KEY FINDINGS:

- Traits in children like leadership, conscientiousness, and attitude explain a significant share of the variation in earnings and occupational status, but much less is understood about parents’ role in transmitting such traits to their children.

- The literature suggests that the effects of family structure on child outcomes are small to moderate. They are larger for things like children’s future family formation and smaller for things like educational attainment.

- While theory suggests that a family structure centered around a healthy marriage improves parenting and therefore child outcomes, the research provides mixed evidence in support of this relationship.

- Given that the association between stable, two-parent families and positive child outcomes is due in part to selection (parents with higher socioeconomic status tend to marry each other) and that genetics play a role in determining child outcomes, it is difficult to sort out causal effects.

To understand how families influence their children’s economic mobility, it may be useful to start with an analogy. We can think about the family as a child’s first school, with the parents as the teachers (Barton and Coley 1992). Schools are most effective when they have appropriate and sufficient resources (a clean, safe physical plant, lots of up-to-date textbooks, and an ample budget), high-quality teachers (well-educated professionals who are highly committed to their jobs and work well with their colleagues), a stable workforce, and a cadre of volunteers who can step in to support enrichment activities or cope with any emergencies. Parents must provide similarly for their children. Parents’ characteristics and resources such as education and ability are largely a function of selection, but the extent to which parents determine how these resources flow to the children (maximizing investments and support) may play a more direct role in child outcomes and influence the child’s prospects for economic mobility.
Parent quality also depends on the parents’ characteristics. Parents with more education and particular temperaments may establish more positive childrearing practices than others. Some evidence suggests, for example, that better-educated parents provide their children with more cognitive and language stimulation, which could bolster their early cognitive skills (Shonkoff and Phillips 2000). At the same time, effort, support, and mutual monitoring by spouses or other family members can offset a lack or reinforce the presence of initial advantages. And families with a single parent more often face greater challenges in providing consistent support and discipline to promote child development. Whatever a family’s configuration, material resources can lower stress and thus facilitate the prospects for effective parenting and mutual support between parents, where both are involved in the child’s life.

Household stability is important in producing healthy child development. Instability disrupts routines and undermines the parent-child relationship, which is essential to cognitive as well as social development. So, while parental conflict is bad for children, breaking up and re-partnering are also likely to be problematic (McLanahan and Bumpass 1988). Again, maintaining a stable marriage or partnership is partly due to temperament and skills, but it is also due to commitment and hard work.

The school analogy may be helpful in illustrating how difficult it is to disentangle the effects of family structure and parent characteristics on mobility. The strong association between poverty and low income more generally, and single parenting may suggest that family structure contributes to economic persistence both within and across generations. However, the vast differences between parents who form single-parent families, those who intend to form a family in partnership but split with their partners before or after a child’s birth, and those who remain married throughout the child’s growing-up years are also a large part of the picture. In the terms of our analogy, the dual-parent “schools” on average have significantly better-educated, healthier “teachers” and higher budgets than the single-parent “schools.” Their “students” have higher test scores. What remains a source of great controversy in the literature is how much of a reduction there would be in the “test score gap” if the single-parent “schools” had the same resources as dual-parent “schools.”

While healthy debate surrounds these questions, this review finds several important general conclusions within the literature:

- Numerous studies show that traits in children like leadership, conscientiousness, and attitude explain a significant share of the variation in earnings and occupational status, but much less is understood about parents’ role in transmitting such traits to their children.

- The literature suggests that the effects of family structure on child outcomes are small to moderate. They are larger for things like children’s future family formation and smaller for things like educational attainment.

- While theory suggests that a family structure centered around a healthy marriage improves parenting and therefore child outcomes, the research provides mixed evidence in support of this relationship.

- Given that the association between stable, two-parent families and positive child outcomes is due in part to selection (parents with higher socioeconomic status tend to
marry each other) and that genetics play a role in determining child outcomes, it is difficult to sort out causal effects.

**Literature Summary**
Some studies find that children who grow up with just one parent do not fare as well as their peers in homes with two married biological parents (McLanahan 1997, for example). Although there is compelling evidence that children who grow up with two married parents are more successful, there is limited evidence suggesting that family structure accounts for a substantial proportion of the intergenerational correlation of income. To the extent that the connection between parents’ and children’s socioeconomic status is mediated through family structure, there are multiple pathways to explain that relationship. The figure below illustrates some of those mechanisms.

