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The Changing Effect of Family Background on the Incomes of American Adults

By David Harding, Christopher Jencks, Leonard Lopoo, and Susan Mayer[1]

Most Americans endorse the ideal of equal opportunity, and many interpret this ideal as requiring that children from different backgrounds have an equal chance of achieving economic success. Most Americans also recognize that children whose parents have "all the advantages" are more likely to prosper than children whose parents lack these advantages. Reducing the correlation between parental advantages and children's economic success has therefore become a prominent goal of liberal social policy, especially since the 1960s. This chapter investigates how the correlation between American adults' family incomes and their parents' characteristics changed between 1961 and 1999.

Our approach to measuring trends in intergenerational inheritance differs from earlier studies in two important respects. First, almost all earlier studies have focused on the determinants of individuals' labor market success, defined either in terms of occupational rank or earnings. We focus instead on an individual's total family income. This change allows us to assess the impact of family background on the economic status of individuals who are not working. It also allows us to take account of the fact that individuals

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economic status often depends more on how they fare in the marriage market than on how they fare in the labor market.

Our second innovation is that we measure changes in the effect of family background in two conceptually distinct ways. Our first measure of intergenerational inheritance is the multiple correlation between adults' family income and their parents' socioeconomic rank. This measure can -- and often does -- remain stable even when the economic distance between rich and poor adults is changing. Our second measure of inheritance is the ratio of the income received by adults who grew up in advantaged families to the income received by adults who grew up in disadvantaged families. This measure incorporates the effect of changes in the degree of inequality in family income as well as changes in intergenerational correlations.

We concentrate on trends among men and women between the ages of thirty and fifty-nine, whom we often refer to as "mature adults." Family income prior to the age of thirty shows little relationship to either family income at later ages or the parental characteristics that predict later family income. The reason seems to be that the young make the transition to full adulthood at different ages. Individuals who are in their twenties are often still in school, childless, or both. As a result, they are more willing to work irregularly or take temporary jobs that provide little evidence about their future earnings. In addition, many are unmarried or in short-term cohabiting relationships that provide few clues about subsequent partners' likely income.

Men and women over fifty-nine are often retired, and the likelihood of their being retired rose between 1960 and 2000. Family income in retirement is strongly related to both parental characteristics and earlier income, but we concluded that pooling retirees with working-age adults would be a mistake.

Our data come from three widely used surveys: Occupational Changes in a Generation, the General Social Survey, and the Panel Study of Income Dynamics. Unfortunately, none of these surveys covers individuals living in institutions. This omission probably leads to some downward bias in our estimates of the relationship between respondents' family income and their parents' characteristics.

Our major findings are as follows:

Intergenerational correlations and income gaps. The multiple correlation between a mature man's family income and his parents' measured characteristics fell during the 1960s and then remained stable from the 1970s through the 1990s. But men's family incomes began growing more unequal in the 1970s, so the income gap between men raised by advantaged rather than disadvantaged parents widened between the 1970s and the 1990s.

We have no data on trends among women during the 1960s. In the early 1970s intergenerational correlations were higher among daughters than among sons, and daughters' family incomes were also more unequal. The economic cost of having grown up in a disadvantaged family was therefore considerably larger for daughters than for sons. But whereas the correlation between a mature man's family income and his parents' socioeconomic position was almost constant between the 1970s and the 1990s, this correlation fell among women. As a result, the economic cost of growing up in a disadvantaged family was roughly constant for women, although it remained larger for women than for men.

Race, ethnicity, and region. At least among those between the ages of thirty and fifty-nine, disparities in family income between blacks and whites, between Hispanics and Anglos, and between those raised in the South and North narrowed between 1961 and 1999.

Parental education. The effect of parental education on men's family income fell during the 1960s but rose again over the next three decades. Parental education mattered more for mature women's family income than for men's in the 1970s, but this difference had disappeared by the late 1990s.

Parental occupation. When we rank occupations in terms of their educational requirements and economic rewards, which we treat as a rough proxy for skill requirements, the effect of a one-point difference between two fathers' occupations on their mature sons' family income declined during the 1960s. The effect of fathers' occupation shows no clear trend after that for either men or women, but it is consistently larger for women than for men, partly because women's family incomes are more unequal than men's.

Parental income. The effect of parental income on thirty-year-old children's family income shows no clear trend between 1979 and 1996. We have no data on this relationship before 1979.

Although we talk about the "effect" of parental characteristics on children's eventual family income, readers should not take the term too literally. The parental characteristics that we can measure are all correlated with other characteristics that we cannot measure, so we cannot say with any confidence what would happen if we were to change any one parental characteristic while leaving all the others constant. The word "effect" is just shorthand for an association or partial correlation.

This chapter begins by briefly summarizing previous research on trends in intergenerational inheritance in the United States. The next section outlines a framework for thinking about the ways in which parental characteristics can affect a grown child's family income, after which we describe our data, and then summarize trends in inequality among parents. We next show changes in the multiple correlation between mature adults' family income and their parents' characteristics, and then show changes in the income gap among adults from different backgrounds. The final section discusses possible criteria for deciding whether the intergenerational correlations that we observe are too high, too low, or about right.

1. Previous research

"Occupational Changes in a Generation" (OCG) was the first large carefully designed study of changes in intergenerational economic mobility in the United States. Featherman and Hauser (1976) compared men who were between the ages of twenty-five and sixty-four in 1962 and 1973. They found that parental advantages explained 18 percent of the variance in occupational rank in 1973, compared to 21 percent in 1962. Hauser et al. (2000) report that the bivariate correlation between fathers' and sons' occupations also fell among non-blacks, although it rose among blacks. Hauser et al. found a further decline when they compared intergenerational occupational correlations in the 1986 Survey of Income and Program Participation (SIPP) to those in the 1973

OCG.[2] Using the General Social Survey (GSS), both Hout (1988) and Grusky and DiPrete (1990) also concluded that intergenerational occupational correlations declined between 1972 and the mid-1980s.

Most assessments of change in the intergenerational earnings correlation are based on the Panel Study of Income Dynamics (PSID). Almost all of these studies also suggest that the inheritance of economic advantages has declined.[3] Mayer and Lopoo (2001) found, however, that when they added other parental characteristics to their model, the multiple correlation between parental advantages and PSID sons' wages was relatively stable.

Although the PSID usually shows a declining effect of parental earnings or family income on men's earnings, the National Longitudinal Surveys do not. Levine and Mazumder (2002) compare the twenty-eight to thirty-six year old men whom the National Longitudinal Survey of Youth surveyed in 1994 to men of the same age whom the National Longitudinal Survey of Young Men surveyed in 1981. Among men raised in two-parent families, the elasticity of sons' earnings with respect to their parents' income rose from 0.22 to 0.41. This means that a 10 percent difference in parental income was associated with a 4.1 percent difference in sons' earnings in 1994 compared to a 2.2 percent difference in 1981. But while focusing on two-parent families holds family structure constant, it ignores the fact that disadvantaged sons were less likely to

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[2] Hauser *et al*. warn that this comparison is not exact, because the Census Bureau introduced a new occupational classification scheme between the 1973 OCG and the 1986 SIPP.

[3] Corcoran (2001) estimated the correlation between parents' family incomes and their sons' hourly wages, annual earnings, and total family income between the ages of twenty-five and twenty-seven. All these correlations were smaller among sons who turned twenty in the 1980s than among sons who turned twenty in the 1970s. Fertig (2002) used the PSID to analyze trends in earnings mobility. She too found that the association between fathers' and sons' earnings weakened over time, although this was not true for mothers' earnings. Levine and Mazumder (2002) also found an (insignificant) decline in the intergenerational elasticity of sons' earnings with respect to their parents' family income in the PSID. Mayer and Lopoo (2001) found a downward trend in the effect of parents' family income on both sons' family income and their wages at age thirty among those born after 1952, but the linear trend was no longer significant when they included sons born between 1949 and 1951.

have grown up in two-parent families. When Levine and Mazumder included sons raised by single parents, the elasticity of sons' earnings with respect to their parents' total income only rose from 0.23 to 0.33, and the change was no longer statistically significant.

All these studies focus on the intergenerational inheritance of labor market status, so they omit respondents who are not in the labor force. This restriction could easily introduce some bias, because family background affects adults' economic position partly by affecting their chances of working for pay, and this effect may well have changed over time. The studies that look at earnings are also limited to trends since around 1980, which means that they cover a relatively short window.

The existing literature also focuses largely on men and ignores the growing role that wives' earnings play in determining many families' economic position. Figure 1 shows changes between 1968 and 1996 in the correlation between a mature adult's own earnings in a given year and his or her total family income in the same year. Men and women without earnings are included and assigned earnings of zero. Among men the correlation between earnings and total family income fell from 0.87 in 1968 to 0.75 in 1996. Among women, the correlation rose from 0.18 in 1968 to 0.39 in 1996. Earnings are still a much better proxy for living standards among men than among women. But since family background influences an individual's chance of having a well-paid spouse, ignoring this fact is likely to bias trend estimates of how background affects economic status among either men or women.

2. How parental advantages affect family income

Figure 2 shows some of the pathways by which parental characteristics can influence children's eventual family income. Figure 2 is not a complete causal model. It omits many links that are well established in the research literature, such as the reciprocal effects of spouses' earnings on one another, to highlight the links that we think most likely to have changed. It also contains several hypothetical constructs that require brief discussion.

Genetic advantages. A growing body of evidence suggests that genetic differences can influence an individual's earnings. In some cases this is obvious. American men whose physical appearance suggests that they are of European descent earn more than

those whose appearance suggests that they are of African descent, for example. But even when we focus on white males, genes still seem to matter. Monozygotic (MZ) twins have all their genes in common, while dizygotic (DZ) twins share roughly half their genes. When Taubman (1976) collected data on the 1973 earnings of white male twins who had both served in the American armed forces during World War II, MZ twins' 1973 earnings correlated 0.54, while DZ twins' earnings correlated 0.30. If genetic resemblance were the only reason for the higher correlation among MZ twins, we could infer that nearly half the variance in annual earnings was linked in some way to genetic variation.[4] Twin data collected by Orley Ashenfelter and his collaborators in the 1990s yield roughly the same estimate for hourly wages.[5] These estimates require a number of problematic assumptions (Goldberger 1978), and they should not be taken literally. They do suggest, however, that genes are likely to play a significant role in explaining parent-child earnings correlations.

Björklund, Jäntti, and Solon (this volume) report earnings correlations not just for MZ and DZ twins but also for large samples of ordinary siblings reared together and apart, as well as for half-siblings reared together and apart and for pairs of genetically unrelated siblings reared together. Their data underscore the danger of extrapolating from twin data alone. The assumptions that psychologists developed to estimate heritabilities from IQ data on MZ and DZ twins do not appear to hold for earnings. If one makes the traditional assumptions, genes appear to explain almost two-fifths of the variance in Swedish twins' earnings. But when Björklund et al. use all their sibling data, they conclude that the figure is closer to a one-fifth.

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[4] With random mating and additive genetic effects, the genetic correlation between fraternal twins is 0.50. Positive assortative mating raises the correlation. Nonadditive genetic effects lower it. If these biases roughly offset one another, the estimated heritability (unadjusted for measurement error) is (0.54-0.30)/(1-0.5) = 0.48.

[5] Ashenfelter and Rouse (1998) describe the sampling strategy. Their analysis focuses exclusively on returns to schooling among identical twins, but Cecelia Rouse generously supplied both the MZ and DZ twin correlations for hourly wages, which were 0.63 and 0.37 respectively. Using the simplified model in the previous note, the implied heritability is thus (0.63-0.37)/(1-0.5) = 0.52.

If we want to estimate the role of genes in the intergenerational transmission of economic privilege, one obvious strategy is to compare father-son correlations for sons who grew up with their biological father to correlations for sons who never lived with their biological father. We do not have such data for the United States, but Björklund and Chadwick (2002) have assembled such data for Sweden. At the mean of the distribution, the elasticity of a Swedish son's earnings with respect to his biological father's earnings is 0.28 (±0.01) if the son always lived with his biological father and 0.09 (±0.02) if he never lived with his biological father. For sons who always lived with a non-biological father, the elasticity of earnings with respect to the non-biological father's earnings was 0.07 (±0.05). These figures suggest that biological and non-biological fathers were about equally important.[6]

The fact that genetic resemblance helps explain economic resemblance between fathers and sons does not mean that this source of economic resemblance operates independently of the environment. Suppose, for example, that myopia has a genetic component. Most affluent societies ensure that myopic children get glasses. As a result, myopic children can usually see almost as well as other children. In poor societies where glasses are not available to everyone, the genes that contribute to myopia have a larger impact.

