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Abstract

This paper estimates trends from 1962 to 1972 in the educational attainment, occupational status, and income of black and white U.S. men aged 35 to 64, and interprets those trends in terms of changes in social background, socioeconomic achievement, opportunity, and racial discrimination. The analysis is based on data from the March 1972 Current Population Survey (CPS) and from the March 1962 CPS and supplement, "Occupational Changes in a Generation." The findings should prove useful in assessing progress in reducing poverty and discrimination.

The socioeconomic achievements of all men in the labor force, but especially of blacks, have increased in the past decade, but the opportunities for white men to hold high status jobs may have levelled off. Black-white differences in educational attainment, occupational status, and income have been reduced substantially, but there remain large residues of discrimination against blacks in all three areas of achievement. These were as large a proportion of the total racial gap in schooling, occupational status, and income in 1972 as they were in 1962. In 1972 as in 1962 the source of black-white differentials in achievement is not primarily the greater prevalence of poverty origins among blacks, but the cumulative effects of discrimination by race at every stage of the socioeconomic life-cycle.

Only within the past decade has it become possible to characterize the distribution of education, occupational status, and income using an explicit, quantitative model of the process of socioeconomic achievement (Duncan and Hodge, 1963; Blau and Duncan, 1967; Duncan, Featherman and Duncan, 1972; Jencks et al., 1972). The development of causal models of stratification has greatly increased the possibilities for cumulative scientific investigation of the persistence of social inequality from one generation to the next. Among the important possibilities are the elaboration of models of achievement which elucidate the social and psychological mechanisms of stratification (Duncan and Featherman, 1972; Sewell, 1971; Hauser, 1972; Featherman, 1971; Sewell and Hauser, 1972; Duncan, Featherman and Duncan, 1972) and the pursuit of comparative study, as among population subgroups in one society, among societies (Featherman, Hauser and Sewell, forthcoming) or between points in time. Our present interest is in the last of these possibilities, the comparison of processes of socioeconomic achievement across time. Specifically, we report trends from 1962 to 1972 in the educational attainment, occupational status, and income of black and white U. S. men, and we analyze and interpret those trends in light of a structural equation model of socioeconomic achievement.

In 1962 the Current Population Survey (CPS) supplement, "Occupational Changes in a Generation" (OCG), carried out under the direction of Peter M. Blau and Otis Dudley Duncan, yielded the first definitive measurements of patterns and trends in occupational mobility among U. S. men. Analyses of this survey of 20,700 men aged 20 to 64 established there had been substantial upward mobility in the educational and

occupational hierarchies between generations, and by an ingenious arrangement of OCG, CPS, and Census data it was possible to show that more recent cohorts enjoyed greater opportunities for movement into higher status occupations than their predecessors (Blau and Duncan, 1967:90-111; Duncan, 1965). Further analyses of the 1962 data by means of age-constant intercohort comparisons suggested that improvements in educational and occupational opportunities in the aggregate have not been accompanied by substantial changes in the rigidity of the stratification system. That is, there has been no appreciable tightening or loosening of the regime connecting the achievements of men with those of their fathers (Duncan, 1968a).

In the past decade there has probably been as much concern about trends toward rigidification in American society as in any earlier period. Thus, efforts to obtain a new reading on trends in socioeconomic opportunity are surely in order. Detailed and definitive measurements of trend over the decade await the completion of a replicate and extension of the OCG survey, which is presently in the field (Featherman and Hauser, forthcoming). However, the discussion of recent mobility trends has already begun (Lipset, 1972), and we think it desirable that the inevitable anticipations and conjectures about trends in socioeconomic achievement be given some basis in fact. By adaptation of a procedure used earlier by Duncan (1965), it has been possible to obtain indirect evidence of changes in social mobility in the past decade.

In an earlier paper we looked at trends in occupational mobility of U. S. men at ages 35 to 64 during 1962 to 1970 (Hauser and Featherman, 1973a). We found there had been net intercohort shifts toward employment

as salaried professionals and managers and as skilled manual workers and away from employment as self-employed managers, as farmers, and as nonfarm laborers. These changes may be described as a shift from manual to nonmanual occupations combined with shifts from lower to higher status occupations within both the manual and nonmanual groups. Changing occupational origins (fathers' occupations) account for a modest upgrading of the occupation distribution, while changes in mobility to first jobs have no systematic effect. The largest component of intercohort shifts in the occupation distribution is change in mobility patterns from first to current occupations. The historical trend of upward occupational mobility among U. S. men is neither uniform nor inevitable. There was more change in occupational mobility patterns from 1962 to 1970 than in 1952 to 1962, but less than in 1942 to 1952. A continuation of historical trends of occupational mobility is strictly limited by the depletion of occupational groups--service workers, laborers, and farmers--which have earlier served as sources of recruitment into higher status occupations.

In a second paper we compared white and nonwhite trends in occupational mobility at ages 35 to 64 during 1962 to 1972 (Hauser and Featherman, 1973b). Both white and nonwhite occupation distributions were upgraded over the decade, but among nonwhites the shifts away from the lower status occupations were expressed partly by increasing rates of absence from the labor force. There were indications of especially rapid shifts in the occupation distributions of nonwhite men at ages 35 to 44. Among men of both racial groups intercohort shifts in the occupation distribution were effected primarily by changing patterns of movement from first jobs to current occupations.

The white and nonwhite occupation distributions did not show a clear pattern of convergence over the decade. They became less similar at ages 35 to 44 and more similar at older ages. White and nonwhite distributions were most likely to converge in those occupation groups where the share of whites was stable or declining, rather than in groups whose share of the occupation distribution was increasing. Recent cohorts of nonwhites would have a much more favorable occupation distribution if they had enjoyed the mobility chances of whites in earlier cohorts. In 1972 as in 1962 the inferior occupational chances of nonwhites were due primarily to their disadvantageous patterns of occupational mobility, rather than to impoverished social origins.