**Pathways between Family Structure and Child Outcomes**

One pathway involves the link between socioeconomic status and family structure. This could reflect a causal relationship if marriage elevates parents’ economic status and some research does suggest that being married raises a man’s earnings (Ahituv and Lerman 2007). The converse is also true: the dissolution of a marriage can cause a decline in an adult’s household income. To the extent that material resources affect children’s eventual outcomes, some portion of children’s outcomes could be attributed to marital status. Parents with more income or wealth may be able to provide their children with more health care, education, or higher quality child care and thus potentially position their children to be more successful as adults.

It is also possible that children follow their parents’ model in their marital and childbearing patterns as adults. For example, children who grow up with a single parent or with stepparents may be more likely to experience marital conflict or to have children early or out of wedlock (McLanahan and Bumpass 1988). To the extent that these marital and childbearing patterns have a negative causal effect on adult socioeconomic status, the fact that children replicate those patterns may help account for some similarity between economic status of parents and children. Yet the few studies that try to determine if single motherhood or teenage pregnancy plays a large role in explaining the intergenerational correlation of income find that they account for only a small portion of that parent-child income resemblance.

Some evidence suggests that adults with higher socioeconomic status more often marry and stay married, and that better child outcomes result from the characteristics of adults who marry rather than family structure per se. Any correlation between family structure and economic status may
reflect this selection. Similarly, selection suggests that divorce per se is not harmful to children; the parent characteristics leading to divorce can have a negative affect. Studies showing that psychological and behavioral outcomes children who grow up in unhappy two-parent families fare similarly to those who grow up with just one parent lend support for this theory (McLanahan and Bumpass 1988). Furthermore, studies show that children who lose a parent through death—which is less likely to reflect selection—have outcomes similar to those who grow up in intact families (McLanahan 1997; Lang and Zagorsky 2001).

Some parents may have childrearing styles and nonfinancial traits that help their children succeed. Some research shows that positive relationships between a child and his primary caregivers correlate with early positive cognitive outcomes (Shonkoff and Phillips 2000). These outcomes in turn can improve a child’s education and earnings outcomes. Parents may also pass behaviors on to their children that increase their economic outcomes later in life through positive role models (Katz 1991). However, other researchers question whether genetics play a more important role in establishing these connections (Duncan et al. 2005).

Parental traits such as poor mental health can also affect child outcomes. While it is difficult to disentangle the intersection between poverty and poor mental health, research shows that children of depressed mothers have greater risk of behavioral problems and poor school performance (Shonkoff and Phillips 2000). The genetic transmission of mental illness may also put such children at higher risk. Home environment and cognitive stimulation also influence child development. Children’s school performance correlates positively with stimulative home environments. Families with more financial resources and education are better able to provide stimulative home environments (Smith et al. 1997, McLoyd 1998). Researchers do not agree, however, on how strongly family income predicts such stimulation. Research does agree, however, that very early childhood stimulation is important in developing cognitive ability and understanding long-term academic and social success (Heckman and Masterov 2000). Other parental traits, such as involvement in their child’s schooling and parents’ expectations, influence children’s outcomes (Hango 2005).

Other research focuses on the importance of parental transmission of personality and non-cognitive traits to children’s outcomes and their economic mobility. Numerous studies show that traits like leadership, conscientiousness, and attitude explain a significant share of the variation in earnings and occupational status (Jencks et al. 1979, Barrick and Mount 1991). Much less is understood about parents’ role in transmitting such traits to their children.

Finally, other elements of family structure may be important in understanding intergenerational economic mobility. For example, assortative mating—the fact that people tend to marry others who resemble them in terms of education, economic background, and other cognitive and non-cognitive traits—helps explain how children, particularly daughters, end up in the same socioeconomic class as their parents. Additionally, some research suggests that the degree of economic mobility may vary according to family size and birth order.

When trying to understand the role that family characteristics play in economic mobility it is often quite difficult to separate out the effects of genetics from the role that parents play in shaping their children’s environment. The case of aggressive or antisocial behavior illustrates the ways in which genetics, family structure, and childrearing may all intersect.
FAMILY STRUCTURE

Children who grow up in households with different family structures experience different outcomes. Yet there is little direct evidence suggesting that family structure itself contributes substantially to intergenerational economic mobility. (Other sections will discuss the ways in which family structure might matter, such as by affecting socioeconomic status and childrearing.)

Family structure is changing rapidly in the United States. In 2001, 18.5 million children—or about a quarter of the nation’s children—were living in single-parent households; in 1970, the figure was about 12 percent (U.S. Census Bureau 2005). Extrapolating these figures over a child’s lifetime would suggest that about half of all children will spend at least some part of their childhood with just one parent.