People's genes also influence the environments they choose for themselves. Consider two sisters, one of whom finds reading easy and one of whom finds it difficult. The sister who finds reading easier is likely to enjoy reading more and do more of it. As a result, she is likely to score higher on vocabulary and reading tests, get higher grades, stay in school longer, and earn more when she enters the labor force.

Human capital. Economists use the term "human capital" to describe the skills, knowledge, and character traits that influence a worker's potential earnings. If employers value the same attributes for several generations, parents with above-average human capital are likely to have children with above-average human capital. To begin with,

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[6] If a son had always lived with a non-biological father, the elasticity of a son's earnings with respect to his non-biological father's earnings is about 0.15 if his father is at the mean of the distribution for all fathers.

parents with traits that employers value tend to have above-average earnings, so they can invest more in their children's nutrition, health care, and education. Such parents also tend to live in political jurisdictions where the government invests a lot in children. In addition, while most parents want their children to develop traits that will pay off in the labor market, achieving this goal is easier for parents who have such traits than for parents who do not (Duncan *et al*, this volume). Finally, as we have already noted, many traits that employers value depend partly on genes, and children get half their genes from each parent.

Although economists use the term "human capital" to describe characteristics that pay off in the labor market, one can easily broaden the concept to include characteristics that pay off in the marriage market. As we shall see, parental characteristics explain slightly more of the variation in daughters' family incomes than in sons' family incomes. This difference between sons and daughters deserves a more careful analysis than we can provide here, but it suggests that parental advantages may exert even more influence on a daughter's success in the marriage market than on a son's success in the labor market.

Taste for market goods. Families vary dramatically in the number of hours that their adult members spend doing paid labor. Family members also vary in the extent to which they maximize their hourly wages. Some always take the best-paid job they can find, while others settle for less money to get shorter hours, more congenial colleagues, more interesting work, or other nonmonetary advantages. Family background appears to influence how much people work (Altonji and Dunn 2000), and it probably also influences the weight that individuals assign to earnings relative to goals like short hours and interesting work. If these correlations change over time, the correlation between family income and parental characteristics is also likely to change.

Gifts and bequests. Dividends, interest, and rent accounted for 7 percent of all income received by individuals between the ages of twenty-five and sixty-four in 1999.[7]

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[7] These estimates are corrected for underreporting. The data are from U.S. Bureau of the Census (2000, pp55 and D-4). Since the self-employed earn less per hour than wage and salary workers with similar characteristics, we assigned their business assets an implicit value of zero. The implicit returns on equity in owner-occupied housing raise family income by another 7 percent for the population as a whole (U.S. Bureau of the Census

Wolff (2002) concludes that gifts and bequests accounted for about 19 percent of all assets in 1998. Gale and Scholz (1994), in contrast, conclude that three-quarters of all assets are inherited.[8] If Wolff is right, inherited assets probably account for about 1 percent of money income among thirty to fifty-nine year olds. If Gale and Scholz are right, the figure could be more like 5 percent.[9] We do not know how this figure has changed over time, but the age at which adults inherit their parents' assets is rising, so the relative importance of inherited assets could be falling for those under the age of sixty.[10]

Rates of change. Figure 2 suggests that intergenerational correlations can change for two quite different reasons. First, the effects of various parental advantages on children's human capital can change. Second, the effects of children's human capital on their family income can change. Children's education illustrates both of these possibilities.

The correlation between parents' socioeconomic advantages and the number of years of school that their children complete declined for children completing school between World War I and the early 1970s (Hauser and Featherman 1976). As a result, educational disparities among adults from different kinds of families kept shrinking throughout the twentieth century. All else being equal, this trend should have reduced the impact of parental advantages on children's family income. But all else was not equal, because the economic value of an extra year of schooling also changed. The effect of an extra year of school on men's annual earnings fell between 1940 and 1975. This change accentuated the declining impact of parental advantages on children's educational attainment, making

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2000, 61), but the increase would be smaller for thirty to fifty-nine year olds. In any event, our estimates of family income do not include the implicit return on home equity.

[8] Kotlikoff and Summers (1981) reach much the same conclusion. The relative importance of inherited assets for respondents between the ages of thirty and fifty-nine could be either higher or lower than for the general population, depending on whether inheritances or savings accumulate faster as people age.

[9] Gifts and bequests also help reduce mortgage debt, which does not show up as money income.

[10] Life expectancy increased by six years between 1960 and 2000, so the proportion of thirty to fifty-nine year olds with at least one living parent rose sharply. The proportion who had actually received a bequest probably fell correspondingly, but we have no data on this point.

it doubly difficult for economically advantaged parents to pass along their advantages by keeping their children in school. But after 1975 the labor market returns to schooling rose again. The payoff to schooling also rose in the marriage market. If we compare the most educated third of all mothers to the least educated third, about 93 percent of the most educated and 87 percent of the least educated were living with a husband in both 1940 and 1960. By 1990 the proportions were 84 percent for the most educated and 70 percent for the least educated.[11] The marriage gap between the most and least educated mothers had thus risen from 6 to 14 percentage points. The net result was that while parental advantages had less impact on how much schooling young people got in the last third of the century than earlier in the century, the value of each year of school rose during the last decades of the century.

Mature adults seldom go back to school, so the correlation between educational attainment and parental characteristics when a birth cohort reaches sixty is about the same as when it was thirty. The correlation does change as more recent birth cohorts replace earlier ones, but this takes a long time. In principle, we can hold changes of this kind constant by tracking the same birth cohort over time. When we do this, almost all the remaining changes in the correlation between family income and parental characteristics are attributable to changes in the way employment, marriage, and earnings are distributed among individuals with fixed characteristics. Some of these changes are predictable byproducts of aging. Adults who head families with children, for example, tend to be more concerned with maximizing their income than young people just out of school. In other cases, however, changes in employment, marriage, and earnings reflect changes over time in the character of the labor market or the marriage market. We return to this issue later.

Whereas cohort replacement is slow, the economic value of respondents' characteristics can change relatively rapidly. When job opportunities improved for black workers in the wake of the civil rights movement, for example, young blacks benefited the most, but older blacks also gained. Likewise, when the wage gap between high

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[11] These estimates are from tabulations by Andrew Clarkwest using the Integrated Public Use Microsamples from the decennial census.

school and college graduates widened in the 1980s, the change was largest among younger workers but it also affected mature workers. Changes in the marriage market can also change the value of personal characteristics quite rapidly. When divorce rates rise, all women are more likely to experience sudden reductions in family income, but the change is likely to be largest among those with disadvantaged parents, because their divorce rates are likely to rise the most.

3. The data.

The Occupational Changes in a Generation (OCG) surveys were supplements to the Census Bureau's Current Population Survey and were conducted in 1962 and 1973. They both asked men (but not women) about their family background. Our first sample of mature OCG men was born between March 1902 and March 1932. Our second sample was born between March 1913 and March 1943.

The General Social Survey (GSS) is a smaller survey that has been conducted by the National Opinion Research Center either annually or biennially since 1972. The GSS asks both men and women about their family income and family background. We analyze the surveys conducted between 1972 and 2000, so our samples of mature adults were born between the spring of 1912 and the spring of 1970.

The Panel Study of Income Dynamics (PSID) is a longitudinal survey conducted by the Survey Research Center at the University of Michigan. It has followed all members of about 5,000 households (including those who leave to form a new household) since 1968. Unlike OCG and GSS, the PSID has asked parents about annual income every year since 1968, so we can link parents' incomes to their grown children's family income at age thirty. Our PSID sample includes all children born between 1949 and 1966.

Family income. All three surveys were conducted in the spring and asked respondents about their income during the previous calendar year: 1961 and 1972 in OCG, 1971 to 1999 in GSS, and 1979 to 1996 in PSID. We adjust OCG and GSS family incomes to eliminate differences in family income based on age, gender, and survey year and analyze the effect of parental characteristics on the natural logarithm of adjusted

family income.[12] Thus if a parental characteristic has a coefficient of 0.01, a one-unit change in the parental characteristic is associated with a 1 percent increase in respondents' family income. Although we refer throughout to "family" income, we include individuals who live alone or with nonrelatives, treating them as families of one. We do not adjust respondents' family income for differences in family size. If respondents did not provide any income data we drop them.

In OCG, the income data come from the March Current Population Survey (CPS). We have data on the total pretax money income from all sources for the respondent and his wife (if he was married), but not for other family members. Our measure of "family" income is therefore the sum of the respondent's income and his wife's income if he was married.[13]

In the GSS, interviewers handed respondents a card with a list of income categories, each of which was identified by a different letter, and asked respondents to say which letter best matched their family's pretax income. The card does not tell respondents how they should define their family, so there was probably some variation in the treatment of income received by elderly parents, grown children, and partners to whom the respondent was not married. As inflation pushed up nominal incomes, the GSS added more categories at the top, raising the total number of categories from twelve in 1972 to twenty-three in 2000. Such changes were associated with increases in the estimated dispersion of income, but these "methodological" increases were small. We assigned all GSS respondents who put themselves in the top income category an amount 1.5 times the top category's lower bound. We assigned respondents who put themselves in lower categories the midpoint of their category.

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[12] To standardize income we divided respondents by gender, survey, and year, and regressed the log of family income on Age, Age^2, Age^3, and Age^4. We use the residuals from these regressions as our dependent variable in subsequent analyses. The Census Bureau imputed missing OCG income data using a "hot deck" routine, which assigns respondents the income of the last previous respondent with similar characteristics. The GSS is too small for such imputations, so we drop GSS respondents who did not report their family income.

[13] Since we do not know to what degree extended families living in the same household pool their incomes, it is not clear whether we would be better off including their income, but in the data available to us this is not an option.

To see how grouping income affected the estimated impact of parental characteristics, we tried grouping the 1972 OCG income data into the twelve GSS categories for 1972. Grouping reduced the standard deviation of logged family income by 7 percent. Contrary to what we had expected, however, grouping had no systematic effect on the coefficients of parental characteristics. As a result, parental characteristics explained slightly *more* of the variance in grouped than ungrouped OCG incomes. This finding suggests that most of the within-category variance is noise. We therefore decided to group both OCG and GSS incomes.[14] Implausibly low incomes are less common in the PSID, so we trimmed the top and bottom one percent of the distribution rather than grouping PSID incomes.

Annual versus permanent income. Most families' income fluctuates from year to year. To see how much annual income varied over time we tracked PSID family heads who were between the ages of thirty and thirty-nine in 1968. The correlations between annual incomes separated by twenty years averaged about 0.5. This finding suggests that respondents' stable characteristics are unlikely to explain more than half the variance in annual income. Thus if family background explains 15 percent of the variance in respondents' annual income, it should explain more like 30 percent of the variance in their average income between the ages of thirty and fifty-nine.

If the correlations among family incomes measured one, five, ten, or twenty years apart were changing over time, the correlation between parental characteristics and annual income would not necessarily show the same long-term trend as the correlation between parental characteristics and long-term income. But year-to-year income

[14] Once we take logarithms, incomes of $200 and $800 differ as much as incomes of $20,000 and $80,000. As a result, much of the within-category variance is in the bottom income category, which includes families with incomes below $1,000 in 1972 dollars. We do not believe that income differences among such families provide any useful information. There is no obvious way in which even a single individual could have subsisted on less than $1,000 worth of goods and services in 1972. Almost everyone who reported such an income must therefore have had additional resources: unreported money income, noncash income (such as food stamps and housing subsidies), gifts or loans from friends or relatives, or savings that could be drawn down. The 1970 Census shows no relationship between variations in household income below $1,000 and a household's chances of having a telephone, an automobile, or other amenities (data not shown).

fluctuations have risen at about the same rate as overall income inequality, so the year-to-year and decade-to-decade correlations among thirty to fifty-nine year olds in the PSID show no clear trend (results not shown). It follows that the correlations of parental characteristics with annual income and long-term income should move in tandem.

