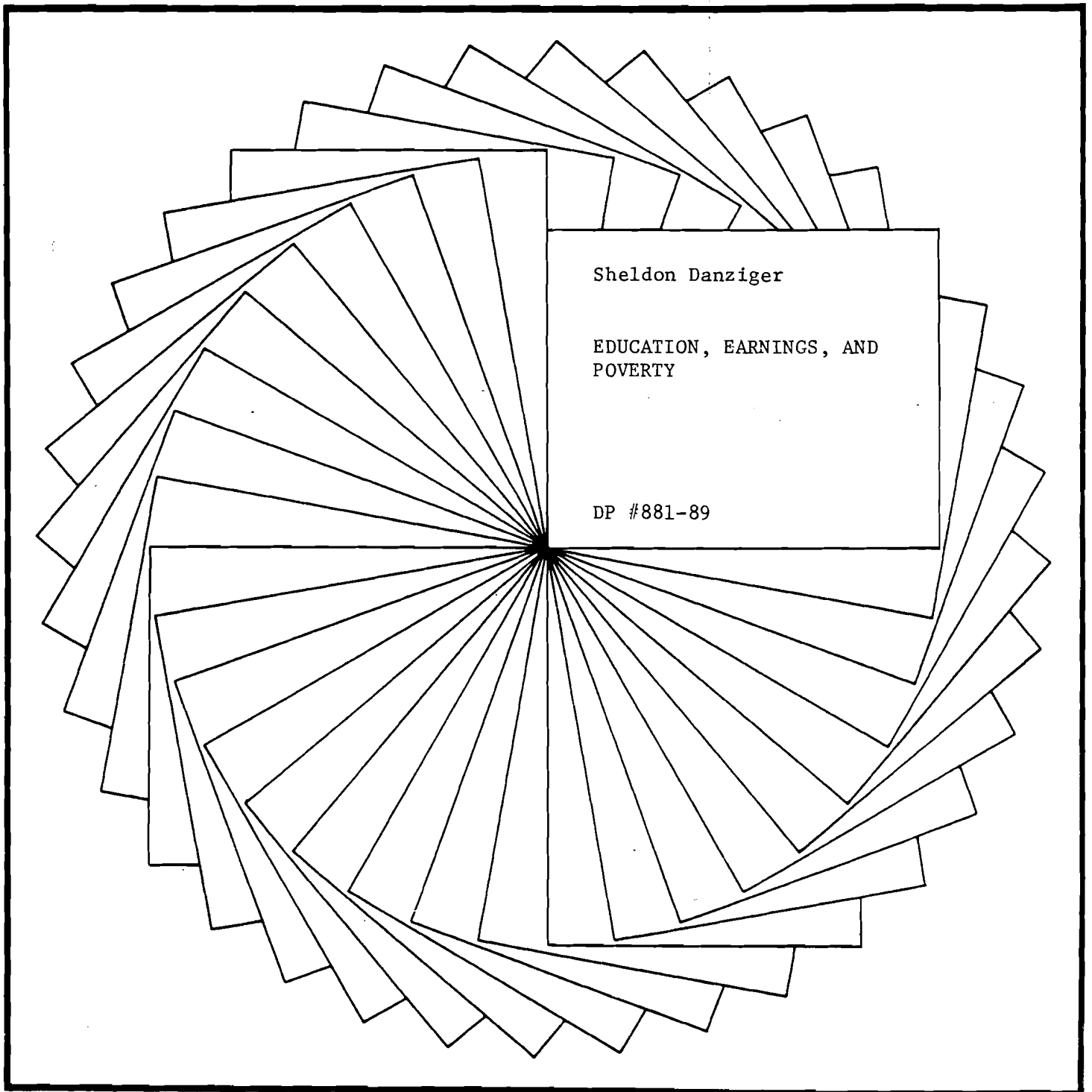

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Sheldon Danziger

EDUCATION, EARNINGS, AND
POVERTY

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EDUCATION, EARNINGS, AND POVERTY

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Abstract

Over the past forty years the rising educational attainment of the population has been a significant factor in the historical trend toward higher earnings and lower poverty rates. In recent years, however, the levels of individual earnings and family income have stagnated and poverty rates have risen, especially for the young, at all educational levels. This paper examines the relationship between an individual's educational attainment and his or her ability to earn enough to support a family (as measured by the poverty line for a four-person family) over the decades from 1949 to 1986. It concludes that policies to enhance human capital through investments in health and education are necessary but not sufficient to significantly raise the earnings of many individuals. Additional policy changes are needed to alleviate current hardship by supplementing the incomes of low earners. Such strategies will also have a human-capital-enhancing effect by making it easier for children in low-income families to remain in school. Policy interventions proposed include an expanded Earned Income Tax Credit, a refundable Dependent Care Credit, and child support reforms.

EDUCATION, EARNINGS, AND POVERTY

In any year, individuals who have completed a greater number of years of schooling are likely to have higher earnings rates and lower rates of unemployment and poverty than those who have less education. Over the past 40 years, the rising educational attainment of the population has been a significant factor in the historical trend toward lower poverty rates. As a result, policies that enhance basic skills and increase educational attainment, for example, by reducing the high school dropout rate, have a continuing role to play in antipoverty policy.

In recent years, however, the levels of individual earnings and family income have stagnated and poverty rates have risen, especially for the young, in all education categories. This experience stands in sharp contrast to that of the two post-World War II decades, when living standards increased rapidly and poverty rates fell for all demographic groups. The poverty rate increases have been greatest for those who have not completed any schooling beyond high school. Those who have a high school diploma are still much less likely to be poor than those who do not. But a high school diploma no longer protects against low earnings to the extent it did twenty years ago.

One implication of this disturbing trend is that raising the human capital of the poor is now a less effective antipoverty strategy than it was in the past. Policies that enhance human capital through investments in health and education are thus necessary, but they are not sufficient to significantly raise earnings and reduce the current high poverty rates of many demographic groups. Additional policy

interventions, such as an expanded Earned Income Tax Credit, a refundable Dependent Care Credit, and child support reforms are also needed to supplement low family incomes.

In the next section, I briefly review the history of antipoverty policy in the period since 1965. Then I present some original tabulations from the Censuses of 1950 through 1980 and the March 1987 Current Population Survey that show how the relationships among earnings, poverty, and educational attainment have changed over time for persons categorized by age, race, and gender. The final section offers some antipoverty policies that are consistent with both the policy history and the empirical trends.

I. A BRIEF HISTORY OF ANTIPOVERTY POLICY

Twenty-five years ago, in his first State of the Union address, President Johnson declared "unconditional" War on Poverty. Shortly thereafter, he transmitted to Congress the Economic Report of the President (U.S. Council of Economic Advisers, 1964), which presented the conceptual foundation on which the War on Poverty was based and outlined a set of antipoverty initiatives. Included in this broad range of policies were maintenance of full employment, acceleration of economic growth, reduction of discrimination, improvements in regional economies, rehabilitation of urban and rural communities, improvements in labor market functioning, expansion of educational opportunities, enlargement of job opportunities for youth, improved health, promotion of adult education and training, and assistance for the aged and disabled. The

report recognized the complexity of the poverty problem and cautioned that no single program could meet the needs of all of the poor.

The primary focus of the attack on poverty was to help the young achieve better employment opportunities and higher earnings. Policies to foster full employment and economic growth would increase demand for the labor of the poor, while education and training programs would increase the quantity and quality of the labor the poor supplied. The poor would then escape poverty in the same manner as the nonpoor-- through the private labor market.

This emphasis on the provision of opportunity rather than on the direct provision of public jobs or income maintenance benefits was reflected in Johnson's remarks of August 1964 when he signed the Economic Opportunity Act:

We are not content to accept the endless growth of relief rolls or welfare rolls. We want to offer the forgotten fifth of our people opportunity and not doles (Johnson, 1965, p. 988).

This optimistic vision that poverty could be virtually eliminated within a generation through informed policies (Lampman, 1971) seemed to be borne out as the official poverty rate for all persons declined from 17.3 percent in 1965 to 11.1 percent in 1973. Optimism faded, however, after the 1973 oil price shock, as economic growth and productivity lagged and consumer prices and unemployment rates increased. The official poverty rate changed little during the rest of the 1970s and jumped after the next oil price shock to 13.0 percent in 1980.

By 1981, the presidential perspective was one of pessimism. Government policies in general and antipoverty policies in particular were blamed for what now seemed to be intractable poverty. According to President Reagan,

In 1964, the famous War on Poverty was declared. And a funny thing happened. Poverty, as measured by dependency, stopped shrinking and then actually began to grow worse. I guess you could say, "Poverty won the war." Poverty won, in part, because instead of helping the poor, government programs ruptured the bonds holding poor families together (radio address, February 15, 1986).

The "Reagan Experiment" cut taxes for the well-to-do and cut social spending for the poor on the assumption that if government did not intervene, productivity and economic growth would increase and prices, unemployment rates, and poverty would fall. In 1989, six years into a sustained economic recovery, the experiment appears to be a success from a macroeconomic perspective, but a distributional failure. In addition to its atypical length, this recovery has had atypical distributional effects--poverty and income inequality in 1989 are higher than in 1979, the previous business cycle peak. Although poverty has fallen somewhat from its peak of 15.2 percent in 1983, the 1989 rate, about 13 percent, exceeds the 11.7 percent rate of 1979. And the rates for minority children, white children living in single-parent families, the minority elderly, elderly white widows, and those without a high school diploma all exceed 20 percent.

