An Economic Framework and Selected Proposals for Demonstrations Aimed At Strengthening Marriage, Employment, and Family Functioning Outcomes

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I. INTRODUCTION

Over the last 50 years, the United States and other western countries have experienced dramatic and long-term changes in family and household formation, and in the ways individuals and families support themselves economically. The changes are well-known: people are deferring marriage to later ages and choosing not to marry at all; divorce rates are at high levels after rising dramatically and stabilizing; more children are born outside marriage and growing up with only one parent; and the sources of family income have shifted, as the role of men's earnings has declined while the roles of women's earnings and government transfer benefits have increased.[1] The trends and patterns vary sharply by educational attainment. More educated women are becoming less likely to divorce and still are very unlikely to bear a child outside marriage, while among less-educated women, the propensity to marry is declining, divorce rates are high and increasing, and nonmarital births have been rising and now account for over half of their births (Ellwood and Jencks 2004; Martin 2006; Raley and Bumpass 2003).[2] Although it is difficult to quantify the impacts of the complex interactions among marriage, employment, fertility, and the functioning of families, the consensus view is that on balance these demographic and economic trends have contributed to child poverty and economic inequality, harmed the health and well-being of adults, and diminished the ability of children to grow into productive and well-functioning adults.[3]

Delays in marriage and the increased share of children not living with two biological or adoptive parents have many potential causes (Ellwood and Jencks 2004). The rising acceptability of premarital sex, the increased effectiveness of birth control, and the expansion of female labor force participation are among the social, economic, and technical

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[1] For a thoughtful analysis of similar trends in the United Kingdom, see Social Justice Policy Group (2006).

[2] Comparing marital dissolution rates within 10 years of marriage by year of first marriage (1975-1979 to 1990-1994), Martin (2006) finds divorce increased from 38.3 to 46.3 percent among women with less than a high school degree but declined from 29.0 to 16.5 percent among women with a high school diploma. Unpublished tables drawn from the Centers for Disease Control web site show that in 2005, nonmarital births constituted 7.6 percent of all births to women college graduates and 54.9 percent of all births to women with a high school diploma or less education. See http://www.cdc.gov/nchs/VitalStats.htm.

[3] See, for example, Blanchflower and Oswald (2004), Carlson and Corcoran (2001), Lerman (1996), McLanahan and Sandefur (1994), Thomas and Sawhill (2002), and Wilson and Oswald (2005).

factors that have played a role (see, for example, Akerlof Yellen, and Katz 1996; Goldin and Katz 2002). Financial disincentives to marry built into government tax and transfer programs may have played some role in reducing marriage among low-income parents (Carasso and Steuerle 2005). Whether or not government policies and programs bear some responsibility for these family outcomes, especially among low-income individuals, the problems are too serious for governments to ignore. Within the United States, several initiatives have aimed at preventing divorce and nonmarital births and at mitigating their consequences. The list includes an array of programs and demonstration projects testing such approaches as teen pregnancy prevention (Quint et al. 1997) and other early youth interventions (Maxfield, Schirm, and Rodriguez-Planas 2003), enhanced work incentives and work requirements for single mothers (Michalopoulos et al. 2002), increases in the affordability and availability of child care (Crosby, Gennetian, and Huston 2001), stronger enforcement of child support obligations of noncustodial parents (Miller and Knox 2001), and the provision of employment and training services to low-income individuals.

Recently, policymakers began a new set of initiatives to strengthen and increase healthy marriages. This effort recognizes the importance of marriage to adult and child well-being, the impact of marriage on employment outcomes and living standards, the desire by many couples to have healthy marriages, the disincentives to marry built into the nation's tax and transfer programs, and the need to respond to the decline of marriage, especially in the African American and low-income communities. The strategy focuses on improving the skills of individuals to communicate effectively with partners and spouses, to solve problems together, to parent well as a couple, to deal with financial conflicts and financial management, and to understand the long-term benefits of marriage. Developed under the Administration for Children and Families (ACF), the Healthy Marriage Initiative (HMI) is sponsoring a mix of demonstrations to test their effectiveness in strengthening marriage in the United States (Dion 2005). In 2006, the U.S. Congress included a five-year program of healthy marriage and father-involvement activities as part of the reauthorization of the Temporary Assistance for Needy Families (TANF) program. So far, in addition to marriage education classes, healthy-marriage programs are using a range of approaches. Among them are mentoring couples, training individuals to deliver marriage education, employing family case managers; declaring celebration days for marriages; delivering media messages about

marriage; and sponsoring seminars and classes dealing with healthy relationships for high school and community college students. Other program features include referrals to services to address potential barriers to healthy marriage, such as employment, substance abuse, or mental health problems; and the formation of local coalitions to encourage government, nonprofit, clergy, and other local organizations to raise the consciousness of community members about the importance of marriage and the availability of marriage-strengthening services.

A commonly expressed concern about the HMI is that it lacks focus on what many regard as the primary barrier to marriage: the employment and career problems faced by a high share of low-skilled men. Men's labor market problems do affect whether couples enter marriage and remain married (Ahituv and Lerman 2007; Oppenheimer 2003), but the size of the effect is too small to explain the declining marriage rates among blacks (Wood 1995). Some recent evidence indicates that gains in employment and earnings that were experimentally induced among young people in the Job Corps demonstration had no impact on men's marriage outcomes but did raise the likelihood of marriage among women (Mamun 2007). At the same time, marriage itself significantly increases men's hours of work and wage rates (Ahituv and Lerman 2007). In addition, a growing body of evidence shows that marriage reduces crime and health problems, thereby indirectly improving men's job market outcomes (Sampson, Laub, and Wimer 2006). Thus, given these favorable impacts of marriage on men's employment, the HMI is likely to stimulate men's employment and earnings, albeit indirectly. Evidence on labor market gains for women from marriage is less clear, though married women generally report higher levels of well-being than unmarried women (Waite and Gallagher 2000).

Marriage also interacts with other significant aspects of social and economic life. Marriage is associated with increased wealth accumulation and reduced material hardship, even among individuals who have similar levels of education and earnings capacity (Lerman 2002; Lupton and Smith 1999). Parenting can strain couples' relationships, but the presence of children generally increases the likelihood of marrying and remaining married.[4]

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[4] See section III.E in the appendix.

Maintaining a healthy marriage and a well-functioning family can be difficult in the face of such employment problems as unemployment and irregular or nonstandard work schedules.

Policy can drive interactions that lead to unproductive outcomes. For example, large financial disincentives to marry can reduce the likelihood of marriage, thus lowering men's earnings and increasing the likelihood of single parenthood. Strict child support policies that generate large arrearages (especially when men are unemployed or in prison) can discourage noncustodial fathers from working in mainstream jobs and lessen contact with their children.

Ethnographers and journalists have attempted to understand the social, economic, personal, and cultural mechanisms underlying these complex interactions. Particularly vexing is the question—if marriage exerts so many positive impacts, why has marriage been declining, especially among less-educated women bearing and parenting children? Finding the answers is not merely an academic exercise, but critical for efforts to halt and ultimately reverse the worsening trends in marriage and in the rates at which children grow up with just one parent.

The primary purpose of this project is to bring evidence and policy development together by using theories, quantitative evidence, and ethnographic findings about the interactions between marriage, employment, and family functioning to formulate new approaches for programs and policies—approaches that can be tested with rigorously evaluated demonstrations. The focus of the analysis and proposed demonstrations is on improving employment and family outcomes for disadvantaged populations and people at risk of poverty. In the appendix, we review an extensive body of research linking aspects of marriage, employment, and family functioning to determine the significance of specific relationships. The goal of this paper is to move to the next stage—to conceive promising strategies that take direct account of the mix of interactions uncovered in research.

The first step is to provide a theoretical framework that lays out the major factors influencing marriage and its interaction with other important outcomes. The second step is to use the framework to identify targets of opportunity to influence marriage, employment, and family functioning.

II. CONCEPTUAL FRAMEWORKS

This section presents a conceptual framework dealing with the major causes of marriage and its interaction with employment and family functioning. Although the framework applies broadly, of particularly interest are the relationships between marriage and employment in the low-income population. These outcomes depend on the motivations of individuals, the external constraints they face, the choices individuals make as they convert their motivations into actions, and the cumulative impact of actions of others on the constraints and preferences of individuals. The pooled actions of other parties exert impacts via the labor market, the marriage market, and the norms of the individual's community, friends, peers, and family.

Well-developed theories in economics, sociology, and psychology offer a starting point for our conceptual framework. With a focus on labor and marriage markets, we present a framework that considers the interplay of (1) preferences, (2) incentives and constraints, (3) uncertainty and information, (4) skills, and (5) context. In addition to the five main causal factors in our framework identified above, we take account of theories of behavior and self-control in contexts of uncertainty.[5]

A. PREFERENCES AND VALUES

Economists focus on how individuals maximize their satisfaction under constraints, where the satisfaction of individuals depends on their preferences. Although some economists, for example Veblen (1899) and Galbraith (1958), have long recognized the role of outside forces in influencing preferences, only recently have mainstream economists joined sociologists in focusing on the role of social interactions (Durlauf and Young 2001; Manski 2000), social norms (Kooreman 2007; Sliwka 2007), neighborhoods (Calvo-Armengol, Verdier, and Zenou, 2007; Vartanian and Buck 2005) and other institutions. In labor force decisions,

[5] The early contributions by Thomas Schelling (1978) and by Amos Tversky and Daniel Kahneman (1974) helped create the new and growing field of behavioral economics. They examined why people often make choices—such as smoking, staying overweight, taking drugs, and betting—that do not square with their welfare, as judged by themselves at another point in time.

individuals make choices based on their preferences not only for income and leisure, but also for job satisfaction, job comfort and safety, time spent with children, and work at home.

Preferences vary in the context of marriage and couple relationships as well. Not everyone places the same priority on marriage or long-lasting couple relationships. Preferences for marriage often interact with preferences about whether and when to have children. Although women commonly prefer to marry prior to having children, some women attach a higher priority to having children, even if childbearing takes place outside of marriage (Edin and Kefalas 2005).

Preferences can affect decisions about parental roles in housework, market work, and child care, about parenting styles, and about interactions with other family and friends. Individuals may value raising their partner's satisfaction, but they may place a higher priority on their own. Economists have developed bargaining theories to capture the way couples negotiate the sharing of income, housework, child care, and leisure (see Lundberg and Pollak 2003 for a recent example).

Preferences can arise from personal or group values that may be influenced by religion, by an internal sense of right and wrong, and by other influential people, including family members, mentors, teachers, and peers. The choice of how much to work and what jobs to accept depends not only on the desire for the income to buy goods and services, but also on preferences for family and leisure time, and on the satisfaction from having a job and performing job-related tasks. Some see work as a way of fulfilling a higher value. Values play an especially significant role in marriage and family preferences. People may prefer marriage before childbearing because they believe it is morally wrong to have sex before marriage or to have a child outside of marriage. People may prefer staying in a less than ideal marriage because they place a higher priority on the outcomes for their children than on their own gratification. Again, the source of such preferences may lie in personal values influenced by religion, community norms, upbringing within a family, or other sources.

One preference that exerts a major impact on work, career choice, and family behaviors is the individual's relative willingness to delay gratification for some larger benefit in the future (Banfield 1970; Laibson 1997). Individuals with a preference for immediate

gratification are typically less willing to study, work at a low wage, or accept unpleasant work conditions today in return for a higher wage and more satisfying job in the future. Some couples take a short-run perspective, pay little attention to building a healthy relationship, and have unintended pregnancies. Others develop their interactions in ways that offer a better chance for marriage and a healthy, long-term relationship.

Uncertainty is inextricably linked to current and future preferences. One reason for short versus long time horizons is different perceptions of future outcomes. Some individuals have little confidence that future gains will materialize in return for delaying gratification today. No doubt the perception and reality of future gains differ widely across individuals. In fact, it is hard to know whether observed choices reflect differences in preferences, in knowledge about the future, or in real uncertainties. Women may avoid marriage because they prefer independence or because of uncertainty over both the economic future and social behavior of their partner. Decisions about careers, marriage, and family functioning all depend on this confluence of preferences, knowledge, and genuine uncertainties. Choosing an education and training strategy depends not only on preferences for current versus future satisfaction, but also on one's knowledge about the future career outcomes in pursuing each strategy and on the actual variability in outcomes for various occupations.

The stability of preferences affects our understanding of what people choose and which policies can be effective. Preferences typically form within a context of family background, cultural traditions, peer groups, media messages, and the social norms of one's community. Although changing an individual's preferences may be difficult, programs often attempt to do so by appealing to an individual's sense of higher values, and by emphasizing the long-term satisfaction and pride one gains from constructive activities in work, parenting, and helping others. Where preferences are stable, purposeful, and reflective of individuality, shifts in individual decisions will take place mainly as a result of changing incentives and constraints, including skills. Although many argue for designing programs for low-income populations with respect for each person's preferences and without imposing middle-class values, others see changing preferences as critical to changing behavior. One expert on ex-offender programs argues that job-oriented interventions for young ex-

offenders will succeed only by motivating them to choose to exit from a life of crime (Bloom 2006; Bushway 2003). Another perspective emphasizes problems of self-control and ambivalence in people's desires. For example, an individual may want to leave the life of crime, but may lack sufficient self-control and may give in to a desire for excitement, revenge, or quick money.

Behavioral economists recognize that people may fail to save money, to stop smoking, or to meet work schedules because of short-term decisions that run counter to deeper preferences for their economic welfare and their health . The policy implications that behavioral economists promote often involve limiting choices and steering people to constructive alternatives that better reflect their long-term objectives and choices. Information may be necessary to reshape preferences and choices toward more constructive choices, but it is rarely sufficient. For example, men may engage in less casual sex after learning about the risks of sexually transmitted infections and about the risks of having to pay high levels of child support. But, altering the opportunities and changing community norms may be required as well. Thus, while preferences matter, the context within which preferences are formed, as well as other factors, will interact to determine the choices individuals make and their consequences.

B. Incentives and Constraints

In addition to preferences and values, choices clearly depend on incentives and constraints. In economic models, individuals maximize their satisfaction (which depends on their preferences) subject to constraints. Nonwage income and the net wage level are key variables affecting the choice about whether and how much to work. For any given set of preferences for work versus leisure, more nonwage income makes people wealthier, possibly reducing their hours of work, while higher net wages exert two offsetting effects. A higher wage rate increases income, lessening the need to work long hours; the higher wage also raises the gain from working extra hours, thus encouraging more hours working on the job. Empirical evidence shows that the expansion of the Earned Income Tax Credit (EITC) increased the net wage of many workers and led to increased work effort on the part of low-income single parents (Meyer and Rosenbaum 2001). Becker (1981) played a major role in extending standard economic models to marriage, viewing individuals as maximizing satisfaction on the

basis of full income (including household production) and as recognizing the benefits from jointly producing income and other outputs of value to each member of a couple.[6]

Tax and transfer programs can also affect marriage incentives and choices. Policies that strengthen the economic position of single parents relative to married parents can lead some couples to delay marriage. Some aspects of the tax system are favorable for married couples, especially for those with only one worker. However, in parts of the system with a single-family filing unit, a family definition of income, and progressive tax and transfer schedules, financial disincentives to marry are inevitable. The impact is particularly large for couples earning similar amounts of money. Disincentives to marry are especially high among couples that receive means-tested transfer income and live together without reporting their coresidence. Consider a mother with two children earning $8 per hour and working 25 hours per week who receives food stamps, a housing subsidy, child care, and Medicaid benefits, and cohabits with a man working full-time at $10 hour but not reporting his coresidence. If the average couple in the United States married, they would lose about 30 percent of their total income (about $820 per month).[7] At the same time, low-income couples with substantially different incomes and little or no transfer income can be financially better off if they marry. Rigorous enforcement of child-support obligations strengthens disincentives to father children outside marriage and to divorce and become a noncustodial parent. But, added child support improves financial outcomes for custodial parents, reducing the financial constraints against unwed motherhood and maintaining a single-parent family. Overall, however, aggressive child support appears to reduce the share of low-income children in single-parent families (Acs and Nelson 2004). In addition, high child-support obligations and payment rates can reduce a father's incentive to work in the mainstream economy (Holzer, Offner, and Sorensen 2005).

The economic and social health of a family interacts in ways affected by incentives and constraints. Parents may resort to poor-quality child care because they lack resources for high-quality care. Conversely, the lack of decent backup child care forces some parents to be

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[6] For a recent discussion clarifying Becker's model and extensions, see Grossbard (2006).
[7] These calculations are drawn from tabulations specified using the ACF-sponsored Marriage Calculator. See http://marriagecalculator.acf.hhs.gov/marriage/index.php.

absent from work and can lead to the loss of a job. Some people face difficulties in credit markets that limit their borrowing and investment opportunities, putting homeownership out of reach. For low-income families, the inability to buy a car on credit can hamper their job search and job stability. On the positive side, legal constraints can improve family functioning, as in the case of strong enforcement of domestic-violence laws that limit a family member's ability to hurt another family member.

Sometimes, unnoticed institutional factors or seemingly minor transaction costs affect behavior in surprisingly significant ways. The availability of the Internet to reduce job-search costs may increase the return to employment. The presence of a nearby office may affect whether families apply for food stamps. In another context, the Congress recently recognized the potential importance of simple features of the institutional environment for encouraging enrollment in private pensions. It allowed employers to enroll new employees automatically unless they take an active step to withdraw. Research suggests this change in the "default" provision is likely to increase participation, despite having no effect on the economic returns to taking part in the program.

Changing incentives to alter outcomes is a common policy recommendation. Often, however, altering a policy instrument to encourage one objective (say, encouraging work by reducing the duration or benefit replacement rate of unemployment insurance) can negatively affect other outcomes, such as material hardship or family stability. Resolving such conflicts requires balancing among competing objectives or using additional policy instruments. For example, reducing benefits encourages single mothers to seek work but might leave them and their children worse off if no job is found. Instead, the government can leave benefits constant while imposing work requirements as a way to encourage people to take jobs without worsening their children's economic position of children. To help people overcome educational and other constraints that limit access to good-paying jobs, we can turn to other elements of our framework, particularly information and skills.

C. Information

Insufficient information, an issue that economists have addressed rigorously in the last few decades, is clearly relevant to discussions about marriage, employment, and family functioning. Individuals base their decisions about work, marriage, and family functioning

partly on their interpretation of current and future realities. Unfortunately, their information is often incomplete and inaccurate. Too often, this misinformation or misperception contributes to bad life-course decisions. For example, lacking good information on the availability and requirements for good jobs and careers, young people spend too little time and effort concentrating on learning in school and outside of school. Some young men may be unaware of the impact of early and unwed fatherhood on their child-support obligations, their children's future, their ability to sustain an adequate living standard, and their ability to become effective fathers. Others apparently overestimate the economic gains from working in illicit and criminal activities, such as the drug trade (Leavitt and Dubner 2005).

Misinformation is widespread about the general effects of marriage on health, sexual satisfaction, living standards, and happiness. Many low-income and minority young people may base their beliefs about marriage on limited observations in their families and communities, or on media portrayals of marriage (Edin and Kefalas 2005). Often, these sources distort the realities of marriage as well as the requirements for and the advantages of healthy marriages. The distinction between cohabitation and marriage patterns is another area in which misinformation is widespread. Many are unaware that cohabitation typically involves much higher breakup rates and that longer-term cohabiting unions are more prone to domestic violence than marriages (Waite and Gallagher 2000).

Sound parenting and other aspects of family functioning require accurate information. Many parents are unaware of the profound impacts of reading to children at very young ages and of mixing warmth and discipline appropriately. Again, when information comes entirely from poor role models, from unsuccessful families in neighborhoods, or from media, parents may choose unconstructive ways to raise their children. Other critical pieces of information include knowing where to go for help in dealing with unemployment, other financial crises, and child misbehavior.

By itself, accurate information may not lead people to make wise decisions. But, inaccurate or distorted information can certainly contribute to unsound choices. Generally, accurate information is necessary but must be combined with a supportive context and with skills for people to achieve healthy employment, marriage, and family-functioning outcomes.

D. SKILLS

Skills are central as well to wage determination, to healthy marriages, to wise parenting, and to other family functions. The role of skills in determining wages, employment, and careers is well known. Indeed, researchers, policymakers, and the public all recognize that people must invest in learning appropriate skills before they can become a computer technician, nurse, welder, or carpenter, or enter most other professions. Having a preference for a profession and general knowledge about the profession are not enough: individuals must undergo education and training and then practice the skills they absorb to demonstrate their abilities to perform the relevant tasks. Adequate preparation for many careers involves not only learning what is pertinent to a particular occupation but also skills that apply to a range of jobs and careers. Among them are academic capabilities (reading, writing, basic math), interpersonal skills, and problem-solving skills.

Less widely recognized is the critical role of skills in achieving healthy marriages and healthy couple relationships. Again, the preference for and information about a healthy marriage may not be enough. Couples must also have or develop the skills to communicate constructively, to solve problems together, and to deal with financial issues, including limited budgets. Many of these skills apply not only to the couple and marriage setting but also to the work setting. One example of a skill that affects many facets of life is the ability to deal with interpersonal conflicts and solve other problems.[8] How individuals handle conflicts and solve problems can have repercussions for their educational outcomes, careers, relationships, and family formation.

