

INHERITANCE: OF POVERTY, OR OF RACE? UPDATE OF DUNCAN'S ANALYSIS**Marilyn Butler, Duke University****THE OBJECTIVE**

In the past decade there have been several attempts to reduce the numbers of poor people in the United States, and to break the cycle of poverty. Billions have been spent on anti-poverty programs such as *Head Start*, the *Job Corps*, housing subsidies and aid to the elderly. The *War on Poverty* included a plan for every stage of the "vicious circle" of poverty. But in 1970, those below the poverty level still comprised 12.6 percent of the population, as opposed to 22.4 percent in 1960. Of those, in 1970, 32 percent were non-white. The racial imbalance is striking when viewed against the background of civil rights activities of the 1960's and early 1970's. This period was marked by race riots and non-violent protests, Black Pride and Black Power groups, civil rights legislation, continued efforts to end racial segregation in schools, quota hiring, and minority recruitment to colleges. These were all efforts to alleviate the effects of a century of racial discrimination. But have things changed? Does discrimination currently have as great an impact on life chances as in 1960?

Using 1962 data, Duncan (1968) formulated a model of white-nonwhite life cycles which enabled him to specify differences in income due to discrimination. This is a replication of the Duncan study, using 1972-1975 data, to determine what changes have occurred in the amount of income differences which he attributed to discrimination. Duncan questions the validity of the phrase, *cycle of poverty* to describe the national poverty situation. The idea that people inherit ways of living including inadequate education, housing, job opportunities and knowledge about how to succeed in the socioeconomic mainstream has been popular, particularly among federal government agencies. The *Economic Opportunity Act of 1964* and the Economic Reports for 1965, 1966, and 1967 all refer to this concept. But Duncan asserts that the term *the poor* is a euphemism for "negroes", and that their poverty stems largely not from the legacy of poverty but from the legacy of race (Duncan 1968 87). This should be interpreted not as a denial of the existence of a cycle of

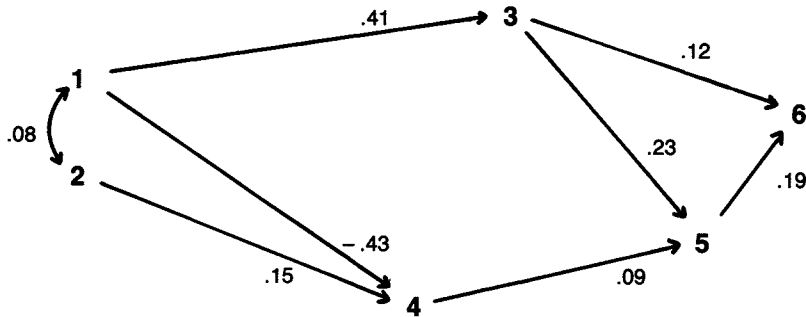
poverty, but rather as an assertion of the existence of the greater influence of race. My purpose is to determine whether Duncan's conclusions apply now as in 1962, in an attempt to identify the magnitude of black gains or losses.

The current literature gives conflicting answers to the question of gains or losses because researchers use widely diverse methods of measurement. One study using the *Gini Index and Delta*, an index of dissimilarity, concludes that blacks increased their socioeconomic status at a faster rate than whites from 1960-1970 (Farley, Mermalin 1972). Intercohort path analysis is said to indicate that educational, occupational and income differences between blacks and whites have been substantially reduced, though large residues of discrimination remain (Hauser, Featherman 1974). A new measure, the *Equality Index* to gauge changes in selected areas over time is said to indicate substantial progress (Palmore, Whittington 1970). Another new measure, the *Distributional Fairness Index* indicates that there have been only slight gains for blacks which are matched by similar gains for whites, leaving the situation only slightly altered (Villemez, Rowe 1975 191).

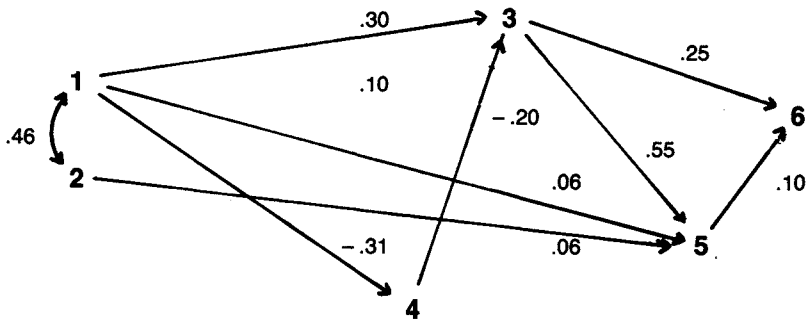
Duncan (1968) developed a socioeconomic life cycle model which consists of two measures of family background, 1) educational attainment of the head, and 2) the occupational status of the head of the family of orientation. Other variables include number of siblings, educational attainment of the respondent, occupational status, and current monthly income of the respondent. Each of these factors depends on the two measures of family background. Path analysis of these variables determines the degree of dependence and takes into account some indirect effects on the dependent variable, the respondent's personal income. To eliminate all except racial influences on income, Duncan sets the degree of dependence of all the above factors equal for blacks and whites. Holding all other factors constant, the income of blacks is little over half that of whites, which Duncan calls *the estimate of income*