This distributional experience--that poverty declined less during the recovery than it rose during the recession--demonstrates that a growing economy is necessary, but not sufficient, to reduce poverty. The concern that antipoverty policies would be needed even during

periods of economic growth is not a new one, as it was made by the Council of Economic Advisers when the War on Poverty was declared. Indeed, this recovery's modest antipoverty effect can be viewed as the outcome of a "natural experiment" that rejects the Reagan-era view that explicit antipoverty policies need not be emphasized or expanded in a growing economy.

The Bush administration, in advocating a "kinder and gentler" nation, has implicitly rejected the view that antipoverty policies are responsible for the continuing high poverty rate and therefore cannot contribute to its solution. The juxtaposition of a robust economic recovery with the hardships of the poor, the medically uninsured, inner-city residents, and especially the homeless has shifted public opinion to favor increased government intervention. And concerns about foreign competition and the private sector's needs for a better-educated work force have produced numerous reports from the business and philanthropic communities that advocate increased government support for human capital investment strategies to raise productivity and living standards (see, for example, Committee for Economic Development, 1987; W. T. Grant Foundation, 1988).

There is now a consensus among the public and policymakers that government must initiate or expand policies to aid the poor in a number of areas that were targets of the Reagan budgetary retrenchment, particularly child health and nutrition programs and federal aid to education. This consensus was reflected in the Tax Reform Act of 1986 and the Family Support Act of 1988. Both bills garnered bipartisan support and targeted substantial additional resources on poor families with children.

It is clear that twenty-five years after the War on Poverty was declared, attention and resources must be readdressed to the problems of poverty. It is also clear that the initial motivation of the War on Poverty was correct--no single program or policy can deal with this multifaceted problem. Both increased income supplements, such as those discussed below, and a variety of human capital investment strategies will be needed to alleviate poverty and address its causes for the able-bodied. What James Tobin stated in 1965 remains true today:

In the national campaign to conquer poverty there are two basic strategies.... The structural strategy is to build up the capacities of the poorest fifth of the population to earn decent incomes. The distributive strategy is to assure every family a decent standard of living regardless of its earning capacity. In my opinion both strategies are essential; correctly designed, they are more complementary than competitive (p.31).

II. THE IMPACT OF EDUCATIONAL ATTAINMENT ON POVERTY

Conventional wisdom about the ability of increased education and training to reduce poverty mirrors the same pattern from optimism to pessimism, and now, hopefully, to realism. According to Henry Aaron (1978), the view of education's impact on income and poverty changed

from its high point in the early 1960s as an all-powerful transformer of economic potential to its low point in the early 1970s as an ineffective instrument that had few, if any, predictable consequences (p.65).

In a recent review of the literature on the antipoverty impacts of targeted education and training programs, on which the federal government spent almost \$300 billion (1986 dollars) between 1963 and 1985, Isabel Sawhill (1988b) concluded that

Overall, the results from investing in the human capital of the poor present a mixed record. Certainly not everything that has been tried has been successful, although there are programs that appear to have worked.... Thus, both the skeptic and the true believer can find support for their positions (pp. 1096-97).

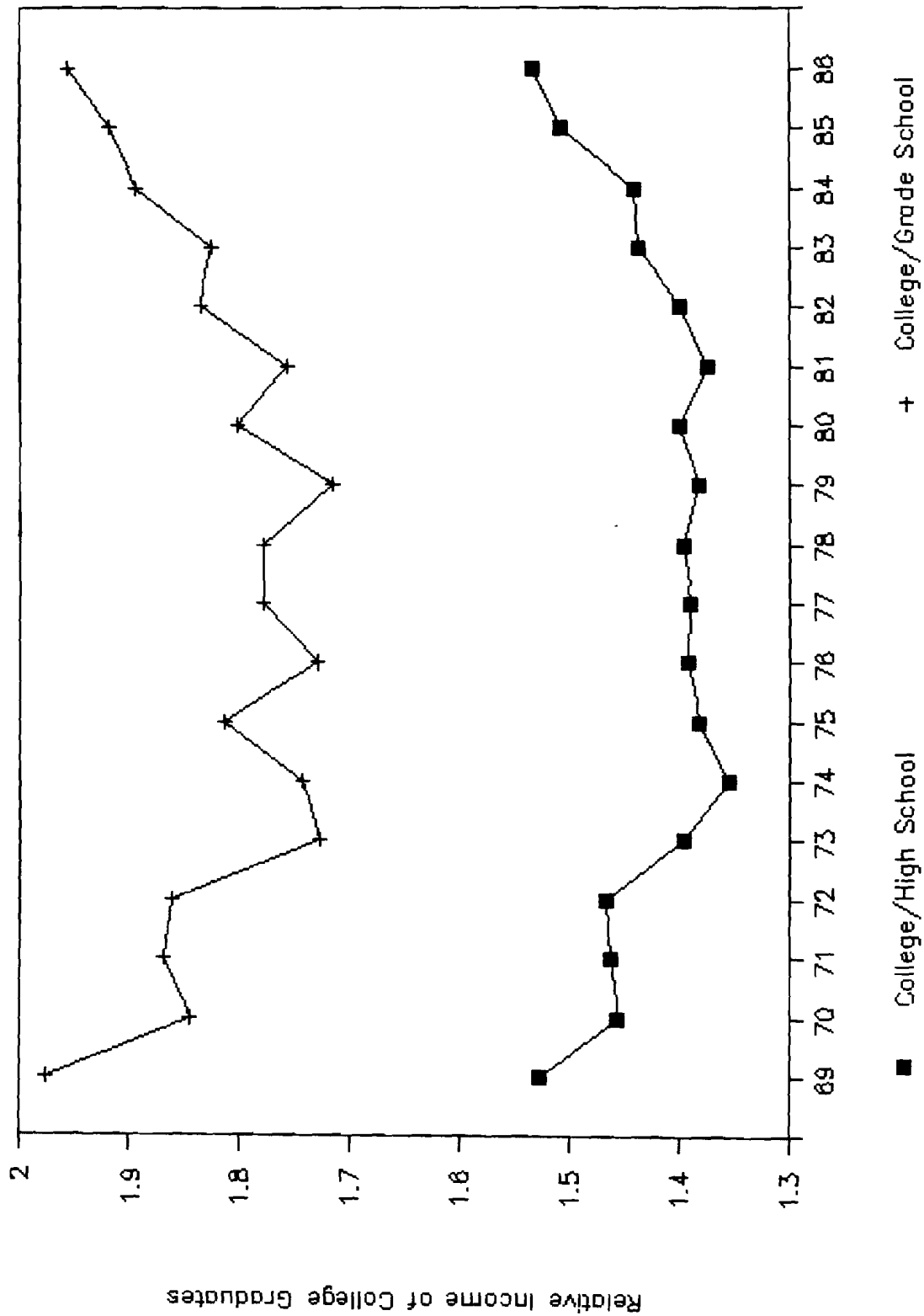
Sawhill estimates that poverty for all persons in 1985 would have been from 0.4 to 2.2 percentage points above the actual rate of 14.0 percent in the absence of this spending.

Today conventional views on the importance of education and the economic returns to education are remarkably different from those of the mid-1970s. In 1976, Richard Freeman, alarmed by the "sudden collapse" in the job market for the college-educated, wrote The Overeducated American (1976). Freeman wrote at a time when the "college premium," the difference between the average wages of a high school and a college graduate had been falling for five years. Then, it seemed that a high school degree was sufficient to escape poverty and that investment in college education produced minimal monetary returns.

The figure shows the college premium dropping substantially from 1969 to 1974. Among all men in 1969, college graduates earned 53% more than high school graduates and 99% more than grade school graduates; in 1974, the premiums stood at 35% and 74% respectively....[p.13] The sharp decline in the college income premium was not anticipated by conventional economists....[p.14] Overall, the period of severe "overeducation" is likely to last for about a decade, to be followed by a period of market balance at a lower plateau....[p.188] Income distribution is likely to become more egalitarian as a result of the relative surplus of the educated [p.189].

Figure 1 extends Freeman's data forward from 1974 to 1986 and shows that not only was the 1969-1974 decline in the premium not anticipated, but that the subsequent experience was not anticipated by

Figure 1. Income of Full-Time Employed Males
by Education, Ages > 25



Freeman. The top graph shows the ratio of annual income for college graduates relative to that of grade school graduates; the bottom, the income ratio for college relative to high school graduates. These premia stopped declining after 1974 (coincidentally, the last year of data available when Freeman was writing his book) and then jumped dramatically in the 1980s. By 1986, they were almost identical to those in 1969--college-educated men earned 53 percent more than high-school educated men and 96 percent more than grade-school educated men. And income inequality has also increased dramatically, both because of the greater differences in earnings between men in different education classes and because inequality increased within most education classes.

Today, public and academic discussions are focused on the "undereducated" American and the large and growing gap between the incomes of the less- and more-educated (see, for example, Blackburn, Bloom, and Freeman, 1989, and Murphy and Welch, 1989). I now turn to a review of the evidence that emphasizes the relationships among educational attainment, earnings, and poverty.