E. CONTEXT

Individuals develop preferences for work and marriage in the context of peers, neighbors, and the community setting. Current perceptions and future goals concerning living standards depend on the living standards attained by others. Context plays a central role in shaping what is acceptable and what constitutes success in work arrangements, couple relationships, sexual activities, and child-rearing. The specific mechanisms may be peers who dismiss

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[8] The evidence for this point comes from demonstrations showing that providing couples with relationship and other marriage-related skills improves marital outcomes. For meta-analyses of several demonstrations, see Butler and Wampler (1999) and Carroll and Doherty (2003).

working at a low-wage job as toiling for "chump change," who attach high status to men who have many sexual partners, or who see young women having children outside marriage as normal and even something to celebrate.[9]

Context has market, institutional, and interactive dimensions as well. If most potential partners in one's community place little value on marriage before bearing children, on fidelity to one's partner, and on formalizing a couple relationship into marriage, individuals trying to choose a healthy marriage may find few takers. If few men are seeking marriage or willing to forego various temptations in return for a stable marriage, then women may be unable to exercise their preferences for a stable, healthy marriage. Another barrier to healthy marriages may be the limited venues in which men and women committed to marriage and raising children within marriage can meet. In the employment context, if individuals see few opportunities to invest in career-oriented skills or to enter rewarding careers, even those with long-term horizons may choose not to study hard in school or to avoid jobs in the illegal economy.

In some cases, the actions of individual agents interact in unexpected ways, leading to an environment that works ineffectively for the group as a whole. As Schelling (1971) demonstrated, despite individual preferences for living in an integrated neighborhood (but one in which they are in the majority), the micro decisions of individuals can easily lead to complete segregation—a macro outcome that no one prefers. Similarly, neighborhood men in search of good-paying jobs may turn down a few low-wage opportunities and thereby lead employers to believe that men in the neighborhood do not want to work. In the context of a modest shortage of available men, a few women may bid for partners by becoming more willing to accept infidelity or a submissive role. In turn, more men may come to expect this behavior, resulting in a cascade of actions that lead to high rates of unstable relationships and unwed childbearing.

The linkages between context and other elements of the framework may run in both directions. Without changes in individuals' context, their constructive preferences may be undermined, their information may be questioned or dismissed, and their skills may go

[9] For some revealing examples based enthnographic studies, see Anderson (1999) and Young (2006).

unused. On the other hand, policies that alter the preferences, constraints, information, and skills of a large share of a group may change the context significantly and set off self-perpetuating and reinforcing changes in preferences, constraints, information, and skills. The impacts may be highly nonlinear (Gladwell 2000). Initially, the effect on individuals may be overcome by the labor- and marriage-market context. However, reaching a critical mass of individuals may achieve a tipping point that ultimately changes the context in a new direction, one especially favorable to employment, healthy marriage, and beneficial family functioning.

F. NEXT STEPS

The five elements of our conceptual framework encompass the main influences on the motivations and actions of individuals and couples relating to marriage, employment, and family functioning. We believe they offer a guide for policy and potential government initiatives and for learning about the key forces affecting each outcome and the interactions among outcomes. Improving employment and marriage outcomes may require steps relating to all elements of our framework. Alternatively, changes in a few elements—say, financial constraints affecting work and marriage or improving marriage-related skills—may help turn around the nation's current predicament, particularly among the low-income and less-educated populations, of high proportions of nonmarital births, weak employment and career outcomes for less-educated men, high divorce rates, and unhealthy practices in family functioning.[10]

The next sections review the experience with demonstrations and programs based on the five elements of our framework and then propose demonstration ideas that draw on this experience along with elements of the framework.

[10] For evidence of more negative parenting practices of single parents, see Astone and McLanahan (1991). Also see Conger and Donnellan (2007).

III. THE NEXT WAVE OF DEMONSTRATIONS

A. CRITERIA FOR JUDGING NEW DEMONSTRATION APPROACHES

Demonstration projects and social experiments are important mechanisms for learning about the relative effectiveness of alternative social strategies and innovative program services, and about expanding their scope. At the same time, demonstrations often are costly and sometimes take many years to yield reliable results. Given these realities, it is critical to test the most promising interventions in ways that can be rigorously evaluated. In developing ideas for the next wave of demonstrations on marriage, employment, and family functioning, we will draw on the conceptual framework, experience with prior demonstrations, and observational research on the interactions between marriage, employment, and family functioning.

Proposed demonstrations should meet several criteria. They should (1) have a solid theoretical rationale linked to a conceptual framework, (2) build on successful elements of past demonstrations and not replicate approaches that have proved ineffective in other demonstrations, (3) have attributes that are consistent with policy implications of the empirical literature, (4) have the potential of significantly improving outcomes along more than one domain—such as marriage and employment or marriage and family functioning, (5) be subject to rigorous evaluation, and (6) have the potential to be replicated and implemented on a large scale, if successful. We favor focusing resources on groups for whom gains in marriage, employment, and family functioning are most urgently needed so long as interventions have a reasonable chance of positively influencing the groups' outcomes. We see advantages in using current operational venues—such as local programs, providers, community activities, and existing demonstrations—to minimize start-up time, to limit costs, and to reach significant numbers of people. However, we recognize the possibility that new, stand-alone demonstrations may sometimes be appropriate.

Demonstrations can meet these criteria using a vast number and mixture of interventions. Even among strategies focusing on employment and earnings, there are wide differences in approach, intensity, duration, scale, delivery mechanisms, involvement of partners, and target groups. Program goals often differ as well, for example, over such issues as the relative emphasis placed on current employment versus long-term careers, or the

emphasis on gender equity versus earnings gains. The employment area offers examples that try to influence outcomes through various aspects of the framework described above. Interventions can be found that emphasize incentives (wage subsidies), skills (classroom and on-the-job training, job-search skills), information (job openings and the career outlooks for various occupations), attitudes (work experience and work-readiness programs), or context (programs that try to alter the participant's peer group or change the hiring and training practices of a local industry sector). Often, programs use a combination of these strategies.

B. Some Relevant Experience from Selected Demonstrations

1. Employment-Related Demonstrations

The evidence from social experiments and program experience is mixed. Wage subsidies exert positive impacts on employment, hours worked, and total income, especially for single parents and where the subsidy increases the returns to workers above their wage rate (EITC, Minnesota Family Investment Program, Self-Sufficiency Project, and New Hope). It is hazardous to generalize about classroom training, since the intensity and duration of programs vary from a few months to a few years. Evaluations of randomized experiments typically show modest gains from programs targeted at low-income workers. One comprehensive evaluation—based on operational programs under the Job Training Partnership Act (JTPA)—found that earnings increased about 15 percent for adult women and 8 percent among adult men, enough to justify the program's costs (Orr et al. 1996). Especially effective were the gains to those expected to use on-the-job and job-search training. Unfortunately, the programs did nothing to raise the earnings of young men and women. Moreover, more comprehensive reviews of government-funded training programs for the disadvantaged show limited gains. A meta-analysis of 31 evaluations of these programs found that annual earnings gains were about $1,400 (1999 dollars) for adult women, $300 for adult men, and zero or negative for youth (Greenberg, Michalopoulos, and Robins 2003).

Although gains from training programs are uneven, nonexperimental evidence shows substantial increases in earnings associated with years of general and vocational education. In addition, intensive job-search programs, especially those that teach people how to find their own jobs, have shown positive impacts. Like the JTPA effects on adults, these gains from

job-search programs are small but sufficient enough to offset their modest costs. Subsidized jobs and work-experience programs, often involving jobs that gradually increase in difficulty and stress, raise earnings, especially during the period when these jobs are available. The gains beyond the subsidized job period have varied, depending on the target group and combination of activities.

Many training programs for low-income individuals begin with life-skills training aimed at changing attitudes about the importance of work and about the habits necessary to succeed in the workplace. Although we should attach some weight to the consensus of practitioners about the importance of these aspects of pre-employment training, we know of no studies that have documented the impact of this program component. One initiative that attempts to alter the context of at-risk youth is Job Corps. Individuals receive housing, education, training, health care, and other services, mostly at residential Job Corps centers (Johnson et al. 1999). Although the targeting of the program puts at-risk youth into an environment populated mainly by other economically disadvantaged youth, the centers attempt to positively alter the context within which participants learn, work, and interact. For the first few years after entering the program, the impacts on earnings were positive (Schochet, Burghardt, and Glazerman. 2001). Job Corps exerted favorable impacts on obtaining a GED and occupational certification, and on curbing criminal activity. But, the combination of earnings and other gains were insufficient in offsetting the social costs of the program (Schochet, McConnell, and Burghardt 2003). Moreover, while there is some indication that the Job Corps context matters, there were no statistically significant differences in impacts between those in a residential center (away from neighborhood peers) and those in a nonresidential setting.[11]

Using an industry context for employment interventions is the emphasis of sectoral strategies. Under this approach, workforce programs target an industry (or subset of an industry), become a strategic partner of the industry by learning about the factors shaping the industry's workforce policies, reach out to low-income job seekers, and work with other

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[11] The JOBSTART demonstration provided another test of the Job Corps model placed in the setting where youth normally live and not in residential centers. It did not exert statistically significant impacts employment and earnings (Cave et al. 1993).

labor-market groups, such as community colleges, community nonprofits, employer groups, and policymakers. The Aspen Institute and the Urban Institute have conducted studies of the operations of sectoral projects along with some analysis of data on the earnings of workers before and two years after participating (Blair 2002; Pindus et al. 2004). The goal is to link the training and career strategies for low-income job seekers to the industry's needs. By design, the programs deal with a particular industry and thus generalizations are hazardous. But, the nonexperimental evidence indicates that the six sectoral programs taking part in the Sectoral Employment Development Learning Project (SEDLP) have yielded impressive results (Blair 2002). Earnings jumped by 73 percent in two years for the 95 percent of participants employed two years. These results must be interpreted with caution because the project lacked a control group. However, the increases between the year before and the two years after participation were much higher in the SEDLP than in demonstrations with comparable groups of workers. Although most of the gains came from higher work levels, wage rates increased by 23 percent. Moreover, two years after training, 69 percent of participants were employed in occupations related to their training. The focused nature of the training, the links with employers, the development of pathways for entry-level workers, and the expertise gained by the training organizations probably all have contributed to the apparent success of the sectoral strategy approach.

A traditional sector-based approach with a long-term track record of success in raising earnings through targeted training is the apprenticeship system. Apprenticeships involve intensive work-based learning and classroom courses. Employers are central to the process, setting up the programs and paying the apprentices during their work-based learning. Although formal, registered apprenticeships are most common in the construction and manufacturing industries, the role of apprenticeship is expanding in other occupations and industries, including metalworking, nursing, information technology, and geospatial occupations.[12] One recent nonexperimental study found that apprenticeship training generated substantial gains in earnings, especially for those completing the program

[12] See http://www.doleta.gov/atels%5Fbat/cael.cfm, which describes the apprenticeship-related initiative for certified nursing assistants and licensed practical nurses, with clinical training linked to an associate's degree in nursing. Geospatial occupations deal with the application of global information and global-positioning skills.

(Washington State Workforce Training and Education Coordinating Board 2004). Relative to a statistically matched comparison group that registered for services with the state employment service, those participating in apprenticeships raised their employment rate by 5 percent.[13] Employed workers who were in apprenticeships earned nearly $2,000 more a quarter than this primary comparison group. These earnings gains are nearly double the comparably estimated gains for participating in a vocational degree program from community colleges.

Another program linked to specific industry sectors is the Career Academy. While operating within schools and as part of a local school system, career academies are high schools organized around an occupational or industry focus, such as health care, finance, and tourism. They try to weave related occupational or industrial themes into a college preparatory curriculum. An experimental evaluation using random assignment has documented some striking gains (Kemple 2004). Although career academy participation did not increase the earnings of women, young men assigned to career academies achieved an extraordinary 18 percent average gain in earnings compared with the control group over the four years after scheduled high school graduation. The career academy group earned an average of $1,373 a month, $212 more than the $1,161 a month earned by the control group. The earnings gains were concentrated among students with a high or medium risk of dropping out of high school.

One small but innovative employment demonstration tested the impact of providing job-search and job-readiness services to help both members of 17–24-year-old couples obtain a job or a better job (Gordon and Heinrich 2007). The Jobs for Youth (JFY)/Chicago's Full Family Partnership (FFP) project operated in the Chicago area, mostly with low-income African American couples, beginning in 1998. The couples had to be in stable relationships, in which at least one partner was a parent and on TANF. The program enhanced the standard set of JFY services (job-readiness workshops of 10–15 days, GED instruction, and job-search assistance) to include one-on-one counseling. The idea is that the partners can support each other, recognize the challenges faced by their partners, offer

[13] The matching variables included race, ethnicity, sex, disability status, age, education, region of the state and preprogram employment and earnings histories.

specific supports like driving or watching a child, and provide appreciation, encouragement, and monitoring of skills. Although enhanced services were received by both parents in the couple only 60 percent of the time, mothers who participated in the FFP achieved higher employment and earnings gains at exit than mothers in the standard JFY approach or in the JTPA program. However, their earnings advantage eroded over time, partly due to more new pregnancies and higher child care burdens. Fathers showed less robust but still positive gains from participating in FFP instead of only JFY. The researchers also found that the couples approach was linked to completion rates 20 to 30 percent higher than among parents with similar characteristics who participated in the JFY program. But much of the advantage in completing the program was the result of higher levels of services provided through the FFP. When both parents completed the FFP, their earnings jumped by over $4,000. Some evidence indicates a feedback between use of program completion, increases in earnings, and marital stability. Among parents who both completed the program, nearly 90 percent remained together at least a year later. Gains in earnings were associated with relationship stability, but the causation may run from earnings to couple stability or the other way around.

2. Demonstrations Linked to Marriage and Family Functioning

Several demonstrations have tested or are testing ways of improving the health of marriages and the broader functioning of families. In the marriage area, programs providing premarital education, premarital counseling, and marriage preparation for couples have been subject to extensive research. Carroll and Doherty (2003) conducted a meta-analysis of 13 experimental studies and concluded that, "premarital prevention programs are generally effective in producing immediate gains in communication processes, conflict management skills, and overall relationship quality and that these gains appear to hold for at least 6 months to three years." One of the studies reviewed (Markman et al. 1993) indicated that premarital prevention could reduce the likelihood of divorce. While these studies generally had small samples and short follow-ups, and rarely included low-income populations, the results from

the broader literature on healthy marriage interventions have been sufficiently compelling to influence policy in the United States and other countries.[14]

Under the Healthy Marriage Initiative (HMI), the ACF is currently sponsoring demonstration projects with large samples and long follow-ups targeted at low-income populations.[15] Two involve random assignment (Building Strong Families and Supporting Healthy Marriage) and one is focusing on community impacts (Community Healthy Marriage Initiative). The HMI projects cover a wide scope: improving financial incentives to marry, marriage education classes, mentoring programs involving married couples, training clergy and others to deliver marriage education, and courses in high school about healthy dating practices and information about the advantages of marriage. The intensity and duration of the interventions vary, with some lasting only a total of 10–12 hours of instruction. However, others are expanding their scope and beginning to connect with employment-oriented services as well as financial-literacy and matched-savings programs (such as the Individual Development Account programs).

One relevant set of results comes from an experimental project aimed at increasing fathers' involvement and couple relationships. The Supporting Father Involvement program provided information, 16-week classes, and case management to 289 low-income families in four rural California counties (Cowan and Cowan 2007). The families were randomly assigned to a fathers group (where the classes and counseling tilted toward parenting), a couples group (where the classes and counseling tilted toward couple relationships), and a control group. The assessments of the treatment and control groups at 9 and 18 months after the baseline assignment revealed a number of significant positive impacts. Both the fathers and couples interventions increased father involvement and decreased parenting stress, anxiety, and conflict over the child. In addition, relative to the control group's income trend, the impact on household income for those assigned to the couples program was a $3,770 gain per year (over an initial average of about $28,000); those assigned to the fathers group experienced a $2,505 additional gain over controls. The program developers view the

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[14] A recent example is the proposal for a large-scale effort to fund locally operating relationship- and parenting-education programs throughout Great Britain (Social Justice Policy Group 2007).
[15] For a list of ACF-funded demonstrations, see http://www.acf.dhhs.gov/healthymarriage/funding/index.html.

central finding as showing that fathers are more likely to become involved with their children when they have a good relationship with the child's mother. From our perspective, the program is an example of a family-functioning intervention that not only improved couple and parent-child relationships but also raised earnings.

Other initiatives have aimed directly at improving parenting to strengthen families. The interventions include direct training and mentoring through regular advice, and observations through nurses' visits and classes at Head Start and other child care centers. In addition, some policies encourage parents to spend more time with their children, such as the mandate that employers offer family and medical leave and some programs to provide paid leave. Only some of these initiatives have blossomed into full-scale programs. Programs not primarily focusing on family functioning may nonetheless exert impacts for good or ill. New Hope offered low-income people in a set of zip codes in Milwaukee a package that included earnings subsidies to supplement the EITC, child allowances, a community service job at the minimum wage, subsidized health insurance, and subsidized child care. Eligibility for the benefit package extended to all types of households, including single individuals, childless couples, and families with children. Each participant had a project representative who helped them access benefits, served as an informal counselor, and encouraged participants. Wisconsin spent an additional $3,300 per year for each New Hope household (in 2006 dollars), mostly on added child care. The job and income stability provided through New Hope apparently generated positive effects on boys (Huston et al. 2003), while the strict work requirements imposed on welfare recipients might have harmed adolescents, though not younger children (Zaslow, McGroder, and Moore. 2006).

The Parents' Fair Share (PFS) demonstration focused on one aspect of family functioning—increasing the financial and nonfinancial support of children by noncustodial fathers (Miller and Knox 2001). Given the likely links between work, support payments, and fathers' involvement, the program provided a range of services, including employment and training, peer support, voluntary mediation between parents, and help in modifying child-support orders. PFS generated substantial initial gains in employment and earnings for the most disadvantaged fathers, probably as a result of on-the-job training and earnings during this component, but no significant gains for the full sample of fathers. PFS stimulated

increases in child-support payments, but little additional father involvement. For another family-functioning outcome—communications between noncustodial fathers and custodial mothers—the level of disagreement increased, though this change may have resulted from more active interest by fathers who had not been closely connected with their children and the children's mother.

The Nurse Home Visiting project has attracted wide attention for its ability to achieve significant gains in child and family functioning. The goals of these programs are to improve pregnancy outcomes, children's health and development, and parents' well-being. In a series of random-assignment demonstrations, Olds and his colleagues (1988) found several positive impacts of intensive nurse home-visiting services during pregnancy and through the child's second birthday.[16] The Elmira, New York, demonstration raised schooling and employment and delayed the second child. In Denver, the nursing intervention program component was linked to a delay in second births and a reduction in domestic violence, but to no other favorable effects (Olds et al 2004). The Memphis demonstrations enrolled young pregnant women who had no chronic illness linked to fetal growth, but nearly all were unmarried, poor, and teenagers (Olds et al. 2007). The evaluation of children and their mothers around the child's 9th birthday documented several statistically significant impacts, including fewer second births, less use of welfare programs, a higher likelihood of marriage or cohabitation or other partnering with the child's father, more months with an employed partner, and better academic outcomes for children. The projected led to an increase in the months spent with the mother's current partner, although the program did not explicitly attempt to increase marriage and relationship skills.

Youth development is a part of the functioning of families. A number of projects have been undertaken to promote youth development in a variety of settings (Eccles and Gootman 2002). One interesting program with evidence-based effectiveness is the Carrera Program, an intensive, year-round, multiyear after-school program designed to promote positive youth development and positive reproductive health. The program employs a holistic approach involving school, family, supportive relationships, and social services and

[16] On average, nurses visited 7 times during pregnancy and 26 times from birth to age 2.

provides employment and academic assistance, family life and sexuality education, performing arts experience, sports training, and mental and physical health care. According to an experimental evaluation, participation in Carrera increased sexual health knowledge, receipt of health care and health behaviors, life skills, academic skills, and work experience (Philliber, Kaye, and Herrling 2001; Philliber et al. 2002). Participation also lowered levels of pregnancies and births and the likelihood of marijuana use in males.

3. Benefit-Related Policies to Raise Employment and Marriage

A major challenge of cash and in-kind benefit programs is to help low-income families without discouraging work and marriage. The EITC, subsidized jobs, and work requirements have achieved gains in employment, but structuring benefit programs that strengthen marriages is difficult. Until the income maintenance experiments of the 1960s and 1970s, the conventional view was that simply allowing low-income married-couple families to qualify for benefits on the same basis as one-parent families would eliminate marital disincentives. Helping couples with children achieve income stability was thought to reduce divorce and to increase marriage. However, evidence from the Seattle-Denver Income Maintenance Experiment showed that extending cash benefits to two-parent families did not increase, and may have even decreased, marriage (Cain and Wissoker 1990; Hannan and Tuma 1990). Helping single parents attain basic incomes was said to have increased their economic independence—they did not have to rely on a spouse or cohabiting partner for economic support.

Still, two recent demonstrations—New Hope and the Minnesota Family Investment Program (MFIP)—have shown that providing targeted benefits can sometimes increase marriage. The MFIP tested a welfare-to-work model with mandatory participation in work and training, consolidated and cashed out related benefit programs, enhanced child care subsidies, and reduced marriage penalties in the provision of transfer benefits.

