

mous others and, hence, more altruistic. Superficially, it seems that some of our known "aliens" have been estranged from society in part because they feel the social order has made practical altruism, including the initial altruism of others toward themselves, difficult.

Altruism, however, is not a clear concept. Its possibly multiform qualities may be clarified through observing the connection between concern for others and alienation. For example, Albert Schweitzer, probably the world's most renowned altruist, leads a life congenial to alienation.<sup>40</sup> With him in mind, it has been proposed that "reverence

<sup>40</sup> John Gunther, *Inside Africa*, New York: Harper, 1953, pp. 712-734, and AP dispatch, January 14, 1957, on observance of Schweitzer's 82nd birthday. Gunther notes, in part, "Dr. Schweitzer is a profound moralist, but he has comparatively little interest in human beings as such. . . ." (p. 713).

for life" (Altruism<sub>1</sub>) may betoken various affective states, and that such reverence as is sometimes noted in the horticulturist and animal husbandman may be translated into a "human husbandry." This is one quality of love, but not another.

4. *That the alienated suffer a proclivity to suicide.*

5. *That they are prone to the chemical addictions.*

6. *That they are poor marriage risks.*<sup>41</sup>

7. *That their estrangement leads to criminal behavior.* The alienated are one breed of "anti-social," and they provide a test of the equation, often assumed in the use of this ambiguous term, between malice or indifference toward society and offense against it.

<sup>41</sup> Cf. W. Johnson and L. M. Terman, "Personality Characteristics of Happily Married and Unhappily Married and Divorced Persons." *Character and Personality*, 2 (1955), pp. 290-311.

## PER CENT NON-WHITE AND DISCRIMINATION IN THE SOUTH

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THE purpose of this paper is to investigate the relationships between various indices of discrimination and rate of non-white increase and per cent non-white in a random sample of 150 Southern counties. The present study is a follow-up to a previous study of non-Southern Standard Metropolitan Areas (S.M.A.'s) in which some of the same variables were interrelated but with different conclusions.<sup>1</sup> In the earlier study it was found that for non-Southern S.M.A.'s neither rate of non-white increase nor per cent Negro was highly related to the discrimination indices used. There was some evidence, however, that negative results such as these would not be obtained if the analysis were carried out on units having a larger percentage of non-whites. Certain predictions concerning both the

strength and the form of relationships were suggested by the first study. These predictions have been stated in terms of explicit hypotheses to be tested in the present study.

*Hypothesis 1.* The correlations between rate of non-white increase and indices of discrimination will be either low positive or non-significant when relevant variables have been controlled. (Partial correlations should range roughly between 0 and .40.)

For non-Southern S.M.A.'s relationships between rate of non-white increase and indices of income and job discrimination were slightly negative. It was anticipated that correlations for Southern counties might be slightly positive because of a tendency for rural non-whites to migrate to urban areas that are characterized by relatively high white levels of living. Although no definite hypothesis was formulated concerning non-linearity of relationships, it was suspected that areas having substantial non-white in-

<sup>1</sup> H. M. Blalock, "Economic Discrimination and Negro Increase," *American Sociological Review*, 21 (October, 1956), pp. 584-588.

creases might have disproportionately high rates of discrimination.

*Hypothesis 2.* The correlations between per cent non-white and indices of discrimination will be positive and moderately high (between .40 and .70) when relevant variables have been controlled.

Although a moderate positive correlation between per cent Negro and income differentials in non-Southern S.M.A.'s did not hold up under controls, evidence suggested that correlations would be considerably higher for Southern counties.

*Hypothesis 3.* The correlations between per cent non-white and *white* levels of living will be negative when relevant variables have been controlled.

This hypothesis was not suggested by the earlier study but by the frequently stated argument that a large number of low status minority members will depress job and income standards in the entire area. According to this argument any advantages whites may obtain through exploitation of the disadvantaged group will be more than counterbalanced by job competition on the part of non-whites willing to work for low wages.