Measuring Poverty

The official poverty concept is a function both of family income and of family size. In 1986, the poverty line varied from \$5701 for a nonelderly single person, to \$11,203 for a family of four, to \$22,497 for a family of nine or more. A family of a given size is counted as poor if its cash income from all sources during a calendar year falls below its poverty line. Income, summed over all related persons in the family, includes wages and salaries, net income from self-employment, social security, and other social insurance benefits, cash welfare

benefits, interest, dividends, net rental income, private pensions, child support, alimony, etc.

The official poverty measure does not include capital gains, imputed rents, noncash government or private benefits (e.g., food stamps, housing subsidies, Medicare benefits, employer-provided health insurance). Nor does it subtract taxes, although all of these omitted items affect a family's living standard. The U.S. Bureau of the Census (1988) has published data on poverty rates for the period since 1979 that reflect these more comprehensive sources of income. They show less poverty in any year than the official measure, but similar trends over time, and similar differences for persons classified by education, race, or gender. Because I focus on the past 40 years, I am not able to account for noncash income in the empirical work that follows.

The official poverty lines are updated yearly to account for changes in the Consumer Price Index so that they represent the same purchasing power each year. In its publications, the Census Bureau has extended the lines forward from the mid-1960s when the current definition was adopted and backward to 1959. In this paper, I extend the official lines back to 1949 in the same manner (see Ross, Danziger and Smolensky, 1987, for a discussion). The poverty line in current dollars for a family of four was \$2417 in 1949, \$2955 in 1959, \$3714 in 1969, \$7355 in 1979 and \$11,203 in 1986.

Because real family income grew rapidly between 1949 and 1969, the poverty line, which is adjusted only for price changes, fell relative to average family incomes. However, because family income has not grown much faster than prices since 1969, the poverty line as a fraction of family income has remained roughly constant. In 1949 the poverty line

for a family of four was about 80 percent of the mean of family income for all households, whereas in 1986 it was about 40 percent of the mean.¹

The Low Earnings Concept

Because the most direct impact of education is on earned income, I begin my analysis with a measure of "low earnings" that compares an individual's own earned income (the sum of wages and salaries and self-employment income) to a fixed real amount--the official poverty line in a given year for a family of four.² A person with low earnings does not earn enough to keep a family of four out of poverty. While most of those with low earnings are among the "working poor," some do not work at all, and others work only sporadically during the year. In other words, some low earners work full time, full year, but at a low wage rate, while others earn a "good wage rate," but work too few hours to earn more than the poverty line because of voluntary or involuntary unemployment.³ In addition, a low earner may not be poor, as officially measured, if her or his family size is less than four and/or there are other earners in the family and/or the family has sufficient amounts of income from other sources.⁴ Likewise, some persons who are not low earners, that is, those who earned more than \$11,203 in 1986, may be counted among the official poverty population if they live in families of more than four persons.

In the next section, I focus on all males between the ages of 25 and 54. They are most attached to the labor force and are the group for whom the relationship between education and earnings should be most evident. These men are classified into fifteen mutually exclusive

groups--three race-ethnic groups classified by five categories of educational attainment. After examining the incidence of low earnings and the official poverty rate for these men, I turn to the data for women in this age group.

The Relationship between Education and Low Earnings among Men

Table 1 shows the educational attainment of white non-Hispanic, black non-Hispanic and Hispanic men in 1949, 1959, 1969, 1979, and 1986. For each group, there has been a dramatic increase in educational attainment over time. In 1949, about 38.4 percent of whites, 71.0 percent of blacks, and 68.4 percent of Hispanics had completed no more than eight years of schooling, by far the largest category. By 1986, these percentages had fallen to 4.2, 7.1, and 28.9 percent, respectively. While majority-minority differences in attainment have narrowed, they remain substantial--in 1986, 12.4, 24.1, and 43.4 percent of white, black and Hispanic men, respectively, had not completed high school.

The percentage of men with advanced education has also increased dramatically. High school graduates were the modal category for whites by 1959, for blacks by 1979, and for Hispanics by 1986. In 1986, 29.7 percent of whites, 13.2 percent of blacks, and 10.4 percent of Hispanics were college graduates.

Table 2 shows the percentage of men in each of the fifteen categories whose earnings were below the poverty line for a family of four in the selected years between 1949 and 1986. In every year and for each of the three groups, those with more education are much less likely to have low earnings than those with less education. Figure 2 shows the

Table 1

Educational Attainment of Men, Ages 25-54, 1949-1986

	<u>Percentage of Men by Completed Years of Schooling</u>				
	0-8	9-11	12	13-15	16+
<hr/>					
White Non-Hispanic					
1949	38.4%	20.4%	23.3%	8.8%	9.2%
1959	27.2	21.2	28.2	10.7	12.7
1969	16.1	18.1	34.4	13.2	18.2
1979	8.1	11.1	35.2	19.6	26.1
1986	4.2	8.2	38.0	20.0	29.7
Black Non-Hispanic					
1949	71.0%	15.0%	8.5%	3.4%	2.1%
1959	56.2	20.7	14.4	5.2	3.5
1969	35.0	26.3	26.2	7.2	5.3
1979	16.1	20.7	35.2	17.4	10.6
1986	7.1	17.0	43.9	18.8	13.2
Hispanic					
1949	68.4%	14.6%	10.7%	3.5%	2.9%
1959	61.0	17.1	13.3	5.5	3.1
1969	44.7	19.9	22.1	9.1	4.2
1979	36.3	15.2	24.3	16.3	8.0
1986	28.9	14.5	30.4	15.9	10.4

Source: Computations by author from computer tapes of the 1950-1980 Censuses of Population and the March 1987 Current Population Survey.

Note: Totals may not add to 100.0 owing to rounding.

Table 2

Men, Ages 25-54, with Low Earnings by Educational Attainment,
1949-1986

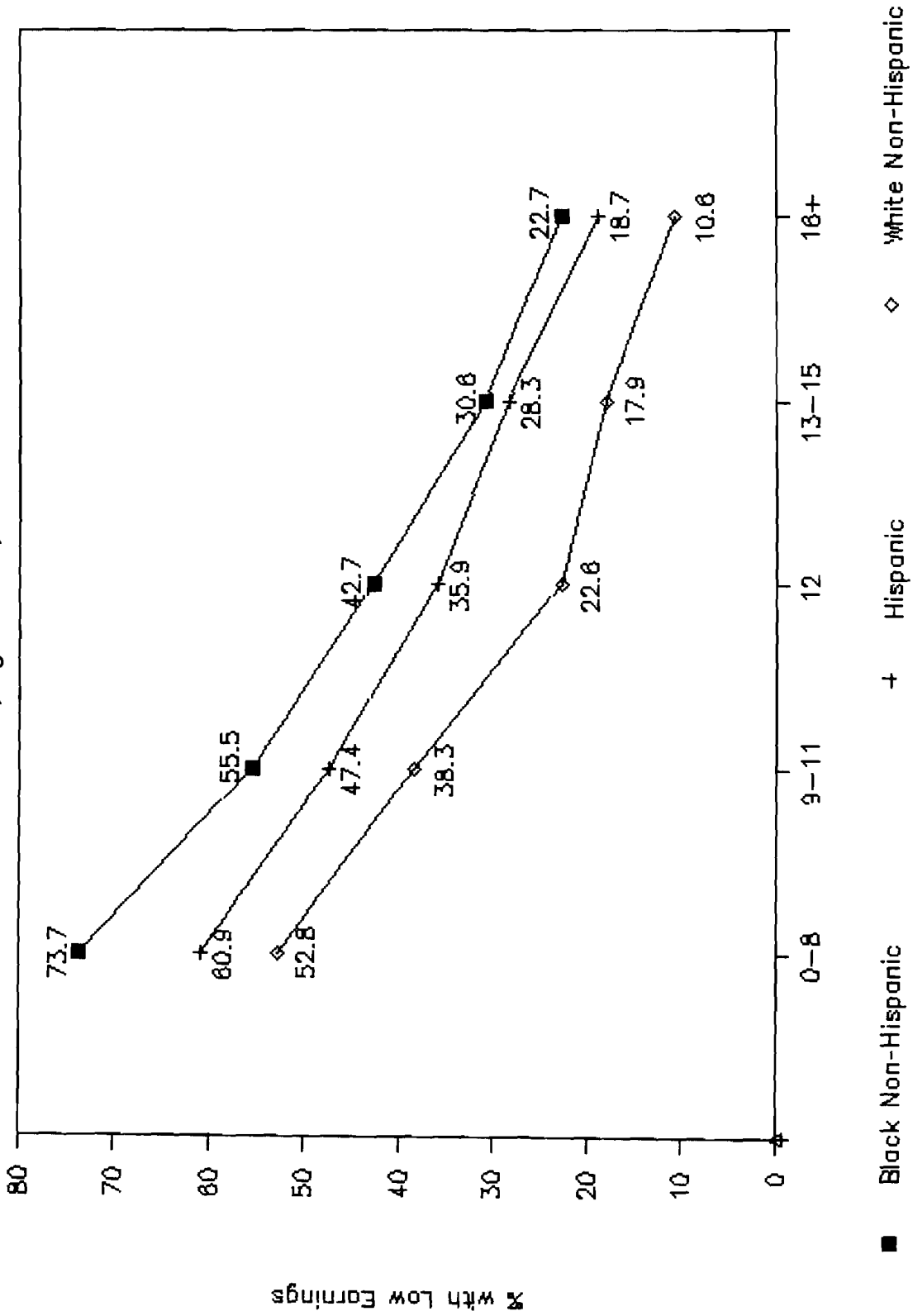
	Percentage of Men with Low Earnings by Completed Years of Schooling					All Men
	0-8	9-11	12	13-15	16+	
White Non-Hispanic						
1949	53.2%	37.8%	30.0%	31.0%	24.5%	40.1%
1959	34.4	17.7	13.2	13.1	10.6	19.6
1969	24.5	12.7	8.3	9.7	7.9	11.8
1979	36.5	24.0	15.3	15.3	10.9	16.8
1986	52.8	38.3	22.6	17.9	10.6	20.6
Black Non-Hispanic						
1949	85.0%	70.4%	63.4%	66.4%	52.8%	79.7%
1959	65.0	45.9	36.7	29.5	18.2	53.5
1969	46.0	32.3	20.0	18.0	16.4	32.0
1979	53.6	44.9	34.0	28.2	17.1	36.6
1986	73.7	55.5	42.7	30.6	22.7	42.2
Hispanic						
1949	76.0%	53.2%	46.4%	*	*	67.8%
1959	57.2	24.6	22.7	23.4	*	43.9
1969	37.7	18.4	16.4	18.4	12.2	26.3
1979	42.7	31.7	26.7	18.4	16.7	31.1
1986	60.9	47.4	35.9	28.3	18.7	41.8