In this paper we extend our analyses of trends in achievement to the educational attainment and income of U. S. men, and in addition we express occupational status in Duncan's (1961) scale of the socioeconomic status of occupations, rather than in major occupation groups. By treating socioeconomic achievements as interval variables and adopting a regression-standardization method, we can interpret intercohort shifts in achievement in terms of predetermined differences in socioeconomic background and family size and in terms of prior socioeconomic achievements.

Data and Methods

The logic of our analysis is straightforward. Using 1962 OCG data we estimate a simple three-equation model of socioeconomic achievement for black and nonblack (hereafter, white) men at ages 35-44, 45-54, and 55-64. If we substitute the means of cohorts ten years younger in each of these equations, we obtain expected levels of achievement in

1972, when the younger cohorts are as old as those for whom the equations were estimated. If there were no intercohort shifts in achievement other than changes in the means of variables entering the equations, the expected levels of achievement would agree (except for sampling error) with the actual levels of achievement in 1972. Differences between actual and expected achievements can be attributed to changes in the process of achievement or in variables other than those entering the equations. Further, by substituting intercohort shifts in the means of variables entering the equations, we obtain components of change in achievement attributable to each variable in turn.

The important assumption of our analysis is that the younger men, for whom we ascertain means of the regressors entering each equation from the 1962 OCG survey, are the same as the men ten years older for whom we ascertain achievements in 1972 from the Current Population Survey. Since our analysis must of necessity pertain to men in the experienced civilian labor force, our comparisons are vulnerable to changes in coverage occasioned by death, migration, and entry into and exit from the labor force. Death and retirement substantially reduce a cohort's participation in the labor force between ages 45-54 and 55-64; many men complete military service and enter the civilian labor force between ages 25-34 and 35-44; and increasing numbers of nonwhites are outside of the labor force at ages 35-54 (Hauser and Featherman, 1973b). For these reasons it should be born in mind that our analyses pertain to men of a given age who occupy a particular labor force status, not to all men of that age.

A Model of Socioeconomic Achievement

Our model of socioeconomic achievement is displayed as a path diagram in Figure 1. The straight, single-headed arrows represent assumptions of unidirectional causation, and the curved, two-headed arrows represent correlations which we have not interpreted in causal terms (Duncan, 1966). The model takes educational attainment in years of schooling (U) to depend on father's occupational status in units of Duncan's (1961) scale (X), father's educational attainment (V), respondent's farm background (F), and respondent's number of siblings (S). Respondent's current occupational status (Y) depends on the four background variables and on educational attainment. Finally, the respondent's income (H or lnH) depends on the background variables, educational attainment, and occupational status.

We have modified the basic Blau-Duncan model by entering farm background as a predetermined variable because it has been suggested that the social status of farming is not accurately represented by its position on the Duncan scale and, also, because there have been large intercohort shifts out of farming in the recent past. In estimating the model we have run two equations for income, one in real (1961) dollars and the other in semi-log form. In the first functional form the regression coefficients are interpretable as dollar shifts in income, and in the second, they are interpretable as approximate proportionate shifts in income. Appendix Tables A and B give the estimated coefficients of our model for each race-age cohort in standardized and in raw form, respectively. Similar estimates have been analyzed extensively elsewhere (Blau and Duncan, 1967; Duncan, Featherman and Duncan,

1972), and we have no interest in these estimates beyond their implications for our analysis of intercohort change.

Intercohort Shifts in Background and Achievement

Table 1 gives the arithmetic means of background and achievement variables by age and race as ascertained in the March 1962 CPS and OCG surveys or in the March 1972 CPS. For example, if we look at white men aged 35 to 44 (see the upper left panel of the table), all of the means reported for 1962 were ascertained in the March 1962 CPS or the OCG supplement. The reports of X, V, F, S, and U for men aged 35 to 44 in 1972 were ascertained from men aged 25 to 34 in 1962 in the March CPS or OCG supplement, and the reports of Y and of H for men aged 35 to 44 in 1972 were ascertained in the March 1972 CPS. As a consequence of these procedures the means of X, V, F, S and U for the cohort aged 35 to 44 in 1962 appear again as entries for the cohort aged 45 to 54 in 1972, and the means of X, V, F, S and U for the cohort aged 45 to 54 in 1962 appear again as entries for the cohort aged 55 to 64 in 1972.

In the case of educational attainment (U) we actually have two reports for each cohort, one from the March 1962 CPS and one from the March 1972 CPS. Since little schooling is completed after age 25, if there were no time-dependent biases in reports of schooling, comparisons of these reports would shed some light on changes in coverage between 1962 and 1972. However, there is a tendency for men to inflate reports of their educational attainment with age (Farley, 1968:5-6), so the education data could not be used to assess changes in population coverage. Throughout our analyses we used reports of educational attainment from the March 1962 CPS. Had we used same-age, rather than same-year reports of schooling, we would have estimated slightly larger

intercohort shifts in educational attainment and attributed correspondingly larger shares of the shifts in occupational status and income to changes in educational attainment between cohorts.

With a few small exceptions the intercohort shifts in socioeconomic background and numbers of siblings all tended to improve the socioeconomic chances of more recent cohorts of U. S. men. That is, in younger cohorts men were generally reared in smaller families and were less likely to be reared on farms, or in families headed by a poorly educated father or one with a low status occupation. Consequently, if the process of socioeconomic achievement were unchanged, we would expect younger cohorts to obtain more education, hold higher status jobs, and earn more money than their predecessors. The exceptions to this pattern occur among the older blacks. In 1962 45 to 54 year old black men reported fathers with higher occupational status than did men of the same age in 1972, and among black men aged 55 to 64 years old there were essentially no changes in father's occupational status and in numbers of siblings between 1962 and 1972.