Parental occupation. OCG asked respondents to describe the occupation of the individual who headed their family when they were sixteen years old. GSS asked respondents to describe the occupation of their father or stepfather when they were sixteen. If respondents did not report their father's occupation, we imputed a value based on their other characteristics using "best subset" regression (Little and Rubin 1987).

Both OCG and GSS assign fathers to a three-digit Census occupational category using the same categories for fathers as for sons.[15] We used updated versions of Duncan's "socioeconomic index" (SEI) to rank these occupations.[16] These SEI scores give roughly equal weight to the educational attainment and income of workers in a given occupation. We interpret these scores as estimates of the occupation's skill requirements. Hauser and Warren (1997) have shown that fathers' SEI scores predict children's life chances more accurately than an occupational ranking based solely on the mean earnings of those who worked in the occupation.

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[15] OCG fathers and sons were classified using the Census Bureau's 1960 categories. Until 1988, GSS fathers and sons were classified using the 1970 Census categories, which are quite similar to those for 1960. Starting in 1988, GSS fathers and sons were classified using the 1980 categories, which differ appreciably from those used earlier.

[16] See Duncan (1961) for the original index. We use Stevens and Featherman's (1981) SEI scores to rank 1970 occupations, and Stevens and Cho's (1985) SEI scores to rank 1980 occupations. In both cases we use SEI scores that cover all workers in an occupation rather than just men. These occupational rankings are based on the educational attainment and income of workers at the time of the decennial census in which the Census Bureau introduced a classification scheme, not at the time when the respondent's father was sixteen. OCG men whose fathers owned farms, for example, are assigned an SEI score based on the education and income of farmers in 1960, even if the respondent was sixteen in 1920. This could be a problem if, as seems likely, the education and income gaps between farmers and the rest of the population were wider in 1920 than in 1960. The relative ranking of most other occupations has, however, been surprisingly stable since 1940.

We transformed all our SEI scores so that they had means of zero and standard deviations of one in the full sample of OCG or GSS fathers. Since the OCG and GSS standardizations differ, differences between OCG and GSS have no substantive meaning. Changes *within* the OCG should, however, reflect changes in the distribution of fathers across occupations, since OCG occupations were assigned the same score in all years. Because GSS switched from the 1970 to the 1980 occupational classification in 1988, occupations got new SEI scores at that time, but this switch did not change the standard deviation of fathers' SEI scores. Trends in the dispersion of GSS fathers' scores are therefore real.

Parental education. Once again, OCG asked about the educational attainment of the person who headed the respondent's family at age sixteen, while GSS asked about the respondent's father or stepfather. When GSS respondents did not report their father's or stepfather's education, we substituted the mother's education. The coefficients of father's and mother's education do not differ in any consistent way. We assigned all OCG and GSS parents in a given educational category the estimated mean of the interval, measured in years. In the PSID, parental education is the number of years of school completed by the respondent's mother, with the father's education substituted when the mother's education was not available.

Siblings. This is the number of siblings reported by the respondent, top coded at nine in OCG and ten in GSS.

Black. This is a dichotomous variable, with a value of one for blacks and zero for non-blacks. In almost all cases this measure is based on the interviewer's judgment rather than the respondent's self-identification.

Hispanic. The 1973 OCG included a question about "original nationality." This question is roughly (though not exactly) comparable to the question that the Census Bureau uses today. It allows anyone with any Latin American ancestors, no matter how remote, to identify themselves as Hispanic if they wish to do so. Those with ancestors from many places can choose their own ethnicity. The 1962 OCG did not include a question of this kind, so we classified men as Hispanic on the basis of their place of birth and their parents' place of birth. This definition excludes Hispanics whose parents were both born in the United States, and it presumably yields a poorer Hispanic population

than the 1973 definition. The GSS asked respondents if they had ancestors from Latin America, but since the GSS only interviews in English, it probably underrepresents first-generation immigrants. The PSID is limited to families who lived in the United States in 1968, so it does not include many immigrants. These definitional difficulties mean that our data cannot tell us much about changes in the economic status of Hispanics.

Southern origins. In OCG this measure is the respondent's region of birth. In GSS and PSID it is the region where the respondent lived as a teenager.

Intact family. OCG asked respondents whether they were living with both parents "most of the time" up to age sixteen. GSS asked respondents whether they were living with both parents *at* age sixteen. The PSID measure is for the year when the respondent was nineteen rather than sixteen, even if the respondent no longer lived at home.

Parental income. The PSID is our only source of reliable data on parental income. We calculated PSID parents' average income when a child was between the ages of nineteen and twenty-five. Most readers would probably prefer a measure of parental income when the child was younger, but since the PSID did not begin until 1968, children born in the late 1940s and early 1950s were already in their middle or late teens when the first data on parental income was collected. Eliminating these children would shrink both our sample and the time interval over which we could calculate trends.

To see if measuring parental income when children were aged nineteen to twenty-six biased our results, we also calculated average parental income during adolescence for respondents who had such data. Average parental income when children were adolescents was highly correlated with average parental income when children were young adults, and when Mayer and Lopoo (2001) used both measures to predict children's incomes they could not reject the hypothesis that the coefficients were equal.

4. Changes in inequality among parents

Suppose that a 10 percent income difference between parents was always associated with a 4 percent income difference between their children. The income gap between children raised by rich and poor parents will then depend on the size of the income gap separating rich and poor parents. If inequality between rich and poor parents falls, as it did during the first two-thirds of the twentieth century, and if all else remains equal, the

subsequent income gap between their children will also fall. If inequality between rich and poor parents rises, as it did in the last third of the twentieth century, and if all else remains equal, the income gap between their children will also widen. The same logic holds for other parental advantages, like educational attainment and occupational position.

We do not find statistically reliable changes in the effect of parental income, but that is because our estimates are imprecise and our time series only covers the years from 1979 to 1996, not because the point estimates are the same year after year. As we shall see, the effects of a one-year difference in parental education and a one-point difference in occupational SEI do fluctuate between 1960 and 2000. We therefore assume that the effects of parental income also fluctuated, and that the PSID sample is just too small and starts too late to identify such fluctuations. Nonetheless, it still seems reasonable to assume that the impact of family background also depends partly on how unequal parents are. All else being equal, the more parental characteristics vary, the higher the expected correlation between parental characteristics and children's economic outcomes.

Table 1 shows trends in the means and standard deviations of the seven parental characteristics available in OCG and GSS. The last column of table 1 combines the within-survey changes in OCG with the within-survey changes in GSS to estimate the overall trend in the dispersion of each parental characteristic between the early 1960s and the 1990s. Changes in the standard deviation provide a good measure of trends in parental inequality when parental characteristics have linear effects. As we shall see, this requirement is more or less met for all our measures of parental inequality except number of siblings.

Occupational inequality. The relationship between the logarithm of respondents' family income and parental SEI scores is approximately linear in the bottom 90 percent of the occupational distribution. But SEI scores have a long tail above the 90th percentile, and differences above the 90th percentile have smaller percentage effects on children's family income than differences below the 90th percentile (results not shown). To assess the impact of this nonlinearity on the estimated trend in occupational inequality among parents, we transformed SEI scores so as to make their effect on logged family income roughly linear. The estimated trend in occupational inequality among parents

using this transformed measure of SEI was almost identical to the trend using the original measure.[17] We therefore use the more familiar untransformed measure. Table 1 shows that when we use this measure, occupational inequality among parents rose by 14.7 percent between 1962 and the 1990s.

Educational inequality. Parental education also has essentially linear effects on the log of respondents' family income. In the 1961 OCG, for example, the income gap between respondents whose fathers had sixteen rather than twelve years of schooling was 29 percent, while the income gap between respondents whose fathers had twelve rather than eight years of schooling was 28 percent.[18] Table 1 shows that the standard deviation of the number of years of school that a parent had completed rose slightly between the first and second OCG surveys but fell slightly in the GSS between the 1970s and the 1990s. Overall, educational inequality among parents hardly changes.[19]

Inequality in family size. Disparities in the size of children's families declined somewhat between the early 1960s and the 1990s. All else being equal, this decline should have reduced the correlation between respondents' family background and their eventual income.

Dichotomous background measures. The four remaining measures of parental advantages in table 1-- intact family, black, Hispanic, and Southern origins -- are dichotomous rather than continuous. It is more difficult to think about changes in parental inequality when a measure has only two possible values (coded in this case as

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[17] Occupational inequality increased by 16.8 percent using transformed SEI scores compared to 15.5 percent using untransformed SEI scores.

[18] Children whose parents attended graduate school do not earn significantly more than children whose parents merely earned a BA, but so few fathers had any graduate education that we cannot draw any firm conclusions from this finding.

[19] For a contrasting approach that treats the ratio of the standard deviation to the mean as a measure of educational inequality, see Hauser and Featherman (1976). Using this measure, educational inequality falls sharply over the course of the twentieth century. But Hauser and Featherman's data also show that the standard deviation of years of schooling falls for successive cohorts of men born during the first half of the twentieth century even when it is not divided by the mean. This decline appears to have slowed in the second half of the century. The absence of such a trend in our data on fathers may be a byproduct of changes in differential fertility.

zero and one). To see how the distribution of dichotomous parental characteristics affects inequality, suppose that coming from an intact family always doubled a child's expected family income. This would be a sizable advantage, but if almost all children grew up in intact families, family structure could not explain much of the variation in family income, because it would not vary much. This would be equally true if almost everyone grew up in a broken family. Dichotomous characteristics can make their largest contribution to inequality when half the population has an advantage and half does not. The standard deviation of a dichotomous characteristic reflects this fact: it is zero when nobody has the characteristic, rises gradually to 0.50 when half the population has the characteristic, and then falls back gradually to zero when everyone has the characteristic.[20]

The only dichotomous characteristic for which the standard deviation changes appreciably is being Hispanic. For reasons that we have already discussed, the OCG measures provide no information on the actual change in the percentage of the population that was Hispanic. The GSS shows substantial growth in the English-speaking Hispanic population between the 1970s and 1990s. Because Hispanics have relatively low family incomes, the fact that more adults had Hispanic parents implies both an increase in the overall level of inequality among parents and an increase in the fraction of the variance in respondents' incomes explained by their parents' characteristics.

Income inequality. All else being equal, growing ethnic diversity and growing inequality in the kinds of work that parents did should have led to a small increase in both the income gap between respondents from advantaged and disadvantaged families and the correlation between respondents' family income and their parents' characteristics. But all else was obviously not equal. The most obvious omission in table 1 is parental income. Since we know that the overall distribution of income changed over the course of the twentieth century, it seems likely that income inequality among parents also changed.

There is no reliable data on income inequality among parents prior to 1940. But this was an era when most children lived in families with a male breadwinner, when relatively

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[20] The standard deviation of a dichotomous characteristic is equal to $[(p)(1-p)]^{.5}$ where p is the proportion of individuals who have the characteristic.

few women worked for pay while they had children at home, and when government transfer payments to the needy were modest. The dispersion of family income among parents is therefore likely to have tracked the dispersion of mature men's earnings, which depends mainly on the unemployment rate and the dispersion of hourly wages among those with jobs. Men's wages became more equal between 1900 and 1945 (Margo 1999). Thus if we set aside the 1930s, when unemployment was unusually high, it seems likely that parental incomes also became more equal between 1900 and 1945.

We have better information on the distribution of family income after World War II. Figure 3 shows that income inequality among families of two or more declined a little between the late 1940s and the late 1960s. After 1969 inequality began to climb. By the late 1970s family incomes were as unequal as they had been in the late 1940s. In the 1980s and 1990s income inequality reached levels not seen since before World War II. Unfortunately, figure 3 covers all families of two or more, regardless of whether they include children. But Jencks, Mayer, and Swingle (forthcoming) have analyzed trends between 1969 and 1999 for households with children, and their trends are quite similar to those in figure 3. In the absence of contrary evidence we therefore assume that trends among parents were similar to trends for all families of two or more throughout the period from 1947 to 2000. If that assumption is correct, income inequality among parents probably declined during the first two-thirds of the twentieth century and rose during the last third of the century.

Neither OCG nor GSS includes a direct measure of parental income, so the coefficients of parental education and occupation reflect their influence on parental income. When overall wage inequality rose after 1970, inequality between workers with different amounts of education and workers in different occupations rose at roughly the same rate. Such evidence as we have suggests that the opposite pattern prevailed between 1940 and 1970, when wage inequality was falling. Thus if the value of a 1 percent increase in parental income remained constant -- a very large if -- and if all else remained equal, the coefficients of parental education and occupation should have declined between 1940 and 1970 and should then have risen after 1970.