Source: See Table 1.

Note: A man is classified as having low earnings if his earned income from wages, salaries and self-employment is below the poverty line for a family of four--\$2,417, \$2,955, \$3,714, \$7,355, and \$11,203 in the five years.

*Cell size below 75 men.

Figure 2. Relationship between Low Earnings and Education for Men, Ages 25-54, 1986



dramatic decline in the percentage of men with low earnings as education increases for the three race-ethnic groups in 1986. While more than half of white non-Hispanic men with eight or fewer years of schooling earned less than \$11,203, only 10.6 percent of white college graduates earned less than this amount. At every education level, black non-Hispanic men have the highest rate of low earnings, followed by Hispanics and then white non-Hispanics. The percentage point disadvantage for blacks is smallest for college graduates, for whom 22.7 percent of blacks, 18.7 percent of Hispanics and 10.6 percent of whites had low earnings.

The data in Table 2 for the post-1969 period do not show the kind of economic progress that Americans in the immediate post-World War II decades came to expect. For example, between 1949 and 1969 the incidence of low earnings declined dramatically. For all white men, it declined from 40.1 to 11.8 percent; for blacks, from 79.7 to 32.0 percent; for Hispanics, from 67.8 to 26.3 percent. Large declines occurred for men in each of the five educational categories. Most of this large decline was due to the rapid growth in the level of earnings. Between 1949 and 1969, mean earnings (in 1986 constant dollars) for all men between the ages of 25 and 54 more than doubled, from \$10,353 to \$24,125 (data not shown), so the poverty line for a family of four as a percentage of this mean fell from 107 to 46 percent. However, the incidence of low earnings also fell because inequality decreased over these two decades--those at the bottom experienced more rapid earnings increases than those at the top (see Danziger and Gottschalk, 1988).

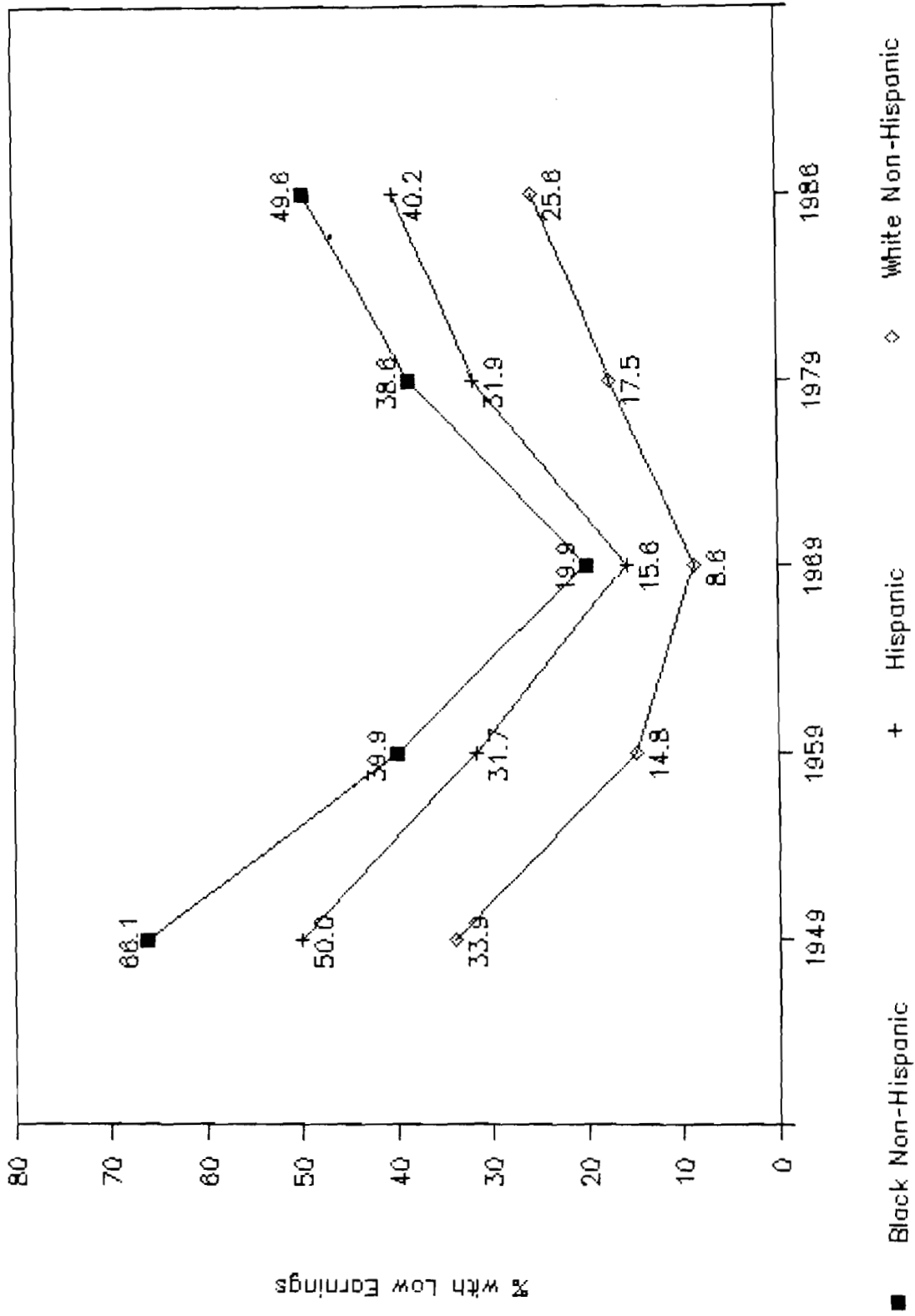
In 1986, mean earnings for all men ages 25 through 54 was \$24,288, virtually the same as it had been seventeen years earlier. The

incidence of low earnings, however, holding education constant, increased dramatically for all the groups. In 1986, 20.6 percent of whites, 42.2 percent of blacks and 41.8 percent of Hispanics earned less than the poverty line for a family of four, representing increases of 8.8, 10.2, and 15.5 percentage points over their respective levels in 1969, despite the higher education levels of 1986. Thus, this period was disappointing both because of the stagnation in the mean of earnings and because inequality increased. Those at the bottom earned less than in 1969, while those at the top earned more.⁵

The increases in low earnings were particularly dramatic for less-educated men. For example, in 1986, men with a high school degree were substantially less likely to have earnings in excess of the poverty line for a family of four than similar men in 1959! The rate of low earnings for high school graduates increased between 1969 and 1986 by 14.3, 22.7, and 19.5 percentage points for the three race-ethnic groups.⁶ High school graduates in 1986 had a rate of low earnings similar to that of men with 8 or fewer years of school in 1969.

This deterioration in earnings was even greater for younger men. Their experience emphasizes the relationship between education and earnings for recent labor market entrants and demonstrates the economic hardship facing those who go no further than high school.⁷ Figure 3 shows the incidence of low earnings in each of the five years for men ages 25 through 34 who graduated from high school but completed no additional years of schooling. The percentage of young white high school graduates who were low earners increased from 8.6 to 25.6 percent between 1969 and 1986, with the 1986 level substantially exceeding the 14.8 percent level of 1959.⁸ For minorities, the percentage point

Figure 3. Low Earnings of Male High School Graduates
Ages 25-34, 1949-1986



increases after 1969 were even greater--from 15.6 to 40.2 percent for Hispanics, and from 19.9 to 49.6 percent for blacks.

