THE "COLLEGE GAP" IN MARRIAGE AND CHILDREN'S FAMILY STRUCTURE

Melissa Schettini Kearney

The "College Gap" in Marriage and Children's Family Structure
Melissa Schettini Kearney
NBER Working Paper No. 30078
May 2022
JEL No. J12,J13,J15

ABSTRACT

The share of children living in a two-parent family has declined sharply in the past 40 years, driven by a decline in marriage among parents without a four-year college degree. This paper presents a number of facts about these trends, drawing on US Census data, the Current Population Survey, the Survey of Income and Program Participation, and US vital statistics birth data. First, there is a large gap in the share of children living with married parents (or two parents) that favors the children of college-educated mothers, both overall and within race and ethnic groups. Second, the decline in the share of children living in married parent families primarily reflects an increase in non-marital childbearing, not a rise in divorce. Third, the widening college gap in children's family structure corresponds to a widening college gap in marriage rates, both overall and within race and ethnic groups. The paper briefly discusses evidence suggesting a causal link between the eroding economic position of men without a four-year college degree and their declining marriage rates. Fourth, the rise in the share of children living with an unpartnered mother has happened despite a sizable decrease in births to teens, women in their 20s, and women with less than a high school degree. Fifth, the college gap in family structure has contributed to the widening college gap in household income, accentuating widening earnings inequality. These trends have the potential to exacerbate class gaps in children's outcomes and undermine social mobility.

Melissa Schettini Kearney
Department of Economics
University of Maryland
3105 Tydings Hall
College Park, MD 20742
and NBER
kearney@econ.umd.edu

INTRODUCTION

The societal norm and economic practice of raising children in a married-parent family, which has long prevailed in the US, has been eroding among large segments of the US population in recent decades. In 2019, only 63% of children in the US lived with married parents at a point in time, down from 77% in 1980. The percent of children living with two parent figures, regardless of parental marriage status, was 70% in 2019, down from 77% in 1980. More than one in five children in the US now live with an unpartnered mother. Furthermore, these families, in general, do not appear to be making up for the absence of a second parent in the home by having another adult in the household. The steep decline in the share of children living with married parents, or more generally with two parents, has happened largely outside of the college-educated class.

The divergent family trends of the past 20 years continue the trend of "diverging destinies" poignantly observed by Sara McLanahan (2004) nearly two decades ago. But, the experience of the past 20 years brings an important coda to McLanahan's observations: the family structure of those in the "middle" has converged with those in the bottom of the education distribution. There is now a sizable "college gap" in the family structure of children, such that children born to mothers with a four-year college degree are the ones set apart. The share of children living with an unpartnered mother is more than two times as high among children whose mothers have a high school degree than it is among children whose mothers have a four-year college-degree. Now, the share of children living with an unpartnered mother is essentially the same among mothers with and without a high school degree: 29% and 30%, respectively.

This paper documents several facts about the widening college gap in children's family structure. First, the college gap in children's family structure is present overall and within the four most common race and ethnic groups. Second, the decline in the share of children living in married parent homes primarily reflects an increase in non-marital childbearing, not a rise in divorce rates. However,

unpartnered college-educated mothers are more likely to be divorced than less educated unpartnered mothers. Third, the widening college gap in children's family structure between 1980 and 2019 corresponds to a widening college gap in marriage rates. Evidence from existing studies suggests a causal link between the eroding economic position of men without a four-year college degree over recent decades and marriage and family formation outcomes. Fourth, the rise in unpartnered mother families has happened despite a rising share of births are to older and more educated mothers. Fifth, data on household earnings reveal that the college gap in family structure has contributed to the widening college gap in household income, accentuating widening earnings inequality. The final section of the paper briefly discusses the implications of these trends in children's family structure for children's outcomes and class gaps in outcomes.

THE COLLEGE GAP IN CHILDREN'S FAMILY STRUCTURE

Between 1980 and 2019, there has been a widening "college gap" in the share of children living in married parent families. I use the term "college gap" to refer to the divide in family structure between the children of mothers with and without a four-year college degree. The statistics I present on children's family structure are based on US decennial Census data from 1980 and 1990 and data from the American Community Survey (ACS) for the years 2000-2019 (Ruggles et al, 2021). The following criteria define a married-parent family: the child's mother and father are both present in the household and are married; a mother and her married spouse are present; or a father and his married spouse are present. This family structure includes biological parents, stepparents, and adoptive parents, and includes married same-sex couples. I use the following criteria to define an unmarried couple household: both the child's mother and father are present in the household and are unmarried; the child's mother and her unmarried partner are present; or the child's father and his unmarried partner are present. An unpartnered mother household is characterized as having a mother present, but neither

a father figure nor a maternal partner is observed in the household.[1] Note that this could include a mother living with another relative, such as the child's grandparent or aunt or uncle. An unpartnered father household is defined by having the child's father present, but neither the child's mother nor an unmarried partner to the father is present. Note that this could include a father living with another relative, such as the child's grandparent or aunt or uncle. A household labeled as no parent present means neither a mother nor a father is identified as residing in the household of the child.

Fewer than two-thirds of American children now live with married parents, as shown in Figure 1. According to US Census data, the share is 63%, down from 73% in 1990 and 77% in 1980. Almost all (99.5%) of these married-parent families in the 2019 ACS are recorded as opposite-sex spouses; 0.37% have two married mothers, and 0.12% have two married fathers. To gain insight into the parent-child relationships of married couple households, I turn to the 2018 Survey of Income and Program Participation (SIPP), a detailed nationally representative survey of 14,211 individuals. Based on the 2018 SIPP sample of 8,737 children living with married parents, 88% of children who live with married parents live with two biological parents; 9% live with one biological parent and one stepparent; and between 2%-3% live with adopted parents.

Despite the substantial rise in cohabitation among US adults and parents (see, for instance, Manning and Stykes 2015; Manning, Brown, and Stykes 2015), the most common family situation for US children after married parents is an unpartnered mother situation. As shown in Figure 1, 21% of children live in a home with a mother who is neither married nor living with an unmarried partner. Only 8% of children live with unmarried parents or a parent and an unmarried partner. Another 4.8% of children live with an unpartnered father and 4.3% of children do not live in a home that includes a parent at all.

---

[1] The US Census only records a household member's relationship status to the household head. Consequently, if a child's mother is not the head of the household (say, for instance, she lives is her parents' household) and she has a partner living with her, that partner will be recorded as an unrelated person of the household head and the mother's partnership will be missed in this family structure accounting.

The rise in unpartnered mother families raises questions about the role that grandparents and other extended family kin now play, or will increasingly play, in providing the resources – income and otherwise – that a spouse might have brought into the family (see, for instance, Bengtson 2001). Data from the 2019 ACS give us some indication about how common it is for extended kin to live with unpartnered mothers and their children. According to tabulations of 2019 ACS data, about one in five children living with an unpartnered mother (22%) live with at least one of their maternal grandparents; 3% live with a maternal aunt or uncle (without a maternal grandparent present); and 8% have another adult in the home.[2] These data indicate that 67% of children living with an unpartnered mother have no other adult besides their mother in their household. That is not to say that these families do not have access to supportive extended networks of family and friends, but in terms of resident adults in the household, the majority of unpartnered mothers are living alone with their children.

These overall statistics mask substantial differences in the family structure of children by maternal education level. In the 2019 ACS, maternal education is observed for the 91% of children who live with their mother. In that year, 37% of these children have mothers with a four-year college degree, 52% have mothers whose highest level of education is a high school degree or some college, and 11% have mothers whose highest level of education is less than a high school degree. Figure 2 plots the share of children living with married parents by these three maternal education groups. In 2019, 84% of the children whose mothers had a four-year college degree were living with married parents, a decline of only 6 percentage points since 1980. In contrast, only 60% of children of mothers with a high school degree or some college credits were living with married parents in 2019. This is a sizable decline from 1980, when the share was 83%. A similar decline occurred for children whose mothers have less than a

---

[2] These statistics are from the perspective of the children living with a lone mother. If we instead examined living arrangements from the perspective of the lone mother, we would find that 61% of lone mothers live without another adult. The difference in the statistics suggests lone mothers with multiple children are more likely to live alone, without the support of another adult.

high school degree. The share of children in this group living with married parents went from 80% in 1980 to 57% in 2019.

McLanahan (2004) documented a dramatic rise in single motherhood between 1960 and 1990 for the least educated women, with some reversal in the 1990s. The data in her paper show a more modest rise between 1960 and 2000 for women in the middle of the education group and no meaningful change for the most highly educated women. In more recent data, we see that over the next 20 years, the rate of unpartnered mother families continued to remain steady and fairly low among college educated women and it remained steady and relatively high among women without a high school degree. But among women with a middle level of education, the rate climbed until reaching nearly complete convergence with that of women in the lowest education group. Figure 3 plots the share of children living with an unpartnered mother between 1980 and 2020. For the large share of children with mothers with a high school degree, the share did not increase much during the 1980s, but then it increased from 19% to 28% between 1990 and 2010. The rate has generally remained flat since 2010, reaching 29% in 2019. Among children of mothers in the lowest education group, the share of children living with a lone mother rose precipitously from 20% to 30% during the 1980s and has been generally flat at this elevated rate for the past 30 years. Among the children of mothers with a four-year college degree, the rate living with an unpartnered mother has hovered between 10% and 12% over the entire 40-year period.

There are large gaps in the share of children living in married parent families across race and ethnic groups, but there are substantial college gaps in the share of married parent families within race and ethnic groups (except for Asians). I define four mutually exclusive race and ethnic groups: White non-Hispanic, Black non-Hispanic, Hispanic, and Asian.[3] For ease of exposition, I will refer to these

---

[3] Other race and ethnic groups – including Native Americans and Pacific Islanders and those who identify as multi-race and multi-ethnic status – do not constitute a sufficient share of the population for there to be reliable statistics on them.

groups as White, Black, Hispanic, and Asian and I refer to children by their mother's race.[4] Figure 4 panel (A) tabulates the family structure of children by maternal race and maternal education using data from the 2019 ACS, weighted by children's weight. The share of children by maternal racial and ethnic composition in the 2019 ACS is as follows: 55% are White non-Hispanic, 23% are Hispanic, 13% are Black non-Hispanic, and 6% are Asian.

Asian and White children are significantly more likely to live with married parents, as compared to Hispanic and Black children. In 2019, 88% of Asian children and 77% of White children lived with married parents, as compared to 62% of Hispanic children and 38% of Black children. There are large differences across race and ethnic groups even for women with the same level of education. Furthermore, there is a college gap in the share of children living with married parents within race and ethnic group, though the size of that gap differs across groups.