New Hope achieved progress on several key goals, including gains in earnings of about $700 per year during the eligibility period, increases in family income by over $1,000 per year, declines in poverty rates by about 30 percent (from about 70 to about 50 percent), reduced reports of symptoms of depression, improvements in several dimensions of family

functioning, and better outcomes for children (Huston et al. 2003). Most strikingly, marriage rates increased as well (Gassman-Pines and Yoshikawa 2006). At the five-year follow-up, marriage rates of never-married mothers in the New Hope treatment group were almost double those of never-married mothers in the control group (21 percent to 12 percent). The study does not identify the mechanism by which marriage rates increased, but one possible explanation is that New Hope offered a degree of income security not available to control-group members. One possibility is that the availability of assured jobs and earnings subsidies can increase marriage rates. During the first three years after entering the MFIP, single parents raised their earnings and showed modest increases in the likelihood of marriage. Over the subsequent three years, both dissipated; no significant effects were evident in earnings or marriage at the six -ear follow-up. A key element of the MFIP was the coverage of low-income two-parent families. Although the MFIP did not end up raising the incomes of these families (higher benefits were offset by lower earnings of women in two-parent families), it did lower the rate at which married couples divorced (Gennetian, Miller, and Smith 2005).

4. A Mix of Strategies

The experience of demonstrations and programs suggests a role for a mix of strategies, including changing incentives, skills, information, attitudes, and context. The programs that stand out in the employment arena assure the availability of a job and combine work incentives and work experience with learning, in the context of a well-articulated career structure. In addition, some research and demonstrations suggest genuine complementarities; specifically, enhancing marital stability increases men's employment, earnings, and family incomes, while improving the health of marriages yields measurable gains in child outcomes.

C. Suggested Areas for Major Demonstration Projects

Even with the experience of past demonstrations and programs and the knowledge of existing demonstrations, it is a complex task to devise a sensible mix of new demonstrations aimed at increasing healthy marriages, employment and earnings, and well-functioning families. There are three types of outcomes of primary interest, five components of a causal

framework, various target groups, and a multitude of program instruments and combinations of instruments. The primary question is, which combination of approaches is most likely to achieve more of our primary objectives?

This section presents several suggestions for types of demonstrations that widen the mix of service approaches, venues, target groups, motivations, and expected outcomes. The recommendations take account of common difficulties in recruitment of participants and in administering interventions. Underlying the proposals is the notion that interventions should become more holistic and deal with a broader mix of challenges faced by individuals, couples, and parents. Thus, the demonstration ideas entail incorporating effective employment services into marriage-oriented programs and for incorporating marriage education, relationship skills, and family-functioning interventions into employment programs. In this section, we offer five concrete proposals, providing a brief case for each and an outline of the way the demonstration could be evaluated—usually with an experimental design. These proposals are by no means an exhaustive list of possible program ideas. Rather, they illustrate how our conceptual framework may be applied to well-founded program models and how these models may be revised to address healthy marriage, employment, and family well-being outcomes.

1. Adding Effective Employment Services to Marriage-Oriented Programs

Under this type of demonstration, sites offering marriage education and relationship-skills programs would expand the scope of the initiative to include employment-oriented services. The specifics of the services are important and several approaches are promising. We recommend two employment-oriented strategies. The first involves offering both members of a couple combinations of wage subsidies, counseling, and community service jobs. The concept builds partly on the experience of New Hope and the Full Family Partnership programs. We suggest using wage-rate subsidies partly to avoid imposing marriage penalties, incorporating community-service job models used in other programs, and including both partners in the provision of job-related assistance.[17] If the wage subsidy were available to

[17] The specifics of the wage subsidies to reduce marriage penalties require further thought but clearly they will have to address the large penalties that arise when the two members of the couple each generate similar

both partners in a couple and only phased out with wage rates, then a low-wage working man or woman would not be penalized by marrying another worker.[18]

The second employment component would involve offering participants in the marriage programs access either to local sectoral industry programs or to apprenticeship programs. Nonexperimental evaluations indicate that both have a good record of improving the earnings of at-risk participants. In both cases, the interventions would integrate the topics in marriage education with the noncognitive employment-related skills, such as the those specified in SCANS, the Secretary's Commission on Achieving Necessary Skills (1992). These approaches respond to the concern that low-income women report wanting marriage to coincide with financial stability and a good living standard. Many low-income mothers want to marry a man who has a decent job but also want a job of their own to avoid excessive dependence on a man who may not be reliable (Edin and Kefalas 2005).

The demonstration would target individuals who sign up for marriage education classes and who are cohabiting, in a close romantic relationship, or married. The presence of children would not be an eligibility requirement for participation. If couples do have children, then parental job sharing, parenting education, and backup emergency child care provision could be made available. Offering the employment- and income-related services in the context of ongoing programs should ease recruitment. In fact, a number of the sites that are currently funded by the Office of Family Assistance (OFA) through Healthy Marriage Demonstration Grants would be ideal candidates for piloting this type of intervention.[19] They are currently offering marriage education in a variety of settings, often embedded in

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incomes. Good employment interventions include those by the Transitional Work Corporation (TWC) in Philadelphia and the Center for Employment Opportunities (CEO) in New York. Under both models, participants engage in pre-employment activities and counseling, in paid work through transitional community service jobs, and in vocational assessments, employment plans, and job search. They emphasize work first, but in combination with a continuing search for unsubsidized jobs. Participants work most of the week and conduct job search and receive training at other times. We would suggest the individual placement used by the TWC over the crew placements used by the CEO.

[18] Unlike the EITC, which begins to decline if a working woman near the EITC maximum marries a man earning moderate wages, the wage-rate subsidy (e.g., paying half the difference between $11 and the woman's actual wage times the number of hours worked) would be unaffected by the marriage.

[19] For abstracts that provide brief descriptions of OFA Healthy Marriage and Promoting Responsible Fatherhood Demonstration Grants by region, see http://www.acf.hhs.gov/programs/ofa/hmabstracts/index.htm.

community organizations that already offer employment assistance. Some sites encourage asset building by low-income couples.

Ideally, the demonstrations would distinguish between impacts of the marriage component alone and impacts of the combined marriage-employment component. However, such a goal requires careful thought on the method of randomization, since contamination is likely if some couples within the same marriage class have access to employment services and the others do not. One possibility is to randomize individuals when they sign up for services to control status (no services), a marriage education class that offers the employment services and wage subsidies, and a class that does not offer employment services and wage subsidies.

In terms of our conceptual framework, this demonstration model focuses on enhancing marriage and job skills, but also aims to improve work and marriage incentives, deliver accurate information, influence preferences, and respond to preferences for near-term rewards. The model may affect the context of individuals and couples to the extent that marriage classes create a peer group for couples. With the employment component added, the group will have employment as well as relationship issues to discuss with each other. The demonstration is well grounded in theory and builds on successful elements of New Hope and other employment-related interventions. It meets the tests of influencing marriage, employment, and family-functioning outcomes, of evaluability, and of potential replication and scale.

The demonstration would test impacts on marital outcomes, relationship quality, and attitudes about marriage, employment, unemployment, wage rates, and earnings. Given the New Hope impacts, we might expect family-functioning benefits as well in improved parent-child relationships and child well-being (such as school-based and behavioral outcomes).

The comparisons of participants in a variety of settings will answer a variety of questions. By randomly assigning individuals to one of three groups, we can examine the relative impact of marriage education with or without the special employment services. Although comparisons between those only receiving marriage-related services (marriage only) and controls will take place in the Building Strong Families and Supporting Healthy

Marriages demonstrations, retaining this comparison makes sense to control for the geographic setting when making broader comparisons. The first comparisons will examine the impact of marriage education (relative to control status) on relationship skills, employment, marriage, and family functioning. The second comparisons will focus on differential impacts resulting from the combined marriage education and employment services models on the same set of outcomes.

The employment and subsidy components would substantially reduce the economic barriers and the financial disincentives to marry.[20] The combination package of marriage education and employment components would become increasingly attractive, given the expanded emphasis on jobs and income alongside marriage education and relationship skills. Unlike New Hope, the package would include marriage education and a somewhat more favorable schedule of wage subsidies. Still, based on the experience of New Hope, the program's help in achieving income stability for couples is likely to encourage entry into marriage, discourage divorce, and possibly improve some aspects of family functioning.

The demonstration evaluation should include a cost-benefit analysis to determine whether the combined program represents a good investment and specifically whether any gains from incorporating employment components are sufficient to offset the added costs. Unlike some partial assessments of programs that include subsidized jobs, the analysis would estimate the value of production generated by workers in subsidized jobs. Of course, valuing reductions in divorce and improvements in marriage quality and family functioning would be difficult.

2. Offering Marriage-Related Services to Targeted Unemployment Insurance Recipients

Job loss is associated with a host of negative family functioning and marital outcomes. By helping those who lose jobs maintain healthy marriages, we can support marriage, improve family function, and improve long-term employment outcomes. The basic idea would be to offer marriage education classes to married men and women who claim unemployment insurance (UI) benefits and who are likely to experience long-term unemployment. Already,

[20] The wage subsidy feature would supplement earnings in a way that does not decline with the added income from a married partner.

the state profiling systems within the UI system are able to identify UI claimants who are likely to exhaust their benefits and remain unemployed for over 26 weeks. In addition, the U.S. Department of Labor is sponsoring a Reemployment and Eligibility Assessment (REA) project in 20 states, which provides intensive job counseling and job-finding services to at-risk UI applicants.

Under the project, the Departments of Labor and of Health and Human Services would jointly sponsor another set of REA demonstrations that incorporate the offer (but not the requirement) to take a marriage education program. Even in the current REA demonstrations, some states are using random-assignment approaches to determine the relative effectiveness of alternative treatments. In the context of developing employment plans (sometimes about a month after applying for UI), REA staff would randomly assign claimants in the REA program to treatment or control status. Controls would go through the standard REA program. For those in the treatment group, REA staff would explain the availability of marriage education classes, their general rationale in strengthening marriages, their particular importance in the context of the strains that arise during unemployment, and how to access the marriage education program. Once claimants in the REA program are identified as in the experimental group, organizations providing the services would be encouraged to contact and to recruit them energetically. As in the case of other demonstrations in which participation of the treatment group is well under 100 percent, the experiment would be examining how access to marriage education affects outcomes. In addition, the demonstration would provide a rigorous test of the impact of recruitment on participation.

The demonstration focuses on improving the skills with which couples and families deal with unemployment and potential financial distress. It would offer information in a context in which individuals are primarily concerned with reemployment, but would have no direct effect on incentives. The venue (REA programs within UI programs) would simplify recruitment to the marriage education program. The demonstration deals with a concern about family functioning identified in the empirical literature. The intervention can potentially influence marriage, family functioning, and possibly employment outcomes, and can be readily evaluated and expanded to a large scale.

The key outcomes for the program would be the rate of participation by treatment group claimants, the reduction of risk of divorce, the reduction of family strains commonly associated with unemployment, the speed at which individuals return to work, and the effect on UI benefits. The study would measure various family-functioning outcomes, including marriage relationship-quality indicators and parent-child interactions. The demonstration would show the extent to which claimants will respond to the offer of marriage education classes and thus the desirability of offering marriage services to recruit from this pool at these times.

The evaluation would include a cost-benefit analysis that captures the additional resource costs, the impact on earnings, and the impact on marriage and family functioning. As in the prior proposal, it will be difficult to place a value on reductions in divorce and on improvements in marriage quality and family functioning.

3. Adding Marriage Education to Job Corps and Other Selected Out-of-School Youth Programs

The Job Corps, which serves more than 60,000 new participants per year at a cost of about $1.5 billion, is the nation's largest and most comprehensive job training program for disadvantaged youth. It is also one of the most expensive federally sponsored education and training programs. This group is at very high risk for having a nonmarital birth (over 25 percent of female participants already have children, nearly all outside marriage), becoming noncustodial parents, and not having a stable marriage. As noted above, despite generating significant gains in education and in earnings lasting up to four years after entering the program, the fade out of the earnings advantage for Job Corps meant that the benefits were not sufficient to offset the social costs of the program. One possible reason for its limited success may be the negative effect on earnings of unhealthy couple relationships. The Job Corps itself recognizes the behavioral challenges that arise in center residential halls and the limited training of residential hall staff to cope with these challenges.

This demonstration would add a marriage education component to the Job Corps experience. The intervention could take place center-wide or be offered randomly to individuals within centers. The random assignment might be most appropriate for Job Corps participants in nonresidential programs. A special curriculum would be tailored to those who

are not yet in couple relationships or parents. However, the program would also cover those already in couple relationships and parents. The initiative would complement the Career Success Standards launched by the Job Corps a few years ago to promote a "positive normative culture." Programs have been revising the required employability skills to include communication, problem solving, conflict resolution, financial management, independent living, and career planning. However, the list does not deal directly with many elements commonly covered in relationship-skills programs.

The demonstration has several rationales. First, in the absence of any intervention relating to marriage, a very large share of participants will go on to have children outside marriage and either not marry or have an unstable marriage. Second, the program offers a setting in which individuals have time to learn marriage and relationship skills and a low-cost method for recruiting potential participants. Third, enhancing marriage and relationship skills is likely to complement efforts to improve job-market outcomes. Research indicates that marriage can contribute to improved employment outcomes for men, including minority and less-educated men. Fourth, the program can be evaluated rigorously through random assignment of participants. A second evaluation approach would deal with models that incorporate marriage education fully into the curriculum at some centers but not others. Difference-in-difference methods and analyses of peer effects would characterize this evaluation. Random assignment of Job Corps centers might be feasible as well, though such an approach might require a large number of participating centers (Schmidt Baltussen, and Sauerborn 2000). Job Corps is a federal program that has already conducted random-assignment activities that raise more sensitive issues regarding the exclusion of potential participants. Fifth, if the program were successful, it could be expanded nationally to all Job Corps programs and potentially to other youth programs such as YouthBuild, the National Guard Youth Challenge Academy, and the Youth Conservation Corps.

The one drawback is that several important impacts may not materialize for several years and may require a long-term follow-up. However, this problem will be present in any program that aims at the critically important task of preventing young people from becoming unwed parents and developing unhealthy couple relationships in the first place. As

with the other recommended interventions, the evaluation of this demonstration should include cost-benefit analyses as well as impact analyses.

This demonstration proposal relates to several aspects of the conceptual framework. It would attempt to affect participants' preferences, skills, and information about marriage and do so in two different contexts—one in which participants live away from their neighborhoods but in a supervised setting with other disadvantaged youth and one in which participants continue to live at home. It would have no direct effect on work or marriage incentives. Recruitment costs would be modest, given the ready identification of and easy access to applicants. The theory and empirical bases for the demonstration include the well-documented impacts of marriage on increasing men's earnings and on reducing criminal activity. Moreover, past Job Corps results suggest the importance of improving long-term impacts of the program. Thus, the intervention could potentially affect marriage, employment, and family functioning. Finally, the demonstration could be subject to rigorous evaluation and, if successful, readily expanded to scale.

4. A Holistic Marriage-Employment-Family-Functioning Demonstration for Offenders and Ex-Offenders

Given the high rates of imprisonment in the United States, especially for minority men, dealing effectively with the most serious family and employment problems requires improved outcomes for the offender and ex-offender populations. Offenders have low levels of education, do poorly in the job market after release, often lose contact with their children and become uninvolved fathers, and have low rates of marriages and low rates of stable marriages. On the other hand, the evidence suggests good jobs can reduce recidivism and that stable marriages can improve job outcomes as well as reduce recidivism. Moreover, the children of offenders and ex-offenders account for a sizable share of the children most at risk of educational and behavioral problems.

The Administration for Children and Families has already signaled its recognition of the critical importance of reaching this target group by funding the marriage and incarceration demonstrations as part of the OFA Healthy Marriage Demonstration program. Other demonstrations are moving forward as well—including the Serious and Violent Offender Reentry Initiative projects sponsored by the National Institutes of Justice and

some foundation-funded demonstrations testing supported work. This proposal recommends another demonstration targeted on these groups, but involving a comprehensive mix of marriage education, employment services (including preemployment training, wage subsidies and subsidized jobs), and family-related services to limit the disruption of family life when the offender enters prison or is released from prison. As in our other suggestions, the theory is that the mix of marriage, employment, and family services may be highly complementary—the presence of marriage education may enhance the impacts of employment-wage subsidy benefits and vice versa.

The potential target populations would be offenders who are romantically involved or married and who are entering prison for short-term stays (2 years or less), offenders entering work-release programs, and offenders reentering the community. Although some might favor focusing only on fathers, we believe that reaching men before they become fathers is desirable. Moreover, it may be of value to men who have not yet fathered a child to learn about the child-support obligations of noncustodial fathers.

Work-release programs offer an especially good target of opportunity. Offenders are near the end of their incarceration. The programs already have an employment component and perhaps others. The demonstration can substantially enhance the employment components by incorporating mentoring and wage subsidies as well as adding marriage education. As noted above, the topics covered in the marriageeducation program are likely to improve the individual's noncognitive, job-related skills.

In one possible variant, the program might incorporate a mandatory jobs component for individuals on parole. If only job search and training were available, reentering offenders might otherwise take too long to find a job and ultimately return to criminal activity. Under the approach suggested by Mead (forthcoming), not only would ex-offenders be provided with help in seeking jobs, but jobs would be guaranteed. This assured availability of jobs could be used to make work mandatory—those not accepting some job (including the guaranteed job) would be subject to sanctions such as more stringent parole or being returned to prison or jail. Mead quotes Christopher Jencks as arguing that if jobs were guaranteed to jobless adults of ghetto areas, community pressure would induce many to take work seriously and accept jobs, even if they are low-paying. Mead would include pre-

employment training and initial support services (health, housing, transportation) along with the job guarantee.

Mead would extend coverage of the approach to noncustodial parents who do not pay child support. Again, the assured job component would permit agencies to make work mandatory. Already, in some jurisdictions, judges require noncustodial parents to find some way to pay child support or face jail. Such policies are difficult to enforce because of uncertainties about an individual's ability to find and hold a job. The assured job provisions would increase the credibility of the sanctions, since judges would know that the obligor is choosing not to work and thus not to pay support even though a job is readily available.[21]

The programs are likely to prove easiest to evaluate if they take place before an individual is fully released into the community. In general, officials running programs for offenders and ex-offenders are receptive to incremental funding and willing to undertake experiments. In the case of the work-release centers, a random-assignment experiment would have to involve randomly assigning individuals to work-release centers with and without the combined mix of services. In some ways, this model would simultaneously capture the impact of services as well as the impact of the context of being in a work-release center with enhanced services for everyone. In this respect, the demonstration would resemble aspects of the Job Corps evaluation.

The demonstration's family-functioning components would incorporate best practices in helping families adjust to the individual's absence, to make it easier for families to remain closely connected to the offender, and in insuring a smooth transition from prison to civilian life. The project would include efforts to resolve past child-support arrearages and current obligations in ways that improve the work incentives of fathers while retaining their connections with and support for their children. Several initiatives are already taking place in this field, including demonstrations in Maryland and Minnesota and provisions in several

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[21] One worry about guaranteeing jobs to these groups is the potential inequities and perverse incentives that arise when people doing the wrong thing (committing a crime or not paying child support) are "rewarded" with a job while others in the community cannot find employment.

states in which debt forgiveness can take place as noncustodial parents establish a record of meeting current obligations (Ovwigho, Saunders, and Born 2005; Pukstas et al. 2004). The problem of high arrearages deterring men from working in the mainstream economy is particularly important for ex-offenders, since very few states suspend the payment of child-support orders while individuals are in prison (Holzer et al. 2005). Thus, a holistic program should deal with this issue while individuals are learning job skills and gaining a foothold in the job market.

This demonstration attempts to modify preferences, change incentives, increase information, and enhance skills. The context for the program poses advantages and disadvantages. Some advantages are the ease of recruitment of a critical target group and the integration of marriage, employment, and family-functioning approaches that avoid major gaps which might prevent participants from leading constructive and productive lives. The disadvantage is that the venue is associated with the stigma of criminality and has a concentration of people at high risk of returning to crime and of influencing peers to do so as well.

In terms of demonstration criteria, the initiative has a solid theoretical basis and empirical data documenting the needs of ex-offenders and the value of marriage in increasing earnings and reducing crime. However, there is no good record (say, from past demonstrations) that these components will succeed for the target population. In principle, however, the intervention could have substantial effects on marriage, employment, and family functioning. The demonstration could be subject to rigorous evaluation and, if successful, readily expanded to scale. Current OFA demonstrations might provide opportunities for pilot testing these approaches and determining their feasibility.

5. Strengthening the Functioning of Families for Parents Working Nonstandard or Irregular Hours

About one in three employed individuals work on a weekend day and about 15 percent of full-time employees do not work on a daytime schedule.[22] Parents who work nonstandard or irregular hours face special challenges in maintaining a healthy marriage, parenting

[22] These are data from the Bureau of Labor Statistics, http://www.bls.gov/news.release/flex.t04.htm and http://www.bls.gov/news.release/flex.t06.htm.

effectively, and dealing with child care requirements. Although the evidence is mixed and sometimes nonstandard hours can be helpful, some studies find that shift work, night shifts, and irregular hours raise the likelihood of separation or divorce (Presser 2000; Stradzins et al. 2006; White and Keith 1990). If family-functioning problems arise from these special circumstances for combining work and family, then family problems may spill over to the work lace in the form of increased turnover and reduced productivity. Presumably, employers use nonstandard hours and irregular shifts to run their operations effectively, often to provide customers with services at night or to operate their plants and equipment at full capacity. Many pay a night-shift differential to compensate somewhat for requiring work during nonstandard hours. While workers voluntarily take these positions and about 8 percent report that nonstandard hours allows for better family and child care arrangements, about 8 percent report it is the only job available. Others may lack sound information for judging potentially negative family consequences or the skills to cope effectively with them.