Many researchers find links between growing up with one biological parent and lower school achievement. In a review of several studies using a range of data sets, McLanahan (1997) finds fairly consistent adverse effects, with more dramatic results for amount of schooling attained than for test scores. McLanahan also reports some evidence that growing up without a father may reduce a boy’s future work effort, and mixed results on whether children who grow up in families without two married, biological parents have a higher risk of poverty in adulthood. Other researchers also show that adults who spent part of their childhood in a single-parent family have lower status jobs, more unemployment, and higher receipt of welfare benefits (see Musick and Mare 2004 for an overview).

McLanahan (1997) finds that the effects of family structure on behavior problems, fighting, hyperactivity, and social impairment appear more consistently across studies and are often larger than the effects on education and labor outcomes. Others note a link between family structure and delinquent behavior, smoking, and drug and alcohol use (Carlson and Corcoran 2001).

Perhaps the finding that children who live in a single-parent home for at least part of their childhood have a greater likelihood of early marriage and childbearing, out-of-wedlock childbearing, and marital dissolution suggests the most significant effect on intergenerational economic mobility (McLanahan and Bumpass 1988). For boys, a father’s early death may decrease chances of marrying (Lang and Zagorsky 2001).

Despite the correlational evidence of links between family structure and socioeconomic status, there is little direct evidence about the impact of family structure on economic mobility. Hertz’s (2006) finds that having a female-headed household accounts for 0.013, or 3 percent, of the total intergenerational correlation of income (0.43). While research shows that age of first pregnancy, and teenage pregnancy in particular, are associated with socioeconomic status, these factors contribute only slightly to intergenerational persistence of status. (See text box below on teenage pregnancy.)

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1 By Hertz’s estimate, female-headed households account for about 5 percent of the explained intergenerational correlation. (Roughly two fifths of the correlation is unexplained in his decomposition.) By comparison, education accounts for 30 percent of the correlation. Another study found that children who grow up with a single mother do about as well as those who grow up with both biological parents, but significantly better than other alternate family arrangements—with a single father or stepparents (Biblarz and Raftery 1999). In this case, Hertz’s specification may not be capturing the full effects of different types of family arrangements.
The stress from marital changes may also have a direct effect on a child. It is possible that children may exhibit more hyperactive or anxious behavior (Pagani et al. 1997) because of the stress involved in marital changes and the corresponding change in the relationship between parent and child. However, others have failed to find a consistent relationship between number of transitions and worse outcomes as the stress model would imply (Carlson and Corcoran 2001).

Intergenerational Transmission and Family Type

Some studies examine whether intergenerational transmission of characteristics works the same for all family types. For example, several studies report that the association between a parent’s income and occupation and a child’s is weaker in nonintact families. This research finds that children who live in households with both biological parents are more likely to have socioeconomic status similar to their parents and experience less intergenerational mobility than those who live with only one biological parent (Biblarz and Raftery 1999). This finding suggests that if a child spends less time with a parent while growing up, he will be less likely to resemble that parent in terms of income or educational attainment. Other studies, however, find a considerable correlation between the characteristics of sons and the biological fathers with whom they have never lived—a correlation that is larger than the one between sons and the nonbiological parents with whom they have lived (Björklund and Chadwick 2003). This suggests a large role for genetics in explaining the intergenerational correlation of income.

Fertig (2006) also finds that the more years a child spends not living with his biological father, the weaker the intergenerational correlation of earnings between the biological father and the child becomes. Yet she concludes that this is not the result of the father’s absence, but a reflection of selection—in the case of parents who end up divorcing, the connection between father and son would have been weaker anyway. Additionally, she notes that the earnings correlation between mother and daughter increases with each additional year without the father.
Unmarried, female-headed households with children have lower median incomes than married-couple families (Lerman 2002). While some evidence suggests that the association between poverty and family structure has declined in recent years, there are growing disparities in education levels between single parents and married ones (McLanahan 2004, Musick and Mare 2004). Changes in marital status can also produce changes in economic well-being: a wedding or a divorce usually lead to changes in family income. Some evidence suggests that marital status has a causal impact on socioeconomic status. If marriage leads to higher income and greater contributions to children’s future socioeconomic status, then being raised in a two-parent household could confer advantages on some children. Others point out that individuals who are of higher socioeconomic status to begin with are more likely to marry or stay married. If being of higher status increases the likelihood of marriage, which then increases socioeconomic status, then marriage could reinforce these advantages.