The implications of these income changes for children born in particular years depend on whether the effects of parental income vary for children of different ages. If parental

income exerts its strongest effect when children are very young and all else is equal, the coefficients of parental education and occupation should probably have fallen fairly steadily among respondents born between 1900 and 1970, as ours were. If parental income exerts its largest effect when adolescents are deciding whether to attend college, the coefficients of parental education and occupation should be somewhat larger among children born in the 1960s than among those born in the 1950s or 1940s.[21] If parental income has roughly the same impact on children of all ages, we would expect to see some decline in the impact of parental education and occupation among children born between 1900 and about 1950, followed by some increase among those born after about 1965. Unfortunately, our samples do not include enough individuals born after 1965 to assess this last conjecture.

5. Changes in intergenerational correlations.

We turn now to changes in the multiple correlation between mature adults' position in the income distribution and their parents' advantages. We denote this parent-child correlation as R_{pc}.[22] When R_{pc} falls, we can infer that intergenerational changes in rank (what sociologists call "exchange mobility") have become larger or more frequent. When R_{pc} rises, intergenerational changes in rank have become either smaller or less frequent.

Table 2 shows multiple correlations between respondents' family income and the seven parental characteristics measured in the OCG and GSS surveys, namely race, ethnicity, Southern origins, intact family, number of siblings, parental education, and parental occupation. For reasons already discussed, differences between the OCG and GSS correlations are likely to be a byproduct of differences between the surveys. For men, one can estimate the overall change between the early 1960s and the 1990s by first comparing the 1961 and 1972 OCG surveys, then comparing GSS men surveyed in the

[21] This prediction assumes that the post-1969 trend in income inequality among parents of college-age children matched that for parents of children under eighteen.

[22] The square of the multiple correlation is the percentage of the income variance explained by parental characteristics.

1970s and 1990s, and then combining these two within-survey changes. But the changes during the 1960s are so different from the changes between the 1970s and 1990s that combining the two changes into a single summary statistic usually conceals more than it reveals.

Among OCG men we see a dramatic decline in R_{pc} between 1961 and 1972. This decline recurs for all age groups. The diagonal arrows track birth cohorts as they get older. Here again we see declines between 1961 and 1972. Men who were between the ages of thirty and thirty-nine in 1961, for example, were almost all between the ages of forty and forty-nine in 1972. For these men R_{pc} fell from 0.399 to 0.305. The same pattern holds for men who were between forty and forty-nine in 1961. Although it is tempting to assume that these changes reflect a trend that prevailed throughout the 1960s, this need not be the case. Figure 3 suggests, for example, that family incomes were unusually unequal in 1961. The changes that drove up measured income inequality could conceivably have produced an analogous short-term jump in R_{pc}.

In any event, the GSS tells a very different story about changes in R_{pc} after 1972. The multiple correlations for men in different age groups show no consistent trend between the 1970s and the 1990s, and none of the changes is statistically significant.[23] When we track the same cohort of men over time, the multiple correlations almost always rise as a cohort ages. This is in sharp contrast to what we saw between 1961 and 1972.

Unlike OCG, GSS provides data on post-1972 trends among women as well as men. Table 2 shows that while R_{pc} was essentially stable among GSS men, it declined by about a seventh among GSS women. Whereas R_{pc} was substantially higher among women than men in the 1970s, this gender difference had largely disappeared by the 1990s. This pattern of differences is consistent with the hypothesis that parental advantages influence success in the marriage market somewhat more than they influence success in the labor

[23] The estimated within-cohort trends are much noisier in GSS than in OCG, partly because the samples are much smaller and partly because the match between cohorts is less exact. Those who were between the ages of thirty and thirty-nine in the 1980s, for example, were born between 1940 and 1949 if they were surveyed in 1980 but were born between 1949 and 1959 if they were surveyed in 1989. When we compare those aged thirty to thirty-nine in the 1980s to those aged forty to forty-nine in the 1990s, the degree of overlap between birth cohorts varies with the precise survey year.

market, although other explanations are also possible. Regrettably, we cannot test this hypothesis in a rigorous way with either the OCG or GSS data.

The correlations in table 2 take no account of parental income. To see how much this omission biases R_{pc} we turn to the PSID. Our PSID data set did not include a measure of either parental occupation or sibship size. Nonetheless, the first equation in table 3 shows that even when we omit parental income, the other five parental characteristics measured in the PSID correlate 0.367 with respondents' income at age thirty. Table 2, in contrast, suggests that for GSS men and women surveyed in the 1980s and 1990s, the multiple correlation between all seven parental characteristics and family income measured between the ages of thirty and thirty-nine averages 0.333. Adding parental income to the PSID equation in table 3 raises R_{pc} by about a tenth (from 0.367 to 0.406), suggesting that omitting parental income does not attenuate the estimated level of intergenerational inheritance as much as some economists assume it does.

For our purposes, however, the crucial question is not whether adding parental income affects the estimated *level* of R_{pc} but whether it affects the estimated *trend*. The interaction between parental income and survey year in the third column of table 3 is positive, suggesting that the independent effect of parental income may have increased over time. But the coefficient of the interaction term is also smaller than its standard error, suggesting that the PSID does not provide enough statistical power to settle this question. Mayer and Lopoo (2001) are also unable to find any clear trend in R_{pc} using the PSID.

For those who find it hard to decide whether the correlations in table 2 are "large" or "small," table 4 displays the association between parental advantages and children's family income in a more intuitively accessible form, namely the probability that children with parents in the top or bottom quartile will remain there when they grow up. To construct this matrix we first used the seven measures of parental advantages available in OCG and GSS to rank respondents' parents from most to least advantaged.[24] Then we divided parents into quartiles running from the least to the most advantaged. We also

[24] These rankings weight each parental advantage by its coefficient in an equation that predicts age-adjusted family income for respondents of a given age and gender in a given period.

divided respondents into quartiles based on how their family income compared to that of other respondents of the same age and sex who were surveyed in the same year. Finally, we calculated the probability that respondents whose parents were in the top or bottom quartile would have family incomes in each quartile. To keep the discussion simple, we focus on the probability that those born into the top or bottom quartile were in the top or bottom income quartile as mature adults.

Since R_{pc} fell between 1961 and 1972, we also expected the proportions of OCG men who remained in the top and bottom quartiles to decline. Likewise, since R_{pc} did not change much for men after 1972, we did not expect much change in the proportions of GSS *men* who remained in the top and bottom quartiles. Table 4 confirms these expectations.

Among women the story is a little more complicated. Among GSS women, R_{pc} fell between the 1970s and the 1990s, so we expected a parallel decline in the proportions of GSS *women* who stayed in the top and bottom quartiles. Table 4 confirms this prediction for women born into the top quartile: their chances of having slipped into a lower quartile were clearly higher in the 1990s than in the 1970s. However, there was little change in the percentage of women born into the bottom quartile who rose into a higher quartile, although those women who did move up moved further in the 1990s than in the 1970s.

Table 4 also suggests that downward mobility out of the top quartile is more common than upward mobility out of the bottom quartile -- an asymmetry that correlation coefficients cannot detect. In the first OCG survey, for example, only 37.6 percent of the mature men born into the top quartile had family incomes in the top quartile, whereas 46.2 percent of the men who had been born into the bottom quartile were still there. This difference is highly significant ($p < 0.001$). This asymmetry is much less marked among GSS men and is not statistically significant, but it crops up among GSS women. This asymmetry may just reflect the fact that both OCG and GSS asked more questions about characteristics that distinguish people in the bottom quartile of the income distribution from everyone else than about characteristics that distinguish people in the top quartile of the distribution, but the asymmetry could also be real.

Long-term income. Tables 2 through 4 describe the correlation between family background characteristics and family income in a single randomly selected year between

the ages of thirty and fifty-nine. The PSID data cited earlier suggest that something like half the variance in such an income measure is attributable to some combination of measurement error and real year-to-year fluctuations in income. If half the variance in mature adults' annual income is attributable to measurement error and year-to-year fluctuations, averaging mature respondents' income between the ages of thirty and fifty-nine should roughly double R^2. Doubling R^2 would raise the values of R_{pc} in table 2 by about two-fifths, putting them between about 0.4 and 0.6. It would also increase the probability that a respondent born into the top of the bottom quartile of parental advantages had a lifetime income in the same quartile.

Although economists often assume that the study of intergenerational inheritance should focus on lifetime incomes, and that year-to-year fluctuations should be treated as noise, this view only makes sense if families' consumption levels are based on lifetime income rather than income over some shorter interval. We know that families often save and borrow so as to neutralize the effects of short-term income changes. R_{pc} in table 2 constitutes a lower-bound on the correlation between mature adults' standard of living in a randomly selected year and their parents' advantages. But we also know that short-term income fluctuations have real effects on some forms of consumption, including grocery spending and parents' ability or willingness to help pay their children's college bills. This means that inflating the estimates of R_{pc} in table 2 would probably overstate the correlation between mature adults' standard of living and the parental advantages measure in OCG and GSS.

6. Changes in income ratios

Up to this point we have focused on the extent to which children's rank in the distribution of income depends on their parents' rank in the distribution of socioeconomic advantages, ignoring the fact that the economic distance between the top and bottom of the income distribution changes over time. But the economic distance between mature adults from advantaged and disadvantaged families depends not just on R_{pc} but on the economic distance between grown children at, say, the 5th and 95th percentiles of the distribution.

One can measure the increase in income associated with growing up in a more advantaged family either as a dollar difference or a percentage difference. Most people find percentage differences more appealing. Doubling your income may not have the same effect on well-being when your income is small as when it is large, but this assumption seems more plausible than the assumption that an extra $10,000 has the same effect on well-being regardless of whether your income is small or large. Increasing the standard deviation of log income by 0.01 implies that the income gap between random families has risen by 1 percent.[25] Thus if a 1 percent increase in income is equally valuable to the rich and the poor, the standard deviation of log income is a good measure of income inequality. The top half of table 5 shows trends in inequality among mature adults using this measure. Just as in figure 3, inequality fell between 1961 and 1972 and rose steadily between the 1970s and 1990s.[26]

Income ratios between the advantaged and disadvantaged. One way to measure the income ratio between respondents with advantaged rather than disadvantaged parents is to multiply the intergenerational correlation (R_{pc}) by the standard deviation of mature adults' logged family income. This yields an estimate of the income gap between mature adults whose parents differed by one standard deviation on the index of parental advantages that we used to construct table 4. The second panel of table 5 shows trends in this measure. Several results deserve attention.

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[25] These effects compound, so a standard deviation of 0.70 implies that when families differ by one standard deviation their incomes differ by a multiple of $e^{.70} = 2.01$.

[26] The standard deviation of logged income is quite sensitive to small errors near the bottom of the distribution, which means that it is also sensitive to certain methodological changes. Figure 3 suggests that income inequality spiked in 1961. This could have been linked to the unusually high rate of unemployment, but the Census Bureau also introduced its "hot deck" routine for imputing missing income values in 1961. Introducing hot deck imputations could perhaps account for the sharp jump in inequality between 1960 and 1961, but it could not account for the equally sharp decline between 1961 and 1962 unless the new imputation procedures had problems that were corrected in 1962. The standard deviation of logged family income in the GSS increases when the number of income intervals changes. But because the GSS only adds new intervals at the top, not the bottom, we did not find sharp discontinuities in the standard deviation for years when the GSS added new intervals.

- Because income inequality declined between 1961 and 1972, the income gap between respondents from advantaged and disadvantaged families fell even more than the intergenerational correlation.
- Because women's family incomes are more unequal than men's, the income gap between women from advantaged and disadvantaged families exceeds the gap between men from similar backgrounds even when the values of R_{pc} for men and women are similar.
- Because income inequality grew faster among men than women after 1970, the income gap between advantaged and disadvantaged men rose, while the income gap between advantaged and disadvantaged women remained roughly constant.
- Because income inequality rises with age, the income gap between respondents from advantaged and disadvantaged families also rises with age, even though the correlation between family income and parental advantages shows no consistent trend with age.

