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# Family Structure, Intergenerational Mobility, and the Reproduction of Poverty: Evidence for Increasing Polarization 

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CCPR-025-03

July 2003

# FAMILY STRUCTURE, INTERGENERATIONAL MOBILITY, AND THE REPRODUCTION OF POVERTY: EVIDENCE FOR INCREASING POLARIZATION?* 

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#### Abstract

A substantial body of research has demonstrated links between poverty and family structure from one generation to the next, but has left open key questions about the implications of these associations for aggregate-level change. To what extent does intergenerational inheritance affect trends in poverty and single parenthood over time and, in particular, trends in the relative economic positions of single-parent and two-parent families? This article examines how patterns of intergenerational inheritance play out in the population over the long run, using data from the National Longitudinal Surveys and a model of population renewal that takes into account intergenerational mobility and differential fertility across groups that are defined by poverty status and family structure. Our results suggest that current rates of intergenerational inheritance have little effect on population change over time. They account for only a small share of the recent historical change in poverty and family structure and play no role in exacerbating existing economic disparities by family structure.


0ver the past 30 years, the proportion of children living in single-parent families more than doubled, from $12 \%$ in 1970 to $27 \%$ in 2000 (U.S. Census Bureau 2003a). This increase is associated with worsening economic circumstances of children, who experience greater economic hardship in single-parent than in two-parent families (Duncan and Rodgers 1991; Eggebeen and Lichter 1991; U.S. Census Bureau 1998). Moreover, single parenthood has grown more rapidly among women with relatively poor economic prospects (Ellwood and Jencks 2002). Educational differences in both marital disruption (Raley and Bumpass 2003) and nonmarital childbearing (Musick 2000) have risen, and exit rates from poverty have declined for female-headed families (Stevens 1994). These trends point to a divergence in the socioeconomic experiences of children in single-parent and two-parent families and suggest that family structure has become an increasingly important marker for socioeconomic well-being.

Rapid changes in the family and their economic correlates have led to concerns about the long-term effects of family structure on children. A substantial body of research has documented the interdependence of poverty and family structure from one generation to the next. Children who spend time with a single parent attain lower levels of education and occupation and are more likely to be out of work and to receive welfare in adulthood than are those who grow up with both biological parents (Astone and McLanahan 1991;

[^0]Biblarz and Raftery 1993; McLanahan 1985, 1988; McLanahan and Sandefur 1994; Sandefur, McLanahan, and Wojtkiewicz 1992; Wojtkiewicz 1993). Girls who spend time with a single parent are more likely as adults to have children out of marriage and to experience the disruption of their own marriages (McLanahan 1988; McLanahan and Bumpass 1988; McLanahan and Sandefur 1994; Wu 1996; Wu and Martinson 1993). This research has raised questions about what may be expected for the future, suggesting a "dynamic in current family changes that may well further weaken the prevalence of simple nuclear families" (McLanahan and Bumpass 1988:148). Given the interdependence of poverty and family structure, it may also imply a widening socioeconomic gap between single-parent and two-parent families.

Individual-level studies documenting associations between poverty and family structure within and across generations raise intriguing questions about the effects of intergenerational inheritance on the population over time. Understanding the implications of individual-level associations for population change, however, requires an understanding of the interplay between intergenerational inheritance and demographic reproduction (Mare 1996, 1997). To date, there has been little such aggregate-level analysis. We used data from the National Longitudinal Surveys (NLS) and a model of population renewal that takes into account the intergenerational transmission of single parenthood, the intergenerational persistence of poverty, and differential fertility across groups that are defined by poverty status and family structure. This strategy allowed us to address questions about population change that have emerged from research on the consequences of single parenthood. We estimated the extent to which current patterns of intergenerational inheritance contribute to trends in poverty and family structure, paying close attention to the potential role of inheritance in widening the economic gap between single-parent and two-parent families.

## AGGREGATE-LEVEL SOCIAL PROCESSES

Most research on poverty and family structure has been conducted at the individual or family level, predicting the income or family behavior of men and women on the basis of their parents' marital histories, socioeconomic status, and other characteristics. This research has shown how poverty and single parenthood are transmitted from one generation to the next, but has not directly shown how patterns of intergenerational inheritance play out in the population over time. The long-run effect of intergenerational inheritance depends on both the strength of inheritance and the size of fertility differences across different kinds of families. If inheritance is strong and fertility differences are large, they combine to affect the transformation of the population. By contrast, if inheritance is weak or fertility differences are small, they have little effect on the population from one generation to the next. While there is less evidence with respect to fertility differences by family structure, there are persistent fertility differences by socioeconomic status (Mare 1996). We assessed whether the intergenerational inheritance of poverty and single parenthood-in combination with fertility differences by poverty and family structure-are strong enough to affect the distribution of the population across these states over time.

How one thinks about intergenerational mobility and fertility in the reproduction of poverty and family structure depends on whether one focuses on children or adults. From a policy perspective, one may care more about how people's lives turn out than about how they start in childhood. If rates of intergenerational mobility are high, then, from the standpoint of long-run life chances, rates of childhood poverty may be of less concern than if mobility is low. If rates of intergenerational mobility are high, moreover, the importance of differential fertility of poor and nonpoor women may be limited because the relatively high fertility of disadvantaged women may be offset by their children's opportunities for upward mobility. Alternatively, one may be directly concerned about the inherent hardship
of childhood poverty, even when opportunities for upward mobility are relatively good. From this perspective, it is important to take account of the differential fertility of poor and nonpoor women because it affects the relative number of children who grow up in poor and nonpoor families. In this article, we consider poverty and family structure from the perspectives of both women and children and show how they are related.

Few studies have addressed questions posed at the aggregate level; one exception was Garfinkel et al.'s (1991) study on the reproduction of long-term welfare dependence among blacks. This is the only one to our knowledge that addressed the reproduction of poverty and family structure, but a small body of work has addressed changes in other aggregate-level social processes over time. Aggregate demographic models have been used to examine trends in educational attainment (Mare 1996, 1997), the distribution of IQ (Preston and Campbell 1993), income inequality (Lam 1986), and occupational achievement (Preston 1974). Our work falls within this tradition, focusing on poverty and single parenthood. It moves beyond the work of Garfinkel et al. by using new data to look more broadly at the processes that govern the reproduction of poverty and family structure for both whites and blacks from the perspectives of both women and children. It asks, To what extent does intergenerational inheritance affect trends in poverty and family structure and, in particular, trends in the relative economic positions of single-parent and two-parent families over the long run?

## TRENDS IN THE DISTRIBUTION OF POVERTY AND FAMILY STRUCTURE

We start by examining trends in the joint distribution of poverty and family structure, focusing on four groups that are defined by poverty status and female headship: (1) not poor married couples, (2) not poor unmarried female heads, (3) poor married couples, and (4) poor unmarried female heads. We examine historical evidence for increasing economic polarization in terms of change in the relative sizes of these groups, as well as change in the association between poverty and female headship. If the economic circumstances of single-parent and two-parent families are diverging, we should see an increase in poor single-parent families and an increase in the association between poverty and single parenthood.

Table 1 presents data from the March Current Population Surveys (CPS) for 1970 to 2003 on the poverty and family structures of women aged 30-39 and related children younger than age 18. We defined family structure on the basis of the current marital status of the woman in the household (thus excluding any children not living with their mothers or mother figures). We restricted our analysis of women to those in their thirties to capture key family-building years. We included women both with and without children, since childlessness is one strategy that women may use to avoid single parenthood and/or economic hardship. By this definition, for women, being unmarried may mean living in a family or nonfamily household (e.g., as a single mother or alone); for children, living with an unmarried mother means living in a single-parent family. ${ }^{1}$ Although for brevity's sake we use the terms single-parent families and two-parent families to describe the circumstances of both women and children, the more precise terms for women are unmarried female-headed households and married-couple households, since not all women in our analysis are living with children. We report trends for all races combined and separately for whites and blacks.