Households that lose a husband are particularly likely to experience downward intragenerational mobility both in absolute and relative terms. In an analysis of Panel Study of Income Dynamics data, Bradbury and Katz (2002) show that families that lose a husband experience, on average, a 40 to 45 percent real family income drop over a decade. In relative terms, more than half of families that lost a husband and did not start off in the lowest quintile, move down a quintile at the end of the decade; and about 75 percent of the families that began the decade in the bottom quintile stayed there. It appears that husbands who lose a wife are not as severely hit, in part because fewer of these new male-headed households have children. Other research suggests that parents who remarry see a significant short-term increase in their socioeconomic status (Lerman 2002, citing Morrison and Ritualo 2000).

There is also evidence suggesting that marriage pays financial rewards in the long run. One recent study that attempted to account for initial differences between married and unmarried men finds that marriage increases husbands’ work hours and earnings (Ahituv and Lerman 2007). As a result, staying married leads to an 18 percent gain in income relative to staying single and a similar gain relative to staying divorced. Lerman (2002) reviews some of the reasons why marriage may boost income, including allowing individuals to specialize and divide tasks and providing men the emotional support, stability, and sense of urgency to be more committed to work. He also presents an overview of studies that suggest the benefits of marriage for single mothers extend even among those most at risk of poverty, taking into account the fact that the men they are most likely to marry may be of lower socioeconomic status.

Systematic differences in who decides to marry (selection bias) may confound these research findings. If higher-status people are more likely to marry, then the correlation between marriage and socioeconomic status might be a reflection of who marries (selection rather than an effect of the marriage decision itself, or causation). McLanahan (2004) argues that the less a man earns relative to the median income in his community, the less marriageable he is. Ahituv and Lerman (2007) find that an increase in wage rates of 10 percent is associated with an increase in marriage rates of around 6 percent. Similarly, research suggests that women who divorce had lower socioeconomic status before their divorce (Smock et al. 1999). Thus some speculate that economic strain contributes to more divorce and unmarried childbearing (McLanahan 1997).

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2 Musick and Mare (2004) note that the correlation between poverty and family structure is stronger among blacks than among whites.

3 Ahituv and Lerman note that the relationship between income and marital status reflects both causal and selection effects.
Differences in Income by Family Structure and Children’s Success

Because single-parent households have fewer resources, it is likely that some of the impact of single-parenthood on children’s outcomes is related to those parental income gaps. McLanahan (1997) argues that differences in income explain about half the difference in the educational achievement of children raised in one-parent families relative to those who live in households with two parents. In her literature review, she finds mixed evidence as to whether single-parenthood or poverty explains more of the gaps in success between children who grow up in different types of households. In particular, she finds that absence of a parent may be more important for behavioral problems, psychological problems, and health, whereas poverty has an equal or larger impact on cognitive ability and school achievement.

Other studies identify a more prominent causal role for income, finding that family structure makes little difference in children’s outcomes after income is accounted for (Carlson and Corcoran 2001, Smith et al. 1997). Having lower income parents can limit the chances of children who grow up in single-parent households if children’s outcomes depend on the resources that parents can to invest in them. Researchers find that higher income parents can purchase higher quality care and this can have a causal impact on children’s eventual development. (See text box below on child care.) Also, children in low-income single-parent families may be more likely to drop out of school and reduce their long-run chance for economic success (McLanahan and Bumpass 1988). McLanahan (1997) argues that even if income is the proximate cause of adverse outcomes, family structure plays a causal role in these outcomes to the extent that lower income results from family disruption. On the other hand, if poverty causes family dissolution, then income, rather than family structure, causes harm.

One potential flaw with the economic-deprivation theory is that if income were truly the limiting force in single-parent households, then remarriage would likely compensate for those differences. Yet, research finds that remarriage does not, in general, allow children to bridge the gap between children who grow up with only one biological parent and those who grow up with two (Ludwig and Mayer 2006, McLanahan 1997). McLanahan and Bumpass (1988) suggest that remarriage may be a stressful event and that stress may offset potential gains from greater income.

Child Care

Shonkoff and Phillips (2000) document some of the research suggesting that the quality of child care—including the relationship between provider and child, the language and cognitive stimulation available, and the number of children per caregiver—helps determines children’s outcomes. Furthermore, the authors conclude that poorer children receive child care of lower quality than other children. Not only are low-income parents often unable to afford higher-quality care in centers and other licensed facilities, but they also tend to have less access to centers in low-income communities. Also, low-income parents more often work irregular hours that make using care facilities difficult. Shonkoff and Phillips also refer to research that suggests that children from families that already have several risk factors for poor child-development outcomes are not only more likely to be enrolled in lower-quality programs, but also more sensitive to the quality of care they receive.
**CHILDREARING**

There are several ways in which childrearing can interact with family resources to affect child development (Shonkoff and Phillips 2000). Parental socioeconomic status may affect parenting style, which in turn correlates with socioemotional child outcomes. Parent’s poor mental health status, disproportionately concentrated among low-income mothers, is tied to poor child outcomes. Low-income families also may provide home environments with less cognitive stimulation. Finally, low income may lead to less favorable child outcomes by limiting parents’ expectations for their children’s success or the time they have to spend with their children.

