cities in 1990 and will compare their respective relationships to structural characteristics of the cities.

Data Source and Variables

Data for the present analysis were taken from the 5% Public Use Microdata Sample (PUMS) of the 1990 United States Census of Population. Since the

relevant units of analysis for the present study are standard metropolitan areas which represent local labor markets, the individual-level data were aggregated to the community level. Only cities with populations of 250,000 or over, and with at least 100 sample cases of Black men,[5] were included to ensure sufficient representation of Blacks across occupational categories. For each city out of the 132 meeting these conditions, a series of variables representing city structural and compositional characteristics were derived from the PUMS. Indicators of nominal segregation and ordinal inequality between Black and White men in each city were computed from a race-by-occupation matrix.

In order to maintain comparability with previous studies, we compute the indices using major occupational categories. For the indices of dissimilarity and the ratio index the following categories have been included: (1) executive, administration, and managers; (2) professionals; (3) technicians; (4) sales; (5) clerical; (6) service; (7) farming; (8) production; (9) operators and laborers. The *ND*, which measures ordinal inequality, was calculated for eight ordinal categories of occupational socioeconomic status.[6] The utilization of eight ordinal (rather broad) categories, rather than detailed occupational status categories, follows Lieberson's (1975) advice in order to prevent distortion of the estimated values of the *ND* which may result from empty or very small cells of race-by-occupation in each city.

The set of determinants of both occupational nominal segregation and occupational ordinal inequality include: city population size (SIZE), percent workers employed in manufacturing (MANUF), percent of the work force employed in the public sector (PUBLIC), percent Black population in the community (BLACK), percent Hispanic in the community (HISPAN), ratio of Blacks-to-Whites educational level (EDUCR), as measured by the proportion of group members holding academic degrees, and geographic region (SOUTH).

FINDINGS

Descriptive Overview

Descriptive statistics for all variables used in the analysis are presented in Table 1. The figures reveal that in 1990 occupational segregation between Blacks and Whites in American cities was substantial. In an average city over 26% of either Blacks or Whites would have to change major occupational categories in order for the two races to reach identical occupational distributions ($D = 26.6$; $DS = 26.9$). Considerable variation exists in the rate of occupational segregation across cities as revealed by the standard deviation. The highest rate of

[5] The analysis reported here focuses only on the male population for several reasons: first, most previous studies focus only on men and we would like to be able to compare our study with previous research; second, gender can interact with race in the determination of occupational status and the inclusion of women can complicate the results.

[6] The eight ordinal occupational categories by status are as follows: 0–19; 20–29; 30–39; 40–49; 50–59; 60–69; 70–79; 80+.

TABLE 1
List of Variables Included in the Analysis, Definitions, Mean, and Standard Deviations for 132 MSAs, 1990

		Mean	SD	Min.	Max.
D	Index of Dissimilarity, 1-digit occupational classification (9 categories)	26.607	5.197	11.54	39.31
DS	Size standardized Index of Dissimilarity, 1-digit occupational classification (9 categories)	26.850	5.104	12.10	41.76
R	Ratio Index, 1-digit occupational classification (9 categories)	0.537	0.113	0.05	0.50
ND	Index of Net Differences for 8 ordinal status occupational categories	0.292	0.086	0.28	0.87
Educr	Ratio of percent Blacks with B.A. to percent Whites with B.A.	0.360	0.110	0.15	0.71
Size	Natural logarithm of population size	10.500	0.782	9.47	12.98
Public	Proportion employed in the public sector	0.144	0.043	0.07	0.27
Manuf	Proportion employed in manufacturing	0.170	0.062	0.05	0.33
South	Proportion in South	0.341	0.476		
Black	Percent Black men	5.231	3.973	0.40	20.0
Hispan	Percent Hispanic men	4.298	5.952	0.20	33.3

occupational segregation was found in Johnson City and in York City (DS = 49.15 and DS = 43.25, respectively), and the lowest rate of segregation was found in Riverside–San Bernandino and San Antonio (DS = 21.38 and DS = 24.10, respectively). Similar distributions and variations are also evident in the values of the ratio index.