Given legitimate concerns about potential harmful impacts of nonstandard work, there is a case for a demonstration to determine whether a well-designed set of services and incentives can prevent negative consequences on families and can benefit employers as well. One option is to work with multisite employers who use nonstandard and irregular schedules for many employees. The organization putting together the demonstration would approach these employers and offer to provide services and incentives to some workers but would require some financial participation by employers, such as paid time to attend classes. Another project component could involve training supervisors and managers about how to mitigate harmful impacts on workers and their families while maintaining high productivity. Initially, the demonstration would recruit only parents (including married, cohabiting, and single parents) and would provide such services as marriage education or relationship-skills classes, classes that offer referrals to services and other means of coping effectively with nonstandard hours, and possibly a modest stipend that parents can use to deal with special needs. Among the skills taught would be how to structure child care with friends, families, and neighbors. The demonstration would not use random assignment within the work site, in part because of the likelihood of contamination (treatment group parents receiving services would commonly interact with control group parents in the same work site) as well as likely employer opposition. Instead, the analysis would use a difference-in-difference

analysis to test whether family outcomes improved in the sites offering services relative to matched comparison sites. The follow-up data would cover not only those still with the organization, but also those who become unemployed, left the work force, or took other jobs. The evaluation would also attempt to determine whether employers experience any positive (or negative) impacts of the services. Ideally, if the demonstration proved sufficiently effective for families and employers, many employers might choose to sponsor similar services.

An alternative demonstration strategy would be to use a randomized encouragement approach to test the provision of services for parents working nonstandard hours. In a community with an organization funded to provide services, a survey firm would conduct a household survey to determine eligibility for services and, at random, to encourage some eligibles to take up the services and to provide no information or encouragement to others. The evaluators would follow both the encouraged households and eligible households not encouraged to participate for at least two years. This approach has advantages and disadvantages over the employer-based method. It offers the chance to obtain experimentally-based and unbiased estimates of the impact of encouragement and information on participation in the program and, assuming some positive encouragement effects, of the impact of services on family functioning. On the other hand, the approach requires a large sample, its effectiveness depends partly on the impact of encouragement, and it provides only partial evidence about potential impacts on employers. Further, the employer-based services might generate peer effects by linking participants with participating co-workers and might offer participants the assurance of employer support. Finally, since identifying gains for employers might be one way to generate long-term funding for the services, a demonstration not directly linked to employers may be disadvantageous.

The demonstration fits the framework by recognizing potential gaps in information and skills faced by parents working nonstandard hours. It draws on empirical evidence about one source of potential family-functioning problems.

6. Adding Marriage Education and Relationship Skills to the Nurse Home Visiting Intervention

The increasing evidence that the Nurse Home Visiting Program is highly cost-effective (Aos et al. 2004) has led to proposals for expanding the intervention nationwide (Isaacs 2007). Yet, although the program as constituted appears to yield some benefits for children and mothers, the gains might be enhanced significantly by combining the intensive visits with marriage education or relationship-skills classes. While less than 2 percent of participating mothers were married at the time of the intervention, 15 percent were married and over 75 percent had a partner at the time of the follow-up. It is well-known that tensions between partners rise soon after the birth of a child. Thus, it makes sense to combine advice on taking care of infants and toddlers with information and skill-building to sustain close partner relationships. Certainly, nurses should be sure to make mothers aware of the importance of marriage and father involvement for the long-term economic and social health of children. Any expansion of the Nurse Home Visiting approach should be informed by the potential effectiveness of high-priority, complementary services, such as marriage education and relationship-skills training.

A demonstration could test the existing Nurse Home Visiting Program against a Nurse Home Visiting Program enhanced by marriage education and relationship-skills components. Evidence from the Supporting Father Involvement Demonstration (Cowan and Cowan 2007) indicates that emphasizing relationship skills can have as positive or even more positive impacts on children than emphasizing parental skills alone. The additional components could work as follows: (1) train nurses to learn about and communicate the long-term benefits for children of marriage and healthy fathering for children, (2) attempt to engage fathers in the standard array of nurse home-visiting activities, (3) give participating mothers (and, where appropriate, fathers as well) formal invitations to participate in marriage education/relationship-skills training, (4) use existing marriage education/relationship-skills providers to contact and recruit participants in the enhanced program, (5) train nurses to learn about the programs and explain their value, and (6) insure that sufficient marriage education/relationship-skill classes are available for participants who choose to take advantage of these services. The demonstration would randomly assign potential participants to either the standard program or an enhanced set of services. In this case, the enhancement

would be a well-structured marriage education component. The follow-up interviews will take place in the context in which both groups will have been receiving services and thus should reach a high share of the sample.

The demonstration would yield answers to several important questions. Can the Nurse Visiting Program effectively encourage participation in marriage education/ relationship-skills classes? To what extent do the offers and encouragement stimulate participation in these classes? If the enhanced component increases participation in these classes and related components, do these services increase relationship quality, stability between partners, cohabitation, and marriage? Are the gains for children higher in the enhanced Nurse Visiting Program than in the standard program? The proposal fits well into the conceptual framework. The program may alter a mother's preferences by raising the priority she places on a good relationship with her partner orhusband, as well as provide her with the skills to be effective in the dual roles of mother and partner. The marriage component can also deliver information to mothers about the importance of stable families for childrearing.

7. Linking Marriage Education, Mentoring, and Expanded Work-Based Learning for Youth

The decline in teen pregnancy is noteworthy but so is the continuing reality that 34 percent of girls become pregnant during their teenage years, almost always outside of marriage. Moreover, half of all first nonmarital births are to teenagers (Whitehead and Pearson 2006). These early actions complicate the route to a healthy, stable marriage and the raising of children in two-parent families. Once a woman has a nonmarital birth, her likelihood of having a long-term marriage declines substantially (Bennett, Bloom, and Miller 1993). If she marries a man who was not the father of her first child, child outcomes may suffer because of the poorer outcomes for children in stepparent families as opposed to biological or adoptive parent families. It is critical to increase the share of young people who recognize these realities, who do not engage in unhealthy relationships, and who delay childbearing until after marriage.

Any demonstration that attempts to address teen pregnancy and early unwed childbearing should recognize the lessons of youth-development programs. The best

strategies help young people achieve their own positive goals rather than simply suppressing problem behaviors (Moore and Zaff 2002). They try to use positive peer influences and long-term mentoring. The best programs for disadvantaged youth address several barriers and deal with the whole person. Although programs can focus on the disadvantaged, they should not involve a concentration of youth criminal offenders.

Young people are making important transitions that involve increased responsibility for their own decisions—in sex lives, couple relationships, living arrangements, marriage, career choices, postsecondary education, and financial independence. Educational institutions and families provide young people with only some preparation for these life events. Critical gaps exist, especially in preparing many youth for productive careers, healthy marriages, and healthy parenting.

This demonstration would test a multipronged strategy to help young people develop achievable pathways toward rewarding careers, see the value of delaying childbearing until marriage, and gain the job-related and relationship skills necessary for success in career and family pursuits. The components of the program would involve both employment-oriented and marriage/family education elements. One potential venue is Career Academies, noted above as a successful intervention raising the earnings of young men, especially students with a high or medium risk of dropping out of high school. However, the venues could vary from Career Academies, to other youth job-focused programs, to community colleges, or to family planning clinics dealing with teens. To ensure the demonstrations are well-targeted, they should operate in areas with a concentration of the target population.

The employment component would focus on expanding work-based learning, ideally in an apprenticeship context. All participants would be given access to a combined work-based and school-based program. Such a model will provide youth with productive experiences, natural mentors, and constructive interactions with adults. Learning in context will help students see the relevance and gain the self-confidence many at-risk students lack. Placing inner-city youth in jobs in fields that can lead to rewarding careers will reduce the disadvantage they may face with respect to information and informal channels to jobs and careers. Linking youth with employers will expose inner-city youth to constructive adult

peers who will often become informal mentors. The approach gives youth a try-out period with employers, many of whom will hire the youth once they graduate from high school.

Along with this employment component, participants would be exposed to an enhanced marriage and relationship curriculum that (1) teaches about healthy dating and uses experiential learning in the teaching of relationship skills, (2) offers abstinence or comprehensive sex education, and (3) teaches about love and marriage and about the importance of raising children in two-parent families. Several curricula are addressing these issues and more will emerge as many of the ACF Healthy Marriage grantees undertake programs within high schools. For example, Opportunities Industrialization Centers of America (OICA) is implementing an OFA grant to provide education in high schools on the value of marriage relationship skills and budgeting, and to provide marriage education, marriage skills, and relationship-skills programs for nonmarried pregnant women and nonmarried expectant fathers. OICA expects to serve 1,500 high school youth and 50 expectant women and unmarried fathers with instruction and support services over 12 weeks. Adding a strong career-focused component to the program could generate synergy in the mix of skills required in relationships and jobs. In addition, the two components could complement each other in giving youth a realistic way to reach both career and family-formation goals.

In developing a holistic approach to teaching life skills to participants, the demonstration would build on the experience of prior youth-development programs and on the teaching of skills documented in the reports of the Secretary's Commission on Achieving Necessary Skills (1992) and of the Partnership for 21st Century Skills.[23] Some of the skills in relationship curricula—especially in communication, listening, problem solving, and allocating resources—parallel those emphasized as required for careers. The emphasis on work-based learning will provide youth with the opportunity to practice these skills in context.

This holistic youth demonstration emphasizes the information and skills aspect of our framework, but includes an effort to change preferences, improve incentives, and utilize

[23] See http://www.21stcenturyskills.org/.

constructive contexts as well. Given the improved and increasingly visible career options, young women would have more of an incentive to delay pregnancy to pursue occupational outlets. The enhanced career success of potential male partners would encourage women to see marriage as a more viable and sensible option. The initiative builds on the theoretical and empirical youth-development field and on empirical data showing the importance of early interventions. Evidence from other demonstrations indicates these components can be effective for the target population. Although the demonstration can ultimately exert significant positive effects on marriage, employment, and family functioning, the impacts will take time to materialize and document. Finally, the demonstration could be subject to rigorous evaluation and, if successful, readily expanded to scale.

V. CONCLUDING COMMENTS

Using policies and programs to strengthen marriage, family-functioning, and employment outcomes poses serious challenges. Although interventions often have a single focus, family formation, job-market outcomes, and family functioning interact in important ways that cannot be ignored. For this reason, the development of policies and programs that take explicit account of these interactions is a potentially critical step in promoting each of these objectives The motivation to succeed in a job-training program may come in part from the desire to enter or maintain a good marriage and provide a decent living standard for a spouse and children. The choice of marriage over cohabitation or other couple relationships may be difficult to sustain without a steady income. Unhealthy family relationships may carry over into the work place, harming an individual's career. Alternatively, unemployment may erode the healthy functioning of a family.

We have presented seven demonstration ideas that recognize the potential importance of these types of interactions for the success of employment, marriage, and family-functioning outcomes. Table 1 summarizes the initiatives and how they relate to our conceptual framework. All seven fit our criteria for testing a promising approach. Although we chose to limit the discussion to seven, we realize that other approaches also have potential for improving overall family well-being. Two promising ideas involve the military. One would combine improved postmilitary career preparation with expanded marriage education, relationship, and financial-literacy skills training. A second would provide new

outlets for groups of at-risk youth to join the military after a special premilitary education, training, and relationship-skills program. Other approaches might incorporate mental-health services alongside the employment- and marriage education components. Already, some sites have been developing programs that link employment- and mental-health services (Iverson and Armstrong 2004).

We view the next steps as considering all of the options described in this paper as well as other possibilities and determining which deserve a more detailed analysis and review. We believe we have laid out a sound framework, sensible demonstration criteria, and some promising and feasible moderate- to large-scale demonstration initiatives. It is now time for a careful discussion of the alternatives followed by a thorough analysis of those selected as having the highest priority.

Table 1: How Demonstration Proposals Relate to the Conceptual Framework

	Preferences	**Incentives/ constraints**	**Uncertainty/ information**	**Skills**	**Context**
Adding effective employment services to marriage-oriented programs		Reduces constraints and improves incentives	Reduces uncertainty about earnings of a potential spouse	Links provision of job-related and couple skills	
Offering Marriage-related services to targeted unemployment insurance recipients					
Adding marriage education to Job Corps and other selected out-of-school youth programs	Helps youth clarify their preferences about family life over time		Teaches youth about the importance of family outcomes for long-term economic and social fulfillment	Provides dating and other relationship skills, which might complement job skills	Success in relationship-skill programs might alter the Job Corps environment somewhat
Conducting a holistic marriage-rmployment-family functioning demonstration for offenders and ex-offenders	Helps offenders clarify their preferences about family life over time		Teaches offenders about impacts of family interactions and outcomes on long-term fulfillment	Provides dating and other relationship skills, which might complement job skills	
Strengthening the functioning of families for parents working nonstandard or irregular hours		Reduces a constraint and possibly tensions in relationships	Provides information about how to adapt to nonstandard hours	Gives couples more skills in coping with this problem	
Adding marriage education and relationship skills to the Nurse Home Visiting Intervention	Mothers may raise their priority on relationship quality		Provides information about the role of healthy marriage in childrearing	Provides skills to help deal with roles as mother and partner	
Linking marriage education, mentoring, and expanded work-based learning for youth	Helps youth clarify their priorities about the value of family life			Provides youth with combination of dating, relationship, and job skills	

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Appendix

Marriage, Employment and Family Functioning: A Literature Review

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I. Introduction

The relationships among marriage, labor-market choices and outcomes, and family functioning are complex. How well adults succeed in the labor market can directly affect their marital and family status, which in turn can affect their living standards and their relationships with their children. But, marital status and family status also affect labor-market choices, such as whether to work and how much to work. The interactions are often unclear and frequently vary by subgroup. A high-earning man or woman might be able to choose among several good choices of partners without committing to a marriage. Marriage might divert attention from one's career and lead to lower long-term earnings. On the other hand, marriage might strengthen responsibility and long-term time horizons that lead some spouses to work more and others to work less. Cohabitation might be a viable substitute for marriage in couple relationships, but less so with child rearing. High income might keep families together or become a source of dissention and family conflict. Work by mothers might serve as a good example to children and reduce the financial burden on families or might limit the attention children receive at critical junctures.

The direction of causation is often difficult to determine. Marital status may affect the wages people earn and the commitment to work people make (Ahituv and Lerman 2005), but this relationship may be mediated by the effect of marriage on the quality of couple relationships and parent-child relationships. The types of jobs available to mothers and fathers may affect the amount of time parents spend with their children. At the same time, the priority parents attach to parenting time may affect the jobs they choose. The dynamics of these interactions are likely to vary by sex and over time as individuals age. Moreover, statistical analyses are generally able to capture average effects for groups but not all the variations in impacts within groups.

Social scientists have tried for decades to sort out which relationships are genuinely causal and which are merely associations. The job is complex and fraught with conceptual, methodological, and empirical problems. Are the researchers simply showing correlational relationships or learning about causation? It is hard enough to document causation in one particular relationship, such as between marriage and work effort. Can the researchers incorporate all the key interactions in studying this or other specific relationships? Are there

sufficient data to determine the size of the impacts and how they differ among subgroups of the population?

The complexities become magnified when researchers try to incorporate links between marriage and family functioning and between family functioning and labor-market outcomes. Each of the relationships involves many possible connections that may vary over the life cycle, may be changing as the economy and social attitudes evolve, and may differ by demographic group.

No doubt personal characteristics affect the choices that individuals face and make. Recent research argues for the importance of both cognitive and noncognitive abilities (like patience, self-control, and time management) in determining choices that individuals make (Cunha and Heckman 2005). The effects can be multiplicative, because skills and abilities are acquired, reinforced, and complemented through development.

Notwithstanding the difficulty of determining causation, the issues are so important as to demand the attention of policymakers. At stake is the economic, educational, and social welfare of children. By influencing marriage, labor-market outcomes, and the way families function, the presence or absence of policies can affect the current and long-term well-being of the next generation.

A reasonable first step toward the development of policy options for improving family and child outcomes is to examine carefully the findings of research on the multiple connections between marriage, work, and family functioning. This paper conducts such a review, with the goal of informing directions for future interventions and how best to test their likely effectiveness. The family-work relationships under study have been the subject of extensive observational and experimental research. In addition, many public policies have attempted to influence a variety of marital, work, and family-functioning outcomes. In short, there is a great deal to consider.

Before the review and analysis of the relevant empirical studies, the next section describes our approach, methods, and theoretical perspectives. This section also lays out the main questions and how they fall into subsequent parts of the paper. Next, we review and summarize the observational (nonexperimental) studies on each of three sets of relationships: (1) the interaction between marriage and labor-market outcomes; (2) the interaction between labor-market outcomes and family functioning; and (3) the interaction between marital and family structure and family functioning. Section IV turns to the

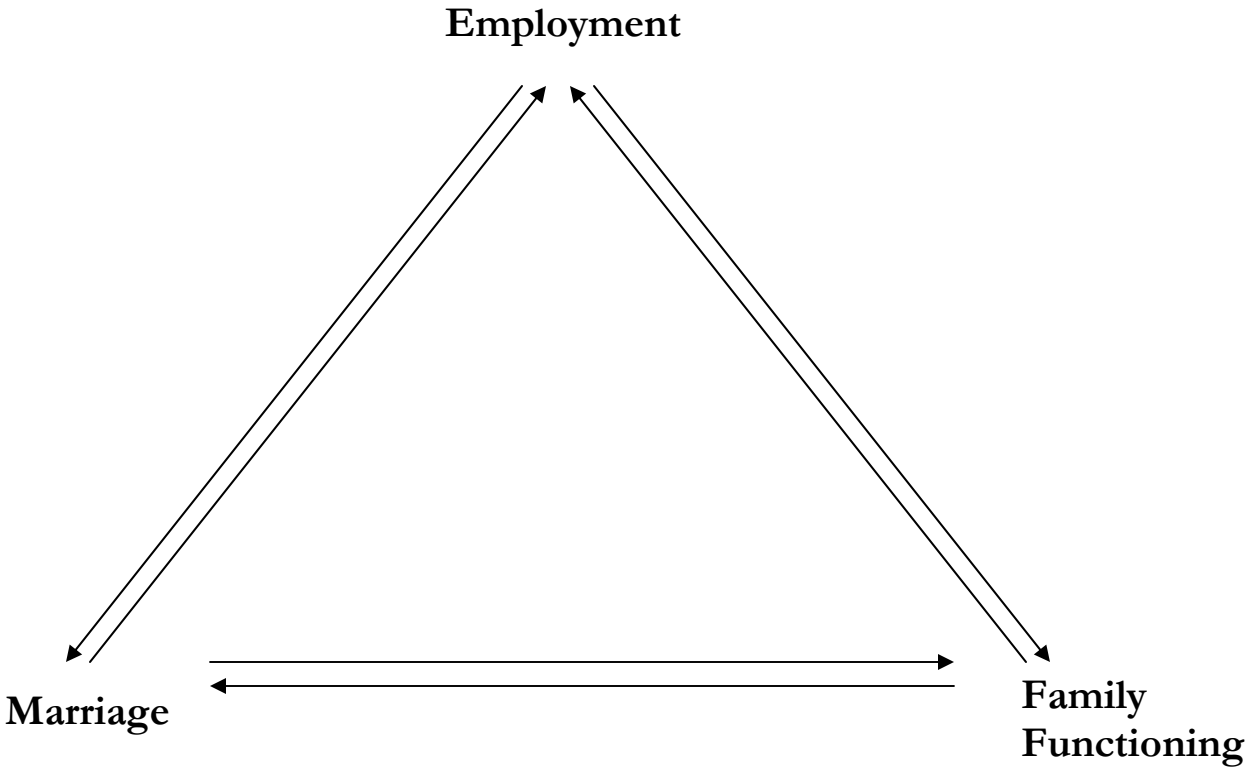
experimental research and considers all the relationships significantly affected by the demonstration treatments, whether or not the planners of the demonstration targeted the outcomes. Section V concludes by delineating the empirical results by the strength of their findings, highlighting what the research shows clearly, shows with some uncertainty, or does not show one way or another.

II. Approaches to Examining the Literature

Covering the vast literature dealing with marriage, labor-market outcomes, and family functioning requires setting limits on what to include and thus what to exclude. This appendix examines a considerable number of relevant studies but does not offer a full, comprehensive review. Figure 1 depicts the three-way link between marital status, job-market outcomes, and family functioning. The triangular pattern displayed in the figure highlights the potential links running in both directions between any two of the three poles. One goal of this review is to highlight which arrows represent the strongest relationships. Now, in doing so, we recognize that each pole generally represents several possible variables or statuses. The labor-force status pole can represent employment, hours worked, wage rates, job stability or occupational status. The marital status pole can involve comparing marriage to never-married, separated, divorced, or remarried status, and, within each of the nonmarried statuses, to cohabiting or not cohabiting. Family functioning incorporates an extensive array of variables, from the health of relationships between partners and between parents and children to the way in which children are acculturated, mentored, and educated. Thus, in highlighting which are the key relationships, we must recognize, for example, that marriage (relative to being never-married or divorced and noncohabiting) may exert large and significant effects on some family-functioning outcomes but not on others.