The first four columns of Table 1 give the distribution of the population across our four poverty-headship groups. The key difference between the woman and child distributions is that women are much more likely to be not poor and unmarried than are children to be raised by such women. This difference simply reflects the relatively high level of

[^1]Table 1. Trends in the Distribution of Poverty and Family Structure, 1970-2003 CPS

| Women and Children | Distribution, by Poverty and Family Structure |  |  |  | Poverty Rate, by Family Structure |  |  | Odds <br> Ratio ${ }^{\text {b }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Not Poor Married | Not Poor Unmarried | Poor Married | Poor Unmarried | Married | Unmarried | Difference ${ }^{\text {a }}$ |  |
| Women Aged 30-39 |  |  |  |  |  |  |  |  |
| All races |  |  |  |  |  |  |  |  |
| 2000-2003 | 60.9 | 27.3 | 3.6 | 8.2 | 5.6 | 23.0 | 17.4 | 5.0 |
| 1995-1999 | 61.1 | 25.3 | 4.0 | 9.6 | 6.1 | 27.6 | 21.5 | 5.8 |
| 1990-1994 | 62.5 | 24.0 | 4.1 | 9.3 | 6.2 | 27.9 | 21.7 | 5.9 |
| 1985-1989 | 65.2 | 22.2 | 4.2 | 8.4 | 6.0 | 27.5 | 21.5 | 5.9 |
| 1980-1984 | 67.4 | 19.9 | 4.8 | 8.0 | 6.6 | 28.5 | 21.9 | 5.6 |
| 1975-1979 | 73.4 | 15.8 | 4.2 | 6.7 | 5.4 | 29.8 | 24.4 | 7.5 |
| 1970-1974 | 78.1 | 11.8 | 4.6 | 5.5 | 5.6 | 31.6 | 26.1 | 7.8 |
| White |  |  |  |  |  |  |  |  |
| 2000-2003 | 65.1 | 24.8 | 3.7 | 6.3 | 5.3 | 20.3 | 15.0 | 4.5 |
| 1995-1999 | 65.8 | 23.1 | 4.0 | 7.2 | 5.7 | 23.7 | 18.0 | 5.2 |
| 1990-1994 | 67.2 | 22.3 | 4.0 | 6.5 | 5.7 | 22.6 | 16.9 | 4.9 |
| 1985-1989 | 69.2 | 20.9 | 4.0 | 5.8 | 5.5 | 21.8 | 16.3 | 4.8 |
| 1980-1984 | 71.1 | 18.7 | 4.6 | 5.5 | 6.1 | 22.8 | 16.7 | 4.6 |
| 1975-1979 | 77.2 | 14.4 | 3.9 | 4.5 | 4.8 | 23.8 | 19.0 | 6.2 |
| 1970-1974 | 81.9 | 10.6 | 4.0 | 3.4 | 4.7 | 24.4 | 19.8 | 6.6 |
| Black |  |  |  |  |  |  |  |  |
| 2000-2003 | 35.2 | 43.0 | 2.8 | 18.9 | 7.5 | 30.5 | 23.0 | 5.4 |
| 1995-1999 | 33.1 | 39.3 | 2.8 | 24.9 | 7.7 | 38.8 | 31.1 | 7.6 |
| 1990-1994 | 32.8 | 36.1 | 3.8 | 27.3 | 10.4 | 43.0 | 32.6 | 6.5 |
| 1985-1989 | 38.1 | 31.6 | 4.2 | 26.1 | 9.9 | 45.2 | 35.3 | 7.5 |
| 1980-1984 | 39.4 | 29.5 | 5.2 | 26.0 | 11.6 | 46.7 | 35.1 | 6.7 |
| 1975-1979 | 43.8 | 26.7 | 5.7 | 23.7 | 11.5 | 47.1 | 35.6 | 6.8 |
| 1970-1974 | 49.3 | 20.7 | 8.8 | 21.2 | 15.2 | 50.5 | 35.3 | 5.7 |

childlessness among unmarried women. Despite differences in the distributions of women and children, the historical patterns are similar. Consistent with recent analyses of the overall population (Iceland 2003), the 1970s to the early 1990s can be broadly characterized by stagnant poverty rates and increasing female headship. Up to 1990, women and children experienced monotonic increases in poor and nonpoor female headship. The percentage of unmarried women and the percentage of children living with unmarried women approximately doubled for whites and increased by two thirds for blacks. Since 1990, poverty rates have declined, and increases in female headship have slowed. For black children, the steady rise in single-parent families turned around in the 1990s: the share of black children in single-parent families dropped from $60 \%$ ( $21.6 \%$ nonpoor and $38.5 \%$ poor) in 1990-1994 to $57 \%$ ( $29.8 \%$ nonpoor and $27.2 \%$ poor) in 2000-2003.

The last two columns of Table 1 show measures of the association between poverty and family structure: the difference in poverty rates between unmarried female-headed and married-couple households and the odds ratios of poverty and female headship. Both measures indicate a strong association between poverty and female headship. For
(Table 1, continued)

| Women and Children | Distribution, by Poverty and Family Structure |  |  |  | Poverty Rate, by Family Structure |  |  | Odds <br> Ratio ${ }^{\text {b }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Not Poor Married | Not Poor Unmarried | Poor Married | Poor Unmarried | Married | Unmarried | Difference ${ }^{\text {a }}$ |  |
| Related Children Younger Than 18 |  |  |  |  |  |  |  |  |
| All races |  |  |  |  |  |  |  |  |
| 2000-2003 | 69.0 | 15.1 | 6.2 | 9.7 | 8.2 | 39.0 | 30.8 | 7.2 |
| 1995-1999 | 66.9 | 13.4 | 7.3 | 12.3 | 9.9 | 47.8 | 37.9 | 8.3 |
| 1990-1994 | 67.8 | 11.6 | 8.0 | 12.5 | 10.6 | 51.8 | 41.2 | 9.1 |
| 1985-1989 | 69.3 | 9.9 | 8.3 | 12.5 | 10.8 | 55.9 | 45.2 | 10.5 |
| 1980-1984 | 70.6 | 9.0 | 9.0 | 11.5 | 11.3 | 56.1 | 44.8 | 10.1 |
| 1975-1979 | 75.7 | 8.0 | 7.1 | 9.2 | 8.6 | 53.5 | 45.0 | 12.3 |
| 1970-1974 | 79.8 | 5.8 | 7.4 | 7.0 | 8.5 | 54.5 | 46.0 | 12.8 |
| White |  |  |  |  |  |  |  |  |
| 2000-2003 | 75.0 | 12.4 | 6.4 | 6.2 | 7.9 | 33.5 | 25.7 | 5.9 |
| 1995-1999 | 73.6 | 11.2 | 7.4 | 7.8 | 9.1 | 41.2 | 32.1 | 7.0 |
| 1990-1994 | 74.7 | 9.8 | 8.0 | 7.6 | 9.7 | 43.6 | 33.9 | 7.2 |
| 1985-1989 | 75.6 | 8.5 | 8.1 | 7.7 | 9.7 | 47.5 | 37.8 | 8.4 |
| 1980-1984 | 76.7 | 7.8 | 8.5 | 7.0 | 10.0 | 47.0 | 37.0 | 8.0 |
| 1975-1979 | 81.4 | 6.9 | 6.4 | 5.4 | 7.3 | 43.8 | 36.6 | 10.0 |
| 1970-1974 | 85.0 | 5.0 | 6.1 | 3.9 | 6.7 | 44.2 | 37.5 | 10.9 |
| Black |  |  |  |  |  |  |  |  |
| 2000-2003 | 38.5 | 29.8 | 4.4 | 27.2 | 10.3 | 47.7 | 37.4 | 8.0 |
| 1995-1999 | 34.0 | 26.0 | 5.2 | 34.8 | 13.2 | 57.2 | 44.0 | 8.8 |
| 1990-1994 | 32.9 | 21.6 | 7.0 | 38.5 | 17.4 | 64.1 | 46.6 | 8.4 |
| 1985-1989 | 35.9 | 17.6 | 7.6 | 38.9 | 17.5 | 68.9 | 51.4 | 10.4 |
| 1980-1984 | 36.9 | 15.9 | 9.8 | 37.3 | 21.0 | 69.9 | 48.9 | 8.8 |
| 1975-1979 | 42.3 | 15.0 | 10.5 | 32.2 | 19.9 | 68.2 | 48.3 | 8.6 |
| 1970-1974 | 46.9 | 11.6 | 15.1 | 26.3 | 24.3 | 69.4 | 45.1 | 7.1 |