Across all education groups, Asian children are the most likely to live with married parents. Although there is a college gap in this share among Asian children, it is relatively small. The shares of Asian children living with married parents are 92% (highest education), 79% (middle), and 83% (lowest). Across all education groups, Black children are the least likely to live with married parents, but there is a sizable college gap and the children of college-educated Black mothers are substantially more likely to live with married parents than the children of less educated Black mothers. Among Black children, the share living with married parents is 60% for those with a college-educated mother, 31% for children of mothers in the middle education group, and 30% for those whose mothers have less than a high school education.

The shares of White and Hispanic children living with married parents falls between the other two racial and ethnic groups and exhibit sizable college gaps. Among White children, the share living with married parents is 88% for college-educated mothers, as compared to 69% among children of the

---

[4] In the 2019 ACS, children's race/ethnicity is recorded as the same as their mother's for 90% of children; in the 1980 US Census, that is the case for 97% of children.

middle education group and 60% among the least educated mothers. Among Hispanic children, the share living with married parents is 76%, as compared to 59% for each of the other two education groups. Between 1980 and 2019, for all four of these race and ethnic groups, the largest declines in the share of children living with married parents has occurred among the children of mothers in the middle education group, as we saw is the case overall. The college gap was not nearly as pronounced in 1980 as in 2019. This can be seen in the comparison of Figures 4a and 4b.

THE ROLE OF (NO) MARRIAGE AND DIVORCE

The rise in the share of children living with an unpartnered mother over the past 40 years reflects an increase in the share of mothers who have never been married, not an increase in divorce. Table 1 reports the shares of unpartnered mothers never married or divorced, based on US census data from 1980 and 2019. In 1980, 22% of unpartnered mothers were never married, while 64% were divorced; 10.5% were widowed and 3.5% had an absent spouse. In 2019, 52% of unpartnered mothers were never married and 39% were divorced; 3% were widowed and 6% had an absent spouse. In other words, in 1980, the majority of unpartnered mothers in were divorced; now, a small majority have never been married.

There is also a college gap in the marital situation of unpartnered mothers. The majority of unpartnered mothers with a four-year college degree are divorced -- 57% -- and another 7.4% have an absent spouse; only 32% have never been married. In contrast, a majority of unpartnered mothers without a four-year college degree were never married: 57% of high school graduates and 59% of those with less than a high school degree. The lower rate of "never married" among college-educated unpartnered mothers suggests that their children are more likely to have had the benefit of two parents' time and resources in their home at some point during their childhood. Beyond those earlier life experiences, children whose mother was unmarried at the time of their birth are less likely to have any current father involvement as compared to children of divorced mothers, as shown by Carlson (2006). Furthermore, data from the 2018 SIPP show that children of divorced unpartnered mothers are more

likely to live in households receiving child support income, as compared to children of never married unpartnered mothers: 40% versus 19%.[5]

There are also racial differences in the circumstances of lone mothers. More than two-thirds of Black unpartnered mothers have never been married: 70%. A small majority of Hispanic unpartnered mothers have never been married: 54%. Minority shares of White and Asian unpartnered mothers have never been married: 38% and 32%, respectively. The shares divorced are 52% among White, 36% among Hispanic, 24% among Black, and 44% among Asian unpartnered mothers. Asian unpartnered mothers are much more likely to be married with an absent spouse than the other racial and ethnic groups: 18%.[6] That share is 5.6% among White, 4.5% among Black, and 7.4% among Hispanic unpartnered mothers.

Notably, there is a college gap in the marital circumstances of unpartnered mothers within racial and ethnic groups. This can be seen in Table 1. For all four racial and ethnic groups identified, unpartnered mothers with a college degree are substantially less likely to never have been married than their non-college-educated counterparts. In 2019, the share never married among White unpartnered mothers with a four-year college degree is 22%, as compared to 44% and 53% among White mothers in the lower two education groups. The comparable shares among Hispanic unpartnered mothers are 42%, 56%, and 54%. The comparable shares among Black unpartnered mothers are 52%, 74%, and 75%. The comparable shares among Asian unpartnered mothers are 20%, 41%, and 42%. In 1980, college educated unpartnered mothers were also less likely to be never married than less education unpartnered mothers – overall and within racial and ethnic groups – but the gaps were not nearly as large in percentage terms and the shares were much lower across all groups.

---

[5] This is true even within education group. The shares in households receiving child support by maternal divorce or never married status are 47% versus 29% among the college-educated group; 39% versus 18% among the high school graduate group; and 24% versus 15% among the less than high school degree group.

[6] This reflects a high degree of absent spouses among immigrant Asian mothers; among native-born Asian unpartnered mothers, the share with an absent spouse is 7.3%.

THE COLLEGE GAP IN MARRIAGE

The decline in the share of US children being raised in two-parent homes reflects a decline in marriage not only among parents, but more generally among US adults, which has been proportionately steeper among adults without a four-year college degree than among those with a college degree. There is now a sizable college gap in marriage rates. Previous studies have documented this divergence using data from the 1990s and 2000s, including Lundberg and Pollack (2007) and Lundberg, Pollack, and Stearns (2016). The statistics reported in this section come from the Annual Social and Economic Supplement to the Current Population Survey (CPS), years 1962-2020, the primary source of data about detailed earnings and income of US adults. The sample includes noninstitutionalized adults between the ages of 30 and 50, weighted using CPS person weights (Flood et al, 2021).

Women without a high school degree have long been less likely to be married than more educated women (see, for instance, McLanahan, 2004). In the 1960s, 1970s, and 1980s, women with a four-year college degree were less likely to be married than women with a high school degree. But as can be seen in Figure 5 panel (a), by the mid-1990s, women with a college degree became the most likely to be married. That positive college gap in marriage rates remains. Between 1980 and 1990, the share of college educated women married fell from 77% to 72%. That share remained fairly steady between 1990 and 2020; in 2020 the married share among this group is 71%. Meanwhile, rates of marriage among women with a high school degree fell from 78% to 70% over the 1980s and continued falling, reaching 67% in 2000, 61% in 2010, and 56% in 2020. This large decline over four decades puts their current marriage rate on par with that of women without a high school degree (57%) and far from that of women with a four-year college degree.

Figure 5 panel (B) plots the share of men ages 30 to 50 who are married, by the three education groups. As the figure shows, marriage rates among men fell at a similar rate for all three groups during the 1960s and 1970s. In the 1980s, the pace of the decline in marriage slowed among men with a four-year college degree, while it continued to fall rapidly among men with and without a high school degree.

Between 1980 and 1990, the married share of college-educated men age 30-50 fell 5 percentage points, from 80% to 75%. Over the next 30 years, it fell only another 4 percentage points in total. In 2020, the married share among this group is 71%. In contrast, as the decline in marriage among men in the other two groups continued to decline through 2020. In 2020, only 54% of men with a high school degree and 53% of men without one were married.

There is substantial variation in marriage rates across race and ethnic groups, a point that has long been recognized by scholars and is the subject of a vast research literature (see, for instance, the overview piece by Raley, Sweeney, Wondra, 2015). For all four racial/ethnic groups tabulated, marriage has fallen over the past four decades. Between 1980 and 2020, the share of men ages 30 to 50 married fell from 81% to 65% among White men (a decline of 20%), from 84% to 55% among Hispanic men (a decline of 35%), and from 60% to 41% among Black men (a decline of 35%). The share of Asian men who are married did not fall by as much: 81% to 75%.[7]

For all four racial and ethnic groups, the declines in marriage were proportionally larger among those with a high school degree as compared to those with a four-year college degree. For all but Hispanics, the declines were also proportionally larger among those without a high school degree than those with a four-year college degree. Figure 6 shows these trends. There is now an evident college gap in marriage among White and Black men. Among White men, 73% of those with a four-year college degree are married, compared to 59% and 48% of the less educated groups. Among Black men, 58% of those with a four-year college degree are married, compared to 36% and 24% of the other groups. Among Hispanic and Asian men, there is a U-shape pattern, with higher rates among the highest and

---

[7] These statistics are calculated among the noninstitutionalized population, meaning that men who are incarcerated are not included in the population denominators. Given the rise in incarceration, the 2020 numbers likely overstate the marriage rates, especially for groups that have relatively high incarceration rates.

lowest education groups. Among Hispanics, the shares married are, from highest to lowest education group, 57%, 52%, and 60%. Among Asians, the shares are 79%, 65%, 73%.[8]

The decline in marriage rates among men without four-year college degrees over recent decades corresponds to a decline in the earnings of non-college educated men, both in absolute terms and relative to women's earnings. A standard model of marriage predicts that the reduction in the "marriageability" of non-college educated men, as reflected in their weakened economic prospects (Wilson 1987), will lead to lower rates of marriage among this population group. Tabulations from the CPS sample of men ages 30 to 50 show that the median real earnings (in 2018 dollars) among men with a high school degree or some college decreased from approximately $45,000 to $41,000. [9] Among those without a high school degree, median real earnings decreased from approximately $29,000 to $24,000. These declines reflect a combination of reduced and stagnant wages and reduced employment rates among non-college educated men.[10] These trends stand in sharp contrast to the rise in earnings of men with a four-year college degree. Over this time period, median real earnings among men with a four-year college degree rose from approximately $58,000 to $78,000, an increase of 28%.

In addition to the link between male's absolute economic position and marriage rates, there is a body of both theoretical and empirical evidence pointing toward a link between male's relative economic position and marriage rates. The standard model of marriage in the economics literature posits that as female wages rise relative to male wages, there will be a reduction in marriage because the returns to marriage are lower (Becker, 1974). Related logic leads to the supposition that an increase in women's relative wages will lead to an increase in divorce because the female "outside option" has

---

[8] This U-shape pattern is driven by a relatively high rate of marriage among less educated immigrants in these groups. Among native-born men, marriage rates among Hispanic men are 54%, 45% and 44% and among Asian men are 64%, 54%, and 14%.

[9] Earnings are calculated by summing the individual's income wage, business wage, and farm earnings. Earning are adjusted for inflation using the PCE adjustment from the Bureau of Economic Analysis.

[10] Abraham and Kearney (2020) provide a comprehensive look at the decline in the employment to population rate between 1999 and 2018 and conclude that reduced demand for non-college educated workers has been a primary driver of the decline.

improved (Browning Bourguignon, Chiappori, and Lechene, 1994). More recent work by Bertrand, Kamenica, and Pan (2015) documents patterns consistent with gender identity norms that induce an aversion to a marriage in which the wife earns more than her husband. They show that marriage rates are lower in marriage markets in which women are likely to earn more than men.

We can see the decline in men's relative earnings, as compared to women, from tabulations of CPS data. Here I use CPS data to calculate median real earnings among full-time full-year (FTFY) working men and FTFY women ages 30 to 50, by education group. (When constructing the relative wage, it makes sense to condition on FTFY work status to better gauge women's earning potential relative to men's, abstracting from labor supply decisions.) Median earnings among FTFY college women have been about 64% of median earnings among FTFY college-educated men since the 1970s. But, median earnings among less educated FTFY women as a fraction of median earnings among FTFY men in the same education group increased throughout the 1970s, 1980s, and 1990s. By the mid-1990s, their earnings were about 70%, or more, of their male counterparts' earnings. As a practical matter, this means that women of all education levels are more likely to have the potential to bring in nearly as much earned income as a male partner would be able to bring in, if they both worked full time full year.