The timing of relationships adds another level of complexity to defining the marriage, employment, and family-functioning poles. Current employment may affect the timing of marriage, divorce, or remarriage, but may have little impact on whether someone ultimately marries. Current unemployment may exert little effect on family functioning today, but frequent unemployment may lead to long-term family problems. Job availability in a single year may have little impact on marital status in the following year, but a sustained

Figure 1. Relationship between Marriage, Employment, and Family Functioning



period of abundant employment opportunities may increase marriage rates. The relationships may vary substantially by age. Marrying too early or too late might weaken long-term job-market outcomes. Good jobs may do little to encourage marriage at some ages but may affect marriage greatly at other ages.

The interactions between employment and marital status are likely to be strongly mediated by decisions about childbearing. Although no studies are able to capture the joint and simultaneous decisions of men and women concerning employment, marriage, and fertility, the trends suggest diverging patterns. College-educated women have been delaying marriage and childbearing by investing early in their careers. Meanwhile, less-educated women are continuing to have children at young ages and increasingly prior to marriage, perhaps because they see fewer work-related reasons to delay childbearing and because economic and social gains from marrying low-wage potential spouses are modest or nonexistent (Ellwood and Jencks 2004).

A second element of our approach is the distinction between associations (or correlations) and causation. Ideally, we would like to know about both association and causation. But, causation is typically difficult to determine, despite extensive efforts by researchers. Certainly, much of the literature aims (usually imperfectly) at establishing causation. Association, however, might be important for targeting purposes. If certain types of marital situations are correlated with the poor functioning of families, then focusing on families in these situations may be desirable even if the relationship is not causal. Often, studies yield evidence of correlations that control for a variety of observable differences between individuals. A good example is the positive correlation between marriage and wage rates, even among those with the same levels of education, age, race, and family background. Such results do not prove causation but are nonetheless informative, showing that the observed association is not an artifact of association with those factors.

The potential limitations on causal inference come mainly from biases associated with simultaneity and unmeasured heterogeneity. For example, simultaneity can arise in a statistical association between marriage and earnings, since higher earnings might be leading to marriage, marriage might be leading to higher earnings, or both. The idea of unmeasured heterogeneity (sometimes linked with selection) is that a third unmeasured factor (say, good looks, a good personality, or a strong responsibility ethic) is causing both marriage and higher earnings. The simultaneity and unmeasured heterogeneity problems pose difficulties

in estimating causal links among marriage, employment, and family functioning, especially with nonexperimental analyses.

Third, in the review we recognize that the studies cover individuals in a variety of contexts and time periods. Findings about relationships that take place in some contexts may not be enduring and carry over to other contexts. For example, the interactions between work and marriage may operate in a different way for the generation born in the 1940s than for the generation born in the 1970s or 1980s. It is important to report the context (whether the study deals with various subgroups, from all U.S. residents to subgroups classified by age, sex, race, educational level, initial marital or parental status, economic status, and region of residence), the time period, and the economic conditions.

Although the primary interest in this review is how the various relationships operate among individuals with low to moderate expected incomes, the observational studies often cover a wider spectrum of the population. The review looks most closely at results for relevant target groups but does not exclude broader studies. As seen in section IV, the demonstrations and program evaluations typically focus on those from the low-income or lower middle-income groups. In reviewing these findings, we include results from projects that emphasized one outcome (such as higher employment and earnings), but where there are data on its link with the outcomes displayed in figure 1. For example, the primary goals of Job Corps and the focus of the Job Corps evaluation are to raise the education and skill levels of at-risk, out-of-school youth and to improve their career outcomes (Child Trends 2003). To the extent the project did so, it would have exerted an exogenous effect on earnings and career outcomes. We can then examine whether demonstrations also yielded positive effects on marriage or family functioning, possibly as an indirect effect of improved labor-market outcomes or possibly as a direct, though unintended, effect of the services provided.

III. The Empirical Literature on Observational Data

Researchers have produced an array of nonexperimental studies of the relationships between marriage, employment, and family functioning. This section reviews many of these studies in three parts: (1) interactions between labor-market outcomes and marital status; (2) interactions between marriage and family functioning; and (3) interactions between employment and family functioning. In each part, we discuss several studies and present a

table listing the key studies, their data, and their findings. In most cases, causation is difficult to determine. However, most studies are at least able to determine statistical associations between marriage, employment, and family functioning that control for a variety of confounding factors, including age, education, family background, and sociodemographic group.

A. Broad Perspectives on Marital Status and Labor-Market Outcomes

Theories offer possible explanations of how marriage affects employment and how employment affects marriage. According to Gary Becker's seminal work (1981), marriage makes families better off partly by allowing individuals within families to specialize, which yields greater productivity on the part of mothers and fathers. With specialization, one spouse may be more likely to work in the job market and be motivated to work hard enough to raise his or her wages, while the second spouse may focus on family responsibilities and thus be less likely to engage in market work. However, the theory may not hold if household production involves activities requiring different skills, such as distinct mother and father contributions to child rearing (Lundberg and Pollak 2007). Several researchers have questioned Becker's specialization perspective on other grounds. Oppenheimer, Kalmijn, and Lim (1997) point out that couples may maximize living standards by having both partners work and buying housework services. Lam (1988) sees marriage as offering partners the ability to share private goods, such as housing, and raising children. In all of these cases, the rationale for marriage remains but does not necessarily involve the housework–market work division of labor and is likely to lead men and women to choose partners with similar education and wage levels.

The sharing of certain economic and social resources in marriage (such as housing) yields economies of scale. By raising living standards for any given amount of earnings, however, economies of scale could lessen the pressure to increase work effort and thus lower hours worked. Marriage provides for risk-sharing protection against unexpected events (Oppenheimer 2000; Waite 1995). Weiss (1997) suggests that marriage may allow individuals to overcome credit constraints (partners can loan to each other). Marriage-induced economies of scale, risk diversification, and enhanced ability to borrow can apply to cohabiting couples and some other household-sharing arrangements; but such benefits are more likely to arise in marriage, since it is a more stable living arrangement than is

cohabitation or single parenthood with other adults. Marriage involves a long-term and formal commitment less common in other household-sharing arrangements. Exiting marriage typically imposes a higher cost than exiting other arrangements.

As an institution designed to order adult sexual unions and provide a stable environment for the rearing of children, marriage is associated with norms of maturity and responsibility, as well as norms of fidelity and loyalty, for both spouses.[1] The former set of norms encourage spouses to work, spend, and save in more responsible ways—say, purchasing and paying for a home, as opposed to spending a lot of money on travel and eating out.[2]

Nock (2005) suggests several mechanisms by which these effects might take place. The institutional nature of marriage may alter how employers treat married, relative to unmarried, men and affect what others expect of married versus unmarried men. A positive signaling effect to employers may lead to an initial wage gain following marriage. The domesticating role of marriage might persuade men to give priority to household responsibilities. Because marriage may provide men with greater confidence in their relationship and more ability to specialize, marriage may generate gains in their wages.

Likewise, the norms of fidelity and loyalty associated with marriage may engender trust between spouses (Wilcox and Nock 2006); this trust, and the long-term view that it inspires in partners, allows spouses to invest in common or pooled resources like education and training, work experience in a rewarding occupation, a home, mutual funds, and other investments without fear that one party will take advantage of the other (Brines and Joyner 1999; Waite and Gallagher 2000). The trust associated with marriage contributes to the willingness of partners to specialize in domestic and market work (Becker 1981; Waite and Gallagher 2000). By contrast, cohabiting couples are less likely than married couples to pool their resources or to specialize, in large part because they have less confidence than married couples that their relationship will endure (Brines and Joyner 1999; Waite and Gallagher 2000; Winkler 1997). Single individuals do not benefit from the economies of scale and pooling of resources associated with marriage.

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[1] The next three paragraphs draw heavily on Lerman and Wilcox (2006).

[2] Indeed, married adults in the United States save more and are more likely to own a home than other adults, even after controlling for socioeconomic factors (Krivo and Kaufman 2004; Lupton and Smith 2002; Reed and Harford 1989).

Married couples may obtain higher wealth transfers from the grandparents of their children than cohabiting couples or single parents. Relative to cohabiting couples, married couples are probably more likely to adjust to one partne's income shocks with upward adjustments (for example, more work) by the other partner. Perhaps most important, the economic stability resulting from marriage provides a solid financial foundation for raising children.

Several other mechanisms may generate a beneficial impact of marriage on economic well-being. Married men may be more committed to work and less likely to quit because of more stable personal routines and the greater emotional support from wives. Husbands may see work as an especially urgent priority because of their family responsibilities. The same patterns may or may not apply to women. One spouse may help the other invest in the skills required to increase long-term earnings. The apparent marriage advantage in emotional health for men and women (Waite and Gallagher 2000) might carry over into jobs and earnings power. For these reasons, married workers, especially men, may earn a wage premium over equally qualified unmarried male workers.[3] The higher income of husbands might be partly offset by a lessening of the pressure on wives to work long hours or pursue demanding careers. Moreover, both wives and unmarried mothers may experience a wage penalty with additional children because of the increased demand on their time for child rearing.

The type of transition to marriage, divorce, or remarriage may influence the impacts of marriage. Marriage-induced gains might result from continuing in marriage instead of obtaining a divorce. Improved job outcomes may come about immediately after parents marry instead of cohabiting or living separately. First marriages between parents may be more beneficial than second and subsequent marriages involving stepparents. Mothers who divorce often end up with a property settlement and a flow of child-support payments. Men who become noncustodial parents face child-support obligations that might be related to their income and thus serve as a tax on income. The impact of child-support payments on the father's work effort is uncertain, since the income loss associated with child-support payments could encourage work while the lower marginal gain from working (because some of each added dollar goes to child support) could discourage work effort.

[3] The evidence for these patterns is discussed in the empirical sections of the paper.

All of these potential effects of marriage may be weaker or stronger among individuals with low education and earnings capacity. If potential partners initially have little or no "productivity" or "insurance value," and the prospect of increasing these attributes is slim even if they marry, then the benefits to marriage may be minimal (Edin 2000). At low income levels, the U.S. social safety net may substitute for the income-enhancing and risk-reduction effects of marriage. On the other hand, marriage may be more attractive to the poor since it is especially urgent for them to increase their income in any way, to avoid income instability, to engage in long-term planning, and to expand the involvement of both parents in child rearing.

Marriage can result from high earnings as well as cause high earnings. Several theories focus on how job-market outcomes influence the marital status of men and women. Ellwood and Jencks (2004) argue that the scale economies, risk-sharing, and enhanced credit benefits of marriage should be of most importance for low-income individuals and thus those with low income should be more likely to marry. However, the living standards in and out of marriage may vary by sex. In particular, women who are or might become single mothers may gain as much from external supports (including social benefits) as they would from marriage.

The notion of an "independence effect" on women's decision to marry or stay married arose in the context of results (Hannan and Tuma 1990) from the Seattle-Denver income maintenance experiments (SIME-DIME). Through the 1960s and early 1970s, a major criticism of the welfare system was its less favorable treatment of two-parent families over one-parent families. The disincentives to marry were built into the structure of benefit programs. The negative income tax tested in SIME-DIME ostensibly reduced the disincentives to marry by offering much higher assistance to married parents and married couples without children. However, benefits were also extended to cohabiting parents, cohabiting couples without children, and childless single men and women. The plans provided single mothers with modestly higher and less stigmatizing support than they qualified for under Aid to Families with Dependent Children (AFDC). Surprisingly, though SIME-DIME benefits improved the incentive for single parents to marry, access to the SIME-DIME income support did not increase marriage and may have actually lowered the

likelihood of marriage, possibly because women's eligibility for more favorable benefit plans helped them remain independent.[4]

The independence effect could also cause women's increased employment and earnings to reduce marriage.[5] In a recent article examining divorce patterns in 71 countries, Greenstein and Davis (2006) find that divorce rates are higher in countries in which women's job-market activity is high relative to men's. An alternative view is that added employment of women might stimulate marriage by increasing their contact with and their attractiveness to men (Oppenheimer et al. 1997).

Extending the economic theories of job search, various authors focus on entry into marriage as the outcome of a search process in which men and women examine their options from a distribution of offers based on the prospective quality of the match (Burdett and Coles 1999). At each point, they compare the long-term benefits from an existing offer with the probabilities of obtaining a match of higher quality in the future. Just as workers optimize their job searches by setting a reservation wage and accepting any offer at or above that wage, so do individuals set a reservation quality match and accept an offer at or above this reservation quality. One insight from this approach is the recognition that individuals attractive to potential partners and with a good offer (say, high-earning men) may choose to delay marriage because they see excellent offers in the future. Conversely, individuals with only an offer of modest quality might choose to marry because of the limited quality of potential future offers. Staying in a marriage could depend on expected options outside of the marriage as well as the ability of an individual to have a good living standard within the marriage. Thus, high earnings, by making an individual both more self-reliant and more appealing to current or potential partners, can theoretically can either raise or lower marriage rates. Just as high-earning men have long been appealing spouses to women, high earnings raise the position of women in the marriage market (Sweeny and Cancian 2004).

Some authors link decreases in marriage and increases in single parenthood among low-income women to the declining quality of their potential spouses, and to increases in their earnings potential and social benefits. Wilson (1987) and others have argued that low-

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[4] Also see Cain and Wissoker (1990). Their analysis indicates that the experimental negative income tax (NIT) did not reduce marriage. However, even Cain and Wissoker do not argue that the NIT increased marriage. It is noteworthy that the data do not distinguish marital from cohabiting unions. All the investigators treated divorces and separations from marriage and disrupted cohabiting unions as marital splits.

[5] Burgess, Propper, and Aassve (2003) restate the economic capability of individuals to live independently as a result of high earnings or other outside income as a self-reliance effect.

income women are less likely to marry when the available men cannot provide adequate economic support for their families. When good manufacturing jobs became less available and wages in jobs for less-skilled men stagnated, marriage became less common in low-income and minority communities. Given the goal of maintaining breadwinner status, men who experience layoffs or other job dislocations might be expected to divorce or separate. Conversely, good job opportunities—especially for men—are considered likely to increase marriage rates, according to this reasoning.

Whatever the incentives, the perception of marriage seems to vary substantially by the income level and cultural setting of the community. Drawing on in-depth interviews of low-income mothers, Edin and Kafalas (2005) find that low-income mothers aspire to marriage, but only after they are sure that they and their potential spouses can attain adequate incomes. According to this view, holding a job may not be enough for a male partner to persuade a single mother to marry. He must be earning a good salary. To these mothers, marriage is less a mechanism for reaching the middle class than a crowning achievement for already having done so. Unfortunately, cohabiting or nonresident romantic relationships between potential spouses are much less stable and lead to lower earnings than marriages. The result is that the mothers end up neither married nor middle class.

B. Empirical Findings on Marital Status and Labor-Market Outcomes

An extensive body of empirical work deals with the impact of marital status on men's wage rates and men's earnings, but only a modest number of studies has examined effects of marriage on men's hours of work. The interactions between marriage and women's work are not as well documented. One complication in the analysis is that marriage might cause and be affected by the level of men's and women's employment and earnings. A second relates to the interaction between marriage and parenthood. Certainly, marriage often leads to childbearing, parenting, and less employment among women. On the other hand, lower interest in the labor market might lead men and, especially, women to marry and have children. In general though, researchers have their hands full taking account of the interactions between marriage and labor-market outcomes among men and women. For purposes of this section of the review, we shall maintain this focus. We begin with a review of research on how men's marital status affects men's labor-market outcomes.

1. How Marital Status Affects Men's Employment and Earnings

The literature on the impact of marriage on men's earnings is extensive, goes back many years, and covers several countries. Research confirms an earnings advantage for married men dating back at least to the 19th century (Goldin 1990). Using cross-country data from the 1980s, Schoeni (1995) finds a wage advantage of married over single men in all 14 countries studied. In the United States, the marriage earnings premium estimated from 1940–1980 decennial Census data has been consistently significant at percentages ranging from +11 percent in 1959 to +23 percent in 1969 (Loh 1996).[6] For black males, the marriage premiums are generally much higher.[7] Although empirical studies on men generally focus on how marital status affects wage rates, some estimates of the marriage–labor supply relationship are available; they show marriage raises working hours among men and lowers them among women. Even among men with poor health, marriage appears to increase hours worked (Parsons 1977).

Facts and Associations Involving Men's Employment, Earnings, and Marital Status

The close associations between marital status and male employment and earnings have continued through the latest data. Table 1 examines employment and unemployment patterns among men ages 25–34 by educational group. Note that married men experience higher levels of employment and lower rates of unemployment in all groups. The differentials are particularly striking among less-educated and non-Hispanic black young men. For such men, the employed share of married men is over 15 percent points higher than among unmarried men.

Using the March 2005 Current Population Survey (CPS), the effects of marital status on earnings net of human capital variables (education, potential work experience, and squared potential work experience), race, Hispanic origin, size of metropolitan area, and the presence of children can be estimated. Among men ages 25–49 the coefficient on being married implied a 39 percent earnings advantage over the never-married, a 28 percent advantage over separated men, and a 21 percent advantage over divorced men and

[6] These marriage impacts on earnings control for education, years of potential experience, potential experience squared, race, immigrant status, veteran status, region, occupation, and industry.
[7] The black marriage premium was less than the white premium in 1939, 1949, and 1969, but reached 38 percent in 1979.

cohabiting men. These marriage-related differentials are extremely high, about two to three times the differentials associated with one year of schooling.

These estimates reveal the one-way associations controlling for key observed factors, but they do not account for simultaneity and unobserved heterogeneity. What do more in depth empirical studies reveal?

Table 1. Employed Share of Population and Unemployment Rates by Marital Status and Education, and Percent Married among Men Ages 25–34, March 2005

Marital Status by Education	Employed Share of the Population			Unemployment Rate		
All education groups	White	Black	Hispanic	White	Black	Hispanic
Not married	81.1	66.2	84.6	5.1	12.6	5.5
Married	88.7	80.6	90.4	2.8	4.9	3.1
Total	85.1	70.6	87.3	3.8	10.0	4.4
Percent married	52.0	30.6	46.1	54.2	33.9	47.4
Less educated						
Not married	75.4	61.1	84.1	7.6	15.3	6.1
Married	84.4	76.4	90.0	4.2	4.6	3.6
Total	79.8	64.7	86.8	5.8	12.5	4.9
Percent married	49.4	23.8	46.0	52.0	26.2	47.2
More educated						
Not married	85.1	73.4	85.6	3.5	9.3	4.0
Married	91.1	83.5	91.5	1.9	5.0	2.1
Total	88.4	77.3	88.3	2.7	7.5	3.1
Percent married	53.7	38.2	46.2	55.5	41.4	47.9

Source: Tabulations by authors from the March 2005 Current Population Survey.
Note: The percent married in columns 4–6 represents the share of each group's labor force that is married. In columns 1–3, the percent married is the married share of the population group.

Analytic Studies of Marriage Impacts on Men's Earnings

We look first at how marital status and marital flows affect earnings. Though the earnings gains induced by marriage could come from added hours or higher wages, most of the

literature examines how marriage affects the wage rates of men (Chun and Lee 2001; Cornwell and Rupert 1997; Daniel 1995; Ginther and Zavodny 2001; Gray 1996; Korenman and Newmark 1991; Loh 1996; and Stratton 2002) and not their labor supply. The focus of recent studies of male wage premiums is on distinguishing a pure causal effect of marriage from a selection effect in which men who are especially capable in the labor market are more likely to marry than other men.

Authors estimating the effect of marriage on wages have tried to capture how men differ in ways unobserved in standard cross-sectional data sources. Using panel data, authors can control for these unobserved differences and estimate how earnings respond to changes in marriage. In one application examining how marriage affected wage rates of young white men from 1976 to 1980, Korenman and Neumark (1991) use the National Longitudinal Survey (NLS) of Young Men to estimate that marriage raises wage rates by about 6 percent and that divorce reduces wage rates by about 2 percent. The authors note that these are average effects of men who are young and thus in relatively short marriages (or recent divorces). Allowing the marriage premiums to rise with the duration of marriage, Korenman and Newmark find wages rise with marital tenure at about 2 percent per year in the first two years and 1 percent thereafter. Their results yield a marriage premium reaching about 15 percent for those with the average years of marriage. In this case, adjusting for unobserved individual differences yields a wage premium that is about 90 percent of the unadjusted premium.[8]

Expanding the data for one additional year, to follow a cohort of 19–29-year-old white men in 1970 to1980 when the cohort age range was 29 to 39, Cornwell and Rupert (1997) find marriage premiums of 8.3 percent when estimated from random effects and 5.6 percent when estimated from fixed effects. Using the same models as Korenman and Newmark, Gray (1997) compares the NLS cohort of 24–31-year-olds in 1976 with the 1979 cohort of 24–31-year-olds in 1989 drawn from the National Longitudinal Survey of Youth, 1979 (NLSY79). He follows white males over three specific years in each cohort, pooling observations from the two cohorts. Gray's results suggest that marriage gains fell sharply over time. In the NLSY79 cohort, the coefficient on the marriage dummy is only 1.4 percent

[8] Further evidence for a marital wage premium comes from their analysis of records from an individual employer. Even within a narrow range of occupations, marriage increases wage rates, largely by raising the likelihood of promotion. Daniel's 1995 analysis of a more recent cohort of young men found similar effects, with slightly higher shares associated with selection.

and is not statistically significant. These unexpected results are probably related to Gray's use of only three years of data.