Every age-constant intercohort comparison in Table 1 shows increasing educational attainment, occupational status and real income between 1962 and 1972. In educational attainment the shifts range from 0.6 to 0.9 years among whites and from 0.9 to 1.8 years among blacks. At each age the intercohort shift is larger for blacks than for whites. The intercohort shifts in occupational status range from 1.5 to 2.5 points on the Duncan scale among whites and from 5.5 to 6.1 points among black men. At each age the intercohort shifts in occupational status are between two and four times larger among blacks than among whites. The increases in real dollar income are substantial for men of both racial

groups, and again the shifts are larger among blacks than whites. The intercohort shifts in real income were each about $1450 for white men and ranged from $1800 to $2100 among black men. In proportionate terms the intercohort increases in real income were much larger for black than for white men because blacks had lower incomes in 1962 than whites. Thus, the shifts in ln(income) ranged from 0.25 to 0.30 among whites and from 0.58 to 0.83 among blacks.

Evidently, white and black members of the civilian labor force have experienced substantial improvements in their socioeconomic standing in recent years, and the increments have been greater for black than for white men. However, it should be kept in mind that these estimated intercohort shifts in status do not apply to the substantial numbers of black men in the prime working ages who are not in the labor force. Further, in 1972 as in 1962 black men have lower levels of educational attainment, occupational status, and income than their white age-peers; we shall return in a later section to the persistence of racial differentials in achievement. We turn next to an interpretation of intercohort shifts in achievement within each racial group.

Interpretation of Intercohort Shifts

Table 2 gives the decompositions of intercohort shifts in achievement among white and black men which were generated by our regression-standardization technique. For example, there is a total difference in educational attainment of 0.62 years between white men aged 35 to 44 in 1962 and in 1972. Of this shift 0.25 years or 40 percent can be attributed to intercohort changes in socioeconomic background (father's occupational status, farm background, and father's education), and another 0.08 years or 13 percent is explained by the smaller families of younger

men. The remaining 0.29 years or 47 percent of the intercohort shift in educational attainment must be attributed to other social-structural changes between the times when these two cohorts completed their schooling. Of the net shift in occupational status of 2.27 points on the Duncan scale between the cohorts aged 35 to 44 in 1962 and in 1972, 0.52 points or 23 percent is due to the intercohort shift in social background, 0.07 points or 3 percent to the reduction of family size, and 2.47 points or 109 percent of the observed shift is due to increases in educational attainment. Since the sum of these components is larger than the observed intercohort shift in occupational status, the net shift in status between 1962 and 1972 is a negative 0.79 points on the Duncan scale. That is, a 35 to 44 year old white man with the same "qualifications" of social background and education in 1962 and in 1972 would have held a lower status job in the later year, primarily because of the increased supply of men who were educationally qualified by 1962 standards.

Of the $1454 shift in real income of 35 to 44 year old whites between 1962 and 1972 $131 or 9 percent was due to changing socio-economic background, $18 or 1 percent to changing family size, $141 or 10 percent to increased educational attainment, and $116 or 8 percent to increased occupational status. The remaining $1048 or 72 percent of the increase in real income could not be explained by intercohort shifts in social background, educational attainment, or occupational status. Expressing the same decomposition in semi-log form, we find a total increase in income between the two cohorts of about 26 percent, of which less than one percent is due to smaller families,

about two percent each to the shifts in socioeconomic background, educational attainment, and occupational status, and about twenty percent to other differences between the cohorts.

The components of intercohort shifts in educational attainment, occupational status, and income among white men at the two older ages are generally similar to those of white men at ages 35 to 44. Changes in socioeconomic background as well as the secular increase in schooling contribute to rising levels of educational attainment, but the secular increase is more important at the older ages. Intercohort shifts in socioeconomic background account for about a fifth of the change in occupational status between cohorts of white men, but changes in family size explain little of the increase in status. At every age the intercohort shifts in educational attainment are more than large enough to explain the observed increases in occupational status. Consequently, the net or structural shift in occupational status between 1962 and 1972 is negative for whites at every age. Changes in socioeconomic background, educational attainment, and occupational status each make modest contributions to the observed intercohort growth of real income among whites, but changes in family size have a negligible direct effect on income shifts, and two-thirds to three-quarters of the growth of income at each age must be attributed to social changes other than those expressed in our model of achievement.

While the intercohort shifts in educational attainment are larger for blacks than for whites at every age, the proportional decomposition of shifts in educational attainment is similar for blacks and whites at the same age. In the case of occupational status the black and white decompositions are quite different. For blacks as for whites changes in

socioeconomic background make a modest contribution to the intercohort increase in occupational status. Shifts in educational attainment contribute an increment of 1.25 to 2.59 points of occupational status to the black intercohort shifts. While these are not trivial, they are smaller than the corresponding components of change in status among whites of the same age. Since the shifts in mean educational attainment are larger for blacks than whites, the smaller effect of changing educational attainments must be attributed to the lower returns to schooling of blacks relative to whites (Hauser, 1973; also, see appendix Table B). This finding gives powerful evidence of the obstacles faced by blacks in attempting to achieve socioeconomic parity with whites through the educational system. Not only do blacks obtain fewer years of schooling than whites, but they need to increase their schooling by a larger amount than whites to effect a given increase in occupational status.

The major difference between the black and white intercohort shifts in occupational status is not in the effect of schooling, but the effect of social structural changes not specified explicitly in our model of achievement. We think it is fair and accurate to refer to these changes as shifts in opportunity. While the occupational opportunities of white men were reduced by .75 to 1.75 points on the Duncan scale between 1962 and 1972, the occupational opportunities of black men increased by 3.25 to 4.25 points. Over the decade 1962 to 1972 increases in occupational status among whites were more than accounted for by the changes in social origins and educational attainments between cohorts, but black men throughout the ages 35 to 64 experienced an improvement in occupational life-chances which could not be explained by intercohort shifts in social origins or in schooling. Again, this hopeful finding should be read in light of the restriction of our analysis to men in the labor force.