Source: Authors' tabulations from the March Current Population Surveys (CPS).
${ }^{2}$ Difference in poverty rates between unmarried female-headed households and married-couple households.
${ }^{\mathrm{b}}$ Ratio of the odds of poverty for unmarried female-headed households and married-couple households.
women, the association between poverty and marital status dropped sharply from the early 1970s to the early 1980s and then remained stable until the late 1990s, when it again dropped sharply. Unmarried women were 7.8 times as likely as married women to be poor in 1970-1974; by 2000-2003, they were 5 times as likely. Although children's odds of poverty in single-parent families have been consistently higher, the trends were similar: the ratio of the odds of poverty for children in single-parent families versus twoparent families dropped from 12.8 to 7.2 over this period.

These data show large racial differences in levels of poverty and single parenthood, as has been well documented in the literature. Blacks were much more likely than whites to be poor over this period, although poverty rates for blacks dropped as those for whites increased. For example, the percentage of poor white children increased from $10 \%$ ( $6.1 \%$ in two-parent families and $3.9 \%$ in single-parent families) in $1970-1974$ to $13 \%$ ( $6.4 \%$ in two-parent families and $6.2 \%$ in single-parent families) in 2000-2003; the percentage of
poor black children decreased from $41 \%$ ( $15.1 \%$ in two-parent families and $26.3 \%$ in single-parent families) to $32 \%$ ( $4.4 \%$ in two-parent families and $27.2 \%$ in single-parent families) over the same period. Despite the declines in poverty, the association between poverty and family structure has been stronger for blacks than for whites over most of this time series and has declined for blacks to a lesser degree. Whereas the odds ratio was slightly stronger for white women and children at the beginning of the period, the association was somewhat stronger for black women and children by 2000-2003.

In sum, the historical data show no consistent trend toward greater economic polarization by family structure. Over the past 30 years, single-parent families increased in number, but increases in nonpoor single-parent families were much larger in both absolute and relative terms than increases in poor single-parent families. Differences in poverty rates between single-parent and two-parent families have declined over the past 30 years; odds ratios between poverty and family structure have also declined, albeit more so for whites than for blacks.

## METHODS AND DATA

## One-Sex Model of Socioeconomic Reproduction

We next examine the implications of current patterns of intergenerational inheritance for trends in poverty and family structure over the long run. The core of our analysis is the transmission of poverty and single parenthood from mothers to daughters. We used a onesex model of population renewal that combines rates of intergenerational mobility and fertility and distinguishes between the populations of girls and women. Let $\mathbf{P}_{\mathbf{t}}$ be a (row) vector of population counts in generation $t$ and $\mathbf{T}$ be a transition matrix that incorporates fertility and intergenerational mobility. Then a general model is

$$
\mathbf{P}_{\mathbf{t}+1}=\mathbf{P}_{\mathbf{t}} \mathbf{T} .
$$

If we distinguish girls from women and differentiate both by their poverty status and family structure (i.e., if we classify them into the four groups presented in Table 1: not poor married couples, not poor unmarried female heads, poor married couples, and poor unmarried female heads), then

$$
\mathbf{P}_{\mathrm{t}}\left[\begin{array}{ll}
\mathbf{C} & \mathbf{w}
\end{array}\right],
$$

where $\mathbf{C}$ is a $(1 \times 4)$ subvector that contains counts of girls classified by poverty status and family structure, and $\mathbf{W}$ is a $(1 \times 4)$ subvector that similarly classifies women. The transition matrix is then

$$
\mathbf{T}\left[\begin{array}{cc}
\mathbf{0} & \mathbf{M} \\
\mathbf{F} & \mathbf{0}
\end{array}\right]
$$

where $\mathbf{F}$ is a $(4 \times 4)$ diagonal fertility submatrix that contains female birth rates by the poverty status and family structure of women, $\mathbf{M}$ is a $(4 \times 4)$ joint intergenerational mobility submatrix that describes transitions across poverty statuses and family types, and 0 denotes a $(4 \times 4)$ submatrix of zeros. In this model, the intergenerational mobility rates are applied to the subvector of girls to transform them into the next generation of women. The fertility rates are applied to the subvector of women to yield the next generation of children. ${ }^{2}$ The fertility and mobility matrices-assumed to be invariant over

[^2]time-govern population renewal. ${ }^{3}$ They are iteratively applied to the population distribution until an equilibrium distribution is reached (i.e., until the distribution is unchanged from one generation to the next). The hypothetical equilibrium distribution represents the expected long-run distribution of the population, given intergenerational mobility and differential fertility. This model is analogous to models of interregional mobility and population growth (Rogers 1975). These models assume that the population is closed and thus ignore the effects of immigration on population composition and intergenerational relationships.

An examination of the population-renewal process shows how the effect of intergenerational inheritance depends on both the strength of inheritance and the size of fertility differences. When rates of intergenerational inheritance are high (i.e., mobility is low), fertility differences drive the population distribution to the highest fertility groups. The speed of transformation depends on the magnitude of fertility differences and the extent of redistribution required to reach an equilibrium population distribution. When rates of inheritance are low (i.e., mobility is high), fertility has little impact on the distribution of the population. Intergenerational mobility sets limits on the effects of differential fertility on the population distribution (Lam 1986; Mare 1996, 1997): the greater the mobility, the smaller the effect of fertility.

Our model captures the interdependence of the trajectories of the populations of women and children. The distribution of any given generation of children by poverty and family structure differs from the previous generation of women according to fertility. Likewise, when the population reaches equilibrium, the poverty and family structure distributions of women and children differ only by the relative sizes of fertility rates across groups. Because fertility may result in a greater or lesser association between poverty and family structure for children than for women, it is useful to distinguish these distributions.

## Intergenerational Inheritance of Poverty and Family Structure

NLS. We estimated the joint intergenerational mobility matrix using data from the NLS (U.S. Bureau of Labor Statistics 2002). The lengthy NLS panels made it possible to examine the transmission of poverty and family structure from one generation to the next. Our analysis covers the experiences of two cohorts of women, one that reached adolescence in the late 1960s (Cohort 1) and the other that reached adolescence in the late 1970s (Cohort 2). We followed each of these cohorts over an approximately 20 -year period, until sample members were in their late thirties. We used data from two ongoing surveys: the NLS Young Women (NLSYW) and the NLS Youth (NLSY). The NLSYW is a nationally representative sample of over 5,00014 - to 24 year olds who were first interviewed in 1968. The NLSY provides nationally representative data on a more recent cohort of about 6,300 women aged $14-21$ in 1979. In other work with the NLS (Musick and Mare 2004), we found no significant differences in the intergenerational mobility patterns of these cohorts, which allowed us to pool data from the two surveys and analyze a single sample. The NLS started as a national probability sample, representing all people of a particular cohort living in the United States at the initial survey date. NLS response rates have been relatively high: in the last survey years used here, retention rates were $68 \%$ and $81 \%$ for the NLSYW and NLSY, respectively. In all the analyses, we applied sample weights that adjust for the known characteristics of nonrespondents to reduce the potential effects of attrition on the representativeness of the survey.