*Hypothesis 4.* The relationships between per cent non-white and indices of discrimination will tend to be non-linear at the upper end of the per cent non-white continuum, with discrimination in counties having very large percentages of non-whites tending to be less than would be expected on the basis of a linear model.<sup>2</sup>

Several lines of reasoning suggested Hypothesis 4. First, it seemed likely that a difference between 20 and 30 per cent non-white, for example, should be much more visible to members of a community than a difference between 60 and 70 per cent non-white. Second, it was assumed that the relationship between per cent non-white and discrimination is not a direct causal one but is mediated by the amount of competition between the two groups. It might be expected that the greater the degree of discrimination

and therefore the greater the socio-economic barriers between the two groups, the smaller the fraction of the non-white group directly in competition with most whites. Therefore, a given increase in the proportion of non-whites should produce a relatively small increase in the total amount of competition between the two groups in situations where there is already a high degree of discrimination, i.e., near the upper end of the per cent non-white continuum according to Hypothesis 2. On the other hand, the same increase in per cent non-white should produce a much larger increase in intergroup competition in instances where the two groups are more nearly equal in status. This hypothesis was also directly suggested by the first study in which it was found that slopes of regression equations were most steep in regions having the smallest minority percentages and least steep in the South.

*Hypothesis 5.* The relationships between per cent non-white and indices of discrimination will also tend to be non-linear at the lower end of the per cent non-white continuum, there being less discrimination in counties having very small percentages of non-whites than would be expected on the basis of a linear model.

Evidence in the first study pointed to the existence of a threshold in the neighborhood of 10-15 per cent non-white, below which competition may not be defined primarily along group lines. It was therefore expected that counties having very small percentages of non-whites would have considerably lower discrimination rates than other counties in spite of the fact that all counties studied are located within a region in which discrimination has a well-established historical heritage.

#### METHODS

The sample consisted of 150 counties selected at random from all Southern counties having at least 250 non-white households. Counties having fewer than 250 non-white households were excluded because certain data for non-whites were not available. Virginia was not included since county data were not comparable with data for other states. States included consisted of the re-

<sup>2</sup> Hypotheses 4 and 5 predict an increasing function with a decreasing slope. Several alternative mathematical models were used in order to predict the exact form of this curve. Since Hypothesis 4 was not supported by the data, these models will not be discussed.

maining 10 states in Odum's Southeast.<sup>3</sup> For the purpose of investigating Hypotheses 4 and 5 concerning non-linearity, 95 additional counties were selected so as to obtain counties with more extreme percentages of non-whites.<sup>4</sup> The measure of rate of non-white increase was obtained by subtracting the percentage of non-whites in the county in 1940 from the comparable figure for 1950.

Indices of discrimination were computed from 1950 Census data using the following variables: (1) *Homeownership*: percentage of occupants who were homeowners; (2) *Overcrowding*: percentage of dwelling units with one or fewer persons per room; (3) *Rentals*: percentage of urban renter-occupied dwelling units with gross monthly rentals of \$15 or more; (4) *Income*: percentage of families having annual incomes of \$1500 or more; (5) *Education*: percentage of males 25 and over having completed more than 6 years of schooling; (6) *Occupation*: percentage of the urban male labor force in semi-skilled, skilled, or white collar positions.

Figures were obtained for both whites and non-whites, and since in each case a high percentage indicates a high level of living, an index of discrimination was obtained by subtracting the non-white percentage from that of the whites. A factor analysis of the 6 x 6 matrix of discrimination indices was carried out on this sample of Southern counties in order to determine whether or not a single factor could account for most of the intercorrelations among indices. Since the second and subsequent factors accounted for a negligible fraction of the variance, it was decided to consider the first factor as a general socio-economic discrimination factor and to compute a combined discrimination index by weighting each separate index in proportion to its loading with the first factor.