The average (unweighted) ordinal inequality across American cities is substantial (ND = 0.29). The value of 0.29 indicates the difference between the probability that a randomly selected White would be ranked higher than Blacks and the probability that a randomly selected Black would be ranked above Whites, averaged across all cities. Here too variation among cities is quite substantial. The highest level of ordinal inequality is found in Memphis and West Palm Beach (ND = 0.49 and 0.50, respectively), and the lowest level of ordinal inequality is found in El Paso and in Stockton–Lodi (ND = 0.05 and 0.11, respectively). It should be emphasized that in no city included in the present analysis do Blacks have a higher probability of being ranked above Whites on the scale of occupational status than the other way around.

The intercorrelations among the four measures of occupational differentiation and the other variables included in the analysis are presented in Table 2. The four measures of occupational differentiation are highly correlated. The highest correlation is between the two standardized indices—R and DS (r = .924). The lowest correlation is found between R and ND (r = .757). These findings suggest that new measures, such as the ratio index that was introduced recently are not much different from other nominal indices of occupational differentiation, especially from DS.

TABLE 2
Correlation Matrix among Variables Included in the Analysis, 132 MSAs, 1990

	D	DS	R	ND	Size	South	Manuf	Public	Hispan	Black
DS	0.891									
R	0.834	0.924								
ND	0.894	0.786	0.757							
Size	0.019	−0.165	−0.193	−0.024						
South	0.421	0.398	0.502	0.547	−0.116					
Manuf	−0.061	−0.023	−0.156	−0.095	−0.179	−0.222				
Public	−0.114	−0.099	0.029	−0.083	−0.053	0.095	−0.580			
Hispan	−0.327	−0.291	−0.182	−0.454	0.175	−0.020	−0.260	0.136		
Black	0.569	0.440	0.479	0.639	0.149	0.519	−0.164	0.216	−0.231	
Educr	−0.711	−0.666	−0.660	−0.736	0.086	−0.312	−0.026	0.180	0.298	−0.454

In general, the four indices of differentiation are similarly related to the attributes of the local labor markets although some differences are observed, mostly in the magnitude of the coefficients. For example, the proportion of Blacks in the local labor market (BLACK) is positively associated with *ND*, with $r = .64$, but has a weaker relationship to the *DS* and *R* measures ($r = .44$ and $r = .48$, respectively). That is, ordinal inequality, as well as nominal segregation tends to rise in cities where blacks tend to concentrate. However, occupational inequality seems to be more responsive to percent Blacks than nominal segregation. Similarly, SIZE is negatively correlated with the two standardized measures—*DS* and *R*—but is not associated with either ordinal inequality (*ND*) or with *D*.

Multivariate Results

In order to examine more systematically the extent to which each measure is related to the racial composition of the local labor market net of the city attributes, we estimated four regression equations. In each equation, the indicator of race-linked occupational differentiation (*D*, *DS*, *R*, *ND*) is taken as a function of BLACK, controlling for SIZE, MANUF, PUBLIC, EDUCR, HISPAN, and SOUTH. The regression coefficients (presented in Table 3) represent the net effects of city structural characteristics on *D* (Eq. 1), *DS* (Eq. 2), *R* (Eq. 3), and *ND* (Eq. 4).

The findings presented in Table 3 reveal that the relationships of city attributes to racial occupational differentiation, especially to the relative size of the Black population, vary in accordance with the measures used. Percent Black has a significant positive effect on *ND* ($b = 0.004$) and on *D* ($b = 0.29$). However, the effect of BLACK on either *DS* or *R* is not significant. It is clear that the standardized measures are more affected by city attributes than the unstandardized measures, even after controlling for other city attributes.