It is difficult to disentangle childrearing effects from genetic effects. Parents will likely respond to a child’s genetic predisposition and alter her parenting style accordingly, making it difficult to separate out “nature” vs. “nurture.”

**Parenting Style**

The relationship between a child and his primary caregivers is important in a child’s early social and emotional development and correlates with early cognitive outcomes (Shonkoff and Phillips 2000). Maccoby (2000) explains that parenting style—often assessed as authoritative (high warmth and control), authoritarian (low warmth, high control), permissive (high warmth, low control), or disengaged (low warmth and control)—show strong correlations to early childhood outcomes. Particularly in cross-sectional studies, correlations as high as 0.5 have been found between authoritative parenting and children’s social responsibility. Studies have more mixed results in identifying effects over a longer period of time, although some parenting behavior does predict antisocial behavior years later (Maccoby 2000).

Some researchers identify links between socioeconomic class and parenting styles. McLoyd (1998) contends that poverty and economic stress make parents more likely to be punitive and inconsistent in their discipline and to ignore their children’s needs, which in turn leads to social and emotional problems. He also points to some studies that suggest that if parents combine strict and consistent supervision with warmth, poor children can achieve greater academic success than their poor peers who do not experience this style of parenting. Although Hanson et al. (1997) find that income generally does not have a significant impact on parenting practices.

Hanson et al. (1997) conclude that parenting practices explain only a relatively small portion of the effect of poverty on children’s outcomes, ranging from less than 7 percent of the impact on school performance to about a third of the effect on internalizing behavior. Duncan et al. (2005) also find little evidence that resemblance between parents and children is propagated by the following parenting behaviors: parental involvement, parental monitoring, child autonomy, emotional warmth, and cognitive stimulation.

**Parental Role Modeling**

Parents may pass behaviors on to their children that affect their economic outcomes later in life. In their sample of low-income youths in Boston, Case and Katz (1991) find strong correlations between parents and children for specific behaviors. For example, children with a family member in jail are significantly more likely to be involved in criminal activity. Similar patterns occur for using drugs and having children out of wedlock. As Duncan et al. (2005) point out, it is difficult to determine whether these resemblances reflect socialization and role modeling or if they are attributable to genetics.

Role modeling may play a special role in single-parent homes. For example, McLanahan and Bumpass (1988) suggest that daughters observing their mothers as single parents find this family
structure choice more acceptable. If a child is likely to replicate her parents’ family structure and that family structure has an impact on income, then that family-forming behavior can affect the intergenerational transmission of income. Others argue that children, particularly boys, who grow up without a father fare less well because they do not have a positive male role model. Biblarz and Raftery (1999) refute that argument, finding that children living with only a father or with one biological and one stepparent, fare worse than children who grow up either with two biological parents or a single mother. They argue that absence of a biological father is not as important as the absence of a biological mother. Their “evolutionary theory” suggests that biological mothers invest more in their children than do fathers and place a higher priority on supporting their development.

**Parental Stress and Mental Health**

Shonkoff and Phillips (2000) find that about 1 in 10 mothers of young children experience depression, with higher rates—sometimes twice as high—among poor women. The authors also explain that maternal depression can disrupt secure attachments. Children of depressed mothers have greater risk of behavioral problems, which can adversely affect school performance. Depression is more likely to disrupt childrearing when it occurs in conjunction with other sources of stress such as domestic abuse. Mayer (1997) suggests that there is only modest evidence establishing a causal link between income, mother’s psychological well-being, and childrearing. She estimates that measures of parents’ psychological health explain from less than 15 percent to about 20 percent of the effect of parental income on children’s well-being.

If a child has a parent with mental illness, even if that condition does not alter childrearing behavior, it can affect the child through the genetic transmission of mental illness. Alternatively, the socioemotional stress that a child may undergo growing up in an environment with exposure to mental illness may place the child at higher risk of the disorder. Mental illness may subsequently affect children’s educational outcomes.

Child abuse and neglect also alter children’s outcomes. Abused young children are more likely to have insecure attachments. Children who have dysfunctional interactions with parents or are exposed to spousal violence exhibit more aggression (Shonkoff and Phillips 2000). In their review of literature, Shonkoff and Phillips (2000) also note declines in IQ scores, language ability, and school performance among maltreated children. Girls who have been abused are at heightened risk for depression, anxiety disorders, and other mental health problems.