[^3]Our sample was restricted to women who were in their teens and living with their mothers at the first interview and who remained in the survey at least 20 years. It included 1,469 women in Cohort 1 and 2,040 in Cohort 2, for a total of 3,509. Cohort 1 daughters were aged 14-18 when they were first interviewed in 1968 and 34-38 when they were last observed in 1988, and Cohort 2 daughters were aged 14-18 when they were first interviewed in 1979 and 35-39 when they were last interviewed in 2000 . We restricted the sample to ages 18 and younger at the first interview so that we could record the characteristics of the daughters' families while the daughters were still in their parental homes. ${ }^{4}$ We kept only families in which a mother was present (including a social mother, i.e., a stepmother) so that we could examine patterns of mother-daughter inheritance. Our sample included respondents with and without children by the time of last observation. About 20\% of the 34- to 39 year olds in our sample were childless, compared with estimates from the June CPS of $15 \%$ of 40 - to 44 year olds who were childless in 1988 and $19 \%$ who were childless in 2000 (U.S. Census Bureau 2003b).

We measured poverty and family structure at two points during the respondents' lives: in their teens and middle adulthood. The first point provides information about the respondents' families of origin, and the second provides information about the families that they formed later in life. We constructed a mother-daughter sample, with Time 1 representing the mother generation and Time 2 representing the daughter generation. Mothers and daughters were, on average, 45 and 37 years old, respectively, when we last observed their income and family structure. At these ages, transitory variance in income is relatively low (Mazumder 2001), and most women have formed their own families. The difference in the mothers' and daughters' ages at the time of observation may attenuate the intergenerational association of poverty and family structure. Being older, mothers are at a stage in life when incomes tend to be higher; in addition, they have more exposure to marriage, divorce, and remarriage. More generally, constructing comparable measures of poverty and family structure for both generations required us to use an incomplete summary of women's income and family experiences. Our measures capture flows into and out of poverty and single parenthood to only a limited extent.

Measuring poverty. We measured poverty by comparing total family income to the official weighted poverty thresholds adjusted for family size (U.S. Census Bureau 2002). ${ }^{5}$ In the NLSYW, the young women reported on the incomes of both generationstheirs and their parents'. ${ }^{6}$ In the NLSY, all income was self-reported by the parents when the girls were in their teens and by the respondent women themselves later in life. For each generation, we averaged three survey years of data and compared this estimate to the average poverty threshold. Taking an average over three years gave us a measure of
4. We excluded $8 \%$ of all 14 - to 18 year olds who were no longer in their parental homes at the time of the first interview. Those who were living away from home were more likely to be married and to have a child by the year following the first interview. They were also more likely to have a nonmarital birth within this period: $13 \%$ of the home leavers versus $6 \%$ of the others. Although this difference represents a strong association, the number is small enough that any bias that is due to early home leaving is unlikely to affect our results.
5. The official thresholds are differentiated by family size, composition, and age of head; the weighed thresholds are differentiated by family size only. We used the weighted thresholds for ease of computation. Because the variation in thresholds is by far the greatest by family size, this approximation should not affect our results.
6. Mothers' own reports of family income were available only for the subset of the NLSYW daughters who could be matched to mothers in the NLS Mature Women sample. To examine the reliability of daughters' reports as proxies for mothers' reports, we regressed a three-year average of the log of mothers' reported income from the NLS Mature Women sample on the analogous measure reported by their daughters in the NLSYW. The resulting coefficient, which we calculated to be $.86(N=811)$, is an estimate of the reliability ratio. Levine and Mazumder (2002) estimated a reliability of .93 for sons' income reports as proxies for fathers' reports in the NLS; adjusting for measurement error had little effect on their estimates of father-son income elasticity.
well-being that better reflects the permanent component of income (Mayer 1997; Solon 1992; Zimmerman 1992). ${ }^{7}$

Measuring family structure. We defined family structure according to whether there was an unmarried woman or married couple in the household, excluding all households with no woman present. As with poverty, we used three years of survey data to distinguish female-headed from married-couple households, according to whichever was the most common status over three years of observation. We used household rosters and respondents' reports of marital status to measure family structure in the daughters' teen and middle-adult years, corresponding to the mothers' and daughters' family experiences. This approach has several advantages: it assesses poverty and family structure over the same years; provides more stable estimates than do single-year snapshots; and gives all sample members an equal chance of single parenthood, regardless of when they married or had their first child. ${ }^{8}$

An assumption of our definition of family structure is that the presence of two married parents is key to patterns of intergenerational inheritance. Of necessity, it simplifies the complexity of family relationships by not fully accounting for trajectories of marriage, remarriage, and cohabitation (Wu, Bumpass, and Musick 2001). It contrasts stepfamilies and biological married-parent families (married couples) to divorced and never-married mothers (unmarried female heads). Evidence suggests there is little difference in the effects on children of growing up with a divorced mother, a never-married mother, or a remarried mother (McLanahan and Sandefur 1994; Wojtkiewicz 1993). Thus, combining families that were formed through divorce and nonmarital childbearing is unlikely to distort estimates of intergenerational effects, but combining biological married-parent and stepparent families may underestimate the intergenerational consequences of single-parent families. In other research (Musick and Mare 2004), we showed that alternative ways of classifying families, such as counting stepparent families as single-parent families, has little impact on estimates of intergenerational mobility. In analyses not reported here, we also examined the potential effects of ignoring cohabitation among the daughter generation, for whom it had become more common. Counting cohabitors as married instead of single results in a reallocation of only $4 \%$ of all cases (or $10 \%$ of single-parent family cases). Our estimates from the population-renewal model are similar whether we classify cohabitors as married or single. Although cohabitation has become a common family transition, it is typically short-lived (Bumpass and Lu 2000) and thus has little impact on the processes considered in our analyses.

Joint mobility matrix. Table 2 presents the joint intergenerational mobility matrix for all races and for whites and blacks separately. The row totals are the distribution of mothers (or origins) by poverty and family structure, the column totals are the distribution of daughters (or destinations) by poverty and family structure, and the cells within the table contain the outflow percentages from each poverty-family status in childhood to each poverty-family status in adulthood. As was evident in the CPS data, the marginal totals show a redistribution of the population from married-couple to female-headed households. Here, the shift is exclusively into nonpoor female-headed households: between the mother and daughter generations, the share of nonpoor married women dropped from $75 \%$ to $66 \%$, the share of poor married women dropped from $7 \%$ to $2 \%$, and the