Table 6 presents such income ratios in a more intuitively understandable way by comparing the age-adjusted family incomes of respondents from each quartile of parental advantages.[27] The income gap between respondents raised in the first and second quartiles is always larger than that between respondents raised in the third and fourth quartiles, regardless of whether we measure the gap as a ratio or as a dollar amount.[28]

Specific parental advantages. Column 1 of table 7 shows the bivariate relationship of respondents' logged family income in 1961 to each of the seven parental advantage measured in OCG. Column 2 shows the change in this coefficient between 1961 and 1972. Almost all of the coefficients decline significantly between 1961 and 1972. Columns 3 and 4 show the multivariate coefficients from an equation that controls all

[27] When we convert a normal distribution into quartiles, the distance between the second and third quartiles is always smaller than that between the first and second quartiles or that between the third and fourth. We therefore expect more mobility in the middle two quartiles than in the extreme quartiles, and that is what we observe. To avoid clutter we show only the results for the top and bottom quartiles.

[28] The dollar gaps in table 6 were calculated from the geometric means for each quartile. The pattern might change if we calculated the gaps using arithmetic means.

seven parental advantages simultaneously. Here again, all seven coefficients decline, although only three of the declines are now significant.

The coefficient of parental occupation dropped by about half between 1961 and 1972. This decline is partly attributable to the steady decline in the proportion of respondents whose fathers were farmers. Among respondents not raised on farms, the main reason for decline was that respondents from the top tenth of the occupational distribution enjoyed less of an economic advantage in 1972 than in 1961 (results not shown).

The declining effect of Southern origins probably reflects the narrowing of the income gap between the South and the North. The declining effect of race reflects a decline in the educational gap between blacks and whites, movement of blacks from the South to the North, and some reduction in wage discrimination.

Table 8 shows bivariate results from the GSS. Column 1 shows the estimated coefficient of each parental advantage for men in 1971, while the second column shows the estimated change in the bivariate coefficient for men between 1971 and 1999.[29] The bivariate relationships between men's family income and their father's education, number of siblings, and whether they grew up in an intact family become significantly stronger over time. The bivariate effect of father's occupation also grows slightly stronger, but the change is not significant. The bivariate effect of being Hispanic grows weaker over time.

Columns 3 and 5 show that in 1971 almost every parental advantage or disadvantage had more impact on women than on men. But columns 4 and 6 show that the coefficients for men and women often converged between 1971 and 1999. The effects of parental education, race, and Southern origins all weakened significantly for women and were very close to those for men by the late 1990s. The adverse effect of coming from a large family was significantly larger for women than men in 1971, but this difference had also disappeared by the late 1990s. The multivariate GSS results (not shown) are broadly similar to the bivariate results except that the coefficients are smaller.

7. What is the optimal intergenerational correlation?

[29] The estimated change is extrapolated from the linear interaction between the measure of parental occupation and survey year. We did not have enough statistical power to estimate more complex interactions.

Most scholars who study the transmission of economic and social advantages across generations assume that social policy should strive to reduce such linkages. Taken at face value, this view could imply either that the optimal intergenerational correlation is zero or merely that the optimal correlation is lower than the correlation we currently observe. In this section we propose a third possibility. We argue that some of the mechanisms that contribute to intergenerational correlations are normatively acceptable, economically efficient, or both. Others are not. In our view, the numerical magnitude of the observed correlation (which we still denote as R_{pc}) does not tell us anything useful about why it exists. As a result, the value of R_{pc} cannot tell us whether we should invest resources in reducing it. We would need other kinds of evidence to answer that question.

To decide whether the current value of R_{pc} is too high, too low, or just right, one must begin by identifying some criteria for making such judgments. Egalitarians have traditionally advanced three reasons for reducing R_{pc}: increasing economic efficiency, reducing economic inequality, and promoting social justice. Each of these goals probably implies a different optimal value for R_{pc}, but we will not try to justify that conjecture here. Instead, we ask a narrower question, namely whether any of these goals imply that the optimal value of R_{pc} is zero. We start by considering economic efficiency, then turn to economic inequality, and conclude with a discussion of justice.

Economic efficiency. The earliest arguments for reducing intergenerational inheritance seem to have been based on claims about efficiency. In pre-revolutionary France, where some public offices passed directly from fathers to sons and others were open only to members of the aristocracy, the regime's critics demanded "careers open to talents." In Britain, too, replacing patronage with selection based on examinations was widely seen as the best way to create an efficient civil service. In both countries the reformers equated the inheritance of privilege with incompetence in high places and wanted to open jobs to able candidates regardless of ancestry. Later, many large private firms adopted the same strategy for raising efficiency, as did many of the professions.

These arguments were almost surely correct in eighteenth-century France and Britain. But if the rationale for reducing intergenerational inheritance is to improve the match between job requirements and job-holders' skills, the benefits that flow from reducing inheritance are almost certainly subject to the law of diminishing returns. If we denote

the correlation between a father's occupational rank and his son's rank as r_{fs}, reducing this correlation from 1.00 to 0.80 is almost certain to yield much larger economic gains than reducing it from 0.50 to 0.30. And as long as skills depend partly on either genes or upbringing, the only way to reduce r_{fs} to zero will be to replace occupational selection systems based on expected job performance with systems based on some other criterion. From an efficiency perspective, therefore, the optimal value of r_{fs} is never likely to be zero.

By the late twentieth century observed values of r_{fs} for rich democracies all fell within a fairly narrow range. Using an occupational ranking scheme akin to the SEI scores described earlier in this paper, Björklund and Jäntti (2000) report father-son correlations for occupational rank in the United States and eight European countries. Their estimates of r_{fs} are all between 0.34 and 0.50. If we set aside the four nations in their sample with fewer than 500 respondents, their lowest estimates are for the United States (0.34) and Britain (0.35), while the highest estimate is for Ireland (0.49). Germany and the Netherlands fell between these extremes with values of 0.42 and 0.40 respectively.[30]

Those who assume that the United States is more economically efficient than Europe may interpret the high rate of occupational mobility in the United States as evidence for the hypothesis that increases in occupational mobility enhance efficiency. But while the material standard of living is higher in the United States than in Europe, the difference is largely explained by the fact that Americans work more than Europeans, not that they produce more per hour. An OECD report that tried to estimate GDP per hour worked in 1996 found little difference between the United States, Germany, and Ireland. The United States ranked ahead of Britain, but it ranked behind the Netherlands (Scarpetta et al. 2000, table A2.6).[31]

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[30] The sampling errors for these estimates are roughly 0.007 for the United States, 0.011 for Britain, 0.017 for Germany, 0.019 for the Netherlands, and 0.021 for Ireland.

[31] The correlation between GDP per hour (measured at purchasing power parity) and r_{fs} should be negative if mobility enhances efficiency. For the five nations with large samples, the correlation between r_{fs} and Scarpetta et al.'s estimates of output per hour is actually positive (0.189), albeit insignificant. If we add the other four nations for which Björklund and Jäntti estimate r_{fs} (Austria, Finland, Italy, and Switzerland), the correlation between r_{fs} and GDP per hour worked falls to 0.006.

Nor are low correlations between fathers' and sons' earnings associated in any obvious way with high levels of economic efficiency. Estimates of r_{fs} for earnings are hard to find, because economists prefer to report the elasticity of a son's earnings with respect to his father's earnings (β_{fs}). Such elasticities are sensitive to both differences in the age at which fathers' and sons' earnings are measured and intergenerational changes in earnings inequality (Grawe forthcoming).[32] As a result, even intergenerational earnings elasticities derived from the same sample vary dramatically.[33] Solon (1999), for example, identified ten studies that had used the PSID to estimate the elasticity of a son's annual earnings with respect to his father's earnings in the United States. These ten estimates ranged from 0.13 to 0.53, with a median value of 0.39. Although their median is close to Solon's own estimate (0.41), the dispersion of the estimates for the United States shows that cross-national comparisons are worthless unless close attention has been given to achieving comparability.[34]

The most meticulous cross-national comparison seems to be that by Grawe (2001). His data suggest that intergenerational earnings mobility in the United States is higher than in Britain but lower than in Canada. Comparisons with Germany are inconclusive. And the best estimates for Finland and Sweden (Solon 2002; Björklund and Chadwick 2002) imply that these nations have more earnings mobility than the United States, although the Finnish and Swedish samples are not entirely comparable to any of the U.S.

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[32] $\beta_{fs} = (r_{fs})(\sigma_{lnYS}/\sigma_{lnYF})$, where σ_{lnYS} and σ_{lnYF} are the standard deviations of logged earnings for sons and fathers. Most studies compare fathers' and sons' earnings when the fathers are older than their sons. Because earnings inequality rises with age (at least after about thirty), this practice often makes β_{fs} less than r_{fs}. In some cases, however, studies try to compare the earnings of fathers and sons who were roughly the same age. This strategy means that sons' earnings are measured a generation later than fathers' earnings. The ratio of σ_{lnYS} to σ_{lnYF} then depends on the trend in earnings inequality. In countries like the United States and Britain, where earnings have grown substantially more unequal, this approach will yield values of β_{fs} that exceed r_{fs}.

[33] Different approaches to measurement error also contribute to this problem.

[34] Cross-national comparisons of occupational mobility are, of course, also sensitive to national differences in occupational classification schemes, and some Europeans believe that the high rate of measured mobility in the United States is attributable to deficiencies in the Census Bureau's categories. Björklund and Jäntti's use of a consistent ranking scheme cannot solve this problem.

samples. Still, these data offer no support for the hypothesis that low rates of intergenerational inheritance make an economic system unusually efficient. OECD estimates of output per hour do suggest that the United States is more efficient than Britain, which is consistent with Grawe's conclusion that earnings mobility is higher in the United States than in Britain. But the OECD estimates also suggest that the United States is more efficient than Canada, where earnings mobility exceeds the U.S. level. And the OECD estimates hourly output in Finland and Sweden at roughly the U.S. level, even though they appear to have more earnings mobility than in the United States.

None of this evidence contradicts the widespread intuition that very high rates of intergenerational inheritance are likely to reduce economic efficiency. But within the range of values we observe in today's rich democracies, there is no obvious relationship between rates of mobility and economic output per hour worked.

Economic inequality. Earnings inequality derives partly from the fact that workers have different skills. Thus, if a nation can improve the skills of its worst paid workers, it can simultaneously raise mean earnings and reduce the dispersion of earnings. Since poorly paid workers are always drawn disproportionately from disadvantaged backgrounds, improving their skills will also reduce the intergenerational inheritance of economic advantages. This logic played an important role in shaping Lyndon Johnson's War on Poverty during the mid-1960s. But while the logic supporting this strategy is compelling, it is hard to see how this strategy can generate a *large* reduction in inequality.

Assume that the correlation between parents' logged earnings and their grown children's logged earnings ($r_{yp,yc}$) is 0.40. Now imagine some policy innovation that raises the mean earnings of adults from all different backgrounds to the same level. Any such policy would by definition reduce the intergenerational correlation of earnings from 0.40 to zero. It would also reduce the variance of children's logged earning by $0.40^2 = 16$ percent. Reducing the variance of earnings by 16 percent would, in turn, reduce the standard deviation of logged earnings (a standard measure of inequality) to $\sqrt{.84} = 91.7$ percent of its previous level.

An 8.3 percent reduction in earnings inequality is not negligible. But this outcome requires a policy that reduces the intergenerational correlation to zero. Such a reduction

would not be easy, and it would probably not even be desirable. It requires a world in which genes have no effect on earnings. It also requires a world in which advantaged parents make no special effort to pass along their advantages to their children. More realistic assumptions imply a smaller reduction in intergenerational inheritance, which would in turn imply a smaller reduction in inequality.

Reducing intergenerational inheritance of economic advantages may nonetheless be an essential political prerequisite for reducing economic inequality by other means. The most effective strategies for reducing income inequality appear to depend on using the power of the government to both limit the dispersion of earnings and to support households in which earnings fall far short of need. The political will required to implement such policies may well depend partly on persuading the affluent that their children have a reasonable chance of benefiting from these policies.

Justice. Some Americans see *any* correlation between parental advantages and children's economic prospects as evidence that the United States has not lived up to the ideal of equal opportunity. One common version of this argument holds that since children do not get to choose their parents, penalizing children for having the wrong parents is unjust.