The decompositions of intercohort shifts in real income are generally similar for black and white men of each age. There are some anomalous results among blacks at ages 55 to 64 which we are inclined to attribute to the limited number of observations on those two cohorts. Elsewhere, our finding is that shifts in socioeconomic background, schooling, and occupational status each contribute modestly to the growth in real income between cohorts, but the largest component of change is changing opportunity, i.e., factors not specified explicitly in our model. Just as the growth of opportunity for schooling and for occupational achievement was greater for black than for white men in the labor force at every age from 35 to 64, so was the growth in income opportunities greater for black than for white men. Among whites the net intercohort shifts in real income were each about $1000, but among blacks the net increases in real dollar income ranged from $1300 to $1800, or 50 to 60 percent of income in 1962.

Racial Differentials in Achievement

Table 3 shows decompositions of black-white differences in educational attainment, occupational status, and income at ages 35 to 44, 45 to 54, and 55 to 64 in 1962 and in 1972. To generate these interpretations of racial differentials in achievement we took the 1962 regressions for whites as the standard and substituted differences of means between black and white men in 1962 and in 1972. Given the predominant pattern of interaction (differences in slope) between the white and black regressions in 1962, the choice of regressions for whites as the standard yields lower-bound estimates of racial differentials in achievement which are not attributable to social background

or prior achievements (Duncan, 1967; 1968b). Following Duncan's usage we think it appropriate to refer to such residual racial differentials as effects of discrimination.

Our procedure may be clarified by an example. At ages 35 to 44 in 1962 white men obtained 3 years more of schooling than blacks. Think of a group of white men with the same social origins as the average black man. From the white regressions in 1962 we would expect this disadvantaged group's educational attainment to fall one year below the mean for all whites because of its poorer socioeconomic background and to fall another quarter of a year below the mean for all whites because of its members larger numbers of siblings. In fact, the mean educational attainment of 35 to 44 year old blacks falls still another one and three-quarters years below the white mean, and we attribute this last component to racial discrimination.

In carrying out similar calculations for men in 1972 we make the additional assumption that the slopes of the white regressions for men of a given age are the same in 1972 as in 1962. For example, among 35 to 44 year old men in 1972 the racial differential in educational attainment is 2.28 years. If the white regressions at age 35 to 44 in 1962 were valid for men of the same age in 1972 we would conclude that 0.88 years of the 1972 differential are explained by the inferior socioeconomic origins of black men, 0.33 years by the larger families in which black men are raised, and the remaining 1.07 years by the residue of discrimination. The critical assumptions affecting the validity of these calculations are those of population coverage, to which we referred earlier, and the constancy of the white regressions. Further, the status of our discrimination components as lower bound estimates is vulnerable to

the possibility that changes in the black regression lines have altered this result. We think it unlikely that intercohort changes in black or white regression slopes at the ages in question could be large enough to affect the outcome of our analyses in any important respect.

If black men in the labor force have experienced greater increases in educational attainment, occupational status, and income than whites of the same age over the past decade, these gains have not been great enough to offset the discriminatory obstacles faced by black men. In 1972 as in 1962 there are large differences in the educational attainment, occupational status and income of black and white men in each of the age groups 35 to 44, 45 to 54, and 55 to 64. In 1962 the racial differential in educational attainment ranged from 3 to 4 years of schooling, and in 1972 it ranged from 2.25 to 3 years. In 1962 the occupational differential between the races was 21 or 22 points on the Duncan scale at every age, and in 1972 it was about 18 points. In 1962 the income differential between the races ranged from $3200 to $3800, and in 1972 it ranged from $2900 to $3200. In ln(income) the differentials ranged from 0.78 to 1.03 in 1962 and from 0.45 to 0.50 in 1972.

Not only the total differences between the races, but also the discriminatory components of those differentials persisted from 1962 to 1972. In 1962 the net racial difference in educational attainment ranged from 1.75 to 2.6 years of schooling, and in 1972 it was 1.1 to 2.0 years. In 1962 the discriminatory component of the racial differential in occupational status was between 6.5 and 7.8 points on the Duncan scale, and in 1972 it was between 4.7 and 6.0 points. In 1962 the discriminatory component of the difference in income between the races ranged from $740 to $1430, and in 1972 it ranged from $510 to $1240.

While the differences in socioeconomic achievement between black and white men persisted from 1962 to 1972, they were also smaller at the later point in time. Of the total racial differentials in education, occupational status, and income and their discriminatory components, only one was larger in 1972 than in 1962. That exception was the discriminatory component in the black-white income difference at ages 55 to 64, which increased from $743 to $863; in the corresponding semi-log decomposition this mild reversal did not occur. If the discriminatory components of the black-white differentials were absolutely smaller in 1972 than in 1962, so also were the components explained by social background and prior achievements. That is, the discriminatory differentials between the races in educational attainment, occupational status, and income were as large a proportion of the total racial differentials in 1972 as they were in 1962 (compare Milner, 1973).

At every age and in both 1962 and 1972 a substantial component of the educational differential between the races could be explained by differences in socioeconomic background. These components were between 0.9 years and 1.2 years of schooling, and they accounted for 28 to 39 percent of the black-white difference in years of schooling. A smaller component of the differential, from 0.16 to 0.33 years of schooling or 4 to 15 percent of the total, could be explained by the larger families in which black men were reared. The remaining 47 to 65 percent of the racial differentials in schooling was not explained by the variables in our model, and in this sense they are attributable to discrimination. (A substantial share of the residual difference in schooling between blacks and whites may be attributable to racial differences in academic ability; see Duncan, 1968b; Jencks et al., 1972.)