A recent study (Antonovics and Town 2004) sought to estimate a causal effect of marriage on wage rates by using data on 136 pairs of identical twins from Minnesota to deal with the problem of unobserved heterogeneity. Assuming that both members of a twin pair have the same unobserved individual-specific earnings endowment and family-specific earnings endowment, the authors find a 26 percent marriage wage premium within twin pairs, a level somewhat higher than the estimate derived from cross-section regressions that take no account of the men's status as twins. This evidence persuasively shows the absence of a selection effect, but the results may not generalize to a broader population.

Some studies have examined the reasons for a marital wage premium. Reed and Harford (1989) find evidence that some of the marriage wage premium is the result of compensating differentials—married men are more willing than unmarried men to take jobs that are more difficult, more dangerous, or more unpleasant in return for a higher wage. Kenny (1983) argues that the marriage premium is partly a return on the higher human-capital investment that married men make by working longer hours and gaining more work experience. Hersch and Stratton (2000) examine and reject the hypothesis that household specialization accounts for a good deal of the male wage premium. Using a fixed effect estimation approach with data from the National Survey of Families and Households, they find that including a measure of the hours of housework undertaken by men does nothing to reduce the marital wage premium. Gray (1997) finds that returns to specialization (having wives work fewer hours) are present and increased from the late 1970s to the early 1990s.

Chun and Lee (2001) account for who enters marriage by a special model using cross-sectional data of all 18–40 year-old working males drawn from the March 1999 CPS. They identify the determinants of being married separate from any impacts on earnings by including an index of the marriage market, predicted hours of a wife's work, and the subject's mother's country of birth—factors that should influence marriage but not directly affect wages. The estimated marriage premiums are about 12 percent, both from an OLS equation on log wage rates and from the switching equation. These results cast doubt on the importance of the selection effect on the marriage premium. Chun and Lee find that the effects on wage rates are much higher in marriages in which wives did not work (about 27 percent) than in cases in which they did work (a 15 percent effect at 20 hours of work by

wives). This result is consistent with the theory that husband-wife specialization is a big reason for the marriage impact on wages. However, such an interpretation may not be valid, given the results from Hersch and Stratton (2000) that men's marriage premium is unaffected by the hours they work at home.

In one recent study, Krashinsky (2004) finds that marriage has little effect on the wage-rate growth among men. After controlling for whether an individual ever married, the study finds no association between marriage and higher wage growth over the 1979–1993 period. Although this finding is of interest, especially because it conflicts with results from other studies, the estimate is subject to several limitations. First, it is not clear why the "ever married" variable is a better control for selectivity than individual fixed effects. Second, the author controls for several important mechanisms by which marriage may affect wage growth, especially work experience, occupational status, and industry status.

A study by Ahituv and Lerman (2007) focuses on the interactions between marital flows, wage rates, and hours worked for young men as they age from 17–19 in 1979 to their late 30s–early 40s in 2002. Their findings reveal statistically significant impacts, running from marriage to wage rates and working hours, from working hours to subsequent wages, and from both wage rates and working hours to marital status. Especially powerful are the large positive impacts of entering marriage and remaining married on wage rates and working hours. The marriage-wage effect is larger for continuing marriage while the hours-worked effect is larger for entering marriage. Putting the wage and hours effects together, entering or remaining married raises earnings by about 21–24 percent relative to staying single (i.e., never-married). The marriage effect on earnings is about 17 percent relative to divorce, and remarriage leads to an 11 percent advantage over those remaining divorced. Marriage effects of these magnitudes are equivalent to earnings gains associated with 1.7–2.4 years of schooling, depending on whether the comparison is with divorced or with single men.

To illustrate the magnitude of these gains, consider a never-married man working for 1,800 hours per year at $20 per hour, about the median wage for full-time workers in 2003. Now suppose he is in a continuing marriage instead of never being married. On the basis of the Ahituv-Lerman fixed-effects estimates, his wage rate would rise to $22.52 and his annual hours worked would increase by 52 per year. These direct gains in wage rates and hours worked translate into about $5,710 in added earnings, from $36,000 to $41,707, or a 15.9 percent increase. In addition, the indirect gains from the feedback effect on wage rates of

marriage-induced added work experience turns out to be $628, thereby raising the earnings gain from an additional year in marriage from 15.9 percent to 17.6 percent. For black men, the earnings advantage from a continuing marriage over never being married is similar (17.9 percent), but the black male earnings premium reaches 28 percent when comparing continuing marriage to continuing divorce.

2. How Men's Employment and Earnings Affect Marital Status

A variety of studies have examined the impacts of men's earnings on marital status. Estimating marriage as a function of earnings, the 2005 CPS data show that higher earnings are correlated with a higher likelihood of marriage. Although the effect is statistically significant, the size of the effect is small, especially in comparison to observed effects of marriage on earnings. For example, controlling for education, race, Hispanic status, and the size of the metropolitan area, a $1,000 increase in annual earnings raised the likelihood that a 35–44-year-old man was married by 0.1 percent. By implication, a $10,000 rise in earnings would be associated with a 1 percentage point rise in the proportion of married men.

One stimulus for studies on the impact of men's earnings on marriage was the Wilson hypothesis (Wilson 1987), which explains the decline in marriage rates among black men as largely the result of their inability to obtain good, steady jobs. While the evidence from elaborate studies documents the connection between better job options for men and higher marriage rates, worsening job opportunities over the 1970s and 1980s accounted for only a modest reduction in marriage (Wood 1995).[9]

Studies often use duration analysis to determine how employment, unemployment, wage rates, or earnings affect flows into a marital or cohabitation status. For example, Oppenheimer (2003) examines how time since leaving school, current earnings, and recent work experience influence the risk of entering cohabitation or marriage (if single), and the risk of entering marriage or separating (if cohabiting). High earnings increased entry into marriage, but not cohabitation, and less than full-time work reduced the likelihood of entering a marriage, but not a cohabiting union. Although the findings are interesting, the study did not control for possible selection bias.

[9] See Becker, Landes, and Michael (1997); Call and Teachman (1996); Manning and Smock (1995); Presser (2000); Smock and Manning (1997); Teachman, Call, and Carver (1994); and Weiss and Willis (1997).

A study by Smock and Manning (1997) looked at the impact of men's and women's income on the marital outcomes of cohabiting couples. Using two periods in the National Survey of Households and Families (1987–1988 and 1992–1994), the authors found that favorable economic circumstances among men accelerated marriage and reduced the likelihood of separation. The higher men's annual earnings were, the greater the likelihood of marrying rather than continuing to cohabit. Women's economic situation mattered little for marriage or for separation.

Burgess and colleagues (2003) examine entry into marriage (among those single) or divorce (among those married) as a function of current and long-term earnings (or wage rates) and other income potentially available in each marital status, including the average earnings of a potential spouse. They use a sample of young white men and women in the NLSY79. They face the common selection problem in which men may have characteristics not observed in the data that influence their success both in the job market and in finding a marriage partner. To deal with selection, they estimate how projected long-run earnings affect marriage. For men, the results show that higher earnings (or wage rates) increase entry into marriage and slow or reduce marital dissolutions, while the average wage of a potential mate has virtually no effect. Long-run measures of earnings and wage rates exert a higher impact than do current earnings or wage rates.

Charles and Stephens (2004) uncover clear evidence that both men and women laid off from a job experience a higher transition rate into divorce, but job losses due to a plant closing did not increase divorce rates. According to the authors, the reason for the different responses to job loss is that plant closings are not indicative of negative qualities of the man losing his job, but layoffs can be. This evidence is striking. One might have expected that the earnings losses from plant closings would place the same type of strain on marriages and induce similar increases in divorce as other losses of earnings. However, the purely exogenous employment losses did not do so.

Two dynamic analyses by Ahituv and Lerman (2005; 2007) yield estimates of how employment and job stability affect flows into marriage, divorce, and remarriage. Both studies use data from the NLSY79. The first (Ahituv and Lerman 2005) estimates a model that adjusts for selection effects and for the possibility of effects that run from job stability to marital stability or vice versa. Marriage may encourage job stability, just as it encourages stability in family relationships and in other behaviors (Waite and Gallagher 2000). Job

stability may promote marital stability by assuring an income flow and improving wage outcomes. Conversely, moving jobs may strain relationships, including marriage, and may lead to divorce or separation. The results show that job stability does lead to higher wage rates and increasing marriage rates. At the same time, marriage enhances job stability and raises wage rates. The results suggest a "virtuous cycle" set off either by an increased propensity to marry or by increased stability of jobs.

The second study by Ahituv and Lerman (2007) also found that success in the labor market raised the likelihood that men enter marriage, remain married, and (if initially divorced) remarry. A 10 percent rise in wage rates increased the likelihood of entering marriage by about 6 percent, the chances of staying married by 4 percent, and remarriage by less than 2 percent. Added hours worked exerted about the same effects, except for having no impact on divorce.

Using a complex model that incorporates preferences of men and women as well as their earnings and their marriage markets (especially the share of available men relative to available women), Seitz (2004) estimates impacts on the combined work and marital status of men and women by race. Her results suggest that equalizing the sex ratio by race (raising the share of men to women among blacks) would raise marriage rates of black women substantially but still leave the rates far below those of white women.[10] On the other hand, raising the earnings of black men and women to the comparable earnings levels of whites would actually reduce marriage rates of black women, partly because both men and women could be choosier.

Still, most studies show that higher men's employment and earnings rates are associated with higher marriage rates. In a recent review of a range of studies, Burstein (2007) concludes that raising men's earnings and employment is likely to increase the likelihood of marriage, but only when the employment is consistent. What is questionable is the magnitude of the impact. In many analyses, a sizable rise in earnings generates only a small increase in marriage rates.

[10] The analysis is not entirely convincing because Seitz does not take account of the sizable Census undercount of black men.

3. How Marital Status Affects Women's Employment and Earnings

Studies on the effects of marital status on women's employment and earnings must confront a variety of simultaneity and sequencing issues. It is difficult to segment the employment and earnings issues from childbearing and parenting. It is difficult to ignore the trend toward later marriages as more women delay marrying until completing their education and early careers.

Facts and Associations on Marriage, Motherhood, and Employment

The last several decades have witnessed a rapid growth in the employed share of married women (DiNatale and Boraas 2002; Pencavel 1998). As Pencavel (1998) finds, the gap between the employed shares of the married and single women populations narrowed sharply between 1975 and 1994. DiNatale and Boraas (2002) extend these findings through 2000. The share of 25–34-year-old married women participating in the work force jumped from 48 to 71 percent and the proportion working 50–52 weeks per year rose from 38 to 58 percent. The increases still left married women working less than unmarried women, but by a much smaller margin in 2000 than in 1975. Part of the growth in married women's employment is the rise in remarriage and the higher likelihood of employment among remarried women. Seitz (2000) estimates that employment among white women is much more common among remarried women than among women in first marriages, perhaps because remarried women face a higher probability of divorce.

Today, once we control for motherhood, the average amount of employment per year (in weeks worked) and annual earnings vary surprisingly little by marital status (see table 2).[11] Married mothers in their late 20s and early 30s work substantially fewer weeks per year than women without children or unmarried mothers. However, the gap narrows to only about two weeks per year among women in the older two groups. Earnings differences are largest at the 25–34-year-old age group, especially between mothers and women without children. Again, the differences fall as women age. These tabulations do not reveal what accounts for the employment and earnings differences by marital status, but they provide a baseline for the discussion.

[11] The figures come from the author's tabulations of the March 2005 Current Population Survey (CPS).

Additional insight on the marriage-employment connection can be drawn from a regression format that examines how marriage affects employment of women, net of education, age, race, immigration status, Hispanic status, size of metropolitan area, and region. Table 3 reports on the association between marriage and employment in 2004 among women ages 25–54. The effects of marriage and the presence of children vary by educational groups. For those with no children and more than a high school degree or GED, marriage neither raises nor lowers the likelihood of working; but, marriage is associated with about a 5 percentage point lower rate of participation compared with separated, divorced, or cohabiting women. Among the less educated with children, the likelihood of working is about 8–9 percentage points lower for married women than among women who are separated, divorced, or cohabiting. It is striking that separated or divorced and cohabiting mothers are more likely to work than single women with no children. After accounting for whether a woman worked at all in 2004, weeks of participation do not differ significantly by marital and motherhood status for less-educated mothers.

The association between marriage and reduced employment is much higher among women with at least some college education. Education apparently increases the employment and earnings reduction associated with marriage. For women with no children and some college or more education, the share of married women working in 2004 is 11 percentage points lower than among single women, and 5–9 percentage points lower than among separated, divorced, or cohabiting women. The marriage-related shortfall in employment is even higher among women with children. Note, however, that for separated, divorced, and cohabiting women, the presence of children has little negative impact on whether one works during 2004. Among women who worked in 2004, marriage and motherhood are associated with lower hours of work per year, but the maximum differential is two weeks. Overall, educated women who were married worked about three weeks less per year than never-married women with no children; married mothers experience a shortfall of about six weeks per year.

Table 2. Women's Annual Earnings and Weeks Worked by Marital Status, Presence of Children, and Age, 2004

	Ages 25–34			Ages 35–44			Ages 45–54		
Parent and Marital Status	Annual earnings	Weeks worked	Percent of population	Annual earnings	Weeks worked	Percent of population	Annual earnings	Weeks worked	Percent of population
No child under 18									
Married	$25,453	36.3	17.1	$26,391	37.1	18.5	$27,065	37.2	34.4
Separated/widowed/divorced	$20,912	37.9	5.4	$27,669	39.4	9.9	$27,206	38.1	14.3
Never-married, not cohabiting	$22,977	39.1	17.3	$30,615	40.2	7.8	$28,547	37.5	6.3
Never-married, cohabiting	$24,385	40.6	6.2	$25,185	37.8	3.3	$23,015	37.7	3.2
With a child under 18									
Married	$17,996	29.9	39.6	$23,859	35.0	48.6	$26,151	36.8	31.7
Separated/widowed/divorced	$18,445	35.9	3.0	$25,290	38.8	6.1	$31,113	39.7	6.9
Never-married, not cohabiting	$20,121	37.0	8.4	$24,673	37.3	3.9	$25,302	36.3	2.1
Never-married, cohabiting	$20,260	37.5	3.0	$24,597	39.2	1.9	$27,772	37.6	1.1
Total	$20,946	34.7	19,631	$25,409	36.7	21,882	$27,009	37.4	21,405

Source: Tabulations by authors from the March 2005 Current Population Survey.

Table 3. Impacts of Women's Marital Status and Presence of Child Under 18 on the Natural Log of Annual Earnings and Annual Weeks Worked, Controlling for Age, Education, Race, and Other Factors, 2004

	Impacts on Any Participation in the Work Force During 2004		Impacts on Annual Weeks Worked of Women With Earnings in 2004	
	Logit Regressions		OLS Regressions	
Impacts relative to never married with no child under 18	Less educated: Those with a High School Diploma, GED, or Less	More educated: Those with some college or an AA, BA, or Graduate Degree	Less educated: Those with a High School Diploma, GED, or Less	More educated: Those with some college or an AA, BA, or Graduate Degree
No child under 18				
Married	-0.014	-0.109***	0.015	-0.742***
Separated, divorced, widowed	0.053**	-0.046***	-0.277	-1.405***
Never-married cohabiting	0.042**	-0.024	0.000	-0.556
Child under 18				
Married	-0.029**	-0.142***	-0.531	-2.004***
Separated, divorced, widowed	0.053***	-0.055***	-0.647	-0.727*
Never-married not cohabiting	-0.013	-0.035*	0.908	0.024
Never-married cohabiting	0.061***	-0.037	-1.003	-1.476***

Source: Logit and OLS regressions by authors using data from the March 2005 Current Population Survey.

One reason marriage is associated with reduced employment is the availability of other family income. To see how the relationship between marriage and employment responds to other family income, two indicators of other family income are included in regressions on weeks worked in 2004: (1) family income other than own income, and (2) this variable interacted with being married. The results show that taking into account other family income reduces the size of the employment reduction associated with marriage, especially for women with at least some college, but a significant effect remains. For the more educated group, the downward effect of marriage falls from 4.3 to 2.5 weeks per year among women with no children present and from 7.5 to 5.4 weeks per year among women with children present.

These associations are not necessarily causal impacts, partly because women with less interest in careers may be more likely to marry and have a child. In this case, it may be a

woman's low earnings that cause marriage and motherhood, rather than marriage and motherhood causing low earnings.

Empirical Studies of Marriage Effects on the Employment of Women

Researchers have examined several ways in which women's employment may cause and be affected by marital status. Few academic papers address the issue directly, though several focus on how work and potential earnings affect marriage. Clearly, finding the causal agent is difficult. The cause of any negative relationship between work and marriage may be that women who are most motivated to work are less likely to marry. In some cases, researchers have studied how a third factor affects both marriage and work.

A good example is the study by Goldin and Katz (2002), which finds that the introduction of the birth-control pill delayed marriages and increased women's investment in education and their employment in professional careers. Another example is the role of women's bargaining power and its effect on the availability of income flowing to a woman within marriage (Grossbard-Schectman 1993; Grossbard-Schectman and Neuman 1988). A high ratio of men to women (the sex ratio) increases women's bargaining power, increasing their income within marriage, lowering the labor-force participation of married women, and increasing their likelihood of marrying. Divorce laws more favorable to women's bargaining power can also influence work within marriage. Chiappori, Fortin, and Lacroix (2002) find that both sex ratios and divorce laws that are favorable to women reduce the amount of work by women within marriage.

Another analysis of the timing of marriages and work patterns of women takes into account impacts on the quality of the ultimate spouse. Loughran and Zissimopoulos (2003) find that women in more favorable marriage markets marry early and partner with higher-wage men. On the other hand, women who delay marriage experience much faster wage growth. According to their estimates and taking into account fertility differences, women at age 36 would be earning 75 percent more if they married at age 27 than if they married at age 21. However, this benefit in added earnings to those delaying marriage is partly offset by the lower wages of the men they marry. The reason is that women who delay entering the marriage market face a less favorable supply of men from which to choose, partly because of their age.

Other studies reveal no wage disadvantage from marriage. Waldfogel (1997), who examined the impacts on women's wage rates of periods of marriage over a 15-year period (1968–1988), found that marriage gave women a 3–4 percent advantage over never-married women and a 1–2 percent advantage over divorced women. A study by Budig and England (2001) based on more recent data (1982–1993) yielded a slight marriage bonus for married over never-married women, but no gain or loss relative to divorced women.

One mechanism by which marriage could be expected to reduce women's employment is through the effect of added income. By this logic, the greater the availability of other income (including the higher the earnings of a husband), the lower the employment amounts expected by wives. Van der Klaauw (1996), in an article notable for its far-reaching ability to take account of simultaneity and timing, projects changes that jointly affect marriage and work outcomes of women. He builds and estimates a structural model in which current and potential future marital and job opportunities affect the desirability of marriage and work choices, and thus their actual choices. He shows that the effect of marriage on employment depends on the specific factors that influence marriage. Consider three possible factors inducing higher marriage rates. In one simulation, when an increase of $1,000 (1984 dollars) in the potential or actual earnings of spouses increases the cumulative time a 35 year-old woman has spent in marriage by 2.3 years, it reduces the cumulative time spent in employment by 2.5 years.[12] In a second case, when years of marriage are higher because of lower women's wage rates, there is almost a two-year reduction in employment for every added year in marriage. Third, when the cause of a higher marriage rate is the result of being white instead of nonwhite, more years in marriage result in virtually no change in employment.

The relationship between women's employment and marriage can vary in other ways as well. Seitz (2000) finds that employment among white women is much more common among remarried women than among women in first marriages, perhaps because remarried women face a higher probability of divorce. In fact, Seitz projects that about 11 percent of the growth in white married women's employment is due to the rise in remarriage and the higher likelihood of employment among remarried women. It is interesting that Seitz finds no employment differences by marital status among black women.

[12] The baseline levels are 10.2 years in marriage and 9.9 years in employment.

4. Effects of Employment and Earnings on Marriage among Women

The fall in marriage rates among young women has been well documented. But, as Ellwood and Jencks (2004) show, some of the apparent reduction in the propensity to marry is actually a delay in marriage. The proportion of women in a first marriage by age 25 declined from 84 percent among women reaching 25 in 1965–1969 to 64 percent among women reaching 25 in 1985–1989. However, by age 40, the gap had narrowed: 94 percent of the older cohort and 86 percent of the younger group were married. For white women, the declines in the share of their first births by ages 25, 30, and 40 were even greater than the declines in the share of their first marriage. However, black women experienced much sharper reductions in first marriages than in childbearing. As of age 30, for example, 82 percent of the older cohort of black women had married and 86 percent had a first birth. In the case of the younger cohort, the share with a birth fell slightly to 76 percent, but the share with a first marriage declined sharply to 55 percent.