There is no American consensus on the definition of equal opportunity, but most discussions seem to assume that it has two basic elements. First, jobs should be distributed on the basis of actual or potential performance, not ancestry. We refer to this ideal as "meritocracy." Second, all children should have the same opportunity to develop the skills required to get a good job. We refer to this ideal as "equal developmental opportunity." (What we call "developmental" opportunity is similar to "educational" opportunity, except that it unambiguously encompasses the activities of parents as well as schools.) Both meritocracy and equal educational opportunity were once strategies for encouraging economic growth. Today, however, these ideals have evolved into claims about justice as well as efficiency, and they are more likely to be invoked by people who care about racism, poverty, and inequality than by people who care about growth.

America does not distribute jobs in a strictly meritocratic way, and American children do not all have the same opportunities to develop their talents. But even if these goals had been achieved, mature adults' family incomes would still be correlated with their

parents' characteristics for at least three reasons. First, even if developmental opportunities were equal, both fathers and mothers would still pass on half their genes to their children, and genes would still have some effect on competence. Second, parents would still pass on some of their cultural ideals and personal preferences to their children. As a result, children who had to choose between maximizing their family income and, say, spending time with their children or living near a trout stream would often make the same choice that their parents had made. Third, while most Americans want employers to follow meritocratic principles when distributing jobs, few want to impose such requirements on men and women who are choosing a spouse. Discrimination on the basis of race, ethnicity, and socioeconomic background is still almost universally accepted as a legitimate feature of the marriage market. We discuss these issues in order.

Genes and justice. There is a latent tension between meritocracy and fairness. A meritocracy, for example, rewards professional athletes for some combination of natural aptitude and effort. It is hard to argue that rewarding athletes for inheriting the right genes is any more fair than rewarding people for inheriting financial assets. Yet a commitment to meritocracy makes this kind of unfairness inevitable in domains where performance varies for genetic reasons. It therefore guarantees that economic status will to some extent be correlated across generations.

Herrnstein (1971) provided a controversial but influential analysis of this issue. His argument went as follows. First, economic success in developed countries depends partly on cognitive skills, which vary partly for genetic reasons. It follows that genetic variation influences an individual's chances of economic success. Second, children get half their genes from each of their parents. This ensures that children of successful parents usually inherit a disproportionate share of whatever genes facilitate success. As a result, children of successful parents tend to be more successful than the average child. Indeed, Herrnstein argued that the relative importance of genetic advantages had increased as social reforms equalized children's opportunities.

Herrnstein probably exaggerated the role of cognitive skills in determining economic success (Jencks *et al*. 1972). But genetic variation also appears to influence noncognitive traits like empathy, reliability, ambition, impulsiveness, and leadership. John Loehlin's chapter in this volume shows that parents and children are not as similar on measures of

such traits as they are on IQ tests. Nonetheless, the parent-child correlations on these personality measures are considerably higher for biological than adopted children, just as they are for cognitive tests. This finding suggests that Herrnstein's argument may also be somewhat applicable to the noncognitive determinants of economic success.

Although the logic of Herrnstein's argument is inescapable, logic alone cannot tell us whether genetic resemblance plays a large or small role in economic resemblance between parents and children. The most obvious way to address this question is to compare economic resemblance between parents and their adopted children to economic resemblance between parents and their biological children. We do not have such data for the United States. In Sweden, as we noted earlier, the father-son earnings elasticity is reduced by two-thirds when sons have never lived with their father.

The implications of genetic inheritance for justice depend partly on whether the genes that contribute to father-son earnings correlations influence men's actual job performance or only their job opportunities. In the United States, for example, both height and beauty influence wages. As far as we know, no one has yet investigated whether either height or beauty affects job performance outside the NBA, Hollywood, and the fashion industry.

The implications of genetic inheritance also depend on the economic and social cost of reducing genes' impact on job performance. Medical intervention to minimize the consequences of myopia is relatively cheap and quite effective. Medical intervention to minimize the consequences of mental disorders with a genetic component, such as depression, is currently less effective and more expensive. The list of genetic disorders that yield to treatment is likely to keep growing, however, which should somewhat reduce the economic impact of genetic resemblance between parents and children. In due course it may also become easier to control children's actual genetic endowment. How this controversial possibility would affect genetic resemblance between parents and children is far from clear.

Culture, preferences, and justice. Equalizing opportunity presumably means ensuring that everyone faces the same choices, not that everyone actually makes the same choices. Maximizing one's family income usually requires spending less time on other activities, and people differ in their willingness to make this sacrifice. Some women take jobs to earn money for their children's education, while others think it is more important to stay

home with their children. Some men spend evenings at the office or on the road so that their family can live in a nicer house or neighborhood, while others regard this as a foolish choice. These choices depend, in part, on both our parents' values and the norms that prevailed in the community in which we grew up. Those who favor equal opportunity seldom argue that society should eliminate these sources of intergenerational resemblance.

Family background seems, for example, to influence people's choices about how many hours they work (Altonji and Dunn 2000). This is not surprising. Neither is it evidence that those who work fewer hours and earn less money have been denied an opportunity to work more, although that is surely true in some cases. Equalizing opportunity appears to imply that everyone should have the same opportunity to work long hours, not that everyone should actually do so.

Wages are also lower in rural than urban areas. To some extent this wage differential reflects the fact that prices are lower in rural areas, but direct measures of material well-being, such as surveys of housing conditions, suggest that living standards are also lower in rural areas. Nonetheless, people raised in rural areas often want to remain there. Many accept a somewhat lower material standard of living to enjoy a life that they judge superior in other respects. The fact that parents and children often have similar preferences in this regard contributes to the intergenerational correlation of earnings. It does not prove that children raised in rural areas have fewer opportunities to develop economically useful skills, although that may also be true.

Marriage and justice. The intergenerational correlations reported in this paper reflect the workings of the marriage market as well as the labor market. Indeed, more than half the correlation between married women's family income and their parents' characteristics derives from the tendency of women from advantaged backgrounds to marry men with high incomes. This pattern arises partly because women from advantaged backgrounds are more likely to meet men from similar backgrounds and partly because women from advantaged backgrounds are more likely to have characteristics that make well-paid men want to marry them.

Few advocates of equal opportunity want to make the marriage market follow meritocratic principles. If a young medical resident has been dating several different men

and is trying to decide which one to marry, hardly anyone believes that she has a moral obligation to choose the most competent candidate. If she decides to reject the top surgical resident at her hospital in order to marry a n'er-do-well from a privileged background, her colleagues may criticize her choice as foolish, but they are not likely to say it is morally reprehensible, even though it obviously reduces her future husband's chances of ending up as poor as he "deserves" to be. The same logic applies if "she" becomes "he."

That said, it remains true that social policies that reduce the impact of parental advantages on children's characteristics are likely to reduce the chances that people from advantaged backgrounds will marry well. Perhaps the most important way advantaged parents improve their children's marital prospects is by inducing their children to stay in school. Of course, couples also pair off on the basis of shared interests, tastes, habits, and friends. If children from different racial, ethnic, and socioeconomic backgrounds were more alike in these respects, family background would exert less influence on people's chances of finding a spouse with a good job. Policies that equalized children's developmental opportunities might therefore increase the likelihood that adults from disadvantaged backgrounds would marry well.

The politics of equal opportunity. We have argued that genetic inheritance, intergenerational transmission of preferences and values, and assortative mating can create a nontrivial correlation between mature adults' family income and their parents' socioeconomic advantages, and that this would still be true even if the labor market were completely meritocratic and all children had the same opportunity to develop the traits that both labor and marriage markets reward. But we have no way of knowing how large this correlation would be. Indeed, we have no way of knowing whether it would be larger or smaller than the values of R_{pc} reported earlier in this paper. It follows that if what justice requires is a meritocratic labor market and equal developmental opportunities for all children, positive values of R_{pc} are not evidence of injustice, and changes in R_{pc} are not good indicators of whether society is becoming more or less just. If our concern is with justice, we need more direct evidence on the amount of variation in children's developmental opportunities and the degree to which the labor market follows meritocratic principles.

In theory, employers have an interest in making the labor market more meritocratic. In practice, we have little evidence about the extent to which they hire or promote based on valid predictors of future performance. We know that job opportunities for women and minorities have improved over the past generation, but those are only indirect indicators that labor markets have grown meritocratic, and we have no direct indicators.

Equalizing children's developmental opportunities is an even more formidable task, since it involves changing families as well as schools. It is relatively easy to imagine a society in which all children have equal access to the kinds of goods and services that parents buy for their children in the market. Indeed, many affluent societies have taken significant steps toward this goal over the past two hundred years. Both the United States and Europe began trying to equalize children's educational opportunities in the nineteenth century by making public education free. Post-secondary students must still pay some of their own bills, especially in the United States, which means that they often have to combine education and work. In the United States, many post-secondary students are also expected to borrow. But while higher education is more financially accessible in most other rich democracies than in the United States, it is more academically accessible in the United States than elsewhere. American colleges admit more students with poor secondary school records, and they offer a wider menu of nonacademic instruction. Both the European and American systems result in a substantial correlation between family background and young people's educational attainment.

Except for the United States, most affluent nations also make children's medical care almost costless. In addition, some European nations try to provide high-quality childcare for all children with working mothers. In the United States the food stamp program tries to ensure that all children get enough to eat. In Europe children's allowances are sometimes meant to do the same thing. Such efforts have probably lowered the correlation between parental income and children's health, but they have not reduced it to zero in either the United States or Europe.

Political resistance to shifting the costs of childrearing from parents to governments has also been stronger in the United States than in most European nations. All these rich democracies are alike in that families with above-average incomes pay most of the taxes, while families with below-average incomes have most of the children. Shifting the costs

of childrearing from families to the government therefore involves a large redistribution of resources from the top to the bottom of the income distribution in every country. This kind of redistribution has been more politically acceptable in Europe than in the United States for both attitudinal and institutional reasons.

Redistributing the cost of childrearing is politically attractive in European countries with low birth rates, because making parenthood less costly seems like a promising way to increase fertility, expand the labor force, and finance future pension payments. Redistribution from the more affluent to the less affluent is also attractive in countries that have strong working-class political parties whose members mostly benefit from redistribution. It is not attractive in countries like the United States, where population decline is not a concern and encouraging the poor to have more children is unpopular. The combination of two-party politics, multiple veto points, and fiscal decentralization also makes it unusually hard to tax the affluent in the United States. Nonetheless, shifting the economic costs of child-rearing from parents to governments remains the most obvious strategy for equalizing children's developmental opportunities.

It is much harder to imagine how a society could equalize the quality of children's home life than to imagine how a society could equalize children's access to the kinds of goods and services that parents buy in the marketplace. Raising poor parents' incomes would presumably lower the amount of conflict and stress in poor children's homes. Ensuring that working mothers have predictable schedules that are compatible with their children's schedule would also improve children's lives, although it is not clear how much impact these changes would have on children's adult characteristics. Some people believe that direct intervention in dysfunctional families can also help parents do a better job raising their children.

But hardly anyone who has raised children believes that equalizing parents' incomes or providing more social services would fully equalize children's developmental opportunities. Nor do many people think that schools can fully compensate children for being shortchanged at home. Such compensation is especially difficult to achieve in the United States, where teachers are hired by local school districts and the best teachers gravitate to affluent districts where the students are easier to teach. Some disparity in children's developmental opportunities is probably an inescapable cost of encouraging

parents to care more about their own children than about anyone else's children. How large these disparities need to be remains an open question.