Components of 2.0 to 2.7 points on the Duncan scale or 10 to 15 percent of the racial differentials in occupational status were attributable to differences of socioeconomic background between black and white cohorts in 1962 and in 1972. The larger number of sibs in black families contributed little to the observed differences in occupational status between blacks and whites, only 0.22 to 0.48 points on the Duncan scale or 1.0 to 2.7 percent of the total racial difference in status. Black-white differences in years of schooling accounted for the largest component of the racial gap in occupational status. These components ranged from 9 to 12 points on the Duncan scale and accounted for 51 to 57 percent of the black-white difference in occupational status. Discrimination was the second largest component of the racial differential in occupational status; it accounted for differences between the races of 4.7 to 7.8 points on the Duncan scale or 26 to 37 percent of the total black-white differential.

In 1962 and in 1972 at every age socioeconomic background differences between the races accounted for a small share of the black-white income differential. These shares ranged from 5 to 18 percent of the dollar gap, or between $150 and $550 in 1961 dollars. Only a negligible share of the racial gap in incomes could be explained by the direct effects of the larger families in which black men were reared. Black-white differentials in educational attainment accounted for $500 to $850 of the racial gap in income; this was 16 to 26 percent of the total black-white difference. Black-white differences in occupational status accounted directly for 28 to 46 percent of the racial gap in income: those components of the dollar gap ranged from $900 to $1650. The remaining 16 to 38 percent or $500 to $1400 of the racial gap in income was attributable to racial

discrimination in incomes which occurred independently of racial differences in socioeconomic background, numbers of siblings, educational attainment, or occupational achievement.

Discussion

In our analysis we have tried to address two questions: "What has been the trend of socioeconomic opportunity for black and white men in the U. S. during the past decade?" and "What has been the trend of racial discrimination in the socioeconomic achievements of black men?" We have found that the socioeconomic opportunities of all men in the labor force, and especially of blacks, have increased in the past decade, but the opportunities for white men to hold high status jobs may have leveled off. Black-white differences in educational attainment, occupational status and income have been reduced substantially, but there remain large residues of discrimination against blacks in all three areas of achievement. These made up as large a proportion of the total racial gap in schooling, occupational status, and income in 1972 as they did in 1962. In 1972 as in 1962 the source of black-white differentials in achievement is not primarily the greater prevalence of poverty origins among blacks, but the cumulative effects of discrimination by race at every stage of the socioeconomic life-cycle.

We hasten to add that our analyses are tentative and incomplete, and it would be inappropriate for us to conclude without mentioning some of their limitations. We wish to repeat that our analyses pertain to men in the experienced civilian labor force, and not to all men. This is particularly relevant to our findings for black men. In an earlier paper we found that the upgrading of the nonwhite occupation distribution between 1962 and 1972 was accomplished partly by shifts out of

lower status occupations and into higher status occupations and partly by increased rates of absence from the labor force. Among nonwhite men at ages 35 to 44 5.8 percent were not in the experienced civilian labor force in 1962, and 8.2 percent were not in the experienced civilian labor force in 1972. At ages 45 to 54 10.8 percent of nonwhite men were out of the labor force in 1962 and 14.1 percent were out of the labor force in 1972. These figures may be compared with rates of absence from the labor force among whites of 3 to 6 percent in the same ages and years (Hauser and Featherman, 1973b). It would be misleading to note the apparently improved socioeconomic life-chances of black men who are in the labor force without adding that growing numbers of black men in the prime working ages simply do not participate in ordinary economic activities.

Further, our operational definitions of "opportunity" and of "discrimination" deserve elaboration. We have defined changes in opportunity as intercohort shifts in the distribution of education, occupation, or income, to the extent they are not explained by shifts in the distributions of causally prior variables in our model of socioeconomic achievement. Likewise, we have defined discrimination as racial differences in the distribution of educational attainment, occupational status, or income to the extent they are not explained by differences between the races in causally prior variables in our model of achievement. These definitions are invalid insofar as the specification of our model of achievement is in error. The omission of relevant causal factors which vary between cohorts and between the races is one important source of error, and a second is error of measurement in variables entering our model of achievement as regressors. For example, we have already noted

that measured differences in academic ability between black and white men may account for a substantial share of the black-white difference in years of schooling not otherwise explained by our model. Also, measurement errors in retrospective reports of socioeconomic background could lead to serious downward biases in the estimated effects of background variables in the OCG data (Bowles, 1972). We think the best available data show that the biases are not large (Kerckhoff, Mason and Poss, 1973; Jencks et al., 1972; Featherman and Hauser, 1973), but more evidence is needed on this subject. In any case the likely effect of either sort of error would probably be to make our estimates of opportunity and of discrimination too large (algebraically, not in absolute value).

Because of the recursive property of our model of achievement, the components of changing opportunity or of discrimination do not express the full impact of changes in opportunity or of racial discrimination on occupational status and income. For example, the educational component of racial differentials in occupational status represents discrimination by race to the extent that the racial differential in educational attainment is based on discrimination. The same holds for the educational and occupational components of the racial differential in income. Thus, the components of change in each measure of socioeconomic achievement which we have attributed to discrimination or to changing opportunities represent those factors to the extent they operate independently of causally prior variables in the model.

While we do not regard our estimates of trends in opportunity and in discrimination as definitive, we do think they shed light on important questions which have been raised about changing opportunities in the United States. For example, Jencks et al. (1972:191) speculate:

> Unfortunately, we do not have good data on developments since 1962. One thing is clear, however. If the occupational status of blacks has improved, this has been because of direct efforts to eliminate discrimination and compensate for past discrimination. It has not been because black's test scores have risen or because they have appreciably more educational credentials than they did a decade ago.

From our analysis we can suggest that Jencks et al. are both right and wrong on this point. From the right hand panels of Table 2 we can see that there has been a substantial improvement in the occupational opportunities of black men, although we are unable to say whether this is due to "direct efforts to eliminate discrimination and compensate for past discrimination." At the same time our analysis shows that shifts in educational attainment between black cohorts do account for a substantial share of their intercohort increases in occupational status.