The data in Table 2 clearly show that high school graduation, relative to not completing high school, is an economic necessity--the percentage point differences between low earnings rates for high school graduates and those less educated have never been greater. The recent experience also demonstrates, however, that policies to increase the high school graduation rate, while necessary, are not sufficient to significantly reduce poverty. In fact, the rates of low earnings of college graduates in 1986--10.6, 22.7, and 18.7 percent, for whites, blacks, and Hispanics--are somewhat higher than those for high school graduates in 1969--8.3, 20.0, and 16.4 percent, respectively.

Several recent studies (Blackburn, Bloom, and Freeman, 1989; Levy and Michel, 1989; Murphy and Welch, 1989) have focused on the declining real earnings of high school graduates and the growing gap between the mean earnings of high school and college graduates (refer to Figure 1). They all attribute the changes, particularly since 1979, to differential shifts in the demand for labor. The causes of these demand shifts have not been resolved. As Murphy and Welch conclude,

Although the data suggests a rapid rise in demand for educated workers in the 1980s, we have yet to identify the precise cause or causes of this rise. Possible explanations include changing patterns of international trade and international competition, structural change in the domestic economy (such as the shift in employment from manufacturing to the services) and changes in production technologies within industries (such as the shift to flexible production and the increased use of computer-aided technologies) (p. 26).

And, none of these studies have focused on the rising rate of low earnings of college graduates.

Table 3 presents a demographic standardization that decomposes the observed changes in the percentage of men with low earnings into two components--one reflecting changes in educational attainment, and the other, changes in the education-specific rates of low earnings. This decomposition assumes that the changes in the education-specific rates of low earnings were not affected by the increasing educational attainment over this period. To minimize the effects of such interactions between educational attainment and the education-specific rates, 1969, the approximate midpoint year, is used as a benchmark. The decomposition begins by computing two hypothetical rates of low earnings based on the fifteen low earnings rates for 1969 that are shown in Table 2 and the corresponding educational distributions for 1949 and 1986 shown in Table 1. Row 4 of Table 3 shows the rate for each of the three race-ethnic groups that would have existed in 1969 if men had the same educational attainment as 1949, but the low earnings rates of 1969. Row 5 shows the rates that would have existed in 1969 if men had the 1986 distributions of educational attainment and the low earnings rates of 1969.

Consider the 1949-1969 period (rows 6-8). For each group, there were very large declines in the incidence of low earnings--28.3, 47.7, and 41.5 percentage points for whites, blacks, and Hispanics. Most of these declines can be attributed to the declining rates of low earnings (row 7). Increasing educational attainment accounted for 3.7, 8.2, and 4.9 percentage points of the declines in the rates for the three groups (row 8).

Table 3

Decomposition of the Trend in the Percentage of Men with Low Earnings, 1949-1986

Men, Ages 25-54	White Non-Hispanic	Black Non-Hispanic	Hispanic
Actual Rates of Low Earnings			
1. 1949	40.1%	79.7%	67.8%
2. 1969	11.8	32.0	26.3
3. 1986	20.6	42.2	41.8
Hypothetical Rates			
4. 1949 Education Dist. and 1969 Rates of Low Earnings	15.5	40.2	31.2
5. 1986 Education Dist. and 1969 Rates of Low Earnings	9.5	23.1	22.7
6. 1949-1969 Percentage Point Change (Row 2 - Row 1)	-28.3	-47.7	-41.5
7. Due to earnings changes (Row 4 - Row 1)	-24.6	-39.5	-36.6
8. Due to educational changes (Row 2 - Row 4)	-3.7	-8.2	-4.9
9. 1969-1986 Percentage Point Change (Row 3 - Row 2)	+8.8	+10.2	+15.5
10. Due to earnings changes (Row 3 - Row 5)	+11.1	+19.1	+19.1
11. Due to educational changes (Row 5 - Row 2)	-2.3	-8.9	-3.6

The 1969-1986 period of rising rates of low earnings would have been even worse had it not been for the continuing increase in educational attainment. During this period, rising education (row 11) offset some of the increasing economic hardship--2.3, 8.9 and 3.6 percentage points for the three groups. For example, for blacks, the rate of low earnings increased by 10.2 percentage points (row 9), from 32.0 (row 2) to 42.2 (row 3) percent. If the education-specific rates of low earnings had not increased between 1969 and 1986, then the rate for all blacks in 1986 would have fallen instead to 23.1 percent (row 5). This 8.9 percentage point decline (row 2 - row 5) is attributable to rising educational attainment. Rows 3 and 5 are both based on the 1969 educational distributions; the difference between them is 19.1 percentage points (row 10) and is attributable to the rising rates of low earnings. Thus, low earnings would have been 51.1 percent (row 10 + row 2) in 1986 if educational attainment had not increased.

Educational attainment for minorities--especially blacks--has converged toward that of whites, leading to substantial reductions in their incidence of low earnings. However, low earnings among minorities would remain significantly higher than that for whites even if their educational distributions were identical. The impact of factors other than education is shown in Table 4, which uses the data in Tables 1 and 2 to perform another demographic standardization.

The standardization reveals that if black non-Hispanic men had the same educational distribution as white non-Hispanic men in 1986, but their own education-specific low earnings rates, then their rate would have been lower by 5.5 percentage points (row 4)--36.7 instead of 42.2 percent. The black-white gap would still have been 16.1 percentage

Table 4

The Effect of Race Differences in Education on Rates of Low Earnings,
1986

	Black Non-Hispanic	Hispanic
1. Actual 1986	42.2%	41.8%
2. White Non-Hispanic 1986	20.6	20.6
3. Percentage Point Difference	<u>21.6</u>	<u>21.2</u>
4. Due to Educational Differences ^a	5.5	10.5
5. Due to Other Factors	16.1	10.7

^aIf minority educational distributions were the same as those for white non-Hispanics, the rates of low earnings for black non-Hispanics would be 36.7 percent ($42.2 - 5.5 = 36.7$) and for Hispanics, 31.3 percent ($41.8 - 10.5 = 31.3$).

points (row 5). Similarly, for Hispanics in 1986, the 21.2 percentage point difference as compared to whites can be divided into a 10.5 point educational component (row 4) and a 10.7 point component due to other factors (row 5).

It is beyond the scope of this paper to evaluate the basis for these differences between whites and minorities in the education-adjusted rates of low earnings. A complete analysis would have to consider age, regional, and work-effort differences, differences in the quality of education received by whites and minorities, and account for the effects of discrimination in occupational entry and advancement and wage rates.⁹

The standardizations of Tables 3 and 4 document that rising educational attainment has been a powerful factor in holding down the rate of low earnings and in reducing the gap between whites and minorities. If high school graduation rates could be increased further and if the educational attainment of minorities could be raised to that of whites, then the rate of low earnings would fall and the racial gap would be narrowed even more. Even if these educational advances could be achieved, however, the 1986 rate of low earnings for white high school graduates remains more than 10 percentage points above its 1969 level and the 1986 rate for minority college graduates remains about 10 percentage points above that year's level for white college graduates (Table 2). Clearly additional programs and policy changes are needed.

The Relationship between Low Earnings and Income Poverty among Men

By comparing the earnings of men to a fixed poverty standard--the poverty line for a family of four--the analysis thus far has presented a picture that is gloomier than analyses of poverty based on the official definition. Table 5 presents the official poverty rates for these men for 1959, 1969, 1979 and 1986. Because the 1950 Census of Population used a different sample frame to gather data on the earnings of persons than it used to gather family income, poverty rates based on family income for all men are not available for 1949. For every cell in the table, these rates are lower in each year than the rates of low earnings shown in Table 2 because they include the man's income from other sources (e.g., property income, government transfer benefits) and from other family members and because they reflect the man's actual family size, which is typically smaller than four persons.

Although these rates are lower than the rates of low earnings, their relationship with educational attainment is also very strong. A white high school dropout, for example, is more than six times as likely to be poor as a white college graduate--13.7 as compared to 2.0 percent. And minority high school dropouts have official poverty rates that exceed 20 percent.

The official poverty rates decline by about half between 1959 and 1969, and then increase somewhat. The official poverty rates increase after 1969 by a much smaller amount than the corresponding rates of low earnings primarily because family size declined and because of the increased contribution of working wives to family income (see Danziger,

Table 5

Percentage of Men, Ages 25-54, Living in Poor Families,
1959-1986

	Percentage Poor by Completed Years of Schooling					All Men
	0-8	9-11	12	13-15	16+	
White Non-Hispanic						
1959	21.0%	9.1%	6.3%	5.0%	4.2%	10.5%
1969	12.4	5.4	3.6	3.2	2.5	5.1
1979	14.6	8.6	4.8	4.6	3.2	5.5
1986	18.8	13.7	5.9	4.3	2.0	5.6
Black Non-Hispanic						
1959	47.4%	29.3%	21.1%	14.5%	7.2%	36.8%
1969	29.1	16.9	9.8	7.6	5.9	18.1
1979	24.7	20.7	13.6	10.6	5.7	15.5
1986	36.9	22.6	13.2	8.2	6.8	14.7
Hispanic						
1959	49.6%	17.0%	14.5%	14.0%	*	36.0%
1969	30.8	13.8	8.8	8.9	7.3	19.6
1979	25.5	16.1	10.2	6.1	5.2	15.6
1986	33.6	20.8	10.6	5.5	3.3	17.2

Source: See Table 1.