Some researchers speculate that a cycle of violence exists in which abused children grow up to be abusive parents. Shonkoff and Phillips (2000) report on research suggesting that although most parents who were abused as children do not abuse their own children, abused children make up a disproportionate share of adults involved in familial violence. On the other hand, Cairns et al. (1998) fail to find evidence of direct links between aggression displayed by mothers and aggressive behavior of their offspring in a longitudinal study of a small sample.

**Home Environment and Cognitive Stimulation**

Certain aspects of cognitive and language development are particularly susceptible to influence from the environment, such as vocabulary development and capacity to pay attention—and particularly important for school success (Shonkoff and Phillips 2000). The authors discuss literature showing that children whose parents or teachers talk to them more experience greater vocabulary growth, which itself is strongly correlated with IQ. Other activities, like reading to the child, going to the library frequently, or engaging the child in play that involves numbers, are also correlated with early literacy and numeracy skills and academic achievement.
Research shows that children’s IQ and school performance are highly correlated with scores on the Home Observation for Measurement of the Environment (HOME) inventory, a commonly used assessment of stimulation in the home. Scores on the HOME assessment and other measurements of parental cognitive stimulation in turn correlate with poverty, parental education, and parental occupation (Shonkoff and Phillips 2000). For example, better-educated mothers talk more with their children. Some research suggests that the tendency of parents with high income and education to create a stimulating learning environment for their children accounts for a substantial portion of the gaps in cognitive scores of children by income and parental education (Smith et al. 1997, McLoyd 1998). One study finds that stimulation at home—in the form of books, computers, and trips—has a larger effect on children’s academic growth over the summer than during the school year. Family income is also associated with the ability to sustain academic growth during the summer, but it has less impact on gains in reading and math during school months (McLoyd 1998, citing Entwiste et al. 1997). Other studies find that these types of behaviors and home environments have more modest effects. Mayer (1997) notes that some of the elements of the home environment that have the largest impact on children’s outcomes, such as owning books and going to museums and other outings, are only moderately associated with parents’ income.

Cognitive ability in very early childhood may be particularly important in understanding long-term academic and social success. As Heckman and Masterov (2007) explain, “Skill begets skill; learning begets learning. Early disadvantage, if left untreated, leads to academic and social difficulties in later years. Advantages accumulate; so do disadvantages” (p. 3). For example, some researchers suggest that much of the effect of parental income on literacy in adulthood is mediated by the influence of income on cognitive skills in early childhood (Shonkoff and Phillips 2000, citing Baydar et al. 1993).

**Parental Involvement and Expectations**

Studies also show that parental involvement, particularly in their children’s schooling, connects with socioeconomic status and improved academic achievement. For example, Hango (2005) finds that greater parental involvement in school when a child was 16 is associated with more schooling for the child. The study also cites research suggesting that parents with higher socioeconomic status affect their children’s education when they are involved in school than do parents of lower status. Authors speculate that higher-income parents may be better able to navigate within the school system.

If a parent’s experiences shape his expectations for his child and those expectations shape the child’s outcomes, a high socioeconomic status parent may be able to foster better outcomes for his child. Hertz (2006) finds that a parent’s expectation that his or her child would get a college degree predicts higher income for the child in adulthood even after controlling for the parents’ own education (Hango 2005). Axinn et al. (1997) find mixed evidence that parents’ expectations of college for their child correlates with amount of completed schooling. However, they find that parents’ college savings when a child is very young pays off, not in the child’s amount of schooling, but in the child’s self-esteem in early adulthood. The authors suggest that this type of investment may simply correlate with greater parental involvement and support in general.
TRANSMISSION OF PERSONALITY, ATTITUDES, AND BEHAVIORS

Research suggests that non-cognitive traits affect socioeconomic outcomes. However, it is less clear whether parents play a strong role in passing such traits on to their children. There is mixed evidence on how much similarity exists in personality traits across generations, suggesting that there is little evidence of personality playing a substantial role in explaining the intergenerational transmission of education, income, or earnings. It is also possible that parents might either model behaviors or influence children’s attitudes in ways that may alter economic outcomes. Even if a child does not end up inheriting a non-cognitive trait from a parent, he may still be affected by the parent. For example, maternal depression can alter childrearing and might therefore affect a child’s development and ultimate outcomes, even if the child herself does not become depressed.