We would caution against efforts to interpret our estimates of changes in socioeconomic opportunities and in discrimination in terms of programmatic efforts at social melioration carried out during the 1960s. The cohorts we have investigated are far too old to have been affected by programs aimed at children and youth in the past decade. Their educational attainments and, to some degree, their occupational distributions were determined 15 or more years ago. While we have analyzed intercohort shifts of the past decade, to a large extent the outcomes of our analyses were determined much earlier in the lives of these cohorts. Some men who were already in the prime working ages at the beginning of the 1960s were undoubtedly touched by public interventions in the job market, but we doubt that such interventions have been extensive or successful enough to have effected many of the changes we have measured.

Finally, we want to note some of the questions on which the present analysis has not touched at all. One important issue is that of inter-cohort change in opportunity and in discrimination at the younger ages. Since our method of analysis can be applied only to cohorts covered in the 1962 survey, we have not been able to say anything about trends in the socioeconomic achievements of cohorts which entered the prime working ages after 1962. Since these are the cohorts most likely to have been affected by public policies directed to equalizing opportunities, it is at the younger ages that we might expect to find changing patterns of inequality and opportunity. Second, throughout our analysis we have assumed the constancy of the coefficients of our model of socioeconomic achievement, but changes in these coefficients would reflect important trends in stratification and mobility. Is the effect of educational attainment on jobs and income rising or falling? Are there different trends in returns to education for white and for black men? Is there a greater or lesser tendency for statuses to persist across generations? Have there been changes in the mechanisms by which socioeconomic background affects the achievements of U. S. men? We cannot begin to answer these and other important questions about trends in stratification at the present time, but we are hopeful of doing so as data come in from the 1973 OCG survey.

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Figure 1.--A model of socioeconomic achievement among U. S. men

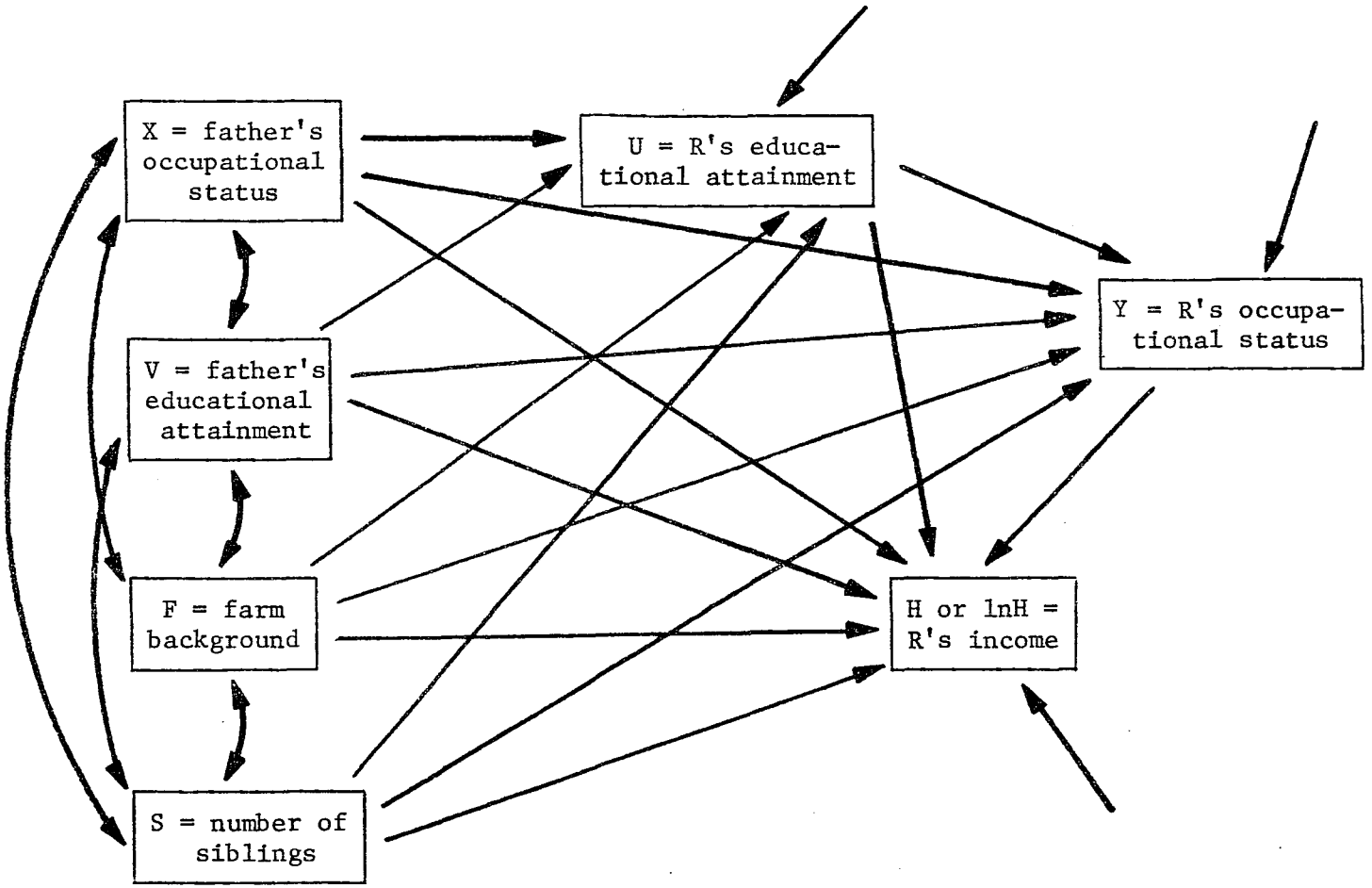

Table 1.--Means of achievement variables at selected ages by race: U. S. men in the experienced civilian labor force, March 1962 and March 1972