Some recent studies probe on the correspondence of these trends and identify a causal link between men's weakened economic position – both in absolute terms and relative to women's – and the decline in marriage rates and the rise in the share of children in single-mother households during these decades. Autor, Dorn, and Hansen (2019) econometrically exploit the negative shock to US male's earnings potential attributable to trade pressures associated with the 2020 entrance of China into the World Trade Organization, after which the US rapidly began importing a range of products that had previously been manufactured domestically (at a higher cost). Their analysis shows that the trade-induced reduction in men's relative earnings led to lower levels of marriage and a higher share of mothers who were unmarried, as well as an increase in the share of children living in single-mother

households with below-poverty levels of income. A related paper by Anelli, Giuntella, and Stella (2021) establishes that the adoption of industrial robots has had a negative impact on the employment and wages of workers in affected industries and regions, with worse effects for men than for women. The authors then show that US regions affected by intense robot penetration subsequently experienced a decrease in new marriages and an increase in the share of non-marital births. Shenhav (2020) takes advantage of the fact that industry and occupation demand shifts differentially affected men's and women's wages over the period 1980 to 2010 due to gender differences in industry and occupation representation. Occupations that men were more likely to work in saw wage declines, while female-dominated industries saw wage increases. Her analysis finds that over this period, an increase in women's relative wages reduced marriage through both fewer first marriages and more divorces. She does not find that the relative-wage-induced reduction in marriage is offset by an increase in cohabitation; her analysis shows that 65% of women who do not marry under a higher relative wage instead opt to live with a female roommate or live alone.

These findings raise the question of whether an improvement in the economic prospects of non-college educated men would lead to an increase in marriage rates and a decrease in non-marital births. Kearney and Wilson (2018) provide evidence to the contrary. They show that localized fracking booms in the 2000s (outside of the Dakotas) led to increased employment and earnings for non-college educated men, both in an absolute sense and relative to women. However, they find that though this led to an increase in births – consistent with a positive effect of income on birth rates, as others have documented in different contexts (e.g., Dettling and Kearney, 2014; Lovenheim and Mumford, 2013; Lindo, 2010) – it did not lead to an increase in marriage nor a reduction in the non-marital birth share. They then contrast that response with the family formation response to the coal boom and bust of the 1970s and 1980s (first studied by Black, Kolesnikova, Taylor, and Lowell, 2013). In that context, the increase in male earnings associated with the coal boom led to an increase in births only among married couples and it led to an increase in marriage.

A possible interpretation of the collection of studies described above is that it is the stalled or reduced earnings of non-college-educated men in earlier decades, along with the increase in earnings among women, was a driving force that led to a decline in marriage and a corresponding rise in nonmarital childbearing among this population. But now that nonmarital childbearing has become commonplace in a large segment of the population, reversing the decline in married-parent families for children will likely require both economic and social changes.

BIRTH RATE TRENDS

The growth in the share of US children being raised in a home with an unmarried mother has been driven by changes in marriage patterns, not a shift in the composition of births toward maternal demographic groups who have historically had high rates of single motherhood. In other words, the rise in the share of US children living with an unpartnered mother has been happening despite a dramatic decline in teen birth rates and births to women in their early 20s and with less than a high school degree, demographic groups that have historically had elevated rates of single motherhood.[11]

This section of the paper draws on public-use microdata on the universe of US births from the National Center for Health Statistics Vital Statistics Natality Files for the years 1980 through 2019. Vital statistics birth data are combined with population data from the Current Population Survey to generate rates of birth per 1,000 women in various demographic cells. Birth rates by maternal educational attainment and race and ethnicity cannot be consistently constructed until 1990, due to changes in variable reporting. For that reason, some of the statistics in this section date back to 1990 rather than back to 1980. The data appendix provides additional details.

Over the past 40 years, the percentage of women of childbearing age who are unmarried has increased. The share was 18% in 1980, 33% in 2000, and 47% in 2019. Furthermore, birth rates among

---

[11] Birth rates in the United States, defined as births per 1,000 women of childbearing age, have fallen substantially over the past 40 years, with the largest decline happening since around 2005. Kearney, Levine, and Pardue (2022) documents the decline in US births since the Great Recession and empirically considers various potential explanations for the birth rate decline.

unmarried women have risen and birth rates among married women have fallen. In 1980, the birth rate among married women was 97 per 1,000; it fell to 93 per 1,000 by 2000 and further declined to 77 per 1,000 women by 2019. In contrast, the birth rate among unmarried women was 25 per 1,000 in 1980. It rose to 42 per 1,000 by 2000 and to 46 per 1,000 by 2019. These two trends combined have resulted in a much greater share of births being to unmarried women. Figure 7 panel (A) shows the shifting composition of births to married versus unmarried women in 1980, 2000, and 2020.

The increase in the share of the births to unmarried women has happened despite a decrease in births to teens and women in their young 20s, groups that typically have had higher rates of non-marital childbearing than older women. Birth rates have declined substantially over the past 40 years, driven by declines in births to women under the age of 30.[12] The teen birth rate peaked in 1991 at a level of 62.4 births per 1,000 women ages 15 to 19. It has since steadily declined, dropping all the way to 16.7 per 1,000 women ages 15-19 in 2019. This reflects an extraordinary 73% decline over 30 years. The birth rate among women ages 20 to 24 remained relatively flat between 1980 and 2000, around 110 per 1,000 women, and then fell 39% to 66.8 in 2019. Similarly, the birth rate among women ages 25 to 29 remained steady at 108.6 per 1,000 women in 1980 and 116.6 in 2000, and then fell 19.5% to 93.9 in 2019. In terms of birth rates by age groups, only women above age 30 are having more births than in the past.

The result of the decline in birth rates among younger women has resulted in a compositional shift in the age distribution of mothers at the time of birth. (There has not been a meaningful change in the age composition of women of childbearing age.) As can be seen in Figure 7 panel (B), in 2019, less

---

[12] Birth rates have declined in recent decades overall and for all four race and ethnic groups highlighted, with birth rates among Hispanic women declining the most. Birth rates per 1,000 women ages 15 to 44 are much more comparable across race and ethnic groups in 2020 than they were a few decades ago. In order from highest to lowest, birth rates in 2019 by race/ethnicity are as follows: 65.3 among Hispanic women, 64.7 among Black women, 55.9 among White women, and 54.5 per Asian women of childbearing age. In 1990, the birth rate among Hispanic women was 114 per 1,000; the birth rate among Black women was 84.9, among White women was 61.6, and among Asian women it was 78.1.

than 5% of births were to teen mothers, as compared to 15% in 1980; 23% of births were to mothers under the age of 25, as compared to 50% in 1980.

Finally, the increase in the share of the births to unmarried women has happened despite a compositional shift in births to more educated mothers. The educational composition of women of childbearing age has changed, such that many more women of childbearing age now hold a four-year college degree. In 2019, the shares of women ages 15-44 in each of the three education groups, from highest to lowest, were 33%, 49%, and 18%. The comparable shares in 1990 were 19%, 60%, and 21%. In addition to this educational composition shift, birth rates fell the most for women with less than a high school degree. The birth rate among the least educated women fell from 73.2 per 1,000 women in 1990 to 39.3 per 1,000 women. (This dramatic decline overlaps with the decline in teen birth rates.) Birth rates among women in the middle education group have been fairly flat, around 63 to 64 births per 1,000 women, throughout the 30-year period. Among college-educated women, the birth rate rose from 62.6 to 75.6 between 1990 and 2000, and then declined back to 58.4 in 2019.

The combination of the increasing educational attainment of women and the relatively larger birth rate declines among less educated women has shifted the educational composition of new mothers. As can be seen in Figure 7 panel (C), in 2019, roughly 33% of births were to college-educated moms, as compared to 18% in 1990; 67% of births were to moms with less than a four-year college degree, as compared to 82% in 1980. The increasing age and education profile of mothers at the time of birth would, all else equal, have led to a decrease in the non-marital birth share. Of course, all else was not equal. Marriage rates have fallen, more so among adults and mothers without a college degree than among those with a college degree. In other words, it is because of a decline in marriage rates and the decoupling of marriage and childbearing that there has been an increase in the share of children born to an unmarried mother, not because of changes in the age or education profile of new mothers.

THE DIVERGENCE IN FAMILY STRUCTURE HAS CONTRIBUTED TO THE COLLEGE GAP IN HOUSEHOLD INCOME

The widening gap in children's family structure between households headed by a parent with a four-year college degree and those headed by a parent without a four-year college degree has amplified the widening of earnings inequality that has taken place over this same period. College-educated workers have seen their earnings rise unabated over the past 40 years, while they have continued getting married and raising families as married couples. At the same time, those in the middle of the education distribution have had their wages stagnate or improve only slightly and they have become increasingly likely to set up a household without another adult.

Table 2 shows the change in median household earnings between 1980 and 2019 for households with children, by maternal education level (highest, medium, and lowest) and household family structure (two parents or a lone mother). The table also reports median earnings for all households with children by maternal education. The top panel of the table reports median household earnings for two-parent households. In the 2019 American Community Survey (based on 2018 earnings), median household earnings for a college-educated mother were $135,000. This reflects a 59% increase since the 1980 Census (based on 1979 earnings), which shows median household earnings of $84,876 (in real 2018 dollars) for this group.

Household earnings over this period increased by much less for mothers without a college degree. Median earnings for a two-parent household in which the mom had a high school degree or some college but not a four-year college degree increased only 8%, rising from $69,766 to $75,000 in inflation-adjusted dollars. For moms with less than a high school degree, the median household earnings of two-parent households declined by 14%, falling from $57,853 to $49,900. These differences reflect widening earning inequality, a topic which has received ample public, policy, and media attention.

The middle panel of Table 2 reports median household earnings for unpartnered mother households by maternal education level. For college-educated unpartnered mothers, household earnings increased by 60% over this period, reflecting the large increase in earnings to college-educated workers,

women included. For unpartnered mothers with a high school degree, household earnings increased by a more modest 19%. For lone mothers with less than high school degree, household earnings increased by 24%, rising from $17,797 to $22,000. Note that these earnings levels are much lower than the earnings of college-educated mothers, even more so in the more recent years, reflecting, again, widening earning inequality between those with and without college degrees. The larger relative increase in earnings for unpartnered mother households, as compared to those in two-parent households, reflects the increase in employment among single mothers over this period, especially among less educated mothers.