The results regarding the effect of percent Blacks in the city on occupational

TABLE 3
Coefficients of Regression Equations Predicting Segregation and Inequality in 132 American Cities, 1990

	D	DS	R	ND
Educr	−23.549**	−23.582**	−0.538**	−0.356**
	(−6.949)	(−6.321)	(−6.919)	(−8.173)
Manuf	−9.207	−6.636	−0.243	−0.208*
	(−1.439)	(−0.942)	(−1.654)	(−2.529)
Size	0.296	−0.790	−0.023*	0.005
	(0.683)	(−1.659)	(−2.322)	(0.821)
South	1.538*	1.679*	0.057*	0.052**
	(1.978)	(1.961)	(3.186)	(5.210)
Hispan	−0.126*	−0.085	−0.000	−0.004**
	(−2.275)	(−1.391)	(−0.059)	(−6.177)
Public	−15.206	−10.134	−0.016	−0.222
	(−1.610)	(−0.975)	(−0.072)	(−1.833)
Black	0.288*	0.140	0.003	0.004**
	(2.604)	(1.153)	(1.119)	(2.794)
Constant	34.244**	45.276**	0.982**	0.419
	(6.395)	(7.681)	(7.992)	(6.099)**
N	132	132	132	132
R^2 adjusted	0.587	0.481	0.542	0.753

Note. The *t* ratios are in parentheses.
* $p < .05$.
** $p < .01$.

inequality (as measured by *D* and *ND*) are consistent with theoretical expectations along the lines of the queuing and overflow models and findings from previous studies (Glenn, 1962, 1966; Semyonov et al., 1984).[7] The effect of HISPAN on *ND* and *D* is negative and significant ($b = -0.004$; $b = -.126$, respectively). Apparently occupational inequality between the superordinate group (i.e., Whites) and the subordinate group (i.e., Blacks) tends to be lower in cities where other disadvantaged minorities (i.e., Hispanics) are present in large numbers. These findings, however, are not observed when the standardized measures are used. The effects of HISPAN on both *DS* and *R* are not significant.

The findings regarding *D* and *ND* are not consistent with the conclusions reached by Frisbie and Niedert (1977) two decades ago. They found that the presence of Mexican Americans has little or no effect on the occupational status

[7] We also tested for the presence of a curvilinear effect of the proportion of Blacks on the dependent variables by adding the squared term of BLACK to the equations. The structure of the equations has not been changed as a result of that. The coefficients of (BLACK) are not significant, and the magnitude of the other coefficients has remained the same. However, the introduction of the new term into the D and ND equations has led to an insignificant BLACK coefficient in both. In other words, the effect of the proportion of Blacks in a city on occupational segregation, while other city attributes are held constant, has a linear rather than a U shape.

of Blacks. There are several possible reasons for this difference in findings: (1) their study covered 40 SMSAs in 1970, while our research pertains to 132 cities in 1990; (2) the size of the Hispanic population has grown considerably over the years, mostly as a result of ongoing migration; (3) the status of both Blacks and Hispanics in American society has changed; and (4) the measure of occupational attainment used by Frisbie and Niedert differs from our measure of inequality. Whatever the reason for the discrepancy may be, our data suggest rather strongly that occupational inequality between Blacks and Whites tends to be lower in places where a sizable Hispanic population is also present.[8]

Although the primary interest of our analysis was to examine the effect of the population composition on various measures of occupational differentiation, it is of some interest to note the ways in which other city characteristics affect race-based occupational segregation and inequality. The findings presented in Table 3 reveal that the effects of EDUCR and SOUTH are similar in all equations. Consistent with theoretical expectations and previous studies, occupational differentiation between Blacks and Whites tends to be lower in places where differences in human capital resources (i.e., education) between the races are smaller. Similarly, Southern residence has a positive effect on segregation and inequality. That is, regardless of the measure used, differentiation is greater in Southern cities than in others.

CONCLUSIONS AND DISCUSSION

The purpose of our study was twofold: first, to estimate and compare among measures of racial occupational differentiation (i.e., nominal segregation, ordinal inequality) across American cities. Second, to examine the relationship of the various measures to structural characteristics of the cities in 1990, especially to the relative size of the Black population. The analysis suggests, rather strongly, that the conclusions one can draw depend to a great extent on the measure used. The four measures can be divided into two groups: standardized and unstandardized measures. This has both methodological and substantive implications.