	Age 35-44 in		Age 45-54 in		Age 55-64 in	
Variable	1962	1972	1962	1972	1962	1972
Nonblack men						
X	28.63	30.23	26.47	28.63	25.86	26.47
V	7.99	8.73	7.55	7.99	7.40	7.55
F	.2616	.1980	.3017	.2616	.3568	.3017
S	4.11	3.72	4.55	4.11	4.95	4.55
U	11.36	11.98	10.55	11.36	9.65	10.55
Y	40.67	42.94	38.08	40.65	36.93	38.42
H	6873.	8327.	6765.	8214.	5930.	7375.
lnH	8.565	8.821	8.520	8.792	8.303	8.602
Black men						
X	14.79	17.41	16.33	14.79	16.35	16.33
V	6.09	7.06	5.69	6.09	4.00	5.69
F	.3748	.2965	.4398	.3748	.4855	.4398
S	5.31	5.30	6.02	5.31	6.02	6.02
U	8.37	9.70	7.43	8.37	5.68	7.43
Y	19.31	25.16	17.20	22.66	14.73	20.80
H	3118.	5132.	3020.	5093.	2711.	4475.
lnH	7.537	8.367	7.711	8.334	7.522	8.100

Note: Sources are March 1962 and March 1972 Current Population Surveys and March 1962 CPS supplement, "Occupational Changes in a Generation." Variables are X = father's occupational status (Duncan SEI scale), V = father's educational attainment in single years, F = farm background, S = number of siblings, U = educational attainment in single years, Y = occupational status (Duncan scale), H = income (1961 dollars).

Table 2.--Components of intercohort change in educational attainment, occupational status, and income, 1962-1972, by race and age: U. S. men in the experienced civilian labor force

Component	Nonblack				Black			
	U	Y	H	lnH	U	Y	H	lnH
Men aged 35-44								
X, V and F	.25	.52	131.	.0180	.55	.66	-20.	.0256
S	.08	.07	18.	.0039	.00	.00	0.	.0001
U	.29	2.47	141.	.0215	.78	1.76	287.	.1117
Y		-.79	116.	.0193		3.43	181.	.0515
H or lnH			1048.	.1933			1566.	.6411
Total	.62	2.27	1454.	.2560	1.33	5.85	2014.	.8300
Men aged 45-54								
X, V and F	.20	.46	84.	.0091	.24	-.16	43.	.0291
S	.08	.09	7.	.0036	.11	.06	24.	.0087
U	.53	2.80	167.	.0331	.59	1.25	74.	.0253
Y		-.78	203.	.0278		4.31	137.	.0437
H or lnH			988.	.1984			1795.	.5162
Total	.81	2.57	1449.	.2720	.94	5.46	2073.	.6230
Men aged 55-64								
X, V and F	.08	.37	44.	.0166	.30	.21	-84.	-.0684
S	.06	.13	6.	-.0037	.00	.00	0.	.0000
U	.76	2.75	192.	.0444	1.45	2.59	380.	.2082
Y		-1.76	98.	.0179		3.27	130.	.0437
H or lnH			1105.	.2238			1338.	.3945
Total	.90	1.49	1445.	.2990	1.75	6.07	1764.	.5780

Note: Source is Tables 2,3. Variables are X = father's occupational status (Duncan SEI scale), V = father's educational attainment in single years, F = farm background, S = number of siblings, U = educational attainment in single years, Y = occupational status (Duncan scale), H = income (1961 dollars).

Table 3.--Components of black-nonblack differences in educational attainment, occupational status, and income by age: U. S. men in the experienced civilian labor force, March 1962 and March 1972

Component	1962				1972			
	U	Y	H	lnH	U	Y	H	lnH
Men aged 35-44								
X, V and F	.98	2.70	501.	.0296	.88	2.47	454.	.0255
S	.25	.22	54.	.0120	.33	.29	72.	.0158
U	1.76	11.90	681.	.1034	1.07	9.07	519.	.0789
Y		6.54	1090.	.1816		5.95	907.	.1511
H or lnH			1429.	.7014			1243.	.1827
Total	2.99	21.36	3755.	1.0280	2.28	17.78	3195.	.4540
Men aged 45-54								
X, V and F	.88	2.05	398.	.0349	1.05	2.68	553.	.0354
S	.27	.29	23.	.0119	.22	.24	18.	.0097
U	1.97	10.78	644.	.1276	1.72	10.33	617.	.1223
Y		7.76	1650.	.2255		4.74	1421.	.1943
H or lnH			1030.	.4091			512.	.0963
Total	3.12	20.88	3745.	.8090	2.99	17.99	3121.	.4580
Men aged 55-64								
X, V and F	1.23	2.38	148.	.0293	.89	2.42	186.	.0333
S	.16	.35	17.	-.0098	.22	.48	23.	-.0135
U	2.58	12.14	848.	.1957	2.01	9.54	666.	.1538
Y		7.33	1463.	.2664		5.18	1162.	.2114
H or lnH			743.	.2994			863.	.1170
Total	3.97	22.20	3219.	.7810	3.12	17.62	2900.	.5020

Note: Source is Tables 2,3. Variables are X = father's occupational status (Duncan SEI scale), V = father's educational attainment in single years, F = farm background, S = number of siblings, U = educational attainment in single years, Y = occupational status (Duncan scale), H = income (1961 dollars).