Looking at the change in median income for all households with children reveals that the rise in the share of unpartnered mother households has led to an overall net decrease in household earnings among mothers without a college degree. This can be seen in the bottom panel of Table 2. Median household earnings among middle-educated mothers decreased by 4%; median household income decreased by 20% among mothers without a high school degree. These decreases reflect the fact that the earnings gains for women in these education groups were offset by the fact that a larger share of these households are now headed by just one parent (and thus only enjoy the income of one potential earner). The decrease in the share of households headed by two parents—a fall from 81% to 67% for moms with a high school degree and from 79% to 66% for moms without a high school degree—led to a decrease in median household earnings for mothers without a college degree.

A key take-away from the numbers reported in Table 2 is that the divergence in family structure has been a meaningful contributor to the widening inequality between the households of the college-degree holding class and everyone else.

WHAT THIS IMPLIES FOR CHILDREN'S OUTCOMES

The college gap in children's family structure potentially has negative consequences for class gaps in children's outcomes. Married-parent families have been found to be associated with numerous benefits for children, even after controlling for a host of potential confounding factors, such as

maternal education and race (see, for instance, Garfinkel and McLanahan (1986), McLanahan and Sandefur (1994), DeLeire and Lopoo (2004), Hill, Holzer, and Chen (2009)).[13] Much of the research on the relationship between family structure and children's outcomes is specified in terms of an average effect of family structure on children. Kearney and Levine (2017) posit that the "marriage premium" for children – defined as the gap in outcomes between children of married and non-married parents – will depend on a mother's own level of resources, the additional resources that her partner/the dad would bring to the household, and the returns to those additional resources in achieving a particular outcome.[14]

Using data from the 2013 Panel Study of Income Dynamics (PSID), Kearney and Levine (2017) document that for the primary outcomes of graduating high school and being out of poverty at age 25, the gap in outcomes between children born to married and unmarried mothers takes an inverted U shape: The gaps are smallest for the youngest, least educated mothers and the oldest, most highly educated mothers. The greatest marriage premium occurs in the middle of the maternal age and education distribution. This is consistent with the view that the potential resource gain from marriage is not sufficient at the low end and is unnecessary at the high end to meaningfully increase a child's probability of graduating high school or avoiding poverty or completing high school. But, for mothers in their early to mid-20s and those with a high school degree, having the additional resources of a second parent in the household leads to meaningful improvements in these outcomes.

---

[13] There are, of course, instances in which a two-parent or married parent family would not be beneficial for children, such as in the obvious case of abuse. Two recent studies consider the effect of having a criminally convicted parent sent to prison as compared to having a criminally convicted parent who is not sent to prison. Both papers find that in this case, the removal of the parent to incarceration is associated with better subsequent outcomes for the child (Norris, Pecenco, and Weaver, 2021; Arteaga, 2021.)

[14] One might also consider the effect of child/parent relationship type, not just the number of parents and the combined level of household resources. For instance, Case and Paxson (2001) and Carlson (2006) show that children tend to have better outcomes when they live with two biological parents, as compared to a biological parent and a stepparent. There is also the question of whether the parents are of opposite or the same sex. The social science evidence on this question is reviewed by Meezan and Rauch (2005); Black, Sanders, and Taylor (2007); Manning, Fettro, and Lamdi (2014); and Reczek (2020).

For the harder-to-obtain outcomes of graduating from college and having a high level of income at age 25, the observed marriage premium increases steadily with maternal age and education. In the case of these harder-to-obtain outcomes, it appears that marriage is associated with an increasingly higher likelihood that children will achieve these outcomes, up to even the highest levels of observed maternal age and education. These patterns are observed in unadjusted differences as well as regression-adjusted differences that account for child's age, race, ethnicity, and year of birth.

Furthermore, Kearney and Levine (2017) show that even after regression-adjusting for household income, sizable gaps in outcomes (that are statistically significant) remain. The finding that household income is an important factor, but not the only factor, driving differences in outcomes between children raised in single-parent versus two-parent homes is consistent with the findings from numerous studies that there are a variety mechanisms beyond income through which children might benefit from living in a married-parent home, including the effects of parental time and supervision, less maternal stress, family stability, among other factors.[15]

There is a related literature about the effect of not having a father in one's home. Carlson (2006) reviews data and evidence showing that fathers who live away from their children's home typically invest lower levels of parental time and money into their children and, furthermore, that father involvement is beneficial for children's outcomes, especially when a father lives with his children. McLanahan, Tach, and Schneider (2013) provides a meta-analysis of academic studies examining the causal effects of not having a father in one's home, using a variety of statistical techniques to try to isolate father presence from other confounding factors. They conclude that there is strong evidence that not having a father in the home negatively affects children's social-emotional development, particularly by increasing externalizing behaviors. Recent evidence suggests that unpartnered-mother

---

[15] Ribar (2005) provides a review of the specific mechanisms through which having married parents might improve children's lives, beyond income. He highlights a number that have been well studied, including fathers' involvement, parents' physical and mental health, parenting quality, social supports, health insurance, home ownership, parents' relationships, bargaining power, and family stability.

families are particularly disadvantageous for boys, suggesting that the emotional and behavioral development of boys is negatively affected by growing up without a dad in one's childhood home, more so than for girls (Bertrand and Pan, 2013; Autor, Figlio, Karbownik, Roth and Wasserman, 2019).

CONCLUSION

There has been a dramatic decrease in the share of US children living with married parents -- and, consequently, with two parents -- over the 1980s, 1990s, and 2000s. This has largely been driven by a decline in marriage among non-college-educated adults, including those with a high school degree or some college. The widening college gap in children's family structure has contributed to the widening inequality in household income and resources. These trends raise the concern that the college gap in family structure will exacerbate and perpetuate class gaps in children's outcomes. As this paper has documented, the benefits of a two-parent family have become yet another disproportionate advantage of the college-educated class.

The evidence suggesting that children do better when they live in a home with both a mother and a father present, especially boys, suggests that improving children's outcomes and closing class gaps in outcomes between the children of college-educated parents and others will require confronting the multi-dimensional challenges facing non-college adults – especially men – that have led to the erosion of marriage and the two-parent family among wide swaths of the population. As discussed above, the eroding economic position of non-college educated men has been a key contributing factor to these trends. Other societal challenges, including the mass incarceration of black men (Sykes and Pettit, 2014; Wildeman, 2009) and the social malaise contributing to "deaths of despair" (Case and Deaton, 2020), are related, contributing factors. A full accounting of these challenges is beyond the scope of this paper, the purpose of which is to highlight the dramatic changes in children's family structure that has taken place for the children of adults without a college degree. However, it bears emphasis that the various economic and social challenges facing non-college educated Americans today are related to the family

environments of children and, if not addressed, are likely to lead to the persistence of intergenerational disadvantage and class gaps across generations.

REFERENCES

Abraham, Katharine and Melissa S. Kearney. 2020. "Explaining the Decline in the U.S. Employment-to-Population Ratio: A Review of the Evidence, *Journal of Economic Literature* 58(3): 585-643.

Anelli, Massimo, Osea Giuntella, and Luca Stella. 2021. "Robots, Labor Markets, and Family Behavior." *Journal of Human Resources* (forthcoming in print).

Arteaga, Carolina. 2021. "Parental Incarceration and Children's Educational Attainment," *Review of Economics and Statistics* (forthcoming in print).

Autor, David, David Dorn, and Gordon Hanson. 2019. "When Work Disappears: Manufacturing Decline and the Falling Marriage-Market Value of Men," *American Economic Review Insights*, Vol 1, No. 2: pp 161-178.

Autor, David, David Figlio, Krzysztof Karbownik, Jeffrey Roth and Melanie Wasserman. 2019. "Family Disadvantage and the Gender Gap in Behavioral and Educational Outcomes." *American Economic Journal: Applied Economics* 11, no. 3: 338-81.

Becker, Gary. 1974. "A Theory of Marriage" in Theodore Shultz, ed., *Economics of the Family: Marriage, Children, and Human Capital.* Chicago: University of Chicago Press.

Bengston, Vern. 2001. "The Burgess Award Lecture: Beyond the Nuclear Family: The Increasing Importance of Multigenerational Bonds," *Journal of Marriage and Family* Vol. 63, No. 1: 1-16.

Bertrand, Marianne and Jessica Pan. 2013. "The Trouble with Boys: Social Influences and the Gender Gap in Disruptive Behavior.*" American Economic Journal: Applied Economics* 5, no. 1 (2013): 32-64.

Bertrand, Marianne, Emir Kamenica, Jessica Pan. 2015. "Gender Identity and Relative Income within Households." *The Quarterly Journal of Economics*, 130 (2): 571–614.

Black, Dan, A., Seth G. Sanders, and Lowell J. Taylor. 2007. "The Economics of Lesbian and Gay Families." *Journal of Economic Perspectives*, 21 (2): 53-70.

Black, Dan, Natalia Kolesnikova, Seth Sanders, & Lowell J. Taylor. 2013. "Are 'Children Normal'?" *Review of Economics and Statistics*, 95, no. 1: 21-33.

Brown, Susan L., J. Bart Stykes, and Wendy D. Manning. 2016. "Trends in children's family instability, 1995-2010." *Journal of Marriage and Family* 78, no. 5: 1173-1183. https://doi.org/10.1111/jomf.12311

Browning, Martin, Francois Bourguignon, Pierre A. Chiappori, and Valerie Lechene. 1994. "Income and Outcomes: A Structural Model of Intrahousehold Allocation," *Journal of Political Economy* 102, no. 6: 1067–1096.

Carlson, Marcia J. 2006. Family structure, father involvement, and adolescent behavioral outcomes. *Journal of Marriage and Family*, 68, no. 1 (2006): 137-154.

Case, Anne and Angus Deaton. 2020. *Deaths of Despair and the Future of Capitalism.* Princeton University Press.

Case, Anne and Christina Paxson. 2001. "Mothers and others: who invests in children's health?" *Journal of Health Economics* 20, no. 3: 301-328.

Dettling, Lisa and Melisa S. Kearney. 2014. "House Prices and Birth Rates: The Impact of the Real Estate Market on the Decision to Have a Baby," *Journal of Public Economics* 110, February: 1-166

Flood, Sarah, Miriam King, Renae Rodgers, Steven Ruggles, J. Robert Warren and Michael Westberry. Integrated Public Use Microdata Series, Current Population Survey: Version 9.0 [dataset]. Minneapolis, MN: IPUMS, 2021. https://doi.org/10.18128/D030.V9.0

Garfinkel, Irwin and Sara S. McLanahan. 1986. *Single mothers and their children: A New American Dilemma.* Washington, DC: The Urban Institute Press.

Hill, Carolyn J., Harry J. Holzer, and Henry Chen. 2009. *Against the Tide: Household structure, opportunities, and outcomes among white and minority youth.* Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.

Kearney, Melissa S. and Phillip B. Levine. 2017. "The Economics of Nonmarital Childbearing and the Marriage Premium for Children," *Annual Review of Economics* 9: 327-352.