[^4]Table 2. Joint Intergenerational Mobility Matrix

| Mother's Poverty and Marital Status | Daughter's Poverty and Marital Status |  |  |  | Total | Mother <br> Marginals | Number of Cases |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Not Poor Married | Not Poor <br> Unmarried | Poor Married | Poor <br> Unmarried |  |  |  |
| All Races |  |  |  |  |  |  |  |
| Not poor married | 70.7 | 23.8 | 1.6 | 3.9 | 100 | 75.1 | 2,634 |
| Not poor unmarried | 59.8 | 33.1 | 2.0 | 5.1 | 100 | 10.9 | 382 |
| Poor married | 48.1 | 27.1 | 8.8 | 16.0 | 100 | 7.0 | 244 |
| Poor unmarried | 41.3 | 33.7 | 2.7 | 22.4 | 100 | 7.1 | 249 |
| Daughter marginals | 65.8 | 25.8 | 2.2 | 6.2 | 100 | 100.0 | 3,509 |
| White |  |  |  |  |  |  |  |
| Not poor married | 72.5 | 22.4 | 1.6 | 3.6 | 100 | 81.9 | 1,935 |
| Not poor unmarried | 64.4 | 30.3 | 2.2 | 3.2 | 100 | 10.3 | 243 |
| Poor married | 53.3 | 22.9 | 11.4 | 12.4 | 100 | 4.7 | 111 |
| Poor unmarried | 68.3 | 24.0 | 1.3 | 6.4 | 100 | 3.1 | 72 |
| Daughter marginals | 70.6 | 23.3 | 2.1 | 4.0 | 100 | 100.0 | 2,362 |
| Black |  |  |  |  |  |  |  |
| Not poor married | 46.2 | 43.1 | 1.5 | 9.2 | 100 | 34.7 | 344 |
| Not poor unmarried | 35.5 | 49.1 | 1.3 | 14.1 | 100 | 14.4 | 143 |
| Poor married | 40.1 | 32.2 | 5.5 | 22.2 | 100 | 21.0 | 208 |
| Poor unmarried | 26.4 | 38.1 | 3.6 | 31.9 | 100 | 30.0 | 298 |
| Daughter marginals | 37.4 | 40.2 | 3.0 | 19.4 | 100 | 100.0 | 993 |

Note: Proportions and $N s$ are weighted.
Source: Pooled sample from the NLSYW $(N=1,469$, respondents aged $14-18$ in 1968) and the NLSY $(N=2,040$, respondents aged 14-18 in 1979).
share of nonpoor female heads increased from $11 \%$ to $26 \%$. Blacks and whites both experienced their biggest gains in nonpoor female-headed households, but for blacks, the redistribution was from poor to nonpoor households, regardless of family structure.

The table presents the intergenerational associations between poverty and family structure. If intergenerational inheritance contributes to economic divergence by family structure, the data should indicate intergenerational persistence in poor female-headed households, on the one hand, and nonpoor married-couple households, on the other hand. Fully $71 \%$ of girls who are born to nonpoor two-parent families end up in nonpoor married-couple families. Yet only $22 \%$ of girls from poor single-parent families end up in poor female-headed households. Because these outflow rates are influenced by the daughters' marginal distribution, however, it is difficult to assess the strength of inheritance based on the raw percentages alone. The population-renewal model puts mobility patterns into perspective by spelling out their implications for the long-run distributions of poverty and family structure. ${ }^{9}$

[^5]Table 3. Female Fertility Rates, by Poverty and Marital Status

| Poverty and Marital Status | All Races | White | Black |
| :--- | :---: | :---: | :---: |
| Not Poor Married | 1.0 | 1.0 | 1.1 |
| Not Poor Unmarried | 0.7 | 0.6 | 0.9 |
| Poor Married | 1.5 | 1.4 | 1.8 |
| Poor Unmarried | 1.3 | 1.1 | 1.4 |
| Overall Average | 1.0 | 0.9 | 1.1 |
| Average for Nonpoor | 0.9 | 0.9 | 1.0 |
| Average for Poor | 1.3 | 1.2 | 1.5 |
| Average for Married | 1.1 | 1.0 | 1.2 |
| Average for Unmarried | 0.8 | 0.7 | 1.1 |
| $N$ | 6,587 | 4,440 | 1,864 |

Notes: Average number of girls who were born to women aged 35-42. Averages are weighted; $N s$ are unweighted.

Source: Pooled sample from the NLSYW ( $N=2,657$, respondents aged 35-42 in $1988)$ and the $\operatorname{NLSY}(N=3,930$, respondents aged $35-42$ in 2000 $)$.

## Completed Fertility Rates

To translate mobility rates into population-level change, we combined them with fertility rates. We generated fertility rates specific to our four poverty-family groups using fertility data from the NLSs. We relied on samples from the NLSYW and NLSY similar to those used in our mobility analysis and applied the same definitions of poverty and family structure, averaging income and living arrangements over three survey years. A key difference between the samples used to compute fertility and mobility rates is that the former included somewhat older women, so we could better estimate completed fertility. We approximated completed fertility by counting the number of girls who were born to women aged 35-42 at the last observation. ${ }^{10}$

Table 3 presents estimated female fertility rates by poverty and family structure. Poor married women have the highest fertility, followed by poor unmarried women, nonpoor married women, and nonpoor unmarried women. ${ }^{11}$ Although the general pattern of differences by poverty and family structure is the same for whites and blacks, the magnitudes of fertility differences differ by race. Among whites, the difference in fertility between poor and nonpoor women is roughly equal to the difference between married and unmarried women. For blacks, the difference between the poor and nonpoor is substantially larger than the difference between the married and unmarried; indeed, there is little difference in fertility rates by family structure. This racial difference reflects the much higher rate of unmarried childbearing among blacks.

[^6]Patterns of differential fertility influence the relative strengths of the associations between poverty and family structure for women and children, as well as differences in the relative sizes of these associations by race. If the association between poverty and family structure among births is positive and strong, the association between these statuses is stronger for children than for women. For births to women of all races combined, the association between poverty and female headship is positive: the odds ratio is $(1.0)(1.3) /(1.5)(0.7) \approx 1.2$. The same holds for births to white women. For births to black women, however, there is a weak negative association between poverty and female headship reflected in an odds ratio slightly less than $1:(1.1)(1.4) /(0.9)(1.8) \approx .95$. These patterns imply a stronger association between poverty and female headship for children than for women among whites but not among blacks.

## Initial Population Distribution and Standardization of the Mobility Table

We used March CPS data to generate initial population distributions by poverty and family structure and to standardize the mobility table. ${ }^{12}$ The initial distribution has no effect on the equilibrium distribution; it is a benchmark against which to compare where the population ultimately settles after successive iterations of the renewal model. We used two initial distributions as benchmarks: a recent distribution (2003) and a past distribution (1975). We adjusted the mobility table so that the destination marginal distributions match the 1975 and 2003 distributions of women, that is, the distribution of daughters across poverty-family groups matches recent and past distributions of women across these groups. Our standardization procedure preserves the associations within the table while generating frequencies with the desired marginal totals (Agresti 2002:345-46). ${ }^{13}$ It isolates the effects of mother-daughter associations on the population-renewal process and allows us to compare the results of our renewal model to known and meaningful distributions. Adjusting the table to match the 2003 distribution and comparing the results of the renewal model to this recent distribution demonstrates the effects of current fertility and mobility patterns on the future distribution of the population. Adjusting the table to match the 1975 distribution and comparing the results of the renewal model to this past distribution indicates how well our model predicts actual change between then and now. Relying on the 1975 distribution effectively assigns daughters the same distribution of poverty and family structure as mothers.

## RESULTS

We applied mobility and fertility rates to the initial population distribution and computed the resulting equilibrium distribution. The difference between the initial and projected distributions represents the expected change in the population, given constant intergenerational mobility and differential fertility. We first examined projected trends from current and past baseline distributions and then ran simulations under alternative assumptions about mobility and fertility. We carried out analyses for both women and children.