FIGURE 1: PATH DIAGRAMS* FOR NORC DEMOGRAPHIC DATA; INCOME ANTECEDENTS PERIOD: 1972-1975, INCLUSIVE

Blacks:



White



*Path coefficient omitted if under 1.96 standard errors.
 Variables: 1 Parent's education 4 Number of siblings
 2 Parent's occupation 5 Respondent's occupation
 3 Respondent's education 6 Respondent's income

discrimination. Specifically, it is the difference between negro and white incomes that cannot be attributed to differential occupational levels, differential educational attainment, differences in size of family of orientation, or differences in the socioeconomic status (Duncan 1968 108).

DATA

The earlier research used data collected for Duncan by the U.S. Bureau of the Census in 1962, for the study of *Occupational Changes in a Generation*. The current study uses the general Social Survey data collected for NORC by James Davis by year for the period 1972-1975 inclusive. The sample includes

1258 white males and 118 black males aged 18 or more who were in the labor force with a non-farm background. The age structure for the Duncan data was for men aged 25-64. The NORC data included only *family income* rather than *personal income*, and because family income was originally coded only in large categories, each person was assigned the median for their category. Since the highest income category had no upper limit, the mean income of those families with \$30,000 or more (1973-1975) or \$25,000 or over (1972) was estimated from *Current Population Reports*.

Duncan used his own *Socioeconomic Index* (SEI) whereas I have used the Siegel-Hodge-

Rossi (1970) index. Because the SEI is derived from the average income and education for each occupation, there is a built-in correlation between that measure and the actual income and education of the individual. Thus, the Siegel-Hodge-Rossi Index is more appropriate to this problem than is Duncan's index. The correlation between these two indexes is .90 (Hall 1975).

RESULTS

A path diagram is a very readable method of presenting data because it requires very little interpretation in the text. Path coefficients are standardized partial regression coefficients, called "standardized betas" with the direction of effect indicated by an arrow connecting a pair of variables, as shown in Figure 1. The set of variables has the same data base. Meaningful comparisons cannot be made between the standardized path coefficients for the two studies. For comparison, the unstandardized partial regression coefficients must be used (Blalock 1971). And comparisons can be made only between the equivalent paths between two diagrams.

In the path diagram of Figure 1, each path, designated by a straight arrow signifies a directed causal relation, and indirect causal relations can also be determined by multiplying the path coefficients only in a forward direction for any linked sequence of variables.

The path coefficients for education to occupation to income, linking variables 3, 5, and 6 are dissimilar for blacks and whites, the products are nearly equal: $.23 \times .19 = .04$ for blacks; and $.55 \times .10 = .05$ for whites. The whites are more successful in turning education into occupational status than blacks, but the compound outcome is similar. Of course the blacks are under a great disadvantage in terms of average income level.

Analysis of the unstandardized coefficients shows that blacks are now better able to translate education into occupation, and occupation into income than they were at the time of Duncan's analysis. Education to income has increased from an unstandardized beta coefficient of .12 for Duncan to .46, in this study, and education to occupation has increased from 1.83 in Duncan's analysis to 4.13 for the 1972-1975 period.

The most significant change lies in the path

to education to income for whites. Not only do whites have a greater advantage in translating education into income than do blacks, but this advantage has increased tremendously since the time of Duncan's study. Sampling error may account for part of the differences, thought it must be recalled that the NORC income measure is of poorer quality, which should attenuate the correlation.

INCOME DIFFERENCE BY RACE

A primary problem is to determine the changes that have occurred in the amount of income difference which Duncan attributed to racial discrimination. Using the current data, the method is as follows: Compute the regression of income for whites on the two background variables, *Parent's education* and *Parent's occupation* as the independent variables in the regression equation for whites. The resulting figure, \$14,337 shown in Table 1 is the estimate of income that whites would have if their family background scores were equal to those of blacks. To calculate the next income estimate, compute the regression of income for whites on the two background variables and number of siblings. Substitute the means for blacks on these three variables into the regression equation for whites. This yields the estimated income for whites of \$13,553. Repeating this procedure for family background, number of siblings and education results in the figure of \$12,986 for the white income estimate. The last calculation, when using the previous variables and occupation yields an income estimate of \$12,632 for whites.