The control variables finally selected included white levels of living (as obtained above), states, percentage of residents classified as urban, per cent rural farm, percentage of females in the labor force, per cent in man-

ufacturing, the average valuation of farm land and buildings, and percentage of total crop acreage planted in cotton. Since differentials between white and non-white figures were expected to be a function of the relative proportions of each group living in urban areas, an urbanization ratio measuring the degree to which non-whites were under-represented in urban areas was also used as a control variable. Since many of the control variables were highly interrelated, it was found that the use of three or more controls yielded partial correlations that are practically identical with those produced by the operation of two simultaneous controls. Only those controls that yielded the greatest departures from zero-order correlations have been reported in this paper.

#### FINDINGS

The correlation between per cent non-white and rate of non-white increase was a non-significant  $-.01$ . Intercorrelations among indices of discrimination were moderately high with the exception of correlations with the occupational index. Intercorrelations among the first five indices varied from  $.33$  to  $.68$ , and correlations between these indices and the combined index ranged between  $.68$  and  $.86$ . Correlations with the occupational index were all positive, but two were not significant at the  $.05$  level and the remainder were less than  $.30$ . Some reasons for these low correlations are discussed below in connection with Hypothesis 2.

*Hypothesis 1.* Correlations between non-white increase and the various indices of discrimination summarized in Table 1 tended to support the first hypothesis to the effect that correlations would be non-significant or low positive. Correlations with occupational differentials and the three housing indices were non-significant. Relationships with income and educational differentials were somewhat higher than anticipated, however. There is some evidence that a partial explanation for these correlations can be made in terms of selective migration of non-whites into areas having high white levels of living. Correlations between rate of non-white increase and white income and educational levels were  $.39$  and  $.29$  respectively. Since measures of discrimination involved differentials between white and non-white figures,

<sup>3</sup> See H. W. Odum, *Southern Regions*, Chapel Hill: University of North Carolina Press, 1936, pp. 7 ff.

<sup>4</sup> This supplementary sample consisted of all remaining counties having fewer than 5 or more than 60 per cent non-whites plus a random sample of counties having between 5 and 20 or 55 and 60 per cent non-whites.

TABLE 1. CORRELATIONS BETWEEN INDICES OF DISCRIMINATION AND NON-WHITE INCREASE AND PER CENT NON-WHITE

Type of Discrimination	Non-white Increase		Per Cent Non-white	
	Total Cor-relations	Partial Cor-relations†	Total Cor-relations	Partial Cor-relations‡
Homeownership	.04	.06	.60*	.52*
Overcrowding	-.06	-.04	.69*	.56*
Rentals	.10	.11§	.53*	...§
Income	.43*	.46*	.54*	.46*
Education	.33*	.42*	.72*	.68*
Occupation	.08	.03§	-.03	...§
Combined index	.22*	.37*	.80*	.73*

\* Only these correlations are significant beyond .05 level.

† With simultaneous controls for per cent urban and per cent non-white.

‡ With simultaneous controls for per cent urban and urbanization ratio.

§ Since measure involves urban data only, controls for per cent urban and urbanization ratio are unnecessary.

such selective migration would serve to inflate the correlations between discrimination indices and rate of non-white increase. Unfortunately, the data did not permit isolation of the effects of migration from those of actual discrimination.

Notice that correlations were generally increased slightly when controls were introduced for per cent urban and per cent non-white. Tests for non-linearity produced non-significant results, although there was a slight tendency for income and educational differentials to be disproportionately high in counties having an increase of more than 4 per cent non-white during the decade. Thus there is a hint of the possibility that very large rates of increase may be associated with higher differentials. On the other hand, no positive correlations were found for non-Southern S.M.A.'s where rates of increase have been much more striking.

*Hypothesis 2.* Table 1 indicates that correlations between per cent non-white and all indices except occupational differentials were at least moderately high and that these correlations were only slightly reduced by controls for per cent urban and urbanization ratios. In the case of the combined index, about 64 per cent of the variation in dis-

crimination was associated with per cent non-white without controls and 53 per cent when controls were introduced.