Table 4 presents the results based on current and past distributions for all races and separately for whites and blacks. The rows labeled " 2003 " compare the current population distribution to what is predicted for the future, given observed mobility and fertility. For women, there is a redistribution of 2 percentage points from nonpoor married women to poor and nonpoor unmarried women. This pattern is the same for white women; for black women, the redistribution is primarily from poor to nonpoor unmarried women,

[^7]Table 4. Projected Poverty and Family Structure Distributions

| Women and Children | Distribution, by Poverty and Family Structure |  |  |  | Poverty Rate, by Family Structure |  |  | Odds <br> Ratio ${ }^{\text {b }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Not Poor Married | Not Poor Unmarried | Poor Married | Poor Unmarried | Married | Unmarried | Difference ${ }^{\text {a }}$ |  |
| Women |  |  |  |  |  |  |  |  |
| All races |  |  |  |  |  |  |  |  |
| 2003 initial $^{\text {c }}$ | 60.0 | 27.2 | 4.1 | 8.7 | 6.4 | 24.2 | 17.7 | 4.6 |
| Projected ${ }^{\text {d }}$ | 58.0 | 28.3 | 4.1 | 9.6 | 6.6 | 25.4 | 18.8 | 4.8 |
| 1975 initial $^{\text {e }}$ | 75.4 | 14.2 | 4.4 | 6.0 | 5.6 | 29.6 | 24.0 | 7.1 |
| Projected ${ }^{\text {f }}$ | 75.5 | 14.2 | 4.3 | 6.0 | 5.4 | 29.7 | 24.3 | 7.4 |
| White |  |  |  |  |  |  |  |  |
| 2003 initial | 64.4 | 24.5 | 4.2 | 6.9 | 6.2 | 22.0 | 15.8 | 4.3 |
| Projected | 63.4 | 25.0 | 4.4 | 7.2 | 6.5 | 22.4 | 15.9 | 4.2 |
| 1975 initial | 78.9 | 13.0 | 4.2 | 3.9 | 5.1 | 23.1 | 18.0 | 5.6 |
| Projected | 78.7 | 12.9 | 4.4 | 4.0 | 5.3 | 23.8 | 18.5 | 5.6 |
| Black |  |  |  |  |  |  |  |  |
| 2003 initial | 34.4 | 43.5 | 3.5 | 18.6 | 9.2 | 30.0 | 20.8 | 4.2 |
| Projected | 34.5 | 47.6 | 2.3 | 15.5 | 6.4 | 24.6 | 18.2 | 4.8 |
| 1975 initial | 47.0 | 24.5 | 5.8 | 22.8 | 11.0 | 48.2 | 37.2 | 7.6 |
| Projected | 49.6 | 26.4 | 4.4 | 19.6 | 8.2 | 42.5 | 34.4 | 8.3 |
| Children |  |  |  |  |  |  |  |  |
| All races |  |  |  |  |  |  |  |  |
| 2003 initial | 68.2 | 15.8 | 6.4 | 9.6 | 8.5 | 37.8 | 29.3 | 6.5 |
| Projected | 61.9 | 19.6 | 6.1 | 12.4 | 9.0 | 38.7 | 29.8 | 6.4 |
| 1975 initial | 77.6 | 7.1 | 7.2 | 8.1 | 8.4 | 53.0 | 44.6 | 12.2 |
| Projected | 77.0 | 9.4 | 6.2 | 7.4 | 7.4 | 44.0 | 36.6 | 9.8 |
| White |  |  |  |  |  |  |  |  |
| 2003 initial | 74.6 | 12.4 | 6.6 | 6.4 | 8.1 | 33.9 | 25.8 | 5.8 |
| Projected | 69.2 | 15.8 | 6.5 | 8.5 | 8.5 | 35.0 | 26.4 | 5.8 |
| 1975 initial | 82.9 | 6.2 | 6.2 | 4.7 | 7.0 | 43.4 | 36.4 | 10.2 |
| Projected | 81.7 | 7.7 | 6.1 | 4.5 | 7.0 | 36.7 | 29.7 | 7.8 |
| Black |  |  |  |  |  |  |  |  |
| 2003 initial | 36.6 | 31.4 | 4.9 | 27.2 | 11.7 | 46.5 | 34.7 | 6.5 |
| Projected | 35.5 | 40.6 | 3.9 | 20.0 | 9.8 | 33.0 | 23.1 | 4.5 |
| 1975 initial | 44.8 | 13.7 | 12.0 | 29.5 | 21.2 | 68.2 | 47.0 | 8.0 |
| Projected | 48.1 | 21.3 | 6.8 | 23.8 | 12.5 | 52.8 | 40.3 | 7.8 |

[^8]such that female headship increases by only 1 percentage point but poverty declines by 4 percentage points. The model predicts little change in the association between poverty and family structure, as measured by the difference in poverty rates between married and unmarried women or the odds ratio of poverty and family structure.

The pattern of redistribution is the same for children, although the magnitude of change is greater. The model predicts a redistribution of about 6 percentage points from nonpoor two-parent families to (poor and nonpoor) single-parent families. White children resemble the population of children overall; for black children, the redistribution is primarily from poor single-parent families to nonpoor single-parent families. Thus, the share of black children living with a single mother is projected to increase little, but poverty is projected to decline by 8 percentage points. The current and projected associations between child poverty and family structure are similar, with the exception of those for black children, for whom the association is projected to decline.

The rows labeled " 1975 " put these results in the context of historical change. Comparing the initial distributions from 1975 to those from 2003 gives the actual change in poverty and family structure over this period (see also Table 1): it shows a doubling of the proportion of nonpoor female-headed households (from $14 \%$ to $27 \%$ for women and from $7 \%$ to $16 \%$ for children). Comparing the initial and projected distributions gives the expected change from 1975 population levels based on the model. For women, the model predicts none of the actual historical increase in the relative number of nonpoor female heads: the initial and projected percentages are both 14.2. The race-specific patterns are similar, although there is a small redistribution of black women, albeit not consistently in the direction of historical change (e.g., the model predicts a modest increase in marriedcouple families). For children, the model predicts approximately a $25 \%$ growth in the relative size of nonpoor single-parent families (from $7.1 \%$ to $9.4 \%$ ), in contrast to the observed doubling. It predicts none of the 2-point increase in poverty among white children between 1975 and 2003, but fully predicts the 10 -point decline in poverty among black children. The model also predicts a weaker association between child poverty and family structure, although it accounts for less than half the decline that actually took place between 1975 and 2003.

Our estimates provide little evidence that observed patterns of intergenerational inheritance increase single parenthood or poverty or contribute to economic polarization by family structure. When used to project from the 1975 distribution of poverty and family structure for women, the estimated rates of intergenerational mobility and differential fertility do not predict the observed relative increase in single-parent families or any change in the association between poverty and family structure over the past three decades. Evidently, the growth in female-headed families is the result of social trends that are distinct from patterns of intergenerational mobility and fertility. Similarly, when mobility and fertility rates are used to project from the 2003 distribution of poverty and family structure for women, they do not imply large future changes in this distribution. Although the associations between parents' and offspring's poverty and family statuses are substantial, they do not, in themselves, imply major changes in the distribution of poverty and family structure.

The trajectory of the child distribution follows that of the woman distribution; the two differ according to fertility rates by poverty and family structure. For example, the distribution of children projected from the 2003 distribution is equal to the corresponding projected distribution of women adjusted by the relative sizes of the fertility rates reported in Table 3. This adjustment substantially increases the percentage of children, compared with women, who are poor and reduces the percentage who live with nonpoor unmarried women. Differential fertility also alters the association between poverty and family structure. As we noted earlier, the association between poverty and female headship for births is positive, that is, the odds ratio exceeds 1 and thus creates a larger association between these
statuses for children than for women (odds ratios of 6.4 and 4.8 , respectively). Births to white women follow the pattern for all races combined; for births to black women, however, there is a weak negative association between poverty and female headship. Thus, when distributions are projected into the future, there is little difference in the associations between poverty and family structure for black women and children (odds ratios are 4.8 and 4.5 , respectively).