Using an economic model of marriage and childbearing to explain these trends, Ellwood and Jencks (2004) estimate the impact of changing male and female wages, the share of married women who work, the share of single parents receiving welfare (also interacted with low education), the male-female sex ratio, the year, and the share of black or another nonwhite race. The rationale for including the working share of married women is that potential gains from marriage in specialization within the household should be lower in situations where more married women work. Ellwood and Jencks find that higher female wages and higher proportions of married women working lower the fraction of 25–34-year-old women who are married. This result is consistent with the finding of Chiappori and colleagues (2002) that third factors that increase the demand for or bargaining position of women (in particular, the male-female ratio and divorce laws favorable to women) both increase marriage and reduce women's work within marriage.

A variety of more detailed studies finds that higher earnings opportunities for women end up reducing (or delaying) their entry into marriage. Blau, Kahn, and Waldfogel (2000) first calculate the extent to which the industrial mix of a geographic area is favorable to male and female workers. Next, they examine the impact of this variable—meant to measure the quality of the job options facing each sex—on the share of women who marry. They find that more favorable job opportunities for women lower the proportions who are married, while more favorable men's job opportunities increase marriage rates. However,

neither impact is statistically significant among black women. Burgess, Propper, and Aassve (2003) and Hoffman, Duncan, and Mincy (1991) estimate the impact of the projected long-run earnings of men and women on marriage and on the entry into marriage and divorce. Both find that higher prospective earnings of women lower their entry into marriage and both agree on the pro-marriage effects of higher men's earnings. However, differences arise in estimates of how women's earnings affect divorce. While Hoffman and colleagues (1991) find women's potential earnings is negatively related to divorce, the more recent work by Burgess, Propper, and Aassve (2003) yields estimates showing higher long-term wages of women increase their entry into divorce. Burgess and colleagues conclude that, for the cohort reaching their 20s in the 1980s, more self-reliance among women meant lower time spent married. Neither of these studies estimated separate effects for black women or low-income women.

Results from the simultaneous analysis by Van der Klaauw (1996) reinforce the findings that higher earnings potential among women delays entry into marriage. An increase of $1,000 in women's earnings lowers the number of years spent in marriage by age 35 by 1.3 years and the proportion of never-married women by 5 percentage points. This estimate is in sharp contrast to the substantial positive impact on marriage of added earnings of men. These findings capture effects on a cohort born in the early 1950s.

Reviews by Burstein (2007), Ellwood and Jencks (2004), and Oppenheimer and colleagues (1997) raise serious questions about the evidence indicating higher employment of women reduces their marriage rates. All are skeptical of cross-section and time-series studies because of their inability to distinguish whether employment is causing less marriage or marriage is causing less employment. Panel studies have other problems, including the difficulty of distinguishing between delaying marriage or reducing the long-term incidence of marriage. They point to studies showing that highly educated women, who have higher than average earnings potential, delay marriage but ultimately are more likely to marry than other women (Goldstein and Kenney 2001; Qian and Preston 1993). Moreover, several studies have found little or no effect of women's earnings potential on their marital outcomes. Sassler and Schoen (1999) investigate how the attitudes and employment of never-married 18–34-year-olds in 1987–1988 affected their likelihood of marriage in 1992–1994. They find women's employment had no statistically discernible impact on the likelihood of marriage. Looking at a sample of cohabiting couples in the same two periods, Smock and Manning

(1997) also find no impact of lagged women's earnings on the likelihood that cohabiting couples will marry.

Observational studies of the impact of women's employment on divorce are equally equivocal. Again, discerning causation is difficult, even in longitudinal studies, because added work by women in the period preceding divorce may increase divorce by offering women the chance at self-reliance or may be the result of expected divorce in the future. Hoffman and Duncan (1995) and Johnson and Skinner (1986) both try to tackle the problem by estimating a two-stage model. In neither case does employment significantly increase divorce; indeed, Hoffman and Duncan find added employment of women lessens the couple's likelihood of divorce.

Some studies focus on the effects of marriage of women's earnings relative to their actual partners. They ask whether marriages are less likely to occur and be maintained when women can earn or do earn as much or more than their male partners. For example, Heckert, Nowak, and Snyder (1998) and Jalovaara (2003) find that couples in which men earn substantially more than women are more likely to marry and stay married. In Nock's study (2001), marriages in which both spouses earn at least 40 percent of the family's total earnings involve less commitment among women and a higher divorce rate. He sees this evidence as further confirmation of an independence or self-reliance effect. Burstein (2007) questions this interpretation, pointing out that Nock is really finding out about marriages in which wives increase their earnings and how they respond to a question about whether things would change badly in terms of standard of living, career and job opportunities, sex life, and happiness. Burstein argues that that it is almost tautological that increased earnings of wives relative to husband would make wives feel that a separation would be less damaging financially. She also contends that the divorce impact on marriages with spouses with similar earnings is concentrated among marriages in which the wife works long hours.

Oppenheimer (2003) questions this notion of dependence, arguing that it is unrealistic to assume that income is pooled in the same way regardless of how much women earn as a percentage of family income. Moreover, she points out that higher women's earnings relative to those of men make dependency more symmetrical. While her discussion is thoughtful, Oppenheimer does not provide empirical estimates of how the ratio of wives' to husbands' earnings affects divorce. Sweeny and Cancian (2004) offer evidence that higher

premarital earnings of white women improve their marriage prospects, but they study only women who marry.

5. An Assessment of the Evidence on Marriage-Employment Links

The vast array of studies of the marriage-employment relationships use a variety of data sets and methodologies and cover different samples and different time periods. Given this variation, it is not surprising that the results are not entirely consistent. Still, several patterns emerge from the research.

- The interaction between employment, earnings, and marital status is complex to analyze, partly because of simultaneity (with earnings affecting marital status and marital status affecting earnings) and partly because patterns differ by such characteristics as race, education, and geographic areas.

- Higher employment and earnings increase marriage and reduce divorce among men. The impact is statistically significant and of meaningful size. The evidence is compelling that unanticipated job loss raises the likelihood of divorce. On the other hand, changes in men's employment do little to explain the trends toward delayed and reduced marriage or the widening racial gap in marriage. One possible reason is that higher earnings might have made men choosier and more desired in the marriage market, thereby delaying their entry into marriage.

- Although the evidence is somewhat mixed on how women's earnings potential affects marriage, most recent studies find that higher women's earnings at least slow their entry into marriage and reduce the number of years spent in marriage. An alternative explanation focuses on exogenous factors—such as the male-female ratio and divorce laws favorable to women—as enhancing women's bargaining power, thereby increasing marriage, and the transfers from men to women within marriage, and reducing women's labor-force participation.

- Marriage is closely and substantially associated with men's employment and earnings. Most of the research finds entry into marriage and continuation in marriage increase work hours as well as wage rates. Earlier entry into marriage, by increasing the amount of work experience at a given age, affects long-term wage rates. According to a recent study by Ahituv and Lerman (2007), marriage's combined effects on hours worked and wage rates imply earnings gains for men of nearly 20 percent. This increase is equivalent to the increase in earnings one would obtain from an additional two years of schooling.

- The effect of marriage on women's earnings is mixed. In general, having a spouse with dependable earnings instead of living alone reduces the urgency of labor-market activity. Although several studies find that marriage lowers women's earnings, the effects vary widely. Marriage does more to lower labor-market activity among more advantaged women than less advantaged women.

- One large research gap has to do with broadening work-marriage interactions to incorporate effects of parenthood. Among the currently unanswered questions in this realm are: How does having a child affect marriage and employment of men and women? It is possible that planning to have a child as well as an unexpected pregnancy stimulates marriage along with changes in labor-force activity among men and women. Alternatively, having a good job might stimulate some to have children and marry. A third possibility is that the decision to marry encourages the spouses to have a child and encourages at least one to invest in training or to work more.

C. Key Topics in Employment and Family Functioning

Employment not only influences the formation of families, but also how they function after they are formed. Certainly, employment provides the economic resources to feed, clothe, and house family members, to pay for other necessities, and to afford other goods, like living in neighborhoods with good schools. For working parents, job loss and unemployment create financial hardships that extend beyond the unemployed worker and often lead to material hardships for spouses, partners and children.

Parental employment also affects noneconomic aspects of family functioning as well, including the psychological well-being and health of parents and children, the effectiveness of parenting styles, and the supervision of children by parents and alternate caregivers when they are at work. Time spent in market work often competes with time needed to care for children and nurture family relationships. Employment may constrain family rituals and routines, alter the activities parents do with their children or as a family, and affect a parent's ability to juggle family demands and "feel good" about their roles as partners and parents. These factors, in turn, affect children's outcomes—their cognitive development, behavioral and socioemotional development, and physical and mental health.

Reverse causation is also possible. Poor mental health or impaired psychological functioning may result in job loss and poor parenting. Having a child with a serious health problem or disability affects employment, particularly of mothers. Certain aspects of employment, such as working nonstandard shifts, may affect relationship quality in two-parent families and the quality of the couple relationship also may have implications for adult and child well-being.

To examine the complex relationship between employment and family functioning, we first provide an overview of the aspects of employment and domains of family functioning that are assessed in the nonexperimental literature. Then, we review clusters of

research on the employment–family functioning relationship to draw implications for future demonstrations. Unless otherwise noted, the research and this review take the family as given and concentrate on families with children.

1. Dimensions of Employment Often Connected with Family Functioning

Researchers typically study the interaction between family functioning and the following three aspects of employment: (1) whether or not mothers work and how many hours they work per week; (2) unemployment, job loss, and job instability; and (3) the timing of work hours and work schedules, often referred to as "nonstandard" work in the literature.[13]

Maternal Employment and Work Hours

Much of the literature on employment and family functioning focuses on maternal employment and how it influences mother's mental health, child care choices, quality of parenting, and child outcomes. Recently, researchers have devoted considerable attention to the number of hours that mothers work. They are also reexamining the impacts of maternal employment during the first year of a child's life and later impacts on child cognitive and behavioral outcomes.

Unemployment or Nonemployment

One body of literature deals with how unemployment, job loss, or job instability affects the psychological health of unemployed persons, parenting practices, and the psychological health and well-being of partners and children. Economic instability or family economic hardship is often an important mediator in the study of the unemployment–family functioning relationship. Many studies examine impacts of a father's job loss in two-parent families or a single mother's unemployment or nonemployment. One recent study (Anderson, Kohler, and Letiecq2005) focuses on single African American, nonresident

[13] There is also a literature in sociology that focuses on job or occupational complexity and parenting styles, dating from the early work of Melvin Kohn (1969) who argued that those in working-class jobs with little autonomy raised children differently from those in middle-class, managerial jobs with greater autonomy. The former emphasized obedience in child rearing whereas the latter emphasized independence. Later work in this tradition by Menaghan and Parcel (1995) suggested that parents in low-wage jobs where they lacked complexity, control, and autonomy provided less-stimulating and less-nurturing home environments for their children than those in jobs with more flexibility, autonomy, and complexity and more income. The most recent addition to this literature is the ethnographic work of Annette Lareau (2003) in her book *Unequal Childhoods* where she argues that the middle-class parents emphasize verbal reasoning, enroll children in many extracurricular activities and cultivate a sense of independence and entitlement whereas parenting in working-class and poor families is quite different. In working-class and poor families, children spend time "hanging out" with friends and in the company of extended kin, and parents are much less involved in orchestrating children's lives.

fathers—a group of great policy interest, given their high rates of nonmarital childbearing and given the efforts to encourage child-support payments and more involvement on the part of these nonresident fathers.

Nonstandard Work Hours and Shifts

The timing of work hours (e.g., evening versus daytime hours, weekend hours) can also influence such aspects of family functioning as the ease or difficulty of establishing family routines and arranging child care. An emerging literature, much of it qualitative, focuses on the way unstable work schedules and varying hours worked per week among workers in low-wage jobs lead to difficulties in maintaining stable child care arrangements. Long commutes among employed single mothers reliant on public transportation are sometimes discussed in the literature on the work and family conflicts of low-wage workers.

2. Interactions between Child Well-Being and Parental Employment

A central concern in the employment–family functioning literature is the potential impacts of employment on child well-being. The outcomes commonly investigated for children vary by the child's developmental age.

Preschool and Early School-Age Children

The key outcomes in this literature follow:

- **cognitive outcomes**, using standardized tests to assess language development, mathematical reasoning, and reading comprehension;[14]

- **behavioral outcomes**, most commonly measured by the Behavioral Problems Index (BPI), which has subscales that tap "internalizing" and "externalizing" behavior problems. Unlike the cognitive testing that is administered directly to the child, the behavioral problems are assessed through parental, usually maternal, reports of the child's behaviors. In some studies, there is also an attempt to gather independent reports of behavior problems from teachers;

- **physical health** behaviors and outcomes, such as doctor visits, immunizations, infections, and so on;

- **cognitive stimulation in the home** environment, most often measured by the HOME scale. This is not a child well-being indicator so much as it is a "family

[14] For example, the tests used in the NLSY-CS (the longitudinal survey of men and women aged 14 to 21, begun in 1979, that has followed female respondents' children since 1986) include the Peabody Picture Vocabulary Test–Revised (PPVT-R), the Peabody Individual Achievement Test in Math (PIAT-M), and the Peabody Individual Achievement Test In Reading (PIAT-R).

environment" measure, but it is often assessed along with children's cognitive skill and behavioral outcomes in studies of the effect of maternal employment on young children;

- **child care choices**, assessed as an important mediating factor when parents—mothers—work outside the home; and
- **time and activities with children**, including the time parents spend and types of activities parents do with their children. Sometimes the focus is on young children (under age 6) but often the focus is on older children (e.g., children 12 and under, children under age 18) as well.

(Middle) School-Age Children

In the literature on parental employment and older, school-age children, cognitive outcomes are important, as are the following:

- **academic performance**, as measured by grades or other indicators;
- **extracurricular activities**, such as sports or clubs, and children's general engagement in school and extracurricular activities; and
- **self-care**, as measured by whether children care for themselves in after-school hours and whether this is more prevalent when mothers are employed.

In addition, this literature devotes attention to activities that parents do for children (parental inputs), such as helping with homework, that only become relevant for older, school age children.

Adolescents and the Transition into Adulthood

The functioning measures for adolescents include an expanded array of behaviors, since older children have more independence from parents and thus more opportunity to engage in risky behaviors. The underlying assumption is that parents who are employed may have more difficulty adequately supervising adolescents and, in some cases, may rely on adolescents to perform duties (e.g., care of siblings) that may interfere with academic performance. In the literature on adolescents, the focus expands to include the following:

- **academic achievement**, grades, completion of high school or GED, transitions to postsecondary training or schooling;
- **negative indicators of school performance and behaviors**, such as suspensions, expulsions, and dropping out of high school;
- **risk taking and consequences**, including early sexual activity, pregnancy and early childbearing; alcohol and drug use; and criminal activity and arrests;

- **physical- and mental-health outcomes**, such as depression, self-esteem, anxiety, stress, eating disorders, or obesity;

- **quality of the parent-child relationship** (e.g., can the adolescent talk things over with a parent, does the adolescent "feel close" to a parent, are parents overly harsh in disciplining the adolescent, and so forth); and

- **work experience and job training**, sometimes characterized as positive, especially for low-income adolescents, but also sometimes associated with negative behaviors such as poorer academic performance and higher engagement in risky behaviors.

Throughout the literature on parental employment and child well-being, parental time and supervision are hypothesized to be an important form of "investment" in children, along with material or monetary investments. Both types of investments may vary by parental employment factors.

3. Parents, Parenting and Family Functioning

Researchers often view parental health and the quality of parenting as mediating variables between parental employment and child outcomes. Some studies of two-parent families examine the association between employment or unemployment and the relationship quality of couples. Key indicators of family functioning potentially affected by employment include the following:

Among Mothers

- Depression (and other mental and physical health factors);
- Time use, pressures and sense of work/family stress or balance.

Among Fathers

- Depression (and other mental and physical health factors);
- Child-support payments and visitation (of single fathers);
- Time use and time pressures.

Among Both Parents

- Positive affect, emotion, closeness to children;
- Monitoring, supervision, style of discipline;
- Time with and involvement in activities with children and family.

Among Couples

- Relationship quality (commitment, happiness, conflict);
- Time together (or lack thereof), tag teaming of child care;
- Divorce and marital instability.

Family Environment

- Family rituals and routines (e.g., eating evening meal together);
- Happiness and satisfaction (e.g., satisfaction with life, work/family balance, how children are doing);
- Conflict in the family;
- Community involvement, social networks, connections to extended kin.

D. Empirical Results from the Literature on Employment and Family Functioning

1. Interactions between Mother's Employment and Child Outcomes

Young Children

Studies in developmental psychology have examined the link between maternal employment and child outcomes, beginning with studies of whether employed mothers have poorer attachment with their infants than mothers who were not employed (for review articles, see Gottfried, Gottfried, and Bathurst 1995; Hoffman 1989; and Hoffman and Youngblade 1999). Early research analyzed effects on mothers in two-parent families and on infants and preschool-age children. One finding was that maternal employment was often associated with positive mental health for the mother (Hoffman and Youngblade 1999).

To date, one cannot draw all-encompassing conclusions about whether employment of mothers leads to poorer or better outcomes for children. Clearly, the context and mediating variables are important. Hoffman (1989), for example, emphasized the difficulty of measuring the enduring traits in young children and highlighted the importance of covariates or mediators such as the mother's satisfaction with her labor-force position, the father's level of involvement, the relationship quality of the parents, the psychological health of the mother and father, and personality and other characteristics of the child. Outcomes may differ as well depending on mothers' hours of employment as well as on the social-support network for a mother's employment, child care, and child rearing.

During the past decade, a number of scholars have reexamined the relationship between maternal employment and child cognitive and behavioral outcomes, using sophisticated econometric specifications with longitudinal data in an effort to move closer to

establishing a "causal" effect. Table 4 describes the findings from 11 studies of this type published between 1989 and 2005. The vast majority of these studies find that maternal employment during the first year of life, particularly full-time employment, is negatively associated with children's cognitive test scores measured later in the preschool and early school-age years.[15] Maternal employment after the first year of life is usually positively associated with reading and math scores.

Most studies suggest negative effects are more pronounced among high-income children (Desai, Lansdale, and Michael 1989). The most recent addition to this literature, a study by Hill and her coauthors (2005), assesses the strength of the relationship between the timing of the return to work and the number of hours a mother works in the first year of a child's life and cognitive and behavioral outcomes through age 8. Through a set of subgroup analyses, they conclude that it is the most advantaged children who appear to experience the most negative outcomes of early maternal employment. Hill and her coauthors (2005: 842) summarize the findings in this way:

> The overall pattern of the results indicated that the significant negative effects on cognitive outcomes were concentrated on the children with the most resources: those who were first born, those with married parents, those in households with higher income, or those with mothers who were more educated or had higher scores on the Armed Forces Qualification Test (AFQT). As for the detrimental externalizing impacts, the significant results tended to be concentrated on those children who were male, first born, and whose mothers were more educated or had higher AFQT scores.

No compelling theoretical rationale has been offered for why effects of maternal employment, if harmful in the first year of life, should be so limited—other than to speculate that children "lose more" when they do not have the caregiving of a highly educated mother or that the positive effect of increased income in low-income families more than compensates for any loss of maternal time from the home.

Only two studies find stronger effects in low-income families. Han, Waldfogel, and Brooks-Gunn (2001) find negative effects of mother's employment on all outcome measures

[15] There is increasing consensus that early child development, including development in the first year of life, plays a critical role in determining success in careers and other aspects of adult life. See, for example, Heckman, Stixrud, and Urzoa (2006).

(math and reading scores and the BPI) for low-income families but fewer negative effects among higher-income families. James-Burdumy (2005) finds that work hours and low income in the first year of life had negative effects on later reading (but not math) scores (at ages 5–18).

One important caveat about this literature is that almost all the studies use one data set, the NLSY cohort of mothers and children. Of the 11 published studies summarized in table 4 that find lowered cognitive ability of children when the mother works in the first year of life, 10 use the NLSY. The one study that used a different data set, the NICHD early child care study (Brooks-Gunn, Han, and Waldfogel 2002), found mixed results. There were no effects of maternal employment within the first year of life on one measure of early mental development (the Bayley Mental Development Index), but an indication that work involving more than 30 hours per week before the 9th month was related to lower cognitive scores on a second index (the Bracken School Readiness Scale).

Adolescents

Recent research on welfare and low-income populations suggests that maternal work may exert some negative or positive effects on adolescents. Some argue that the increased income that comes with employment, particularly employment of single mothers, stabilizes family routines and leads to better parenting (Chase-Landsdale et al. 2003; Klebanov, Brooks-Gunn, and Duncan 1994; Wilson 1996). For example, Lindsay Chase-Lansdale and colleagues (2003) found that a mother's transition to work was associated with *positive* outcomes for adolescents, including better mental health and less externalizing behavior problems. By contrast, mother's employment showed little or no association with younger children's behavioral or cognitive functioning where the indicator is the transition to work (Chase-Lansdale et al. 2003) or an increase in work intensity (Kalil, Dunifon, and Danziger 2001).

A finding in some experimental research on low-income populations (Gennetian et al. 2002; Gennetian 2004; Zaslow, McGroder, and K. A. Moore 2004) is that older children, particularly adolescents with younger siblings, may be *negatively* affected by an increase in the work effort of their single mothers. We discuss this evidence in part III of this report.