Note: The poverty line varies for each man according to his family size. In 1986, the poverty line ranged from \$5,701 for a single man to \$22,497 for a man living in a family of nine or more persons. The 1950 Census utilized a sample frame that differed from those of the other years. As a result, family income was not available for all persons.

*Cell size below 75 men.

Gottschalk, and Smolensky, 1989). Rising income transfers also played a role before 1979.

The percentage point gaps between the rate of low earnings and the official poverty rate for all men ages 25 through 54 for each of the three race-ethnic groups for the four years are shown in Figure 4. Each curve shows a slight decline between 1959 and 1969 and then a rapid increase to 1986. For example, for blacks, the rate of low earnings increased by 10.2 percentage points between 1969 and 1986 (from 32.0 to 42.2 percent, from Table 2). Their official poverty rate actually declined by 3.4 points (from 18.1 to 14.7 percent, from Table 5). Thus, the percentage point gap between the two rates, shown in the figure, increased from 13.9 to 27.5 points between 1969 and 1986. Thus, declining family size and increasing earnings of wives have tended to offset most of the dramatic declines in the ability of men to earn an income above the poverty line for a family of four.

In sum, the recent period has been characterized by decreases in the ability of prime-age males to earn an amount sufficient to raise a family of four above the poverty line and by approximately constant male poverty rates. The least-educated have the highest poverty rates in any year and have experienced the greatest deterioration in their economic status over time.

The Relationship between Education, Low Earnings, and Income Poverty among Women

Table 6 presents the distributions of educational attainment for women ages 25-54 in each of the race-ethnic groups. The pattern of dramatic increases in schooling over time is as true for women as for

Figure 4. Difference between Rate of Low Earnings and Official Poverty Rate, Men, Ages 25-54, 1959-1986

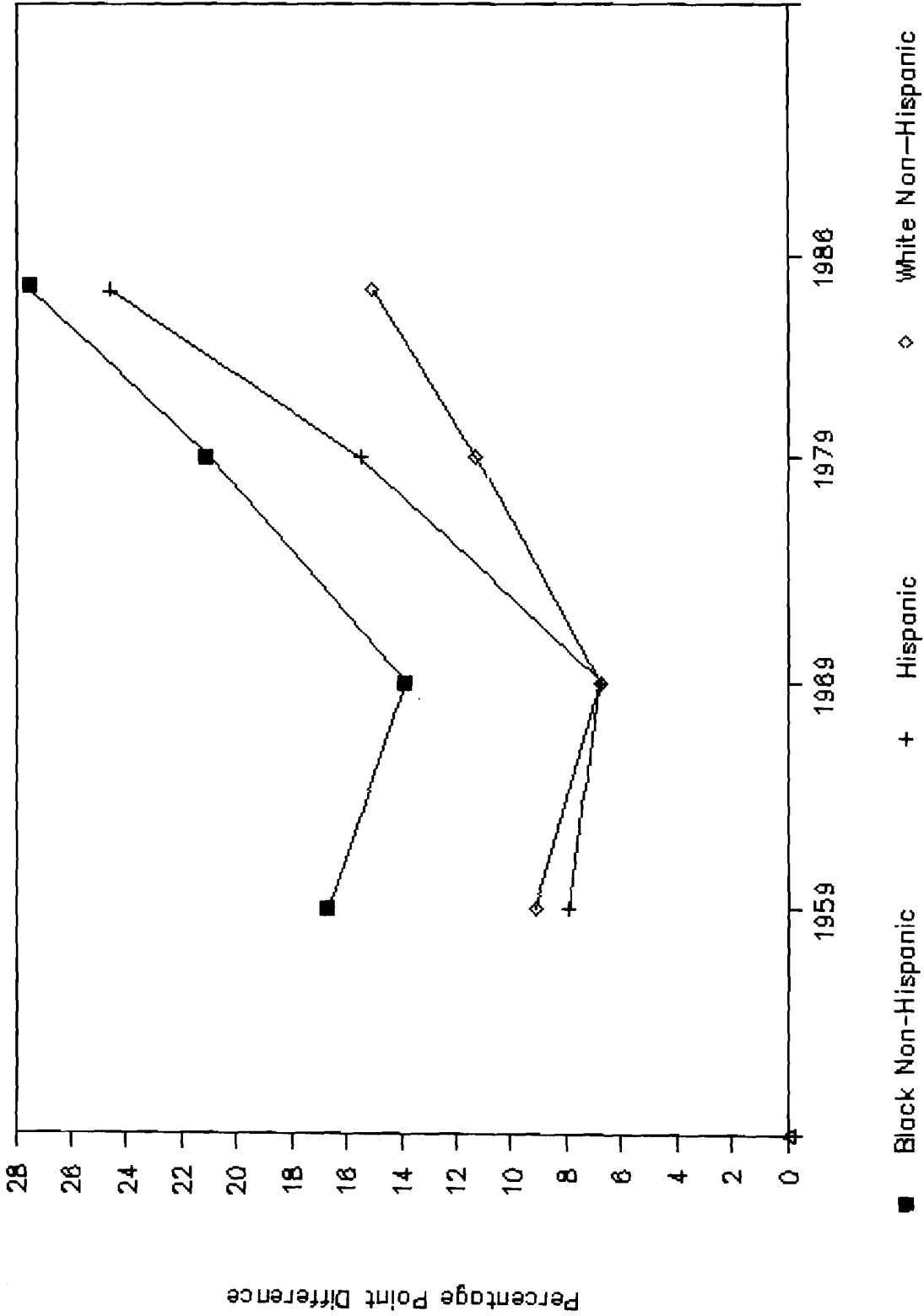


Table 6

Educational Attainment of Women, Ages 25-54, 1949-1986

	<u>Percentage of Women by Completed Years of Schooling</u>				
	0-8	9-11	12	13-15	16+
<hr/>					
White Non-Hispanic					
1949	33.8%	20.6%	29.9%	9.5%	6.2%
1959	23.0	22.0	37.2	10.8	7.1
1969	13.4	19.9	44.6	12.2	9.8
1979	6.2	13.0	44.8	18.8	17.1
1986	3.2	8.3	45.3	20.7	22.5
Black Non-Hispanic					
1949	66.6%	16.8%	10.5%	3.4%	2.7%
1959	48.9	24.9	17.7	4.7	3.8
1969	28.2	31.8	28.2	6.7	5.1
1979	12.2	23.9	37.1	16.8	9.9
1986	6.2	18.2	43.8	19.5	12.2
Hispanic					
1949	68.8%	13.4%	13.7%	2.5%	1.6%
1959	62.4	17.5	14.6	3.4	2.2
1969	49.9	19.5	21.8	5.9	2.9
1979	37.7	18.3	27.5	10.9	5.6
1986	28.5	14.9	33.5	14.5	8.6

Source: See Table 1.

Note: Totals may not add up 100.0 owing to rounding.

men. The largest educational difference by gender for any race-ethnic group is that white non-Hispanic women are less likely to have completed college than have white men--22.5 versus 29.7 percent (compare Table 6 with Table 1). As a result, majority-minority differences in educational attainment are somewhat smaller for women than for men.

Because women have a greater attachment to nonmarket work in the home and a lesser attachment to paid employment, their rates of low earnings, shown in Table 7, are much higher than those for men. Because women's labor force participation rates have increased significantly over time, however, their rates of low earnings--in contrast to those of men--have continued to fall over time. There are also very large differences among women in the rate of low earnings by educational attainment. For example, 85.0 percent of black non-Hispanic women who have completed only some years of high school earned less than \$11,203 in 1986, while the rate was 22.3 percent for college graduates. In part because of the convergence in wage rate differentials for minority and majority women, and in part because black women work more than white or Hispanic women, there are much smaller differences between white and minority women in the incidence of low earnings than there are between men.

Table 8 shows the official poverty rates for women. Here, the pattern is similar to that of men--declines from 1959 to 1969, and little change thereafter. Figure 5 plots the official rates for all men and women ages 25 through 54 for the three race-ethnic groups in 1959, 1969, 1979, and 1986. If all men and women were married, there would be no male-female differences, as the official poverty rate is based on the income of all family members. Thus, the rates differ to the extent that

Table 7

Women, Ages 25-54, with Low Earnings by Educational Attainment,
1949-1986

	Percentage of Women with Low Earnings by Completed Years of Schooling					All Women
	0-8	9-11	12	13-15	16+	
White Non-Hispanic						
1949	96.7%	95.1%	90.6%	86.8%	74.5%	92.2%
1959	91.5	86.9	82.2	77.6	62.5	83.5
1969	84.7	80.1	73.5	70.2	54.4	74.0
1979	84.4	80.4	68.6	59.9	46.7	65.8
1986	89.0	81.2	65.5	53.5	37.3	58.7
Black Non-Hispanic						
1949	98.8%	97.9%	94.9%	90.1%	72.1%	97.3%
1959	96.5	92.4	84.6	76.1	42.7	90.4
1969	90.8	82.1	67.6	53.9	22.2	75.5
1979	84.6	78.6	61.6	49.7	23.0	62.7
1986	92.7	85.0	65.6	48.1	22.3	62.1
Hispanic						
1949	97.9%	92.8%	92.4%	*	*	96.1%
1959	96.6	90.5	81.9	*	*	91.7
1969	92.1	83.5	47.8	64.0	*	84.0
1979	90.5	84.5	68.7	59.6	38.7	77.1
1986	91.1	86.5	68.4	50.1	40.4	72.5

Source: See Table 1.