The low correlations generally found between the occupational index and other variables deserve further comment. It is possible, of course, that these results were due to inadequacies in the measure itself. Certain variables may also have operated in a direction opposite to the per cent non-white factor, producing very low correlations with other discrimination indices as well. We would expect to find a higher percentage of professionals, businessmen, and clerical workers among non-whites whenever the minority percentage were sufficient to stimulate the development of a dual economy. This factor alone, however, cannot account for the low correlation, since the proportion of white-collar workers among non-whites was found to be very low in all counties. Actually, the size of the measure for non-whites was largely determined by the ratio of the number of unskilled laborers to operatives. It seems plausible to argue that if there were a large number of non-whites in urban occupations, some of these persons would occupy positions as operatives simply because the available number of unskilled jobs had already been filled by other members of their own group. In other words, a large percentage of non-whites might tend to produce an overflow of the minority group into semi-skilled positions. This does not mean that non-whites in these positions would necessarily receive the same pay as whites or that they would be afforded comparable status. Consistent with this explanation is the fact that with a control for per cent urban the

TABLE 2. CORRELATIONS BETWEEN WHITE LEVELS OF LIVING AND PER CENT NON-WHITE

White Levels	Total Correlations	Control for Per Cent Urban
Homeownership	-.16	-.21*
Overcrowding	.15	.22*
Rental	-.17*	...†
Income	.07	.31*
Education	.35*	.38*
Occupation	.23*	...†

\* Only these correlations are significant beyond .05 level.

† Control unnecessary since measures involve urban data only.

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TABLE 3. COMPARISON OF OBSERVED DISCRIMINATION SCORES WITH SCORES EXPECTED UNDER THE LINEAR MODEL, FOR COUNTIES WITH 65-69.9 AND 70-84.9 PER CENT NON-WHITE

Type of Discrimination*	Counties With 65-69.9 Per Cent Non-whites (N=25)			Counties With 70-84.9 Per Cent Non-whites (N=24)		
	Obs. Score	Exp. Score †	Diff. ‡	Obs. Score	Exp. Score †	Diff. ‡
Homeownership	47.8	48.6	-0.8	53.4	50.5	2.9
Overcrowding	44.3	46.1	-1.8	49.3	47.9	1.4
Rental	47.5	50.7	-3.2	53.8	53.4	0.4
Income	42.5	42.9	-0.4	46.1	44.9	1.2
Education	67.8	66.0	1.8	69.7	69.2	0.5
Combined index	50.9	50.9	0.0	54.0	53.0	1.0

\* Occupational differentials omitted since correlation with per cent non-white was not significant.

† Expected scores obtained by extending regression equations for remaining counties.

‡ The t test was used to test for significance of adjusted differences between observed and expected scores. Since computation of the regression equations involved possible sampling error, 95 per cent confidence bands for the true equations were computed and adjustments made so as to reduce the differences between observed and expected figures to values that would be obtained if the true regression equations were the most "unfavorable" ones possible within the confidence bands. Probability levels indicated are therefore likely to be on the conservative side. All differences are non-significant at the .05 level.

correlation between per cent non-white and white occupational levels was positive (.38).

*Hypothesis 3.* It was anticipated that correlations between per cent non-white and white levels of living would be negative. As shown in Table 2, results tended to be opposite to those predicted when controls were introduced for per cent urban. The data therefore do not support the thesis that whites in areas with the largest percentages of non-whites tend to have the lowest standards of living. For example, the writer was surprised to find that whites in counties with more than 60 per cent non-whites had average or higher than average levels of living as compared with whites in other Southern

counties. This does not mean that low white levels in the region as a whole cannot at least partially be attributed to the presence of a cheap source of labor.

*Hypothesis 4.* This hypothesis, which predicted non-linearity at the upper end of the per cent non-white continuum, was not supported by the data. For each of the six discrimination indices for which a significant relationship was established, the form of the relationship with per cent non-white turned out to be remarkably linear except at the very low end of the continuum.<sup>5</sup> There was

<sup>5</sup> In tests for overall non-linearity using all 245 counties, results were non-significant at the .05 level except in the case of the combined index.