Non-Cognitive Traits and Economic Outcomes

The labor market rewards individuals for non-cognitive skills directly and indirectly because some of those traits are linked to higher educational attainment. Researchers have identified a number of characteristics that appear to pay dividends in the labor market. To the extent that these non-cognitive traits are passed on from one generation to the next, they may be a mechanism that helps explain parent-child socioeconomic similarities.

One indirect line of evidence of the effect of non-cognitive skills is the observation that large variation in earnings—by one estimate, more than half of the variance in the natural logarithm of permanent earnings—exists even among individuals who have similar education, years of labor market experience, parental schooling and income, and other demographic features (Bowles et al. 2001). Furthermore, a survey of U.S. employers finds that “attitude” was far more important to employers in their consideration of hiring nonsupervisory workers, than measures of academic or test performance (Bowles et al. 2001, citing Bureau of Census 1998). Jencks et al. (1979) conclude that a composite of non-cognitive measures has as much, if not more, explanatory power in understanding the variation in men’s earnings and occupational status, as do test scores. They also note that the effect of non-cognitive skills is relatively independent of the effect of cognitive skills. Heckman et al. (2006) find that except among the most educated individuals in their sample, non-cognitive skills have a much steeper gradient in explaining wages than other factors.

Some characteristics appear to have lasting impacts on labor outcomes. For example, in one small study teacher ratings of “executive ability”—including self-regulatory, planning, and organizational skills—in tenth grade predicted earnings independent of occupational status 20 to 40 years later (Jencks et al. 1979). Others show that measures of motivation at the beginning of an individual’s career are associated with higher hourly wages 20 to 25 years in the future (Dunifon and Duncan 1998). These results hold up when controlling for schooling, cognitive skills, and some background measures and are similar in effect size to years of education.

In a review of literature, Barrick and Mount (1991) show that conscientiousness predicts elements of productivity including job proficiency and training proficiency, which may in turn be related to higher earnings. Other traits that researchers have identified as possibly explaining educational or labor market outcomes include self-esteem, perseverance, outgoingness, and antisocial behavior (Bowles et al. 2001, Farkas 2003, Osborne Groves 2005, and d’Addio 2007). Physical traits have also been linked to different labor outcomes.

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4 Dunifon and Duncan note that some other studies, which measure motivation closer in time to their measurement of earnings, have failed to find this same result.
Less is understood about how non-cognitive traits affect economic outcomes. Although some personality traits, such as leadership, appear to directly affect labor market performance, others influence earnings through their effects on education. In some studies, the effect of personality traits on earnings or occupation disappears once you account for educational attainment (Blanden et al. 2006). Non-cognitive abilities at very early ages can also affect education. Children entering school with less executive functioning often have problems in school that get more severe over time (Shonkoff and Phillips 2000). It is likely that stronger non-cognitive skills are associated with better education outcomes (Farkas 2003, Bowles et al. 2001). It is not clear, however, whether some personality traits help individuals succeed in school and choose to pursue more schooling, or if schooling itself helps produce those personality traits. In either case, higher educational attainment may serve as a signal to employers that individuals have valued traits that help them to succeed both in school and in work. Heckman et al. (2006) suggest that recipients of the GED appear to do less well not because of a deficit in cognitive abilities but because of lower non-cognitive skills, relative to individuals who graduate from high school.

The Role of Personality in Intergenerational Mobility

Results are somewhat mixed when researchers have tried to directly determine what portion of the intergenerational transmission of status can be accounted for by the transmission of personality traits to children. Osborne Groves (2005) argues that the transmission of personality captured in the Rotter locus of control scale accounts for a modest portion of the intergenerational correlation of earnings. (See table below for estimates of these effects.) By contrast, Hertz (2006) finds inconclusive results about whether parents’ fatalism can predict a child’s earnings, after he has taken into account a number of other parental traits.

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<th>Estimates of the Role of Personality in Intergenerational Mobility</th>
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<td><strong>Study (dataset)</strong></td>
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<td>Osborne Groves 2005 (National Longitudinal Surveys)</td>
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<td>Bowles et al. 2005 (meta-analysis)</td>
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<td>Blanden et al. 2006 (British Cohort Study)</td>
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Loehlin (2005) suggests that personality could only have a small impact on economic mobility because of the relatively modest correlation between parents’ and children’s personality and between personality traits and occupational status. (See also Jencks and Tach 2006.) In his meta-analysis, Loehlin (2005) finds an average correlation between parent and child on personality traits of 0.13. This correlation is the same for children growing up with biological parents as for children who did not grow up with their parent, suggesting a strong role for genetics. Similarly, Loehlin et al. (1987) find that once adopted children reach adolescence, they have almost no resemblance in personality with their adoptive family members, but do resemble their genetic parents whom they had never met.