Note: A woman is classified as having low earnings if her earned income from wages, salaries, and self-employment is below the poverty line for a family of four--\$2,417, \$2,495, \$3,714, \$7,355 and \$11,203 in the five years.

*Cell size below 75 women.

Table 8

Percentage of Women, Ages 25-54, Living in Poor Families,
1959-1986

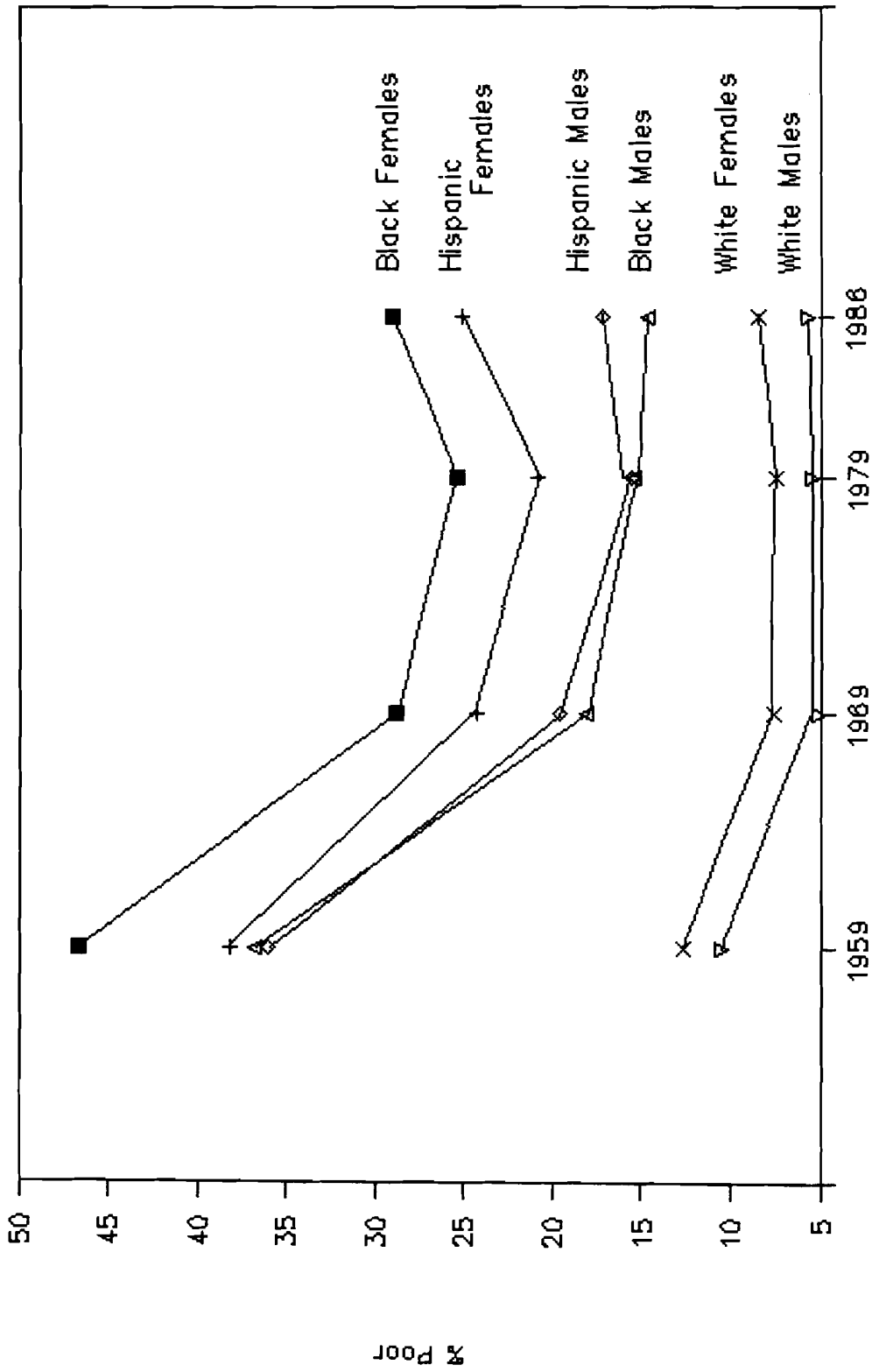
	Percentage Poor by Completed Years of Schooling					All Women
	0-8	9-11	12	13-15	16+	
White Non-Hispanic						
1959	24.1%	13.1%	8.1%	6.9%	5.9%	12.6%
1969	18.1	9.4	5.3	4.8	3.2	7.6
1979	19.7	13.1	6.3	5.6	3.8	7.5
1986	31.8	22.7	8.4	6.2	2.4	8.5
Black Non-Hispanic						
1959	58.6%	45.2%	30.5%	21.7%	8.6%	46.6%
1969	44.2	31.5	18.9	12.8	3.4	28.8
1979	41.0	36.7	22.6	15.9	5.0	25.4
1986	54.3	48.3	29.8	16.7	4.9	29.1
Hispanic						
1959	50.0%	23.6%	15.1%	*	*	38.2%
1969	35.5	20.2	10.0	7.2	3.3	24.3
1979	31.6	24.2	10.4	11.9	7.2	20.9
1986	41.2	35.9	18.8	9.6	4.6	25.2

Source: See Table 1.

Note: The poverty line varies for each woman according to her family size. In 1986, the poverty line ranged from \$5,701 for a single woman to \$22,497 for a woman living in a family of nine or more persons.

*Cell size below 75 women.

Figure 5. Official Poverty Rate, 1959-1986, Men & Women, by Race



the poverty rates of unmarried women are higher than those of unmarried men. This is the case for two main reasons. First, women earn less than men. Second, women tend to retain custody of children after a marriage dissolves. Thus, even if single men and women earned the same amounts, the official rate for women would be higher due to their larger family size.¹⁰ The male-female gap has grown over time as a greater percentage of women have become female family heads.

III. IMPLICATIONS FOR ANTIPOVERTY POLICY

I have emphasized the relationships among educational attainment, the rate of low earnings, and the official poverty rate. Because these rates fall as education rises for every demographic group, further increases in attainment can significantly reduce economic hardship. However, because rates of low earnings are high for all persons without a college education and official poverty rates are high even for blacks and Hispanics who have high school diplomas, additional policies to supplement low incomes are needed.

The poverty population is diverse and no single program or policy can deal with the entire range of poverty problems. The poverty problem of the elderly widow differs from that of the family whose head seeks full-time work but finds only sporadic employment; the poverty of the family head who works full time but at low wages differs from that of the family head who receives welfare and either cannot find a job or does not find it profitable to seek work. Because of this paper's emphasis on the relationship between education and low earnings, I focus in this section on income supplementation policies which seek to raise

the earnings of working poor families with children. In 1986, about 40 percent of the household heads between the ages of 25 and 54 whom I classify as low earners worked at some point during the year and had dependent children. About one-third of the total official poverty population lives in households with a child present where the head works at some point during the year and is neither aged, disabled, nor a student. I do not discuss either welfare or work strategies for those who do not work.

The kinds of income supplementation policies I have in mind can be viewed as indirect human-capital-enhancing policies because they are likely to raise the educational attainment of the next generation. Since most human-capital strategies are focused on children or young adults, income supplementation policies are an important strategy for aiding poor prime-age workers. For example, human-capital strategies may have little to offer a 45-year-old family head with a high school degree who works full time full year in an industry with competitive wages that are too low to raise his or her family above the poverty line. Supplementing this family's income, however, may increase the educational attainment of the children, since achievement is quite responsive to family income.

According to Richard Murnane (1988):

...it is important to keep in mind that the roots of the low achievement of many American children lie in the circumstances of poverty in which they live. Consequently, educational policy changes not accompanied by policies that significantly reduce the poverty that dominates many children's lives will have only modest influences on their academic achievements (p. 229).

In other words, human-capital-enhancing strategies seek to directly raise the productivity of the young while income supplementation policies, by alleviating current hardship in their families, make it easier for them to remain in school and to gain more from the education and training programs that serve them. There is some evidence that the Negative Income Tax experiments of the 1970s, which provided experimental families with income supplements that exceeded those available from existing welfare programs, had just such effects. Eric Hanushek (1987) reviewed the Negative Income Tax literature and concluded that the schooling

effects appear quite large and significant. For example, Mallar (1976) estimates the probability of completing high school for families on a "middle" negative income tax plan to be 25 to 30 percent higher.... Venti and Wise (1984) find an 11 percent increase for youth in the Seattle-Denver experiments (pp. 112-13).

The kinds of income supplementation policies I advocate do not extend welfare programs, but rather involve expansion of two provisions in the federal personal income tax, the Earned Income Tax Credit (EITC) and the Dependent Care Credit (DCC), and further reforms of the child support system. The proposed expansions build on the Tax Reform Act of 1986, which eliminated the personal income tax liability of most poor families with children, and the Family Support Act of 1988, which made important changes in the child support system.