If there are no differences in any of the variables between blacks and whites, then the mean income of whites should equal that of blacks. As Table 1 shows, this is not the case. Even after the introduction of all of the variables into the equation, there is still a gap of \$1,281. The initial mean income for white families is \$15,385 and of black families, \$11,351. Of the actual income gap, of \$4,034 \$1,281, or 32 percent of it cannot be accounted for in terms of unequal education attainment, occupational status, number of siblings, or family background. I thus must conclude, as did Duncan, that a large portion of the revealed income gap is due to racial discrimination. Compared with Duncan's

TABLE 1: INCOME DIFFERENCES SCALED BY INFLUENCE OF CAUSAL VARIABLES

Mean Limits	1962 DATA*		1972-1975 DATA		Causal variables
	Personal income	Difference	Family income	Difference	
White Mean	\$ 7,070		\$15,385		
		\$ 940		\$ 1,048	Parent's education, occupation
	\$ 6,130		\$14,337		
		\$ 70		\$ 784	Number of siblings
	\$ 6,060		\$13,553		
		\$ 520		\$ 567	Respondent's education
\$ 5,540	\$12,986				
		\$ 830		\$ 354	Respondent's occupation
	\$ 4,710		\$12,632		
		\$ 1,430		\$ 1,281	Assumed racial discrimination
Black mean	\$ 3,280		\$11,351		
Total difference		\$ 3,790		\$ 4,034	White minus black mean

*Adapted: Duncan (1968) Tables 3,4.

findings, the 1972-1975 gap between black and white incomes is larger than the 1962 gap (\$4,034 vs \$3,790). But the portion due to discrimination has reduced from 37 percent in 1962 to 32 percent for 1972-1975.

The appropriate narrowing of the gap due to discrimination results in a concomitant widening of that part of the gap attributable to the variables used in this model. Examination of the dollar amounts generated by the individual component variables reveals that a greater part of the mean income gap of \$4,034 can be accounted for by the ascribed variables of family background as indicated by parent's education and income and the family size, as indicated by number of siblings, than by the achieved variables of respondent's education and occupation. This was not the case in Duncan's analysis. A spectacular increase has occurred in the dollar amount assignable to number of siblings (from \$70 to \$784) with a decrease in the amount due to occupation (from \$830 to \$345). The achieved variable of occupation, over which the individual has some control is now less a handicap than it appeared a decade ago. But this progress has occurred in conjunction with a great increase in the influence of variables which are beyond his reach in the past of his family of orientation. More of the income gap is due to inherited factors when was the case ten years ago. Over 75 percent of the difference between the mean income of blacks and whites is attributable to inheritance and discrimination which probably renders the black person powerless to overcome the handicaps ascribed at birth.

CONCLUSION

Indeed, the inheritance of race seems stronger than the inheritance of poverty, as Duncan's thesis suggests. This is evidenced by the income differential attributed to the ascribed factors. Further research could isolate other variables which contribute to income difference. A current study suggests a possible interpretation variable between the ascribed factors and the income difference they cause (Erbe 1975).

Research incorporating neighborhood composition in the analysis may go beyond the current analysis by indicating the nature of the discrimination process.

REFERENCES

- Blalock H 1971 Causal inferences, closed populations and measures of association. 139-151 *Causal Models in Social Sciences* Chicago. Aldine
- Davis James, Kathleen Schwartzman 1972 General social survey National Data Program for Social Sciences. Chicago. National Opinion Research Center
- Davis James 1973, 1974, 1975 General social survey, National Data Program for Social Sciences. National Opinion Res. Ctr
- Duncan Otis D 1968 Interference of poverty or inheritance of race? 85-110 *On Understanding Poverty*, ed. D P Moynihan. NY. Basic Books
- Erbe Brigitte Mach 1975 Race and socioeconomic segregation. *Amer Sociol Rev* 40 801-812
- Farley R, A Hermalin 1972 The 1960's: a decade of progress for blacks? *Demography* 9 353-370
- Hall R 1975 *Occupations and Social Structure*. Englewood Cliffs. Prentice Hall
- Hauser R, D Featherman 1974 Socioecon. achievements, U.S. men, 1962-1972. *Sci* 185 325-331
- Palmore E, F Whittington 1970 Diff. trends to equality; whites, nonwhites. *Social Forces* 49 108-117
- Siegel P 1970 American occupational prestige structure. Doctoral thesis. Chicago Univ
- Villemez W A Rowe 1975 Black economic gains in 60's; method. critique *Soc Forces* 54 181-193