Table A.--Standardized regression coefficients in a model of socioeconomic achievement: U. S. men in the experienced civilian labor force by age by race, March 1962

Dependent variable	Predetermined variable						R^2
	X	V	F	S	U	Y	
Nonblack men, 35-44 years old							
U	.234 (.024)	.253 (.022)	-.069 (.021)	-.186 (.020)			.294
Y	.137 (.022)	.015 (.020)	-.056 (.019)	-.022 (.018)	.545 (.020)		.428
H	.087 (.026)	.055 (.024)	-.060 (.022)	-.027 (.022)	.150 (.027)	.245 (.026)	.221
lnH	-.009 (.027)	.013 (.025)	-.111 (.024)	-.030 (.023)	.117 (.029)	.211 (.028)	.130
Nonblack men, 45-54 years old							
U	.269 (.025)	.215 (.023)	-.071 (.023)	-.170 (.021)			.273
Y	.161 (.024)	-.012 (.022)	-.043 (.021)	-.026 (.021)	.504 (.022)		.376
H	.153 (.027)	-.012 (.024)	-.002 (.024)	-.009 (.022)	.126 (.028)	.331 (.026)	.254
lnH	.024 (.028)	.008 (.025)	-.072 (.025)	-.027 (.023)	.151 (.029)	.274 (.027)	.189
Nonblack men, 55-64 years old							
U	.214 (.033)	.255 (.030)	-.049 (.030)	-.133 (.027)			.232
Y	.136 (.031)	.011 (.029)	-.095 (.028)	-.043 (.026)	.463 (.028)		.346
H	.046 (.035)	-.012 (.032)	-.066 (.031)	-.010 (.028)	.153 (.034)	.312 (.033)	.214
lnH	-.013 (.036)	-.003 (.033)	-.125 (.032)	.024 (.029)	.151 (.035)	.243 (.034)	.152

Continued

Table A.--Continued

Dependent variable	Predetermined variable X	V	F	S	U	Y	R^2
Black men, 35-44 years old							
U	.163 (.073)	.186 (.073)	-.292 (.070)	-.090 (.069)			.218
Y	.043 (.076)	.069 (.076)	-.075 (.076)	-.077 (.072)	.331 (.079)		.182
H	-.049 (.076)	-.005 (.076)	-.033 (.076)	-.008 (.071)	.327 (.083)	.188 (.077)	.194
lnH	-.010 (.080)	.072 (.080)	.005 (.080)	-.023 (.076)	.220 (.088)	.093 (.082)	.090
Black men, 45-54 years old							
U	-.043 (.086)	.308 (.086)	-.187 (.088)	-.145 (.083)			.195
Y	.046 (.090)	-.021 (.094)	.021 (.093)	-.021 (.087)	.361 (.092)		.130
H	.032 (.088)	.126 (.091)	-.106 (.091)	-.065 (.085)	.160 (.096)	.186 (.087)	.174
lnH	.018 (.090)	.164 (.093)	-.131 (.093)	-.049 (.087)	.113 (.098)	.124 (.089)	.139
Black men, 55-64 years old							
U	.353 (.105)	.161 (.098)	-.084 (.099)	.030 (.096)			.208
Y	-.005 (.113)	.042 (.102)	.035 (.101)	.019 (.098)	.423 (.107)		.184
H	-.009 (.108)	-.110 (.097)	-.063 (.096)	-.133 (.093)	.425 (.110)	.146 (.100)	.273
lnH	-.044 (.111)	-.164 (.099)	-.080 (.099)	-.087 (.096)	.432 (.113)	.092 (.103)	.232

Note: Source is March 1962 Current Population Survey and the supplement, "Occupational Changes in a Generation." Variables are X = father's occupational status, V = father's educational attainment, F = farm background, S = number of siblings, U = educational attainment, Y = occupational status in March 1962, H = 1961 income. Coefficients in parenthesis are approximate standard errors.

Table B.--Regression coefficients in a model of socioeconomic achievement: U. S. men in the experienced civilian labor force by age by race, March 1962

Dependent variable	Predetermined variable						Constant
	X	V	F	S	U	Y	
Nonblack men, 35-44 years old							
U	.03637	.2185	-.5322	-.2068			9.564
Y	.1563	.094	-3.126	-.1808	3.979		-8.215
H	20.61	71.77	-704.91	-45.37	227.78	51.01	1416.80
lnH	-.0004	.0034	-.2531	-.0100	.0346	.0085	7.916
Nonblack men, 45-54 years old							
U	.04526	.1887	-.5356	-.1869			8.936
Y	.1853	-.072	-2.215	-.1992	3.455		-1.150
H	42.11	-17.66	-30.50	-15.51	206.52	79.00	677.23
lnH	.0011	.0019	-.1467	-.0081	.0409	.0108	7.715
Nonblack men, 55-64 years old							
U	.03844	.2390	-.3770	-.1527			7.773
Y	.1608	.068	-4.820	-.3260	3.058		6.107
H	11.53	-15.41	-706.31	-15.53	213.54	65.92	1580.31
lnH	-.0008	-.0010	-.3132	.0092	.0493	.0120	7.478

Continued

Table B.--Continued

Dependent variable	Predetermined variable						Constant
	X	V	F	S	U	Y	
Black men, 35-44 years old							
U	.05866	.2111	-2.431	-.0998			7.654
Y	.0620	.312	-2.492	-.3402	1.325		8.136
H	-11.52	-3.60	-179.99	-6.07	215.42	30.91	1011.24
lnH	-.0013	.0312	.0162	-.0097	.0840	.0088	6.539
Black men, 45-54 years old							
U	-.01417	.3072	-1.443	-.1509			7.460
Y	.0558	-.077	.592	-.0798	1.325		7.101
H	5.20	62.19	-407.18	-33.28	79.24	25.05	1940.81
lnH	.0014	.0390	-.2410	-.0123	.0269	.0080	7.307
Black men, 55-64 years old							
U	.10458	.1601	-.6223	.0286			3.456
Y	-.0054	.147	.895	.0637	1.479		5.012
H	-1.29	-56.23	-239.85	-64.02	217.35	21.39	1910.61
lnH	-.0036	-.0449	-.1626	-.0225	.1190	.0072	7.192

Note: Source is March 1962 Current Population Survey and the supplement, "Occupational Changes in a Generation." Variables are X = father's occupational status, V = father's educational attainment, F = farm background, S = number of siblings, U = educational attainment, Y = occupational status in March 1962, H = 1961 income.