Kearney, Melissa and Riley Wilson. 2018. "Male Earnings, Marriageable Men, and Non-Marital Fertility: Evidence from the Fracking Boom," *Review of Economics and Statistics* 100, no. 4: 678-690.

Kearney, Melissa S., Phillip B. Levine, and Luke Pardue. 2022. "Explaining the Puzzling Decline in Births Since the Great Recession," *Journal of Economic Perspectives.*

Lindo, Jason M. 2010. "Are children really inferior goods? Evidence from displacement driven income shocks," *Journal of Human Resources* 45, no. 2: 301-327.

Lopoo L.M. and T. DeLeire. 2014. "Family Structure and the Economic Wellbeing of Children during Youth and Adulthood." *Social Science Research.* 43 no. 1: 30-44.

Lovenheim, Michael and Kevin Mumford. 2013. "Do Family Wealth Shocks Affect Fertility Choices? Evidence from the Housing Market," *Review of Economics and Statistics* 95, no. 2: 464-475.

Lundberg, Shelly, and Robert A. Pollak. 2007. "The American Family and Family Economics." *Journal of Economic Perspectives*, 21 (2): 3-26.

Lundberg, Shelly, Robert A. Pollak, and Jenna Stearns. 2016. "Family Inequality: Diverging Patterns in Marriage, Cohabitation, and Childbearing," *Journal of Economics Perspectives* 30(2): 79-102.

Manning, Wendy, Susan L. Brown, and Bart Stykes. 2015. "Trends in Births to Single and Cohabiting Mothers, 1980-2013 (FP-15-03). Bowling Green OH: national Center for Family and Marriage Research, Bowling Green State University, retrieved from https://www.bgsu.edu/content/dam/BGSU/college-of-arts-and-sciences/NCFMR/documents/FP/FP-15-03-birth-trends-single-cohabiting-moms.pdf.

Manning, Wendy and Bart Stykes. 2015. "Twenty-five Years of Change in Cohabitation in the U.S., 1987-2013," (FP-15-01). Bowling Green OH: national Center for Family and Marriage Research, Bowling Green State University, retrieved from https://www.bgsu.edu/content/dam/BGSU/college-of-arts-and-sciences/NCFMR/documents/FP/FP-15-01-twenty-five-yrs-cohab-us.pdf

Manning Wendy D, Marshal Neal Fettro, and Esther Lamidi. 2014. "Child Well-Being in Same-Sex Parent Families: Review of Research Prepared for American Sociological Association Amicus Brief," *Population Research and Policy Review* 33(4): 485-502.

McLanahan, Sara and Gary Sandefur. 1994. *Growing up with a single parent: What hurts, What helps?* Cambridge, MA: Harvard University Press.

Mclanahan, Sara. 2004. Diverging destinies: How children are faring under the second demographic transition. *Demography* 41, 607–627 (2004).

McLanahan, Sara, Laura Tach, and Daniel Schneider. 2013. "The Causal Effects of Father Absence." *Annual Review of Sociology* 39: 399-427.

Meezan, William and Jonathan Rauch. 2005. "Gay Marriage, Same-Sex Parenting, and America's Children" in editors Sara McLanahan, Elisabeth Donahue, and Ron Haskins, *Marriage and Child Wellbeing, The Future of Children* 15, no. 2.

National Center for Health Statistics. Vital Statistics Natality Birth Data, 1980-2019. Public-use data file and documentation. https://www.cdc.gov/nchs/nvss/birth_methods.htm 2021.

Norris, Samuel Norris, Matthew Pecenco, Jeffrey Weaver. 2021. "The Effects of Parental and Sibling Incarceration: Evidence from Ohio," *American Economic Review* 111, no 9: 2926-2963.

Raley, R. Kelly, Meghan M. Sweeney, and Danielle Wondra. 2015. "The Growing Racial and Ethnic Divide in U.S. Marriage Patterns," *The Future of Children*, Vol 25, No 3: 89-109.

Reczek, Corinne. 2020. "Sexual- and Gender-Minority Families: A 2010 to 2020 Decade in Review," *Journal of Marriage and Family* 82: 300-325.

Robert Wood Johnson Foundation. 2014. *Fragile Families and Child Wellbeing Study: A national, long-term study of the causes and consequences of childbearing outside marriage.* Program Results Report Grant ID: 30978, 38788, 43407.

Ruggles, Steven, Sarah Flood, Sophia Foster, Ronald Goeken, Jose Pacas, Megan Schouweiler and Matthew Sobek. IPUMS USA: Version 11.0 [dataset]. Minneapolis, MN: IPUMS, 2021. https://doi.org/10.18128/D010.V11.0

Shenhav, Na'ama. 2021. "Lowering Standards to Wed? Spouse Quality, Marriage, and Labor Market Responses to the Gender Wage Gap," *Review of Economics and Statistics* 103, no. 2: 265-279.

Sykes, Bryan L. and Becky Pettit. 2014. Mass incarceration, family complexity, and the reproduction of childhood disadvantage. *Annals of the American Academy of Political and Social Science*, 654, 127–149.'

United States Census Bureau, "Income and Poverty in the United States: 2019," Current Population
    Reports September 2020:
    https://www.census.gov/content/dam/Census/library/publications/2020/demo/p60-270.pdf,
    last accessed August 2, 2021

United States Census Bureau. Survey of Income and Program Participation 2018. [dataset]
    https://www.census.gov/programs-surveys/sipp/data/datasets.2018.html

Wildeman, Christopher. 2009. Parental imprisonment, the prison boom, and the concentration of
    childhood disadvantage. *Demography,* 46, 265–280

Wilson, William Julius. 1987. *The Truly Disadvantaged: The Inner City the Underclass, and Public Policy.*
    Chicago: University of Chicago Press.

Table 1: Unpartnered Mother's Marital Status by Education and Race

|		2019		1980	
		Never Married	Divorced	Never Married	Divorced
Overall		51.7%	39.2%	22.1%	63.8%
Four-year college degree		32.1%	56.8%	9.8%	75.4%
	White NH	21.7%	67.4%	4.5%	80.4%
	Hispanic	41.9%	48.8%	16.4%	68.5%
	Black NH	51.8%	39.7%	27.8%	60.7%
	Asian NH	19.8%	51.8%	8.8%	53.7%
High School degree/Some college		56.5%	35.3%	19.5%	69.6%
	White NH	43.8%	47.2%	7.9%	79.7%
	Hispanic	55.9%	34.4%	22.2%	67.0%
	Black NH	73.6%	20.9%	41.5%	50.7%
	Asian NH	40.5%	38.7%	12.3%	62.9%
No high school degree		58.6%	31.1%	24.0%	61.2%
	White NH	52.8%	36.6%	11.9%	72.0%
	Hispanic	54.0%	34.7%	26.9%	58.6%
	Black NH	75.4%	17.6%	42.2%	45.4%
	Asian NH	41.7%	36.6%	12.9%	48.0%
White Non-Hispanic		38.4%	52.0%	10.4%	74.4%
Hispanic		53.8%	36.2%	26.0%	59.9%
Black Non-Hispanic		70.0%	23.8%	41.5%	47.1%
Asian Non-Hispanic		31.8%	44.1%	12.1%	52.0%

Notes: Data come from 2019 American Community Survey. The sample is limited to mothers with a child under age 18. There is one observation per mother, weighted by the mother's survey weight.

Table 2: Change in median household earnings for families with children between 1980 and 2019, by maternal education level and family structure

	Median Household Earnings		
	4-year College	High School/Some College	Less than High School
Two Parents			
1980	84,876	69,766	57,853
2019	135,000	75,000	49,900
Percent Change	59%	8%	-14%
Unpartnered mother			
1980	37,295	26,994	17,797
2019	59,500	32,000	22,000
Percent Change	60%	19%	24%
All families with children			
1980	79,936	62,792	50,007
2019	124,000	60,000	40,000
Percent Change	55%	-4%	-20%

Notes: Author's calculations using 1980 Census and 2019 American Community Survey, reflecting prior year earnings. The sample is limited to mothers with a child under age 18. There is one observation per mother, weighted by the mother's survey weight.

Figure 1: Percent of children living with married parents, an unpartnered mother, cohabiting parent(s), or in another arrangement
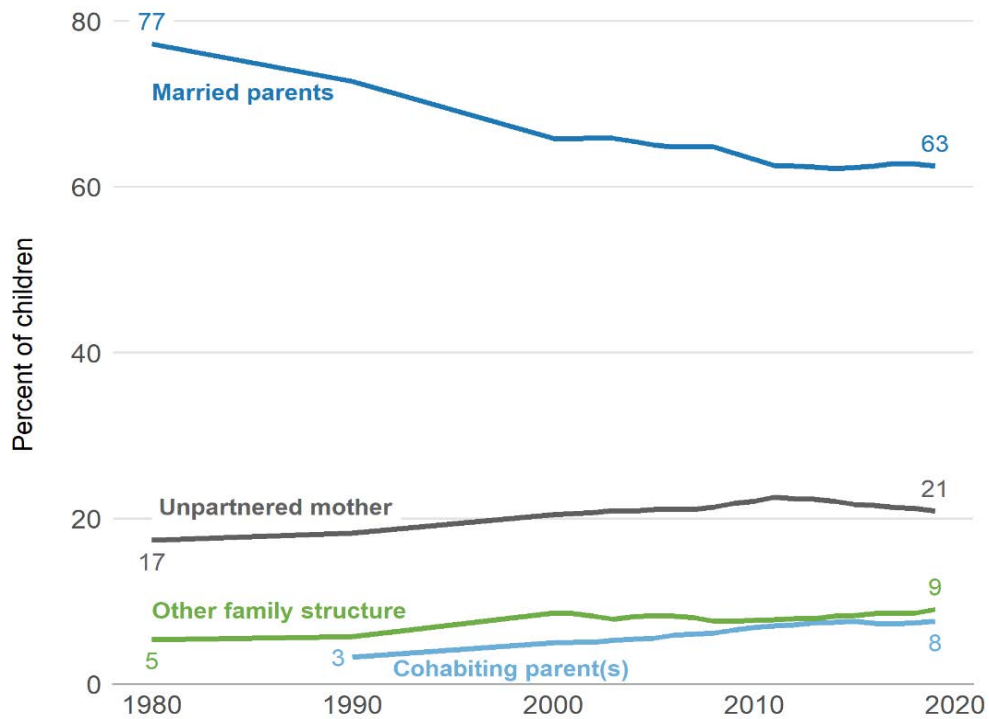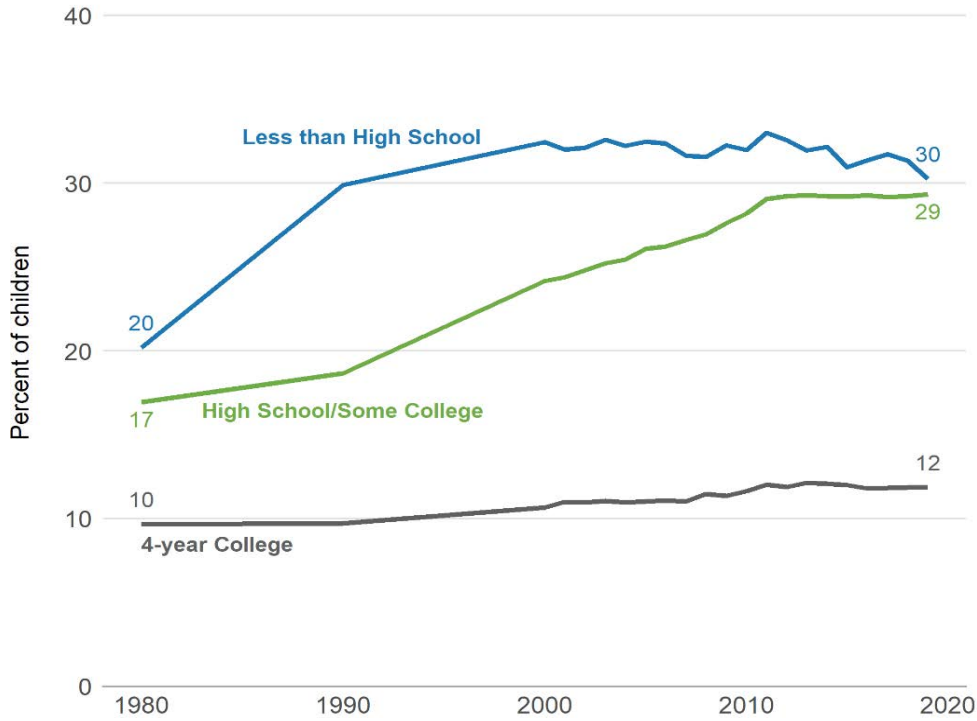