The Earned Income Tax Credit is a refundable tax credit targeted on low-income families with children. In 1989, the credit is 14 percent for each dollar of earned income up to \$6520, where it reaches its maximum value of \$913. The credit remains at \$913 until earnings reach

\$10,000, after which it is reduced by 10 percent of additional earnings, phasing out at \$19,300. According to congressional estimates (U.S. House of Representatives, 1988), the provisions of the Tax Reform Act of 1986 increased the number of families receiving the credit each year from about 6.3 to 13.8 million between 1986 and 1990 and increased the amount of the credit from \$2.0 to \$7.5 billion per year over the same period.

The Dependent Care Credit allows working single parents and couples, when both spouses work, to partially offset work-related child care costs. The credit begins at 30 percent of expenses for families with incomes below \$10,000 and falls to 20 percent for those with incomes above \$50,000. Because the credit is nonrefundable and because the Tax Reform Act of 1986 eliminated the income tax liability of many of the poor, only a very small percentage of poor and low-income families now receive any DCC. On the other hand, higher-income taxpayers receive credits of up to \$960 if they have more than one child and if they spend at least \$4800 on care.

Several proposals have been introduced in Congress to expand the EITC by making the credit an increasing function of family size. Under current law, the EITC provides a constant amount per family, whereas the poverty line increases with the number of children. The Family Living Wage Act, sponsored by Rep. Thomas Petri (Wisconsin), the Toddler Tax Credit, sponsored by Rep. Richard Schulze (Pennsylvania), and the Employment Incentives Act, sponsored by Rep. Thomas Downey (New York) and Senator Albert Gore (Tennessee), among other bills, would provide larger credits for families with more children. The Downey/Gore bill,

for example, would raise the maximum EITC in 1990 to \$1430 for families with one child and \$2043 for families with two or more children.

President Bush has proposed a refundable credit for families with children under the age of four, which he labels "child care assistance," but which is essentially a second earned income tax credit. Like the EITC, the credit equals 14 percent of wages up to \$7143, where it reaches the proposed \$1000 maximum. It then remains at \$1000 until wages reach \$8000, after which the credit is reduced by 20 cents for each additional dollar earned, so that it phases out at \$13,000. The phase-out range would be increased to between \$15,000 and \$20,000 by 1994. For families with several children under the ages of four, this plan is similar to an EITC that provides greater subsidies to larger families.

The Bush proposal would allow a family that used child care expenses that were reimbursable under the new child care assistance credit to receive both the current EITC and the new credit, or the EITC and the Dependent Care Credit. The Bush proposal would also make the DCC refundable. The family could not receive both the new child care assistance credit and the DCC. The Bush plan is provided only to families with children under the age of four because of budgetary constraints. But to increase its antipoverty impact, the new credit should be made available to all families with children, not just those with children younger than four.

In addition, the DCC should be expanded and made refundable. One could combine the Bush proposal, revised to benefit all families with children, with the proposed Expanded Child Care Opportunities Act of 1989 (ECCO) sponsored by Senators Bob Packwood (Oregon) and Daniel Patrick Moynihan (New York). ECCO expands the DCC by raising the

maximum subsidy rate--the percentage of child care expenses that can be credited--from 30 to 40 percent and by making the credit refundable. The bill leaves unchanged the maximum amount of child care expenses that are eligible for the subsidy at \$2400 for one child and \$4800 for two or more children, so the maximum DCC would increase to \$960 for one child and \$1920 for two or more children.

One could combine an expanded Bush proposal with ECCO to provide additional aid for working poor and low-income families and recoup some of the additional budgetary costs of these proposals by phasing out the DCC for higher-income taxpayers. For example, under ECCO, the child care subsidy rate falls from 40 percent at \$10,000 to 20 percent at \$27,500, after which it remains constant. An alternative would be to have the subsidy rate continue to fall in the same manner so that it was phased out for families with incomes above \$45,000. Or, one could follow the plan of the Downey-Gore bill, which would pay for itself by raising the marginal tax rate in the personal income tax for the highest income taxpayers.

Because single-mother families have such high poverty rates, and because poor female-headed families have incomes that fall further below the poverty line than poor male-headed families, additional strategies are necessary. The Wisconsin Child Support Assurance System (Garfinkel, 1988), for example, would provide uniform child support awards financed by a percentage-of-income tax on the absent parent, which would be automatically withheld from his or her earnings. If this amount were less than a fixed minimum level because the absent parent's income was low, then the support payment would be supplemented up to the minimum by government funds.

The three policies highlighted here target the working poor with children. Various combinations and permutations of these and other current policy proposals, such as an increased minimum wage, extensions of medical care coverage for the uninsured, and a variety of education and training proposals, including the expansion of work/welfare programs, are all necessary components of a comprehensive antipoverty strategy (see Ellwood, 1988, for one example of such a strategy).

The experience of the twenty-five years since the declaration of War on Poverty has shown that no single program or policy can aid all of the poor. Yet the new realism requires us to confront the facts that all of these proposals have budgetary costs and that we do not even have model programs to address some aspects of the poverty problem, let alone solutions that could be implemented on a nationwide basis. While we do not know how to eliminate some of the causes of poverty, we know how to alleviate most of its effects. And, we certainly know that without a refocused antipoverty strategy and additional antipoverty funds, the rates of low earnings and poverty will remain unacceptably high.

Notes

¹Poverty will generally fall as real incomes rise when poverty is measured by an absolute poverty line such as the official measure. For example, consider the case in which the real income of each family doubles over a twenty-year period. Income inequality and relative poverty will be unchanged, as the relative distance between the rich and poor has remained constant. Absolute poverty, however, will decline significantly, because it is measured by comparing a family's income, which has now doubled, to a poverty line that has remained unchanged in real terms.

Poverty, as officially measured, is thus likely to decline over long periods, such as 1949 to 1969, marked by rapid growth in real incomes. With a relatively constant mean, poverty will fall only if the income of poor families grows more rapidly than the mean. If the incomes of the poor grow less than the mean, poverty can increase even if the mean increases. In this case inequality, relative poverty, and absolute poverty rise. Such a situation characterizes the 1979-1987 period (see Danziger, Gottschalk, and Smolensky, 1989).

²Any choice of a fixed cutoff with which to compare earnings is arbitrary. Levy and Michel (1988), in evaluating whether or not a job is a "good" one, use a cutoff of \$20,000. David Ellwood (1988) uses a normative definition: "I believe that in a two-parent family, the earnings of one person working full year, full time (or the equivalent number of hours of combined work by a husband and wife) ought to be sufficient for a family to reach the poverty line." Ellwood's norm implies a cutoff that varies, like the official poverty line, with family

size. The measure used here is similar to Levy and Michel's in that it does not take into account the person's family size or structure, but it is similar in level to Ellwood's. Berlin and Sum (1988) use the poverty line for a family of three as their benchmark in an analysis of male earnings in 1973, 1979, and 1984.

³Sawhill (1988a) uses a classification of the poor that would subdivide my category of low earners into three groups--the "underemployed poor" who report themselves as unable to find work; the "hard-working poor" who work full time full year; and a residual category of students, early retirees, and others who do not report difficulty in finding work, and who either do not work at all or only sporadically. In the empirical work that follows, this third group is mostly eliminated by my restriction of the analysis to persons between the ages of 25 and 54. To reduce the number of tables, I do not distinguish between "the underemployed" and the "hard-working" low earners.

⁴Most low earners are, in fact, not officially poor. The connection between low earnings and poverty has weakened over the past forty years because of changes in family size and the sources of income. Mean family size has declined over time and is now less than four; and the percentage of families with two earners and with income from government transfers has increased.

⁵Levy and Michel (1988) examine changes between 1973 and 1987 in the percentage of men who earn less than \$20,000 per year in constant 1987 dollars. Their results are similar to those reported here--substantial increases in the percentage of men earning less than a fixed threshold.

They also report increased inequality, with a greater proportion of men earning above \$60,000 in 1987 than in 1973.

⁶This increase in the rate of low earnings of men reflects mainly lower real earnings, not reductions in work effort. The mean weeks worked for men aged 25 to 54 with exactly 12 years of schooling was 46.32 weeks in 1949, 45.75 weeks in 1979, and 44.13 weeks in 1986. Levy and Michel (1988) also find that falling real earnings between 1973 and 1987 are mostly due to declining weekly wages.

⁷The W. T. Grant Foundation Report (1988) is devoted to the economic problems of those who graduate from high school but do not go on to college. Also, see Berlin and Sum (1988) for a discussion of the relationship between educational attainment and ability.

⁸Over the 40-year period, a comparison of high school graduates is problematic because of the educational upgrading that took place. For example, for white non-Hispanics, a high school graduate in 1949 was among the top 40 percent in educational attainment, while in 1986, he was in the bottom half of the educational distribution. However, over the 7-year period between 1979 and 1986, there was relatively little change in the education distribution, and, as Figure 3 shows, a dramatic decline in the ability of young high school graduates to avoid low earnings. The changes in the returns to schooling between 1979 and 1986 are much too large to be explained by changes in the quality of schooling. For a more complete discussion, see Murphy and Welch (1989).

⁹For a comprehensive discussion of changes in the socioeconomic status and educational attainment of blacks, see Jaynes and Williams (1989).

¹⁰Of course, differences in the economic status of formerly married men and women would not be as large if noncustodial parents paid more in child support.

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