The separate roles of fertility and mobility in affecting the distributions of women and children are further clarified by the simulations. Table 5 summarizes the results of our simulations for all races combined using an initial distribution from 2003. Because our race-specific simulations yielded similar results, we do not include them here. The simulations show the implications of observed mobility and fertility and illustrate general properties of the population-renewal model. Here, we examine five alternative assumptions about fertility differences: (1) observed, (2) none (i.e., all poverty-family structure groups have the average fertility rate), (3) by poverty status only, (4) by family structure only, and (5) twice as large as observed differences relative to nonpoor married women. We also look at three alternative assumptions about mobility: (1) observed mobility, (2) perfect mobility (i.e., daughters' poverty and family statuses are independent of their mothers'), and (3) perfect immobility (i.e., daughters' statuses are identical to their mothers').

Simulations 1a-1d combine observed mobility with various assumptions about fertility. The projected distributions for women closely resemble the initial distributions, whether we apply observed fertility rates, average rates across groups, or rates differentiated by poverty status or family structure only. The most dramatic simulated change, a doubling of the fertility ratios of all groups relative to nonpoor married women, redistributes about $9 \%$ of the female population from nonpoor married women largely to poor female heads. Differential fertility, moreover, has little impact on the estimated long-run association between poverty and family structure. Even a doubling of fertility differences has only a modest impact on the odds ratio for this association (an increase in the odds ratio from 4.6 to 5.3 ). The relatively high fertility of poor women, therefore, does not have a major impact on the poverty-family structure distribution of women. Evidently, rates of intergenerational mobility are high enough to nullify the effects of fertility.

For children, in contrast, alternative assumptions about fertility have a large impact on the long-run poverty-family structure distribution. In the absence of fertility differences, the distribution of children is the same as the distribution of women (i.e., simulation 1a yields the same results for women and for children). Observed fertility differences create a substantially larger proportion of children than women in poverty and a larger association between poverty and family structure among children. Compared to no differences, fertility differences by poverty only (simulation $1 b$ ) increase poverty rates among children, and fertility differences by family structure only (simulation 1c) increase the percentage of children in two-parent families, given their higher rates of reproduction. Doubling fertility differences relative to nonpoor married women results in much greater poverty and single parenthood and creates a sizable increase in the association between poverty and family structure, as indicated by the large odds ratio (13.9). This change, however, is the result of a massive hypothetical increase in the fertility rates of poor unmarried women.

Simulations 2 a and 2 b show projected population distributions, given perfect intergenerational mobility with respect to poverty and family structure. For women, under perfect mobility, differential fertility has no effect, and thus the projected long-run distribution is identical to the initial distribution. The similarity of results under observed and perfect mobility implies that observed patterns of intergenerational inheritance have a small impact on the long-run distributions of poverty and family structure. This impact can be seen by comparing simulations 0 and 2 a (for observed fertility) and simulations 1 a and 2 b (for average fertility). The corresponding simulations for children yield a similar result. For children, under perfect mobility, the expected poverty-family
Table 5. Projected Poverty and Family Structure Distributions Under Alternative Assumptions About Fertility and Mobility, All Races

| Simulation | Fertility ${ }^{\text {a }}$ | Mobility ${ }^{\text {b }}$ | Distribution, by Poverty and Family Structure |  |  |  | Poverty Rate, by Family Structure |  |  | Odds Ratio ${ }^{\text {d }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Not Poor Married | Not Poor Unmarried | Poor Married | Poor Unmarried | Married | Unmarried | Difference ${ }^{\text {c }}$ |  |
| Women |  |  |  |  |  |  |  |  |  |  |
| Initial distribution-2003 CPS |  |  | 60.0 | 27.2 | 4.1 | 8.7 | 6.4 | 24.2 | 17.7 | 4.6 |
| 0 | Observed | Observed | 58.0 | 28.3 | 4.1 | 9.6 | 6.6 | 25.4 | 18.8 | 4.8 |
| 1a | Average | Observed | 58.8 | 28.9 | 3.8 | 8.5 | 6.1 | 22.8 | 16.8 | 4.6 |
| 1 b | Poverty | Observed | 57.1 | 29.1 | 4.1 | 9.8 | 6.6 | 25.2 | 18.5 | 4.7 |
| 1 c | Family | Observed | 59.9 | 28.2 | 3.8 | 8.1 | 5.9 | 22.2 | 16.3 | 4.5 |
| 1 d | Diff. $\times 2$ | Observed | 51.1 | 28.7 | 5.1 | 15.1 | 9.1 | 34.5 | 25.4 | 5.3 |
| 2 a | Observed | Mobility | 60.0 | 27.2 | 4.1 | 8.7 | 6.4 | 24.2 | 17.7 | 4.6 |
| 2 b | Average | Mobility | 60.0 | 27.2 | 4.1 | 8.7 | 6.4 | 24.2 | 17.7 | 4.6 |
| 3 a | Observed | Immobility | 0 | 0 | 100.0 | 0 | 100.0 | - | - | - |
| 3 b | Average | Immobility | 60.0 | 27.2 | 4.1 | 8.7 | 6.4 | 24.2 | 17.7 | 4.6 |
| Children |  |  |  |  |  |  |  |  |  |  |
| Initial distribution-2003 CPS |  |  | 68.2 | 15.8 | 6.4 | 9.6 | 8.5 | 37.8 | 29.3 | 6.5 |
| 0 | Observed | Observed | 61.9 | 19.6 | 6.1 | 12.4 | 9.0 | 38.7 | 29.8 | 6.4 |
| 1a | Average | Observed | 58.8 | 28.9 | 3.8 | 8.5 | 6.1 | 22.8 | 16.8 | 4.6 |
| 1 b | Poverty | Observed | 54.1 | 27.5 | 5.4 | 13.0 | 9.1 | 32.1 | 23.0 | 4.7 |
| 1 c | Family | Observed | 66.0 | 23.2 | 4.2 | 6.6 | 5.9 | 22.2 | 16.3 | 4.5 |
| 1 d | Diff. $\times 2$ | Observed | 45.9 | 8.4 | 12.9 | 32.9 | 21.9 | 79.7 | 57.7 | 13.9 |
| 2a | Observed | Mobility | 63.9 | 18.8 | 6.2 | 11.1 | 8.8 | 37.2 | 28.4 | 6.1 |
| 2 b | Average | Mobility | 60.0 | 27.2 | 4.1 | 8.7 | 6.4 | 24.2 | 17.7 | 4.6 |
| 3 a | Observed | Immobility | 0 | 0 | 100.0 | 0 | 100.0 | - | - | - |
| 3b | Average | Immobility | 68.2 | 15.8 | 6.4 | 9.6 | 8.5 | 37.8 | 29.3 | 6.5 |

[^9]structure distribution is similar to the one implied by observed mobility. These results underscore the relatively high degree of mobility that is inherent in current patterns of intergenerational mobility.

Under perfect immobility, shown in simulations 3 a and 3 b , fertility rates drive the projected distributions. Given observed fertility differences, the population converges to poor married-couple families-the group with the highest fertility. The transformation takes many generations (over 25 in this case), whereas under observed mobility, the population converges to equilibrium in just 1 or 2 generations. This difference is due to how far the initial population has to go to reach equilibrium under assumptions of high and low mobility: under perfect immobility, there is a massive redistribution of the population; under high mobility, there is relatively little. When perfect immobility is combined with average fertility across all groups (i.e., no fertility differences; simulation 3b), the initial population distribution is reproduced from one generation to the next.