Notes: Author's calculations using 1980 and 1990 US Decennial Census and 2000-2019 US Census American Community Survey. Observations weighted using child's survey weight.

Figure 2: Percent of children living in a married-parent family, by maternal education
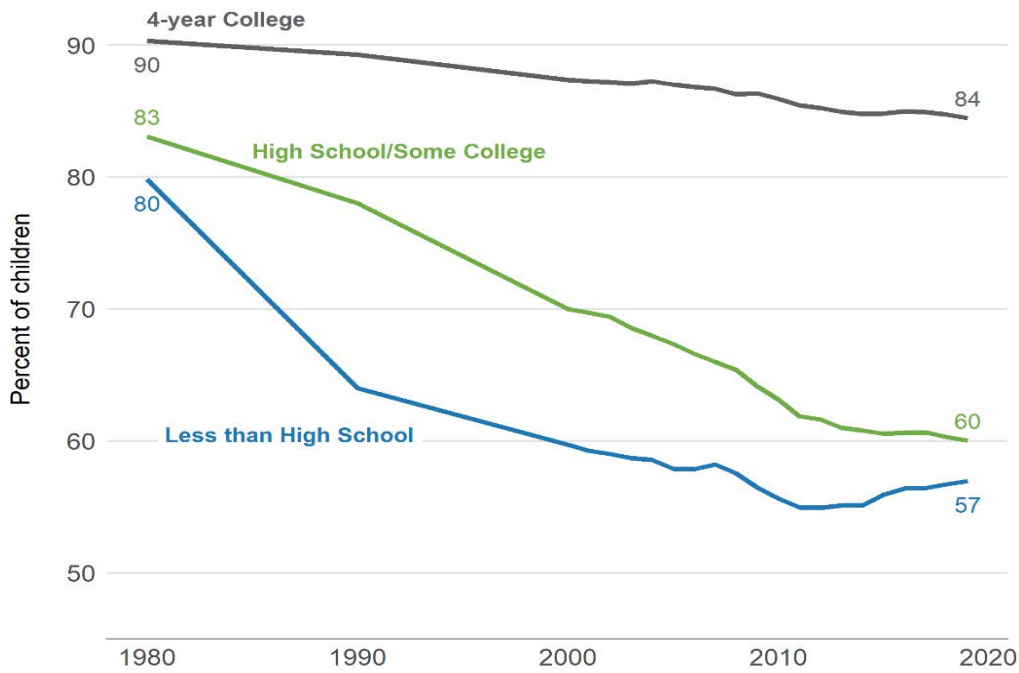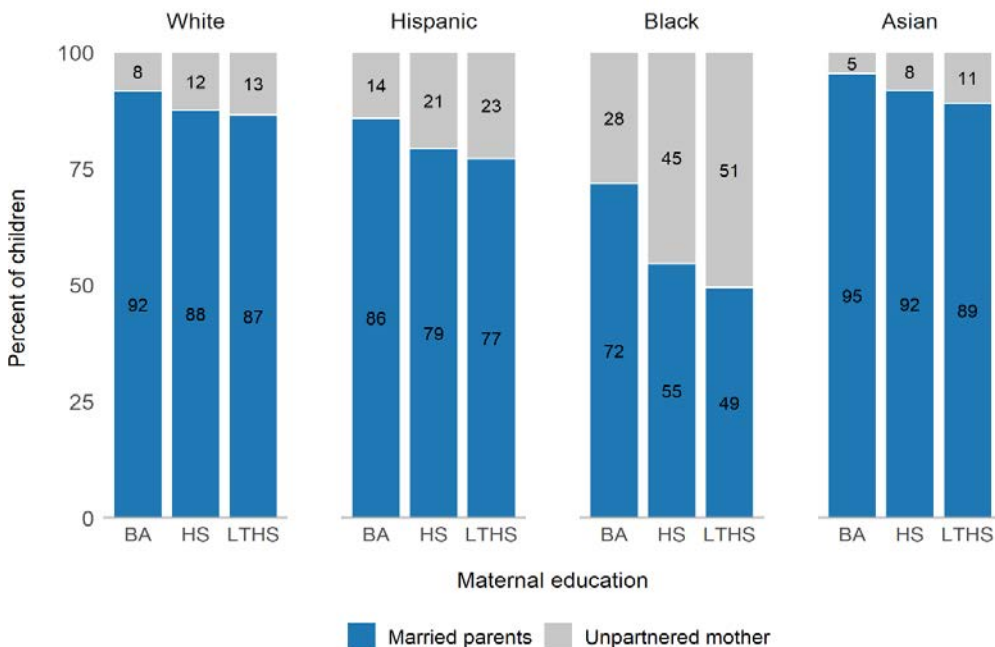

Notes: Author's calculations using 1980 and 1990 US Decennial Census and 2000-2019 US Census American Community Survey. Observations are weighted using child's survey weight. Among children who live with their mother in 2019 (and hence for whom maternal education is observed), 37% have mothers with a four-year college degree, 52% have mothers with a high school degree or some college, and 11% have a mother with less than a high school degree.

Figure 3: Percent of children living with an unpartnered mother, by maternal education

Notes: Author's calculations using 1980 and 1990 US Decennial Census and 2000-2019 US Census American Community Survey. Observations are weighted using child's survey weight.

**Figure 4: Children's family structure, by maternal race/ethnicity and education**

(A) 2019
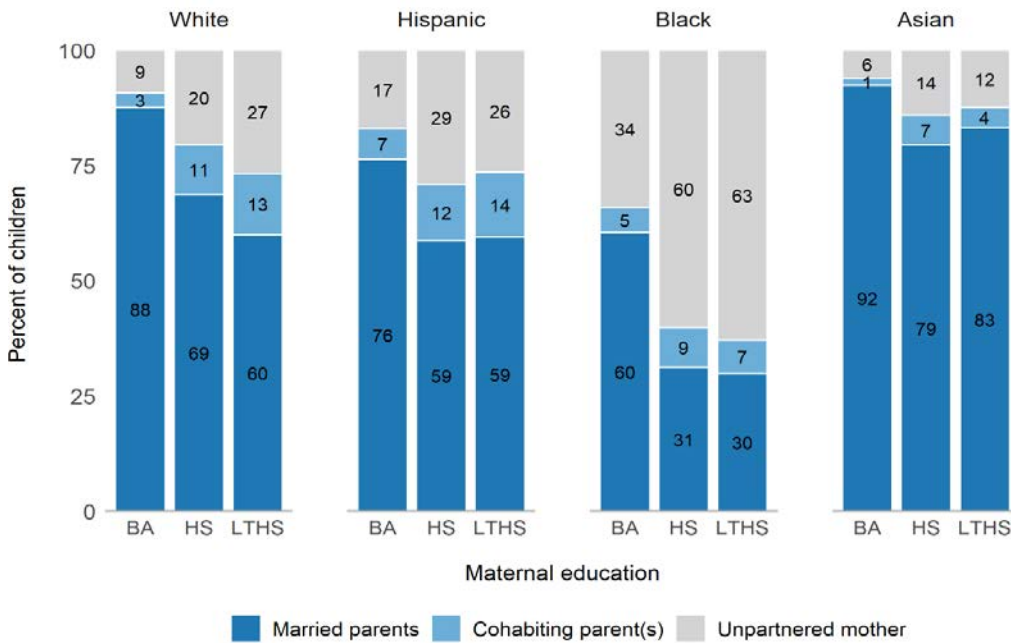
(B) 1980

Notes: Author's calculations using the 2019 US Census American Community Survey (ACS) and 1980 US Census. Tabulations include all children ages 0 to 17, weighted using the child's survey weight. In the 2019 ACS, the racial and ethnic composition of children's mothers: 55% are White non-Hispanic, 23% are Hispanic, 13% are Black non-Hispanic, and 6% are Asian; 90% of children are reported to be of the same race/ethnicity as their mother. In the 1980 US Census, the racial and ethnic composition of children's mothers: 75% are White non-Hispanic, 8% are Hispanic, 14% are Black non-Hispanic, and 2% are Asian; 98% of children are recorded as the same race/ethnicity as their mother.