Turning first to the standardized measures, the findings reveal that the new margin-free index that was proposed recently by Charles and Grusky (1995) is not much different from the standardized index of dissimilarity. The two indices (R, DS) are correlated almost perfectly and indeed, produce similar results when regressed on various labor market characteristics. When turning to D and ND, we find that the two unstandardized indices differ from the two standardized measures. They are highly intercorrelated and similarly affected by city characteristics. The differences between the standardized and unstandardized measures may be attributed to the way occupational categories are treated in the two sets of measures to arrive at a summary index. In the standardized measures, small and

[8] Although this result seems to contradict Wilson's (1996) assertion that employers prefer Hispanics to Blacks, it is possible that such preference affects hiring ratios and consequently unemployment rates among Blacks but not their occupational distribution vis-à-vis whites.

large occupational categories are assigned equal weight. Since Blacks and Whites are not equally distributed across occupational categories of different size, both standardized measures produce the same results.

From a substantive point of view, the findings for 1990 are generally similar to those reported in studies that utilized data from previous decades. The extent of ordinal inequality found in 1990 ($ND = 0.29$) is not much different from that found in 1970 (Fossett, 1984, reported a figure of $ND = 0.36$) and 1980 (Fossett et al., 1989, reported a figure of $ND = 0.29$). Nominal segregation ($D = 26.6$; $DS = 26.8$) is also similar to the values reported by Fossett (1984) for 1970. Thus, according to the measures of ordinal inequality and nominal segregation employed, the race-based occupational differentiation has remained stable on average (across American cities). Blacks are still more likely to be overrepresented in low-status and low-income occupations despite considerable legal intervention and government-sponsored programs.

Our analysis further demonstrates that ordinal inequality is significantly related to the relative size of the Black population in the city, albeit in a somewhat complex manner. Ordinal inequality tends to rise in cities where Blacks constitute a large proportion of the population. These relationships may be explained along the lines of the overflow and the queuing models. In cities where Blacks constitute a large proportion of the city population, more Blacks can "spillover" into many occupations. However, due to racial typing and racial queues in the labor market, the "spillover" of Blacks takes place mostly in low-status occupations. Concomitantly, Whites overflow in disproportionate numbers into high-status occupations. Hence Whites may benefit from the presence of a large minority group. This is evident in the positive effect of percent Black in the city on ordinal inequality. These findings shed light on the processes that take place in a racially heterogeneous labor market. The large proportion of Blacks provides a large pool of individuals that may be used in low-status, low-income occupations. The effect of the proportion of Blacks in the population on ordinal inequality is similar in direction to previous findings for 1970 (Fossett, 1984). Namely, a rise in the proportion of Blacks in the community was found to be associated with a high level of occupational inequality.

The thesis regarding the effect of the relative size of the minority population on racial occupational inequality gains additional support when evaluating the effect of the presence of Hispanics in the city on White–Black occupational differentiation. A large number of Hispanics in the city population serves as an additional source of cheap labor to be employed in low-status, low-income occupations. Given that the Hispanic population (large recent immigrants) has not surpassed Blacks in the job queue, their presence serves to decrease ordinal inequality between Blacks and Whites in the labor market.

REFERENCES

Allport, G. W. (1954). The Nature of Prejudice, Beacon, Boston.
Becker, G. S. (1971). The Economics of Discrimination, Univ. of Chicago Press, Chicago, IL.