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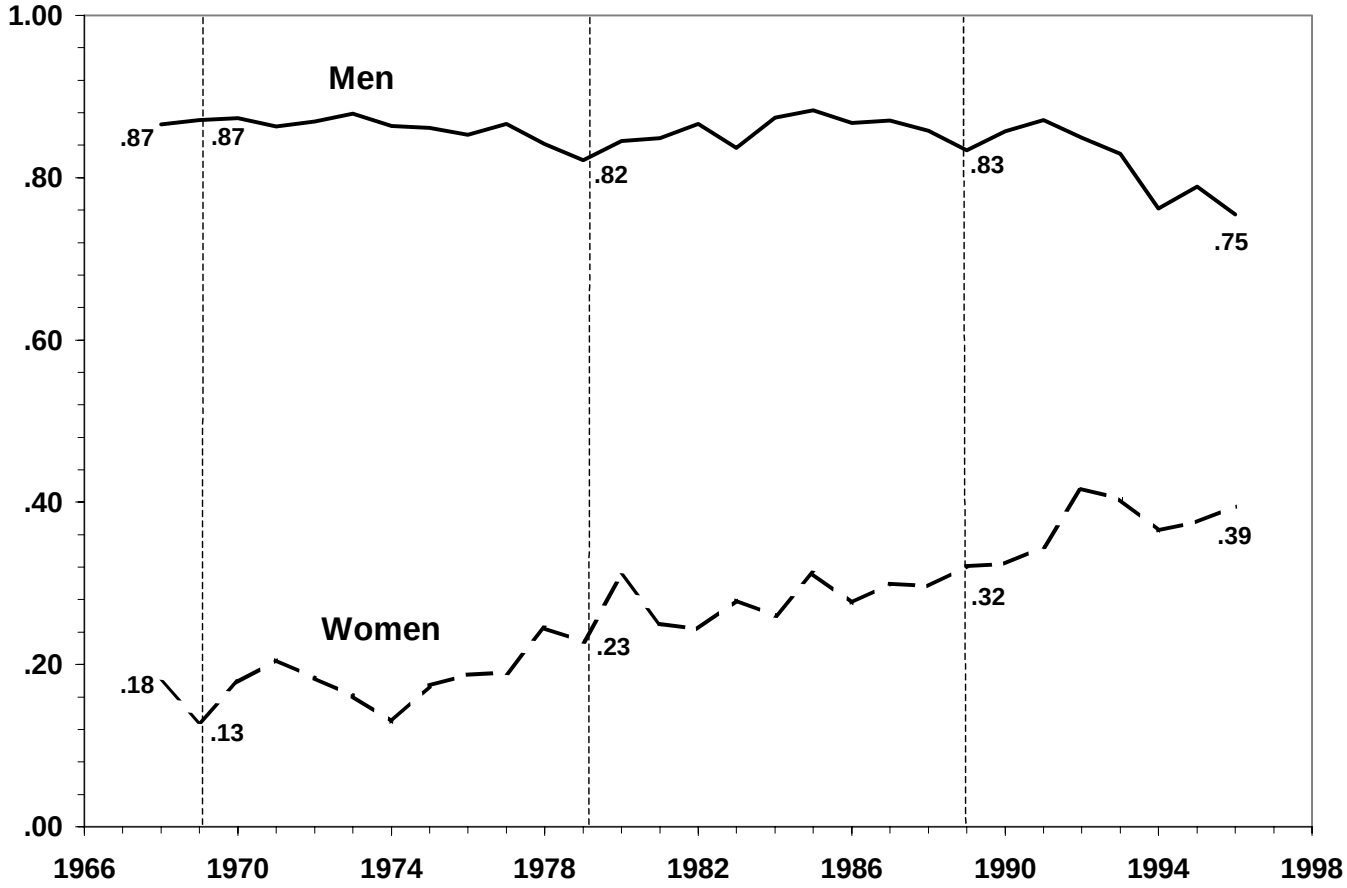
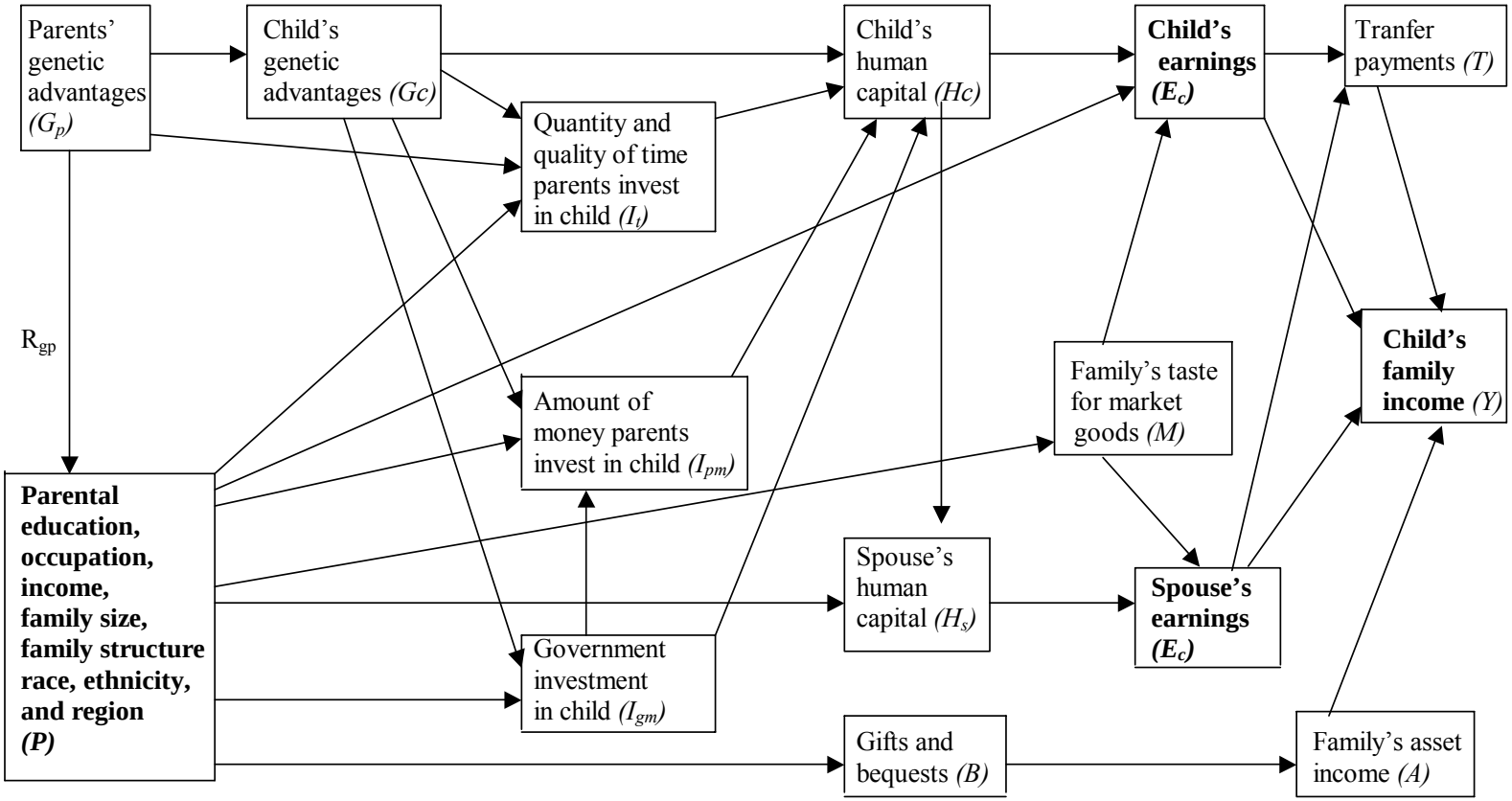
Figure 1: Correlation of Respondent's Earnings with Total Family Income among PSID Men and Women Age Thirty to Fifty-Nine between 1968 and 1996.



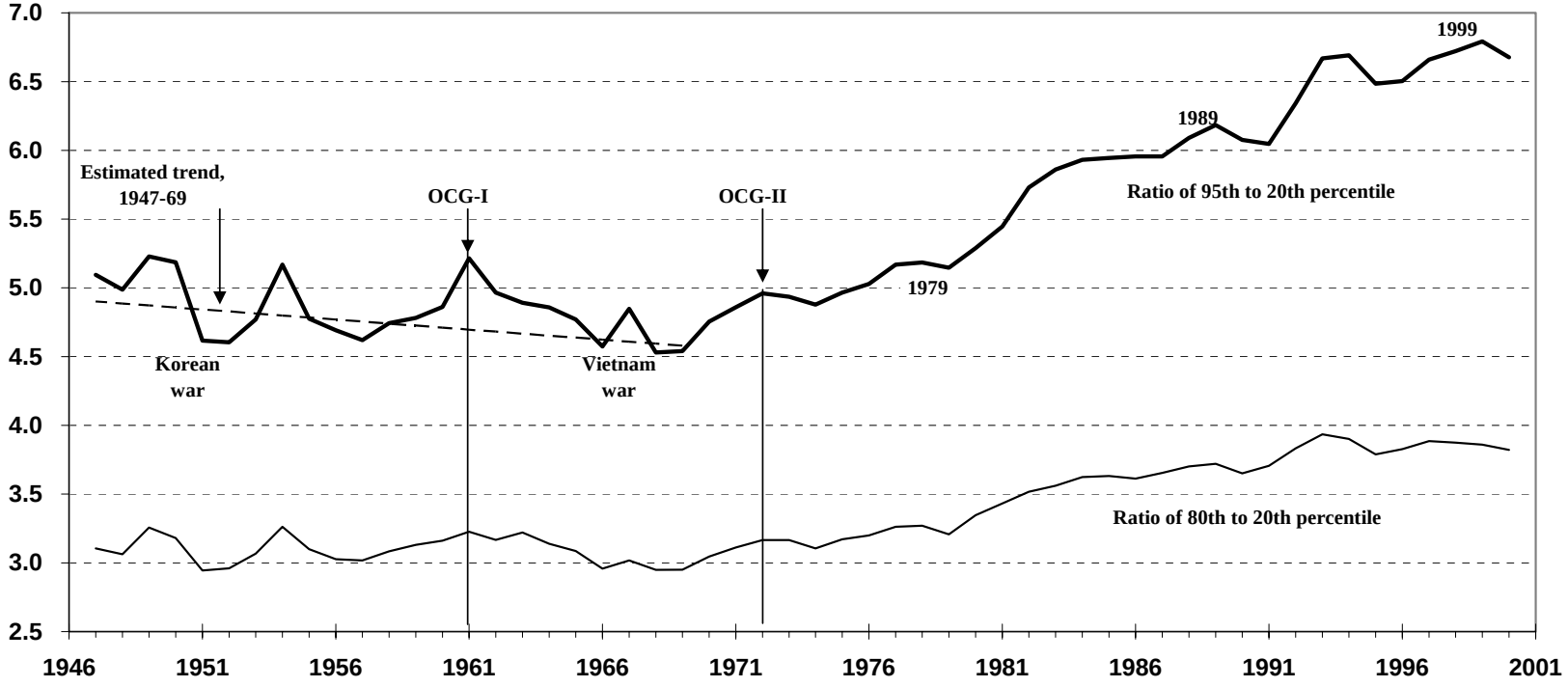
Dashed vertical lines are business cycle peaks. Earnings and incomes are unlogged, and those without earnings are assigned values of zero. The data do not cover individuals who are neither household heads nor partners of heads. Source: Family vs Individual Income-PSID.xls.

Figure 2: Some Possible Links between Respondents' Family Incomes and Their Parents' Characteristics



Source: Transmission Chart7.doc.

Figure 3: Ratio of Family Incomes at 95th and 80th Percentiles to Incomes at the 20th Percentile in the United States: 1947 to 2000



Data cover families of two or more and are from http://www.census.gov/hhes/income/histinc/f01.html (revised 9/25/01). The trend line for the 95/20 ratio between 1947 and 1969 has a slope of -0.0146 with a standard error of 0.0064.

Table 1
Means and Standard Deviations of Seven Parental Characteristics Among OCG and GSS Respondents Aged 30 to 59, by Decade

	OCG Men		GSS Men and Women			Percent change
Variable	**1962**	**1973**	**1970's**	**1980's**	**1990's**	**in SD[a]**
Parental occupation						
Mean	-.091	-.038	-.097	.055	.048	
S.D.	*.933*	*.983*	*.939*	*1.049*	*1.022*	*14.7*
Parental education						
Mean	7.462	7.901	8.612	9.915	11.166	
S.D.	*3.87*	*4.08*	*3.86*	*4.00*	*3.79*	*3.4*
Number of siblings						
Mean	4.245	3.868	3.989	3.767	3.671	
S.D.	*2.76*	*2.73*	*2.87*	*2.76*	*2.61*	-10.2
Intact family						
Mean	.827	.831	.764	.763	.728	
S.D.	*.377*	*.373*	*.425*	*.425*	*.445*	*3.7*
Black						
Mean	.093	.091	.113	.112	.137	
S.D.	*.291*	*.286*	*.316*	*.315*	*.344*	*7.0*
Hispanic[b]						
Mean	.022	.046	.028	.039	.045	
S.D.	*.146*	*.210*	*.164*	*.193*	*.207*	*26.2*
Southern origins						
Mean	.303	.331	.330	.314	.300	
S.D.	*.460*	*.471*	*.470*	*.464*	*.458*	*-0.2*
Unweighted N	10,953	21,289	5,143	6,743	8,474	

a. (OCG-73/OCG-62)(GSS90s/GSS70s)(100) - 100. The shift from Stevens and Featherman's (1981) scale to Stevens and Cho's (1985) scale makes comparisons between pre-1989 and post-1989 GSS data problematic, but since the standard deviation of father's occupation does not change in 1989, we treat the shift as seamless.

b. Because the OCG-I and OCG-II measures of Hispanic origins differ from each other and from the GSS measure, the change in Column 6 is based on the GSS alone.