Some evidence suggests that behaviors that reflect personality traits may explain a portion of the intergenerational correlation. A clean home in childhood is very predictive of income in adulthood (Hertz 2006, also citing Dunifon et al. 2001). It is possible that this result captures a larger behavioral/personality trait about wanting to maintain order, shared between children and parents.

**Attitudes**

Loehlin (2005) finds a greater correlation between parent and child for attitudes than for personality traits, with an average correlation closer to 0.26. Although there is apparently still a large genetic role involved in attitude resemblance, it is less extreme than with the personality measures. It has been theorized that attitudes about work might be passed on from parent to child. For example, Altonji and Dunn (1991) find that turnover behavior tends to run in the family, although their evidence does not find that this plays a large role in the intergenerational correlation in wages. The authors also find strong relationships in weeks worked between fathers and sons and between mothers and daughters. Based on this and similar research, Jencks and Tach (2006) estimate that values about work (both in terms of hours and attitudes about the nonmonetary value of different jobs) as well as preferences about where to live (i.e., in cities or in more rural areas), may account for a tenth of the intergenerational elasticity of earnings or more.
ASSORTATIVE MATING

There is ample evidence suggesting that individuals marry people who resemble them—a phenomenon referred to as assortative mating. Spouses often resemble each other in terms of economic background. In fact, several studies have found that the intergenerational elasticity of earnings between a child and a parent may be similar to the one between a child and a parent-in-law, suggesting that one’s spouse’s parents are frequently similar in economic status to one’s own (Altonji and Dunn 1991, Chadwick and Solon 2002).

The tendency to marry people of similar education has increased over the later half of the twentieth century (McLanahan 2004, Schwartz and Mare 2005). Kearney (2006) asserts that marriage appears to facilitate the transmission of economic status from parents to daughters because women tend to marry men with similar economic backgrounds. One study finds that more than half of the intergenerational correlation in family income for women is accounted for by the tendency to marry someone with a similar background (Harding et al. 2005 and Ermisch et al. 2006 for similar findings in European data sets). Individuals may marry people with similar characteristics both because of preferences and the tendency for similar individuals to occupy the same “social spaces,” suggesting one way that social capital can influence economic mobility (d’Addio 2007).

The resemblance between spouses extends to traits like physical size, religion, personality, and some values (Chadwick and Solon 2002). Spouses are also similar in IQ, with correlations of about 0.3 (Plomin et al. 1997). One study found that in the United States the correlation in years of schooling is slightly more than 0.6 (Chadwick and Solon 2002, citing Kremer 1997). Marriage partners also appear to sort themselves along racial/ethnic lines (Fu 2001; Gullickson 2006; Model and Fisher 2001; Rosenfeld 2001). Assortative mating reinforces the genetic transmission of cognitive or non-cognitive traits between parents and children.
FAMILY SIZE AND BIRTH ORDER

Research shows a negative association between the number of children in a family and their achievement. For example, Grawe (2005) finds negative effects of larger families across a range of cognitive, physical, and social measures. Family size may also affect earnings in adulthood (Björklund et al. 2004). Two theories try to explain these patterns. One argues that parents with more children have fewer resources—both money and time—to invest in them. Another argues that children growing up in large families develop a taste for more children and therefore make educational and occupational choices that reflect this goal of having a large family (for example, early marriage and early timing of first birth, which may reduce human capital accumulation, though from another perspective an individual desiring a large family could be highly motivated to earn as much as possible to support the family). However, Grawe (2005) finds this second theory is implausible because family size affects a wide range of outcomes that weaken over time.

Another potential link between family size and intergenerational mobility is the possibility that smaller families will foster closer resemblances between children and parents. It is possible that children in smaller families become more similar to their parents because of the greater parent-child interactions (Björklund et al. 2004). Yet evidence is mixed on whether children from families of different sizes have different intergenerational income elasticities (Lindahl 2002 and d’Addio 2007).

Birth order may also influence achievement. While results are mixed, some research suggests that education achievement declines among the children born later (d’Addio 2007 and Lindahl 2002). Others show that birth order affects the strength of the correlation between parents’ and children’s economic outcomes. For example, Lindahl (2002) finds that in Sweden the intergenerational elasticity of labor income from father to son is twice as large for first-born children as it is for last-born children in large families. Lindahl speculates these differences might relate to financial constraints or different parent-child interactions as families expand.
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FAMILIES
AND ECONOMIC MOBILITY

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