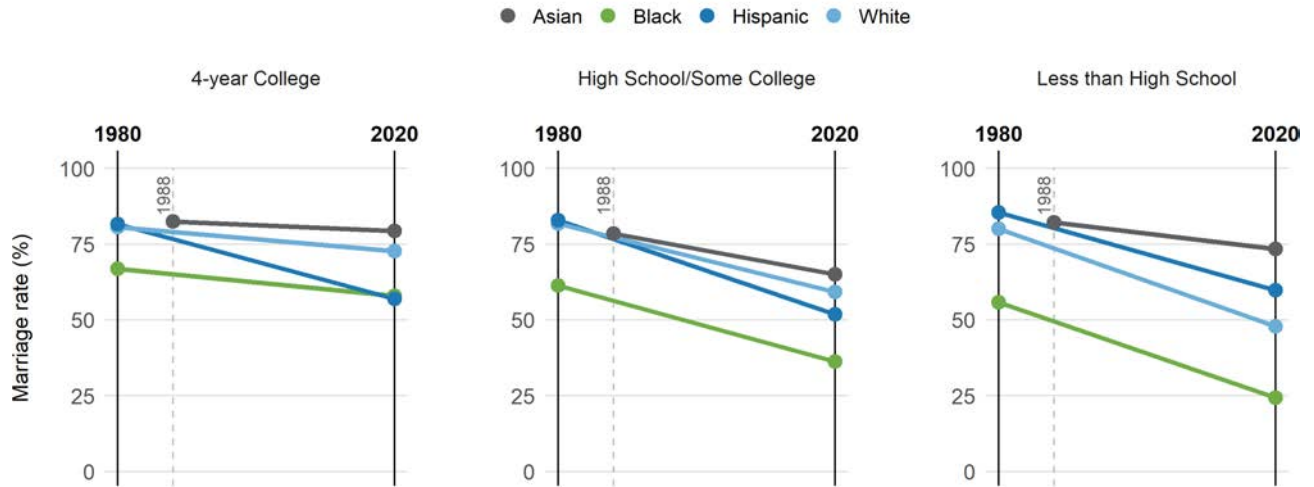**Figure 5: Share of adults ages 30-50 married, by education**
(A) Women
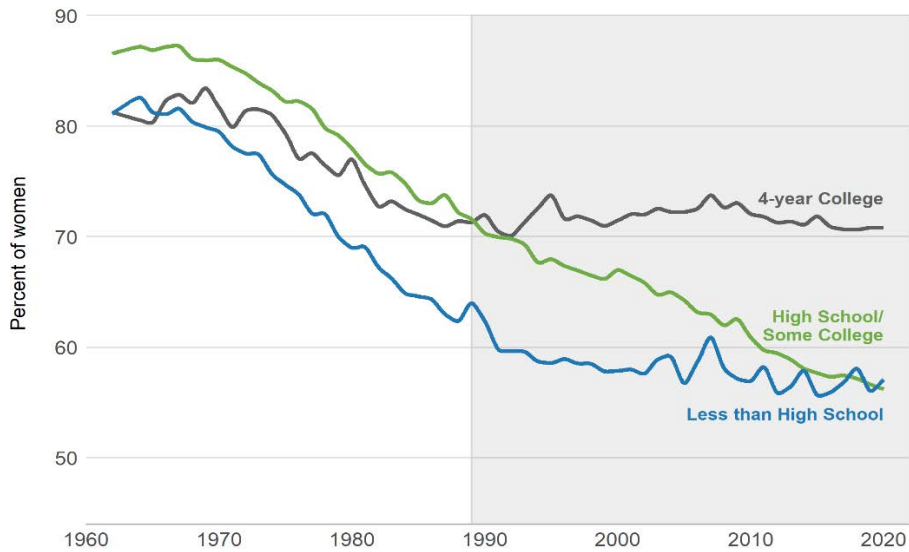
(B) Men
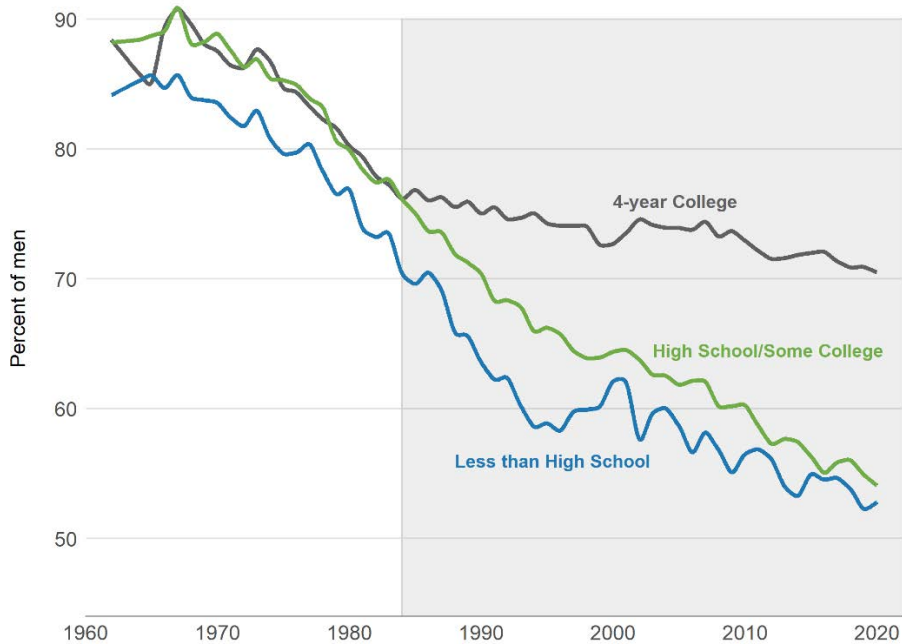
Notes: Author's tabulations from the Annual Social and Economic Supplement of the Current Population Survey (CPS ASEC), 1962-2020. Sample includes noninstitutionalized adults between the ages of 30 and 50, weighted using individual person weights. In 2020, the share of women in each of the three education groups were 45%, 47%, and 7%, from highest to lowest; the share of men in the three education groups were 39%, 52%, and 9%, from highest to lowest.

Figure 6: Share of men ages 30-50 married, by race/ethnicity and education


Notes: Author's tabulations from the Annual Social and Economic Supplement of the Current Population Survey (CPS ASEC), 1980-2020. Sample includes noninstitutionalized adults between the ages of 30 and 50, weighted using individual person weights.

Figure 7: Share of births in 1980, 2000, 2019 to different groups
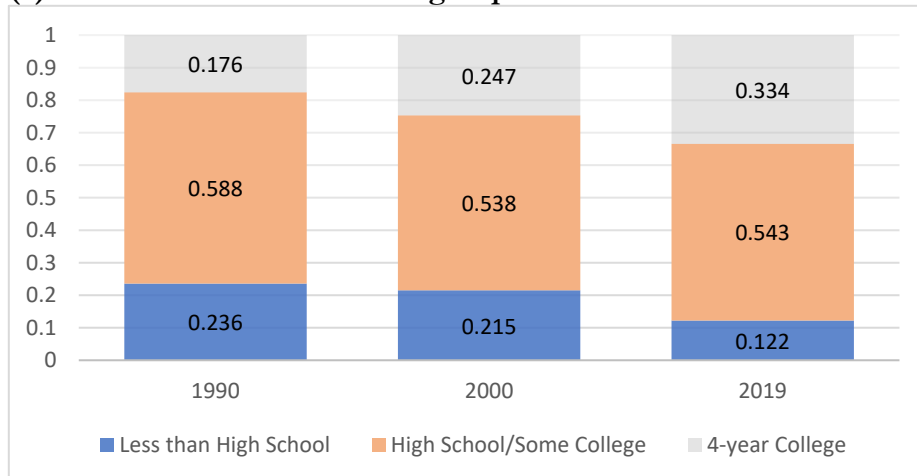
(A) Unmarried and married mothers
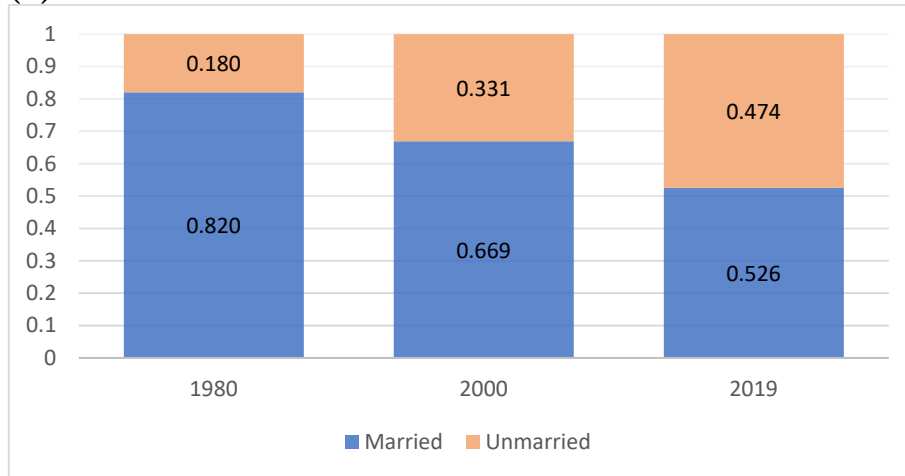
(b) Mothers in five age groups
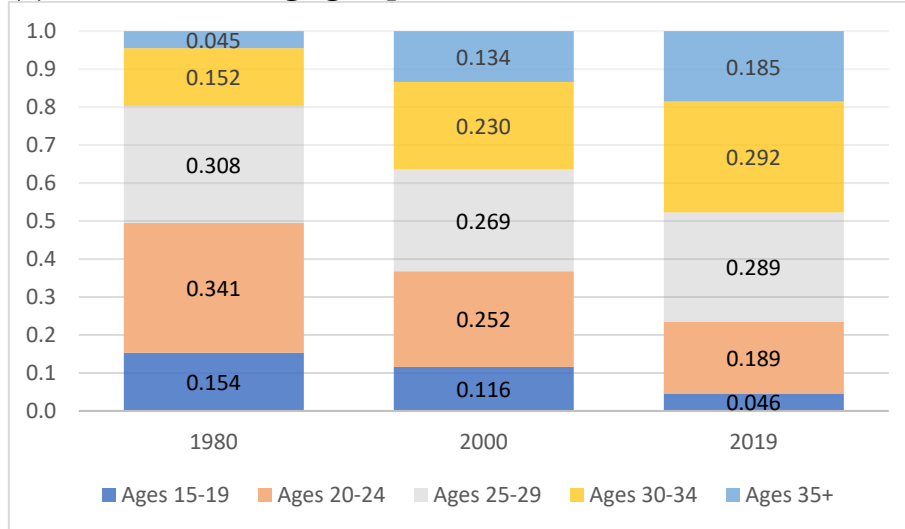
(c) Mothers in three education groups

Source: Author's calculations using 1990, 2000, and 2019 Natality Data from the National Center for Health Statistics.

Data appendix

Children's family structure

The main sources of data on children's family structure are the American Community Survey (ACS) 2000-2019 and the 1980 and 1990 US Census, accessed December 2, 2020, via IPUMS (Ruggles et al, 2021). Our sample consists of non-institutionalized children under the age of 18 years.[16] The primary unit of analysis is the child and IPUMS relationship variables are used to identify the family structure of each child.