Blalock, H. M. (1967). Toward a Theory of Minority Group Relations, Wiley, New York.
Boyd, R. L. (1993). "Difference in the earnings of Black workers in the private and public sector," The Social Science Journal **30**(2), 133–142.
Boyd, R. L. (1994). "The allocation of Black workers into the public sector," Sociological Focus **27**(1), 35–51.
Charles, M. (1992). "Cross national variation in occupational sex segregation," American Sociological Review **57,** 483–502.
Charles, M., and Grusky, D. B. (1995). "Structure of sex segregation," American Journal of Sociology **100**(4), 931–971.
Collins, S. M. (1983). "The making of the Black middle class," Social Problems **30**(4), 369–382.
Duncan, G. D., and Duncan, B. (1955). "A methodological analysis of segregation indexes," American Sociological Review **20,** 210–217.
Fossett, M. (1984). "City differences in racial occupational differentiation: A note on the use of odds ratios," Demography **21,** 655–666.
Fossett, M., and South, S. J. (1983). "The measurement of intergroup income inequality: A conceptual review," Social Forces **69,** 855–871.
Fossett, M. A., Galle, O. R., and Kelly, W. R. (1986). "Racial occupational inequality, 1940–1980: National and regional trends," American Sociological Review **51**(3), 421–429.
Fosset, M. A., Galle, O. R., and Burr, A. J. (1989). "Racial occupational inequality, 1940–1980: A research note on the impact of the changing regional distribution of the Black population," Social Forces **68,** 415–427.
Frisbie, W. P., and Neidert, L. (1977). "Inequality and the relative size of minority populations: A comparative analysis," American Journal of Sociology **82**(5), 1007–1030.
Gibbs, J. P. (1965). "Occupational differentiation of Negroes and Whites in the United States," Social Forces **44,** 159–165.
Glenn, N. D. (1962). "Changes in the American occupational structure and occupational gains of Negroes during the 1940's," Social Forces **41**(2), 188–195.
Glenn, N. (1966). "White gains from Negro subordination," Social Problems **14,** 159–178.
Herring, C. (Ed.). (1997). African American and the public agenda: The Paradoxes of Public Policy, Sage, Thousand Oaks, CA.
Herring, C., and Collins, S. (1995). "Retreat from equal opportunity? The case of affirmative action," *in* The Bubbling Cauldron (M. P. Smith and J. Feagin, Eds.), Univ. of Minnesota Press, MN.
Hodge, R. W. (1973). "Toward a theory of racial differences in employment," Social Forces **52**(1), 16–31.
Jacobs, J. A., and Lim, S. T. (1992). "Trends in occupational and industrial sex segregation in 56 countries, 1960–1980," Work and Occupation **19,** 450–486.
James, D. R., and Tauber, K. E. (1985). "Measures of segregation," *in* Sociological Methodology (N. Tuma, Ed.), pp. 1–32, Jossey-Bass, New York.
LaGory, M., and Magnani, R. (1979). "Structural correlates of Black–White occupational differentiation: Will U.S. regional differences in status remain?" Social Problems **27**(2), 157–169.
Lieberson, S. (1975). "Rank-sum comparison between groups," *in* Sociological Methodology (D. Heise, Ed.), pp. 276–291, Jossey-Bass, New York.
Lieberson, S. (1980). A Piece of the Pie, Univ. of California Press, Berkeley.
Melvin, E. T., Herring, C., and Horton, H. D. (1994). "Discrimination over the life course: A synthetic cohort analysis of earning difference between Black and White males, 1940–1990," Social Problems **41,** 608–625.
Semyonov, M., Hoyt, D. R., and Scott, R. I. (1984). "Place, race, and differential occupational opportunities," Demography **21,** 258–270.
Spilerman, S., and Miller, R. E. (1977). "City nondifference revisited," American Sociological Review **42,** 979–983.
Stolzenberg, R. M., and D'Amico, R. J. (1977). "City differences and nondifferences in the effect of race and sex on occupational distribution," American Sociological Review **42,** 937–950.

Tienda, M., and Lii, D. T. (1987). "Minority concentration and earnings inequality: Blacks, Hispanics, and Asians compared," American Journal of Sociology **93**(1), 141–165.

Tomaskovic-Devey, D., and Roscigno, V. R. (1996). "Racial economic subordination and White gain in the U.S. south," American Sociological Review **61**(4), 565–585.

Turner, R. H. (1951). "The relative position of the Negro male in the labor force of large American cities," American Sociological Review **16,** 524–529.

Watts, M. (1998). "Occupational gender segregation: Index measurement and econometric modeling," Demography **35**(4), 489–496.

Wilcox, J., and Roof, W. C. (1978). "Present Black and Black–White status inequality: Southern versus nonsouthern patterns," Social Science Quarterly **59**(3), 421–434.

Williams, R. M. (1947). The Reduction of Intergroup Tensions, Social Science Research Council, New York.

Wilson, W. J. (1996). When Work Disappears: The World of the New Urban Poor, Random House, New York.

Zipp, J. F. (1994). "Government employment and Black–White earnings inequality, 1980–1990," Social Problems **41**(3), 363–382.