Table 2
Multiple Correlations of Family Income with Seven Parental Advantages in OCG and GSS, by Age, Sex, and Decade

	OCG Men		GSS Men			GSS Women		
Respondents' age	**1961**	**1972** [a]	**1970s**	**1980s**	**1990s**	**1970s**	**1980s**	**1990s**
30 to 39	.399	.309	.330	.289	.306	.399	.361	.374
40 to 49	.397	.305	.355	.362	.352	.437	.388	.361
50 to 59	.414	.323	.327	.410	.360	.440	.429	.350
Weighted mean for all 30 to 59 year olds	**.403**	**.312**	**.337**	**.342**	**.335**	**.423**	**.385**	**.364** [b]
Approximate sampling error of multiple R[c]	(.008)	(.006)	(.014)	(.017)	(.015)	(.012)	(.015)	(.014)
Sample size	12,829	23,824	2,382	3,040	3,817	2,761	3,703	4,657

Note: The seven measures of family background are race, ethnicity, Southern origins, living with both parents at age 16, number of siblings, parental education, and parental occupation (see text for details).

a. The declines between 1961 and 1972 are significant at the .01 level for all age groups.

b. The average decline between the 1970s and the 1990s is significant at the .01 level.

c. Approximated using $[(1-R^2)/(N-8)]^{.5}$.

Table 3
Effect of Including Seven Years of Parental Income on Multiple Correlation of Parental Characteristics with PSID Children's Family Income at Age 30

	Coefficients (and standard errors)		
Ln of mean parental income when child was 19 to 26		**.363** (.043)	**.206** (.046)
Income by Year interaction (Ln parental income)(Year)(17)		.038 (.073)	.063 (.073)
Mother's education (in years)	**.050** (.006)		**.029** (.007)
Intact family	**.156** (.039)		.000 (.043)
Black	**-.473** (.044)		**-.406** (.045)
Hispanic	-.068 (.073)		-.083 (.074)
Southern upbringing	**-.074** (.032)		-.047 (.032)
R^2	**.135**	**.117**	**.165**
Multiple R	**.367**	**.342**	**.406**

Coefficients in bold are significant at p < .05.

Sample includes all men and women with complete data who turned thirty between 1979 and 1996 (N = 3,509). The standard deviation of logged family income at age thirty is 0.722.

Table 4
Percent of 30 to 59 Year Old Sons and Daughters in Each Quartile of Family Income By Quartile of Parental Advantages and Year in OCG and GSS

Parents' quartile and survey	Family income quartile					Sample
	Bottom	**Second**	**Third**	**Top**	**Total**	**size**
Sons from bottom quartile						
OCG: 1961	**46.2**	27.7	16.7	9.5	100	2,537
OCG: 1972	**40.7**	29.8	21.2	8.4	100	6,454
GSS: 1970s	**40.3**	29.6	19.8	10.2	100	595
GSS: 1980s	**39.4**	30.0	21.2	9.4	100	840
GSS: 1990s	**40.6**	25.8	21.1	12.6	100	954
Trend:1961 to 1990s[a]	**-5.3**	-1.7	5.7	1.4		
Sons from top quartile						
OCG-I	9.5	20.9	32.1	**37.6**	100	2,678
OCG-II	11.8	24.0	29.2	**35.0**	100	4,899
GSS: 1970s	11.6	20.5	30.2	**37.8**	100	596
GSS: 1980s	12.3	19.7	28.8	**39.2**	100	728
GSS: 1990s	11.6	21.4	29.0	**38.0**	100	954
Trend:1961 to 1990s[a]	2.4	3.9	-4.1	**-2.3**		
Daughters from bottom quartile						
GSS: 1970s	**44.4**	26.2	19.6	9.9	100	690
GSS: 1980s	**44.5**	25.5	18.8	11.2	100	1,070
GSS: 1990s	**43.7**	25.9	18.8	11.6	100	1,164
Trend: 1970s to 1990s	**-0.6**	-0.4	-0.8	1.7		
Daughters from top quartile						
GSS: 1970s	10.1	19.1	27.1	**42.8**	100	691
GSS: 1980s	12.1	19.3	29.7	**38.9**	100	878
GSS: 1990s	11.7	23.5	27.1	**37.7**	100	1,164
Trend: 1970s to 1990s	1.5	4.4	0.0	**-5.2**		

Parents are assigned to quartiles of parental advantages using the seven measures in Table 1, with each advantage weighted by its coefficient in the equation predicting log family income. Family incomes are assigned to quartiles after eliminating variation due to age, gender, and survey year.

a. Sum of within-survey changes: (OCG II - OCG I) + (GSS 1990s - GSS 1970s).

Table 5
Income Gap between Respondents Whose Parents Differed by One Standard Deviation on the 7-Item Index of Parental Advantages in OCG and GSS, by Age, Gender, and Decade

	OCG Men		GSS Men			GSS Women		
	1961	**1972**	**1970s**	**1980s**	**1990s**	**1970s**	**1980s**	**1990s**
SD of log family income								
30-39 year olds	.813	.708	.638	.753	.769	.814	.875	.948
40-49 year olds	.860	.764	.697	.763	.901	.813	.932	.929
50-59 year olds	.971	.827	.760	.933	.962	.883	.958	.952
Weighted mean	**.875**	**.765**	**.695**	**.801**	**.860**	**.835**	**.912**	**.942**
Income gap between respondents whose parents differ by 1 SD[a]								
30-39 year olds	.325	.219	.211	.218	.236	.325	.316	.354
40-49 year olds	.341	.233	.247	.276	.317	.355	.361	.335
50-59 year olds	.402	.267	.249	.383	.347	.389	.411	.333
Weighted mean	**.353**	**.239**	**.231**	**.277**	**.290**	**.353**	**.352**	**.343**

a. SD of log family income in the top panel of this table multiplied by the appropriate multiple correlation in Table 2.

Table 6

Mean Family Income by Quartile of Parental Advantages for Men and Women Aged 30 to 59 in OCG and GSS, by Decade

	OCG Men			GSS Men				GSS Women		
	1961	1972		1970s	1980s	1990s		1970s	1980s	1990s
Mean of log family income by quartile of parental advantages										
Bottom quartile	9.70	10.30		10.42	10.31	10.27		10.09	9.97	9.98
Second quartile	10.12	10.58		10.75	10.67	10.63		10.54	10.41	10.43
Third quartile	10.31	10.72		10.83	10.82	10.78		10.68	10.65	10.63
Top quartile	10.57	10.91		10.99	10.99	10.96		10.95	10.82	10.84
Interquartile ratio										
Second/bottom	1.51	1.32	#	1.39	1.44	1.44	#	1.56	1.56	1.56
Third/second	1.21	1.14	#	1.09	1.15	1.17	#	1.16	1.27	1.23
Top/third	1.30	1.21	#	1.17	1.19	1.20	#	1.30	1.18	1.22
Top/bottom	2.38	1.83	#	1.76	1.98	2.00	#	2.37	2.34	2.34
Interquartile gap in 1998 dollars[a]										
Second - bottom	$8,404	$9,633		$12,961	$13,132	$12,535		$13,573	$11,911	$12,111
Third - second	5,156	5,663		4,109	6,608	6,827		6,041	9,088	7,703
Highest - third	9,000	9,475		8,373	9,628	9,466		13,238	7,635	9,285
Top - bottom	$22,560	$24,771		$25,443	$29,368	$28,828		$32,852	$28,634	$29,099
Sample size	10,953	21,289		2,382	3,040	3,817		2,761	3,703	4,657

a. Prices are in 1998 CPI-U-X1 dollars, which probably understate actual gains in purchasing power over time. Dollar gaps are between geometric rather than arithmetic means.

Table 7
Regression Coefficients of Seven Parental Advantages When Predicting Logged Family Income among Sons Aged Thirty to Fifty-Nine in 1961 and 1972: Bivariate and Multivariate Results from Pooled OCG-I and OCG-II Data

	Bivariate Results		Multivariate Results	
Parental characteristic	**Coefficient in 1961**	**Change from 1961 to 1972**	**Coefficient in 1961**	**Change from 1961 to 1972**
Parent's Occupation				
B	**.257**	**-.089**	**.156**	**-.072**
(S.E.)	(.007)	(.009)	(.008)	(.011)
Parent's education				
B	**.053**	**-.012**	**.016**	.001
(S.E.)	(.002)	(.002)	(.002)	(.003)
Number of siblings				
B	**-.058**	**-.011**	**-.024**	.003
(S.E.)	(.002)	(.003)	(.003)	(.003)
Intact family				
B	**.164**	.033	.063	.007
(S.E.)	(.018)	(.024)	(.038)	(.051)
Black				
B	**-.824**	**.359**	**-.559**	**.279**
(S.E.)	(.023)	(.031)	(.025)	(.032)
Hispanic				
B	**-.405**	.082	**-.255**	.006
(S.E.)	(.047)	(.055)	(.045)	(.053)
Southern origins				
B	**-.424**	**.191**	**-.203**	**.098**
(S.E.)	(.015)	(.019)	(.015)	(.020)
Unweighted sample size:	32,242		32,242	

Coefficients in boldface are significant at the .05 level.

Missing data on the independent variables were imputed using best-subset estimates. Missing data on family income were imputed by the Census Bureau using its "hot deck" routine. Equations also include dummy variables for missing values on parental occupation, education, siblings, and intact family. Income was age-standardized for each OCG sample by using the regression of log income on a quartic in age.

Table 8
Bivariate Regression Coefficients of Seven Parental Advantages When Predicting Log Family Income at Ages 30 to 59 among GSS Men and Women: 1971-1999
(Coefficients in boldface are significant at the .05 level)

	Sons		Daughters		Daughters minus Sons	
Parental characteristic	**Coefficient for 1971**	**Change from 1971 to 1999**	**Coefficient for 1971**	**Change from 1971 to 1999**	**Coefficient for 1971**	**Change from 1971 to 1999**
Father's Occupation						
B	**.131**	.037	**.207**	-.010	**.076**	-.047
(S.E.)	(.017)	(.026)	(.017)	(.028)	(.024)	(.038)
Parent's education						
B	**.037**	**.015**	**.057**	-.010	**.020**	**-.025**
(S.E.)	(.004)	(.006)	(.004)	(.007)	(.006)	(.009)
Number of siblings						
B	**-.043**	**-.029**	**-.067**	.007	**-.024**	**.036**
(S.E.)	(.006)	(.010)	(.006)	(.010)	(.008)	(.014)
Intact family						
B	**.090**	**.205**	**.262**	.081	**.172**	-.124
(S.E.)	(.039)	(.062)	(.039)	(.062)	(.055)	(.088)
Black						
B	**-.415**	-.065	**-.770**	**.179**	**-.355**	.244
(S.E.)	(.051)	(.081)	(.051)	(.079)	(.072)	(.113)
Hispanic						
B	**-.573**	**.443**	**-.482**	.168	.091	-.275
(S.E.)	(.095)	(.147)	(.095)	(.144)	(.134)	(.206)
Southern origins						
B	**-.260**	.093	**-.367**	**.226**	**-.107**	.133
(S.E.)	(.035)	(.057)	(.036)	(.060)	(.050)	(.083)
SD of log family income	0.804		0.907			
Unweighted sample size	9,268		11,107			

Missing data were imputed using best-subset estimates. All equations also include dummies for missing data. Education equations also include an interaction allowing the coefficient to vary when mother's education is substituted for father's.