The ACS samples household units; multiple subfamilies might reside within a household. A subfamily represents a nuclear familial unit, e.g. a married couple or a parent-child family. We define the following mutually exclusive and exhaustive category definitions, using the mother, father, and spouse locator variables:

- Married parents: Families in which IPUMS imputation indicates the presence of a married mother or a married father and their married partner is present in the household. (Cases for which the two parents' marital status do not match are considered cohabiting parents.)
- Cohabiting Parent(s): Families in which IPUMS imputation indicates a child's mother with an unmarried partner present in the household or a child's father with an unmarried partner present in the household. Beginning with the 1990 Census, "unmarried partner of householder" became a valid *relate* code, allowing for the identification of "spousal" links between unmarried partners if the unmarried couple includes the householder. Prior to 1990, IPUMS did not separate unmarried partners from the broader *relate* category of "partner, friend, visitor."
- Unpartnered mother: Families in which IPUMS imputation indicates that a child's mother is present without an additional father or mother figure present in the household.
- Unpartnered father: Families in which IPUMS imputation indicates that a child's father is present without an additional mother or father figure present in the household.
- No parent present: neither a mother nor a father is identified in the child's household.

We categorize mothers into three levels of educational attainment using the detailed educational attainment variable; (this is not observable if a child does not live with their mother):
- Less than high school: includes women who report 12th grade educational attainment without a diploma.
- High school graduate or some college: includes those who completed high school, those who earned their GED, and those with some college credits or an associate degree, but less than a bachelor's degree.
- Four-year college: includes women who have completed four years of college, earned a bachelor's degree, or earned a higher professional degree.

We categorize race and ethnicity based on a combination of the IPUMS race and Hispanic ethnic origin variables for the mother. (Again, if a child does not live with their mother, we do not see her characteristics.) We define the following mutually exclusive groups: White Non-Hispanic, Black Non-

---

[16] By restricting the sample to non-instituionalized children, 0.26% of children under the age of 18 are excluded in 2019.

Hispanic, Asian, and Hispanic. Anyone with the Hispanic ethnicity is defined as Hispanic. The Asian category includes Chinese, Japanese, and "Other Asian or Pacific Islanders." These four race definitions exclude non-Hispanic children with mothers who identify race as multiracial, American Indian, Alaska Native, and "other race." Among children in the 2019 ACS who live with their mothers, 55.1% are White non-Hispanic, 12.6% are Black non-Hispanic, 6.1% are Asian, and 23.5% are Hispanic. The excluded categories total about 2.8%: multiracial 1.9%, Native American and Alaska Native 0.68%, and "other race" 0.23%.

The marital status of unpartnered mothers is categorized as never married, divorced, widowed, and married with an absent spouse. We use the IPUMS reported marital status of the unpartnered mothers and combine *separated* and *divorced* into one category.

Median household earnings

Data on household earnings are from the US Census of 1980 and the 2019 American Community Survey (ACS), accessed December 2, 2020, via IPUMS (Ruggles et al, 2021). We restrict the sample to noninstitutionalized households with children under the age of 18. The survey captures the prior year's earnings and income information; thus, we are examining the earnings of 1979 and 2018 in the analysis. Earnings are estimated at the household level to reflect available resources to children. The unit of analysis is a family (even though earnings are summed over the household) and we keep a single observation per mother. This means we necessarily restrict the sample to children living with their mothers; 95% and 91% of children in the 1980 Census and 2019 ACS, respectively, live with their mothers. All observations are weighted by the mother's person weight.

Earnings are defined as the sum of the household members' wages, business earnings, and farm earnings. (In the 1980 Census, farm and non-farm business earnings were reported separately. The ACS does not report these earning separately; these earnings are reported jointly in the variable, *incbus00.)* We calculate median household real earnings in 1979 and 2018 using the PCE Chained Price Index from FRED[17] to record everything in 2018 dollars. If any earnings component is missing or unknown, we recode the value as zero.

Adult marital status and earnings

Data on trends in adult marital rates and the median earnings of men and women come from the Annual Social and Economic Supplement (ASEC) of the Current Population Survey (CPS) 1962-2020, accessed December 2, 2020, via IPUMS (Flood et al, 2020).

The sample is limited to adults between the ages of 30 to 50 with a positive person weight (*asecwt*); that excludes 43 observations. The sample size averages 26,282 per year. In the 2020 sample, there are 20,969 men and 22,944 women. The unit of analysis is an individual adult; we weight each observation is by their IPUMS person weight.

In our CPS analysis, we use the same education categories as defined above.

---

[17] US Bureau of Economic Analysis, Personal Consumption Expenditures: Chain-type Price Index [PCEPI], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/PCEPI, December 2, 2020.

Marital status: Each adult is defined as either married or unmarried based on their reported marital status in the survey. Married individuals include married people with an absent spouse.

Earnings: Median earnings are examined using income wage, business earnings, and farm earnings inflated into real dollars the PCE Chained Price Index from FRED[18] to record everything in 2018 dollars. If any earnings component is missing or unknown, we recode the value as zero. For 1980 onward, full-time work is defined based on two variables: "usual hours of work" must be 35 hours or more and "weeks worked last year" must be 40 or more. (We do not examine earnings by employment status prior to 1980.)

We define the same four mutually exclusive race and ethnic groups as defined above. The IPUMS CPS files include a variable for Hispanic origin; we exclude observations whose Hispanic status is missing. Asians cannot be identified in the CPS prior to 1988, during which survey years they would be included with a broader group labeled as non-white.[19] Between 1998 and 2002, the Asian designation include Asians, Pacific Islanders, and Native Hawaiians. In 2003, the race variable was modified to separate "Asian" and "Hawaiian/Pacific Island." For the sake of consistency over time, we include Pacific Islanders and Native Hawaiians in the group categorized as Asian for all years. These four categories do not include individuals who identify as multiracial, Native American, or Alaska natives. Among adults between the ages of 30-50 in the 2020 CPS, 57.2% are White non-Hispanic, 12.6% are Black non-Hispanic, 7.7% are Asian, and 20.2% are Hispanic. The excluded categories total about 2.25%: multiracial or unspecified 1.08% and Native American and Alaska Native 1.17%.

Birth rates

Data on birth rates come from the public-use natality files microdata from the National Center for Health Statistics (NCHS) from 1980 to 2019, accessed June 23, 2021, via National Center for Health Statistics.[20] We limit the sample to births to mothers ages 15 to 44, inclusive.[21] The sample is limited to births to mothers whose residence is within the United States, identified using the *restatus* variable.

To construct annual birth rates by demographic group, we use data from the corresponding year of the CPS ASEC available through IPUMS (Flood et al, 2020) to measure the population of women of childbearing age in that demographic group. We aggregate births to a national annual count of births by maternal age bin, marital status, education, and race/ethnicity. The NCHS reports marital status as either married or unmarried. In the natality files, educational attainment can be consistently defined from 1990-2019. But, between 2009-2014 coverage of maternal education in natality files from some

---

[18] US Bureau of Economic Analysis, Personal Consumption Expenditures: Chain-type Price Index [PCEPI], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/PCEPI, December 2, 2020.

[19] A full description of the race categories available over time can be found in the race variable comparability tab: https://cps.ipums.org/cps-action/variables/RACE#comparability_section Technical documentation on the 2003 race revision can also be found in this report: https://www.bls.gov/cps/rvcps03.pdf

[20] National Center for Health Statistics. Birth Data Files, 1980-2019. Public-use data file and documentation. https://www.cdc.gov/nchs/data_access/vitalstatsonline.htm

[21] The CDC measure the fertility rate based on births to women between the ages of 14 to 45 years old. The share of births to mothers under the age of 15 were 0.05% in 2019 and 0.28% in 1980; the share of births to mothers over the age of 44 were 0.26% in 2019 and 0.03% in 1980.

states is incomplete. For these years, we adjust the denominator (the population) to estimate a national birth rate based on available state coverage between 2009 and 2014.[22]

We define the same four mutually exclusive race/groups as above, using a combination of race and ethnic origin variables. (The natality data records race as a single race category for all mothers.) We report birth trends and shares by race and ethnicity from 1990-2019 because NCHS natality files do not report Hispanic ethnicity before 1990. For 2019 births, 52% are White non-Hispanic, 15.4% are Black non-Hispanic, 7% are Asian, and 24% are Hispanic. The excluded categories total about 1.6%: 0.87% are Native American or Alaska native and 0.73% have missing or unknown Hispanic ethnicity information.

Assorted statistics from the SIPP

We tabulate various statistics using the 2018 Survey of Income and Program Participation (SIPP), accessed September 14, 2020 from the US Census Bureau website.[23] In accordance with the SIPP documentation on weights[24], we restrict the sample to responses in December weighted by person weights, using the child's weight for our analysis. Our analysis sample consists of 14,211 children under the age of 18.

We define the same mutually exclusive and exhaustive family structure types as described above using SIPP household relationship indicators. We consider household members who are living in the household at the time of the December survey. The SIPP obtains the parental type of residents during the initial interview; if a parental figure was absent in the house during the initial interview and was living in the house during the reference month 12, we would not know their parental type. The interpretation of stepparent includes cohabiting partners of a parent regardless of level of involvement or dedication to the child. (For more information on relationship identification, see the SIPP user guide[25].)

Maternal education is categorized into the three groups defined above. If a child in the SIPP is recorded as having two mothers, we use the highest level of education between the mothers. Race and ethnicity are categorized as defined above.

Data appendix references:

Flood, Sarah, Miriam King, Renae Rodgers, Steven Ruggles and J. Robert Warren. Integrated Public Use Microdata Series, Current Population Survey: Version 8.0 [dataset]. Minneapolis, MN: IPUMS, 2020. https://doi.org/10.18128/D030.V8.0

National Center for Health Statistics. Birth Data Files, 1980-2019. Public-use data file and documentation. https://www.cdc.gov/nchs/data_access/vitalstatsonline.htm

---

[22] CDC reports states whose maternal education was unavailable due to recoding in the Education and Prenatal Care data https://wonder.cdc.gov/wonder/help/Natality.html#Education.

[23] United States Census Bureau. 2018 Survey of Income and Program Participation (SIPP) Data: Wave 1. Updated November 4, 2020. https://www.census.gov/programs-surveys/sipp/data/datasets/2018-data/2018.html

[24] https://www2.census.gov/programs-surveys/sipp/Select_approp_wgt_2014SIPPpanel.pdf

[25] https://www2.census.gov/programs-surveys/sipp/tech-documentation/methodology/2018_SIPP_Users_Guide.pdf

Ruggles, Steven, Sarah Flood, Sophia Foster, Ronald Goeken, Jose Pacas, Megan Schouweiler and Matthew Sobek. IPUMS USA: Version 11.0 [dataset]. Minneapolis, MN: IPUMS, 2021. https://doi.org/10.18128/D010.V11.0

United States Census Bureau. 2018 Survey of Income and Program Participation (SIPP) Data: Wave 1. Updated November 4, 2020. https://www.census.gov/programs-surveys/sipp/data/datasets/2018-data/2018.html