TABLE 4. COMPARISON OF OBSERVED DISCRIMINATION SCORES WITH SCORES EXPECTED UNDER THE LINEAR MODEL, FOR COUNTIES WITH 0-4.9 AND 5-9.9 PER CENT NON-WHITE

Type of Discrimination	Counties With 0-4.9 Per Cent Non-whites (N=17)				Counties With 5-9.9 Per Cent Non-whites (N=27)			
	Obs. Score	Exp. Score †	Diff.	Sig. Level ‡	Obs. Score	Exp. Score †	Diff.	Sig. Level ‡
Homeownership	26.1	30.7	-4.6	N.S.	26.5	32.1	-5.6	N.S.
Overcrowding	21.4	29.9	-8.5	<.01	29.0	31.1	-2.1	N.S.
Rentals	14.1	27.1	-13.0	<.02	30.0	29.0	1.0	N.S.
Income	15.9	23.7	-7.8	<.05	25.1	25.1	0	N.S.
Education	28.7	37.4	-8.7	<.01	34.4	39.6	-5.2	N.S.
Combined index	21.4	29.7	-8.3	<.01	28.8	31.2	-2.4	N.S.

\* Occupational differentials omitted since correlation with per cent non-white was not significant.

† Expected scores obtained by extending regression equations for remaining counties.

‡ See Table 3, footnote 3 for explanation of significance test.

no noticeable tendency for discrimination scores to level off in the case of the 49 counties having over 65 per cent non-whites. Table 3 indicates the direction and magnitude of differences between mean scores to be expected if relationships were linear and mean scores actually obtained for counties having 65-69.9 and 70-84.9 per cent non-whites. Observed scores were slightly below the expected figures for counties having between 65 and 69.9 per cent non-whites, but just the opposite tendency can be noted in the case of counties with 70-84.9 per cent non-whites. All differences were extremely small, however, and none were significant at the .05 level. Clearly, either the reasoning that motivated Hypothesis 4 is basically wrong or there were forces counterbalancing a tendency for a decreasing slope. One such factor might be the threat of political or economic dominance posed by a very large non-white group unless it were completely subordinated. It is also possible that a very large number of non-whites might produce a situation in which the market for unskilled labor could become supersaturated to such a degree that non-whites depressed their own standard of living without markedly affecting that of the whites.

*Hypothesis 5.* The final hypothesis predicted that counties having very small minority percentages would have unusually low discrimination scores. Table 4 indicates the direction and magnitude of differences between observed and expected mean scores for counties having 0-4.9 and 5-9.9 per cent non-whites. Counties with 0-4.9 per cent non-white had substantially lower discrimination scores than would be expected under the linear model. There was much less of a tendency for counties with 5-9.9 per cent non-white to deviate in the predicted direction, however. Although deviations for four of the indices were as predicted, none of the differences was significant at the .05 level. There therefore seems to be a threshold somewhere between 5 and 10 per cent non-white below which non-whites tend to fare relatively well.

#### CONCLUSIONS

This study was designed to test certain hypotheses concerning the relationships between various indices of discrimination and rate of non-white increase and per cent non-white. Moderate positive correlations were obtained between rate of non-white increase and income and educational differentials, but correlations with other indices of discrimination were non-significant. On the basis of these findings and those of a previous study, the writer concludes that the relationship between discrimination and rate of minority increase is at most a relatively weak one.

Correlations between per cent non-white and all indices except occupational differentials were moderately high. These relationships were remarkably linear except for counties with less than 5 per cent non-whites that had substantially lower discrimination scores than other counties. In view of the fact that comparable correlations for non-Southern S.M.A.'s were considerably lower than those obtained in the present study, the conclusion is that the relationship between these two variables is by no means a necessary one, but is dependent upon other variables. An increase in the relative size of the minority may directly increase the total amount of competition with the majority, but this competition need not be defined along group lines and therefore may not result in increased discrimination. There may be a threshold below which discrimination and minority percentage are only slightly related. The exact level of the threshold may be determined by such factors as the amount of prejudice toward the minority, the degree to which the minority is easily visible, and the presence of group norms sanctioning discrimination. Further study is needed to determine whether or not such thresholds do in fact exist and to investigate the exact nature of the relationships among the variables involved.