## CONCLUSION

Although there has been a large increase in the relative number of women and children living in single-parent families over the past several decades, we found little evidence of divergence in the socioeconomic experiences of single-parent and two-parent families. Increases in single-parent families have taken place among both the poor and nonpoor; among blacks, the increase has been mainly among the nonpoor, with overall poverty rates dropping substantially from high initial levels. And whereas poverty and family structure are strongly associated, this association has weakened over the past three decades. Our results are consistent with those of Iceland (2003), who found a weakening of the association between aggregate-level changes in family structure and trends in poverty since 1990. They are in contrast to recent reports of increasing educational differences by family structure (Ellwood and Jencks 2002), perhaps because of the different nature of these indicators. For one, education is a relatively stable measure of socioeconomic status, whereas poverty is variable-over the life course, from year to year, and in response to exogenous economic conditions. Second, poverty is a family-level measure that takes into account all economic resources available to get by. Although single mothers may be falling behind their married counterparts in human capital, they may be compensating by spending more time in the labor force or working longer hours for pay.

Our population-renewal model shows that the intergenerational inheritance of poverty and single parenthood has little effect on trends in poverty and family structure. Our simulations demonstrate a high degree of mobility inherent in current rates. Among women, the model implies a current population mix that is close to equilibrium. Among children, we found larger population-level effects, but even these are modest compared to recent historical change. The association between poverty and family structure is stronger for children than for women as a result of patterns of differential fertility. These patterns, however, do not imply an increase over time in the link between poverty and family structure. Whether we focused on women or children, we found no increase in the association between poverty and family structure; indeed, our model predicts declines in the association between child poverty and family structure. Intergenerational inheritance and differential fertility do not exacerbate economic disparities by family structure.

It is important to note that our conclusions about the implications of mobility and fertility patterns for population-level trends may depend on the specific definitions of family structure and socioeconomic hardship that we have adopted. Although there has been little evidence to date that different kinds of single-parent families have different effects on children, research has been limited. Much of what is known about single parenthood has come from imperfect data on the timing and sequencing of transitions into (and out of) marriage, cohabitation, and parenthood. Samples are often too small and panels too short to capture fully the diversity of family forms. Families are
increasingly diverse, and differences between them may have important implications for processes of social stratification. We researchers need to improve our ability to model this complexity.

Similarly, we adopted a standard of economic hardship that is based on the official poverty thresholds, which may not fully capture salient differences in, for example, the quality of neighborhoods, social networks, schools, normative climates, and other social institutions that structure opportunities. The inheritance of poverty and family structure may be weak compared with the inheritance of deep poverty, social isolation, and detachment from the labor force (Wilson 1987). How patterns of intergenerational mobility vary under alternative definitions of hardship is an important question for future research.

These limitations notwithstanding, our findings demonstrate that intergenerational associations between poverty and family structure at the micro level do not necessarily translate into important population-level changes. Individual-level studies form the basis of our understanding of the inheritance of poverty and family structure. Intergenerational associations between poverty and family structure have been found consistently and lead to questions about their consequences for future generations. But these associations alone cannot reveal how they affect aggregate population trends. Although intergenerational inheritance may contribute in a small way, changes in the relative number of persons in different family and socioeconomic statuses must be understood in terms of broader social, economic, and cultural developments, such as shifts in the relative economic positions of men and women (Becker 1991; Oppenheimer, Kalmijn, and Lim 1997; Ruggles 1997; Sweeney 2002), ideational changes (Axinn and Thornton 2000; Thornton 1989), and changes in the material aspirations of younger cohorts (Bumpass 1990). They must be understood, that is, in terms largely outside the micro-level effects of family structure on subsequent generations.

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[^1]:    1. Here, as in the official CPS definition, single-parent families include mothers who are living with unmarried cohabiting partners.
[^2]:    2. The model does not, however, take account of age variation in fertility rates. Thus, it may underestimate the effect of mobility on population transformation by not accounting for the shorter mean generation length of
[^3]:    single mothers, who typically begin childbearing earlier than married mothers. The model also ignores differential mortality, since we have no reliable data on mortality by socioeconomic status and family structure. It is unlikely that fertility timing and differential mortality have large effects on the processes examined here.
    3. Elsewhere (Musick and Mare 2004), we showed that intergenerational associations between poverty and family structure have been stable in recent decades.

[^4]:    7. We also replicated our analyses using an alternative definition of poverty: income below $150 \%$ of the official thresholds. Because our findings with respect to population renewal were the same, regardless of which poverty definition we applied, we present only those based on $100 \%$ of the official thresholds.
    8. Another approach is to define family structure on the basis of marital histories, which would have allowed us to differentiate between various kinds of single-parent families. Doing so, however, introduces bias by giving women who marry and have children early-and who tend to be poorer-longer exposure to the risk of divorce and thus single parenthood than women who marry and have children later.
[^5]:    9. The estimates in Table 2 also imply that of all girls who are poor in childhood, $25 \%$ are poor in adulthood ( $17 \%$ of whites and $32 \%$ of blacks), and of all girls who are not poor in childhood, $6 \%$ are poor in adulthood ( $5 \%$ of whites and $12 \%$ of blacks). Corcoran (2001: table 4.1) reported comparable estimates from the Panel Study of Income Dynamics. Our estimates are similar to Corcoran's, given differences in the samples and methods.
[^6]:    10. Since we used a one-sex population model, we counted only daughters, which we estimated by taking one half of total fertility. We slightly underestimated total fertility by relying on women aged 35-42, not all of whom completed their fertility by the time of the interview. Age truncation affected our results only to the extent that it affected group-level differences.
    11. Estimating fertility by poverty and family structure is complicated by the dynamic nature of these states; nonetheless, our estimates are consistent with patterns reported elsewhere. For example, the June CPS showed that women with family incomes less than $\$ 20,000$ have the highest rates of children ever born (U.S. Census Bureau 2000: table C). Wu and Martin (2002) found that women who are unmarried at the time of their first birth have lower duration- and parity-specific birth rates than do married women.
[^7]:    12. These distributions are defined in identical fashion to the distributions presented in Table 1.
    13. We calculate a multiplier for each column equal to $p_{\cdot j} N / n_{. j}$, where $p_{\cdot j}$ is the desired proportion in the $j$ th poverty-family group in the daughter generation, $N$ is the total sample size, and $n .$, is the observed (prior to adjustment) marginal count. We apply this multiplier to the cell frequencies in the $j$ th category of daughter's poverty-family status.
[^8]:    ${ }^{a}$ Difference in poverty rates between unmarried female-headed households and married-couple households.
    ${ }^{\mathrm{b}}$ Ratio of the odds of poverty for unmarried female-headed households and married-couple households.
    ${ }^{\mathrm{c}}$ The initial distribution is based on data from the 2003 CPS.
    ${ }^{\mathrm{d}}$ The projected distribution is derived from the population-renewal model, with the mobility matrix adjusted so that the destination marginals match the 2003 CPS distribution of women.
    ${ }^{\mathrm{e}}$ The initial distribution is based on data from the 1975 CPS.
    ${ }^{\mathrm{f}}$ The projected distribution is derived from the population-renewal model, with the mobility matrix adjusted so that the destination marginals match the 1975 CPS distribution of women.

[^9]:    ${ }^{\text {a }}$ Fertility column: average $=$ average fertility for all women, poverty $=$ fertility differentiated by poverty status only, family $=$ fertility differentiated by family structure only, and diff. $\times 2=$ fertility differentials twice as large as observed differentials relative to not poor married women.
    ${ }^{6}$ Mobility column: observed = observed mobility patterns, mobility = perfect mobility between mothers and daughters, and immobility = perfect immobility between mothers and daughters. ${ }^{c}$ Difference in poverty rates between unmarried female-headed households and married-couple households.
    ${ }^{\mathrm{d}}$ Ratio of the odds of poverty for unmarried female-headed households and married-couple households.