The qualitative literature suggest that adolescents may be called upon to substitute for the mother's caregiving, which can lead to negative effects on their own school

attendance, performance, and the like (Burton, Lein, and Kolak 2005; Heymann 2000). Using the Survey of Income and Program Participation, Capizzano and his coauthors (2004) found that maternal employment increased the likelihood of adolescent caregiving more often in two-parent than in one-parent families and more often among higher- than lower-income two-parent families. Families receiving welfare used adolescent care less often and for shorter periods than families not receiving welfare. Hence, it remains somewhat unclear whether and how adolescents' time use is affected by an increase in maternal employment, especially in low-income populations.

2. Nonstandard Work Schedules, Long Work Hours, and Instability in Work Hours and Work Schedules: Effects on Marriage, Child Care, Parenting and Child Outcomes

The research on maternal employment and family functioning has recently examined the effects of a broader array of employment conditions. These include whether or not a worker's schedule is fixed versus rotating; whether the schedule is an evening, night or "standard" daytime schedule; and whether work is performed on weekend days as well as weekdays. Much of this research is descriptive and includes both quantitative assessments of the association between nonstandard schedules and indicators of family functioning as well as qualitative interviews with low-wage workers. Recent studies are reviewed in table 5.

Studies of two-parent families show that when the mother works a nondaytime schedule, fathers are more involved in providing child care than when a mother's work schedule is a "standard" daytime schedule (Casper and O'Connell 1998; Han 2004; Presser 2003). Some have labeled this "tag-team" parenting and suggested that particularly among lower-income couples, nonoverlapping employment shifts are used to reduce child care costs and increase parental care of children, but that such arrangements may not be ideal for the couple or for family functioning.

A handful of studies assess whether a wife's or a couple's paid work hours or schedules are related to marital happiness or stability. Shift work or working nights or on a rotating shift are associated with a higher likelihood of separation or divorce (Presser 2000; White and Keith 1990). Greenstein (1995) uses longitudinal data to assess whether women's employment hours are associated with marital instability and finds more weekly hours are associated with more divorce but only for women who state that men's and women's roles should be equal. Not discussed by Greenstein is the possibility that women who disagree

with the traditional view of men as sole breadwinners might be nontraditional in taking a more tolerant attitude toward divorce as well. As noted above, Nock (2001) also finds that divorce rates are higher among couples in which each spouse earns at least 40 percent of family earnings.

Other studies focus on parental work schedules and outcomes for children. In a study using the National Survey of America's Families (NSAF), Phillips (2002) finds that 6–11-year-old children with one parent working full-time were more likely to participate in extracurricular activities if the second parent worked part-time than if the second parent was not employed. But, children of parents with nonstandard hours were less likely to engage in extracurricular activities. Among low-income children, ages 12–17, there were no relationships between parent work schedules and child well-being. A recent study of Canadian families with two working spouses found evidence that nonstandard hours worsened parenting and child outcomes (Stradzins et al. 2006). The effects were similar for men and women. As in other studies, the authors caution readers that family problems may have predated or even caused parents to choose nonstandard hours.

One concern is that nonstandard work schedules of mothers are associated with either increases in children's behavior problems (Bogen and Joshi 2001) or decreases in test scores (Han 2005). Mechanisms may include parenting stress or decreased child care quality (Dunifon, Kalil, and Bajracharya 2005). Heymann and Earle (2000) report a negative association between evening work of parents and the quality of the home environment, including parental difficulty supervising homework. In a recent study using cross-sectional Canadian data, Strazdins and coauthors (2006) report that nonstandard work schedules are associated with worse family functioning, including more depressive symptoms among parents and less-effective parenting. Parental depression and lower-quality parenting are in turn associated with more social and emotional difficulties among children aged 2 to 11 years old.

Child care and "tag-teaming" in single parent families may involve another relative (e.g., a grandmother) who is available to provide care at nonstandard hours. Relatively little is known about the quality of such arrangements or the associations with family functioning. Presser and Cox (1997), using Current Population Survey (CPS) data, show that a high proportion (approaching one-half) of less-educated women worked a schedule that was not standard (i.e., not one with a fixed schedule with all hours worked during weekdays). To

date, there is relatively little quantitative research focused on maternal work schedules and child outcomes among low-income populations, particularly low-income, single mothers.

One exception is Dunifon and her coauthors' (2005) study of welfare mothers in Michigan. The authors carefully operationalize a number of work conditions that might affect child outcomes, specifically a mother's long work hours (40+ per week), unstable or erratic work schedules from week to week, working a nonday shift, and having a long commute. Using data from the Women's Employment Study (WES), a five-year longitudinal study of a sample of women drawn from the cash assistance rolls in an urban county in Michigan who had children ages 5 to 15, they focus on the subsample of women who were employed at one or more of the second through fifth waves of interviewing. Dunifon and her coauthors (2005) do not find any significant increase in children's behavior problems over the five-year period for those who worked a nonday shift at one or more waves of interviews. Nor were a mother's long working hours or scheduling instability significantly associated with child outcomes. However, they did find that lengthy commutes—which extended mothers' work days, perhaps increased unpredictability, and complicated child care arrangements—were associated with more internalizing behavior problems and lower prosocial behavior of children in the study.

Using the NSAF, Phillips (2002) also analyzed the association between single mothers' work schedules and child well-being indicators. Among low-income children ages 6–11 in the NSAF, neither levels of parental work (full-time/part-time status) nor nonstandard work hours were associated with behavior problems, school engagement, or extracurricular activity for children of single parents. In a recent analysis of a small low-income sample of working parents in Boston, Chicago, and San Antonio, Joshi and Bogen (2007) find that nonstandard work significantly increases internalizing and externalizing behaviors of 2–4-year-olds and lowers their positive behavior. Although the study controls for many observed differences between those working standard and nonstandard hours, the ability of a parent to find only jobs with nonstandard hours may be correlated with lower child performance for reasons having nothing to do with the hours themselves.

Qualitative Research

Qualitative research on nonrepresentative samples of low-income women has documented problems associated with work schedules and care of children. Child care may be harder to

find, arrangements more often include relatives and multiple arrangements, and child care may be inherently more unstable when a mother's work schedule includes nonday or weekend hours (Henly and Lyons 2000). Henly and Lambert (2005) interview a low- income sample of women in the Chicago area whose schedules often change from week to week in response to consumer demand. Hours can be long one week, short the next. The variability in hours, rather than the shift itself, is the factor that creates child care problems for these low-income mothers. Child care often has to be secured at the last minute because of a schedule change. Shifts can be extended and children cannot be picked up as planned.

Heymann (2000) finds that children are more likely to be in self-care or in the care of siblings in low-income families with a mother who works in the evenings.[16] Grosswald (1999) describes the child care strategies of bus drivers (in-depth interviews with 17 transit workers, all married, 6 female and 11 male, in the San Francisco Bay area) and reports that these workers leave children alone or bring them to work (on the bus) in order to accommodate shift work.

In summary, the empirical base for assessing the impact of nonstandard work arrangements on family functioning is still quite limited relative to the rich array of hypotheses about how and why aspects of maternal employment—work schedules, long work and commuting hours, and work schedule instability—can negatively affect child well-being. Nonstandard work for mothers generates several concerns, including the difficulty in arranging adequate child care for young children, interference with the ability of parents to help school-age children with homework, and a general lack of parental supervision, particularly for older children and adolescents. Finally, in the case of two-parent families, "tag team" parenting may affect relationship quality because partners find it difficult to spend time together as a couple.

So far, studies that use longitudinal data and extensive controls find mixed results. Some find an association between working nonstandard schedules and negative child outcomes (Bogen and Joshi 2001; Han 2005), while others find no association (Dunifon et al. 2005). To adequately study the relationship between paid work and family functioning, future research will likely need to pay greater attention to the timing of both paid work and family demands. This will entail greater attention to the schedules of multiple family

[16] Journalistic accounts such as that of Katharine Boo (2001) in the *New Yorker* reinforce this picture.

members—not only the work schedules of parents but also children's school schedules and temporal constraints on various child care options.

3. Job Loss and Unemployment

Unemployment is expected to exert negative effects on family functioning through two main mechanisms. The first is economic. Unemployment or (involuntary) job loss creates financial strain and reduces the economic resources families have to provide members with necessities like adequate food, clothing, and shelter, and it also diminishes parents' ability to provide things like safe neighborhoods and good schools for their children. The second pathway is through psychological health. Here, unemployment can affect family functioning by increasing the psychological stress and eroding the mental health of the unemployed individual. The unemployed experience increased risk of depression and anxiety. The combination of financial and psychological strain spills over into more marital conflict and less effective parenting (e.g., less parental warmth, more erratic parenting, more disengaged parenting).

Although most of the empirical research on job loss or unemployment focuses on individuals rather than families, there are "pockets" of research that examine how unemployment or economic crisis spills over into family functioning. For example, in a longitudinal study of rural, two-parent families during the late 1980s farm crisis in Iowa, Conger and Elder (1994) proposed a model whereby economic pressure would increase parents' emotional distress, reduce marital quality, lead to less effective parenting, and ultimately result in poorer adolescent adjustment. The sample of 451 two-parent families was first interviewed in 1989 and followed through 1994. Each family had a 7th-grade child and near sibling in 1989, with the focal child a senior in high school in 1994, the time of the last interview. Early cross-sectional results lent support to the hypothesized relationships (Conger and Elder 1994). However, when the focal children were in the 10th grade, roughly four years after the initial interview, there were few differences in adolescents' emotional distress or family relationships in families who had lost their farms and experienced substantial economic hardship compared with those who had not.

A second set of studies, also done in the 1980s and early 1990s, focused on working-class families during manufacturing crises and plant closings in Michigan and Maryland. Table 6 reviews the findings from a number of the published studies (Broman, Hamilton,

and Hoffman 1990; Flanagan 1990; Flanagan and Eccles 1993; Howe, Levy, and Caplan 2004; Kessler, Turner, and House 1989; Vinokur, Price, and Caplan 1996). Unemployed workers showed an increased incidence of depression and anxiety (Kessler et al. 1989). Symptoms of distress improved upon re-employment.

One difficulty with this literature is determining causal pathways: does job loss make one depressed and anxious or do depressed and anxious individuals do poorly on the job and thus lose their jobs? In general, those who lost their jobs through mass layoffs and plant closings had similar experiences compared to those who lost jobs for other reasons, suggesting that causality runs from unemployment to poorer mental health (Kessler et al. 1989; Price 1992).

Some studies suggest that one of the consequences of unemployment or job loss is a reduction in marital quality. Unemployment is associated with more conflict between spouses (Broman et al. 1990; Howe et al. 2004). Financial strain increases symptoms of depression not only in the unemployed individual but also in his or her partner (Vinokur et al. 1996). This inhibits a partner's ability to provide support to the unemployed individual.

Liem and Liem's (1988) longitudinal study of 82 recently involuntarily unemployed men in Boston interviewed in the early 1980s noted high levels of depressive and other negative psychological symptoms following job loss, with more depression among those who had better, more challenging jobs prior to the loss. Wives also showed higher negative psychological symptoms, but these did not manifest as quickly as for the husband, nor were her psychological impairments as large. Howe and colleagues (2004) elaborated secondary stressors following job loss that were associated with increases in depressive symptoms in both the job loser and his or her partner and that also appeared to degrade the quality of the couple's relationship. These "secondary stressors" included applying for or being denied benefits (e.g., welfare, unemployment, bank loans), restricting their spending, changing their routines, relocating and engaging in job search, or obtaining additional training.

Some researchers have dealt with the relationship of parental unemployment and adolescents' well being. Flanagan (1990) and Flanagan and Eccles (1993) study adolescents, their mothers, and their teachers by using a sample of two-parent, middle- and working-class families in Michigan in the 1980s when the automotive industry was in crisis. They followed children longitudinally and group families into those in which the parent remains unemployed, those in which an unemployed parent is reemployed, and those in which the

parent is stably employed. When families are coping with a job loss or demotion, adolescents report higher levels of conflict with their parents relative to other adolescents (Flanagan 1990). However, the conflict associated with a loss of work status declines when the family recovers (i.e., there is a compensatory effect). Adolescents in families with persistent unemployment had more difficulty than other students adjusting to junior high school. Teachers rated adolescents in families with persistent unemployment as less competent than their peers in families where parents were either always employed or where an unemployed parent was re-employed between the first and fourth interviews (spanning a two-year period).

McLoyd and colleagues (1994) studied job loss among African American single mothers, also using a local sample with data collection in the late 1980s. They found that a mother's job loss and economic stress affected adolescents' socioemotional functioning indirectly rather than directly. Current maternal unemployment was associated with increased depressive symptomatology in mothers. Maternal depressive symptomatology was, in turn, positively associated with harsher punishment of adolescents. Higher levels of maternal punishment were associated with greater distress and depressive symptoms in adolescents.

Finally, at least three recent studies use large, nationally representative data sets—the SIPP, PSID, and NLSY—to assess the relationship between parental job loss or income loss and child or family well-being. Kalil and Ziol-Guest (2006) draw on SIPP data to assess mothers' and fathers' underemployment and unemployment in relation to children's grade retention and suspension from school. They examine mothers' and fathers' underemployment (involuntary part-time work) and unemployment in a sample that is restricted to two-parent, mostly white families. They find that maternal unemployment or underemployment is never significantly associated with children's grade retention or school suspension or expulsion. However, fathers' job loss is negatively associated with children's academic progress. Elementary school children with a father who experiences an involuntary job loss have twice the odds of repeating a grade in school compared with those whose fathers are continually employed. This relationship is fully mediated by family economic resources. Once a measure of economic hardship is introduced into the model, the coefficient for fathers' unemployment becomes statistically insignificant. However, multiple job loss (both voluntary and involuntary) increases the odds that children will be suspended or expelled by 5.3 and 2.8 times the levels experienced by children whose fathers continually

work. This behavioral outcome is not mediated by economic hardship, but the authors do not rule out the possibility that some fathers are more prone to unemployment and less effective in raising children.

In a paper utilizing the NLSY, Kalil and Ziol-Guest (2005) also analyze single mothers' job loss and adolescents' feeling of mastery, self-esteem, grade retention, and likelihood of dropping out of high school. Adolescents whose mothers lose a job without regaining employment show declines in mastery and self-esteem. Those whose mothers are continuously employed in a low-paying job show an increased likelihood of grade repetition. Those whose mothers are either persistently unemployed or lose more than one job show an increased likelihood of high school dropout. These effects are not explained by concomitant changes in family income.

Finally, Yeung and Hofferth (1998) use the PSID to assess the relationship between a dramatic income loss (a reduction of 50 percent or more) and an array of family behaviors, including reduction in food expenditure, receipt of food stamps, increased maternal employment, and increased likelihood of divorce. Families that experienced either substantial income loss or whose family head experienced reduced work hours were much more likely than families that experienced no loss to reduce their food expenditures and to receive food stamps following the loss. Families that experienced a major income loss were significantly more likely to move in the subsequent year than those with no or a smaller income loss. Surprisingly, wives in white families with a 50 percent loss or more of income did not increase their hours of employment. Income loss was associated with a significantly increased probability of divorce or separation from a partner.

To summarize, the literature on unemployment and family functioning has broadened over the past two decades and now includes studies that assess both the financial impact and mental-health consequences of unemployment for the worker and as well as for the worker's partner and children. Kessler and his coauthors (1989) suggest that an important mediating variable between job loss and poor mental health of the unemployed individual is the financial strain associated with the loss. There may be ramifications throughout the family. When job loss leads to depression on the part of the unemployed, conflict increases among couples and income loss is associated with a heightened likelihood of divorce. In both single parent and two-parent families, increased financial strain and compromised parental mental health seem to increase the likelihood of harsh discipline

practices and poorer school performance on the part of adolescents. These can be short-lived if the bout of unemployment is limited but may persist when financial strain and poor parental mental health become chronic.

4. Child Health and Maternal Employment

Burton and her coauthors (2005) highlight the high incidence of health problems and comorbidity of parents and children in low-income families. They argue that more attention needs to be given to the health problems of family members in studies that assess impediments to job retention and successful parenting, particularly among low-income families. A consistent finding in the research literature is that a serious heath problem or disability of a child is associated with reduced maternal employment. In the 13 recent studies reviewed in table 7, this negative association between a child's health or disability and maternal employment is pervasive. Loprest and Davidoff (2004) suggest that the reduction in maternal employment is not present for all types of child disability and is most often found when a child has a condition that results in activity limitations. However, most studies spanning an array of disability definitions consistently find that mothers respond to a child disability or serious health limitation by reducing employment.

The literature on child health and maternal employment reminds us that the relationship between employment and family functioning is often reciprocal, making it complicated to sort out cause and effect. In addition, a change in employment that alters family functioning can then result in a feedback loop whereby the change in family functioning alters subsequent employment, particularly of mothers, whose roles in the family remain highly responsive to the needs of children.

5. Assessment of Links between Family Functioning and Employment

Clearly, employment often interacts with the functioning of families, but not all of the two-way relationships are significant or expected. Although the patterns are situation specific, we can draw several conclusions from the observational literature.

- Employment of mothers generally does not worsen the functioning of families. The possible exceptions are mothers of children under age 1, single mothers with adolescents and a younger child, and high-income children. Market work by mothers with children over age 1 is associated with improved child outcomes.

- The evidence on the impact on children of long or nonstandard work hours by mothers is mixed. Several studies find negative effects on marriage, family functioning, and child outcomes. However, one detailed study of welfare mothers found that job requirements had no negative effects, but long commutes did. One possibility is that women who are less concerned with maintaining their marriage or family relationships are more likely to take jobs with demanding, irregular, or nonstandard hours requirements.

- Unemployment of men and women lowers their self-esteem and worsens some psychological symptoms. In addition, men's unemployment creates financial problems, marital strains, and concurrent negative effects on children's schooling. But, often the negative effects on family functioning are temporary. Job losses for mothers sometimes generate negative psychological effects on children, but the induced problems do not lead to grade retention or suspensions or expulsions from school.

- Few studies examine the dual directionality of the relationships. In particular, the impact of positive or negative family-functioning variables on employment is not well examined in the literature.

E. The Relationship between Marriage and Family Functioning

The literature on how marriage interacts with measures of family functioning is extensive. In this review, family functioning encompasses child and adult well-being as well as the dyadic relationships between children and parents and between adult romantic partners. Conventional wisdom, supported by tabular data analyses, holds that married adults and children living with their married parents, on average, fare better on a host of indicators and outcomes than adults and children in other living arrangements. At the same time, breakdowns in family functioning caused by strains in partner and parent-child relationships both inhibit the formation of married-couple families and contribute to their dissolution.

Researchers examining links between marriage and family functioning attempt not only to assess the strength of the relationships but also to learn the mechanisms by which marriage promotes family functioning and, in turn, how family functioning influences marriage. Sound policy requires knowledge of the role of marriage in promoting well-being, the size of marriage effects relative to effects of other factors (such as income and maternal mental health), and the extent to which marriage itself affects these factors. Determining causal links is a complex task and has involved a wide variety of analytic approaches. This

variation makes it challenging to compare findings across studies and to draw strong conclusions.

Four principal differences in the nature of studies can affect differences in findings. First, studies use different definitions of marriage and compare marriage to a wide variety of alternative family structures. For example, some studies distinguish between first and higher-order marriages, and others distinguish between married biological and married stepparent families. Suppose children in stepparent families do worse on a particular outcome than children with their married biological parents; then, combining the two under the label "married family" and comparing children in married families to children in single-parent families may misstate the benefits of marriage. Similarly, the benefits of marriage may vary depending on the alternatives considered—single living alone, single living with other adults, never married, divorced, widowed, cohabiting, and so on.

Second, some studies assess current outcomes as a function of current living arrangements, while others take a "life course" approach. That is, they assess how well-being at a point in time is influenced by living arrangements versus changes in living arrangements over some set of years prior to the present time. This approach allows researchers to distinguish, for example, between children who spent all their lives with married parents from those who spent many years in single-parent families but just recently transitioned into married-parent families. Some research focuses solely on the effects of changes in marital status on adults with children. The outcomes may depend on the type of transition, since the trauma of divorce may be quite different from the effects of always living in a single-parent family.

Third, the influence of marriage on well-being likely varies by age, sex, and race and ethnicity. For example, marriage may confer more benefits to men than women. Theoretically, white male children may fare substantially better with married parents than with cohabiting parents, but these two arrangements may yield different outcomes for black male children.

Fourth, marriage may exert different influences on different domains of well-being. The security and stability of marriage may confer substantial benefits to the psychological well-being of adults and to the behavioral outcomes among children. On the other hand, cognitive outcomes may depend far less on marriage than on factors outside the home.

Further complicating the evidence on how marriage affects family functioning is the variation in how researchers incorporate other factors into their analyses. One key issue is whether to view family differences other than marital status as moderating or mediating the impact of marriage. Take, for example, income. Individuals in higher-income families tend to do better on a wide variety of outcomes than individuals in lower-income families, and married families tend to have higher incomes than other families. Thus, when multivariate models include measures of income, the benefits of marriage relative to other living arrangements tend to fall. If family income is viewed as moderating the effects of marriage, the inference is that the benefits of marriage are smaller than they first appear. On the other hand, marriage may enable families to have higher incomes. If part of the benefit of marriage is mediated through the beneficial effects it has on family income, then including income in a multivariate model will lead analysts to understate the benefits of marriage. Thus, in considering the vast research on marriage and family functioning, it is important to note the other factors that are taken into account in empirical research and how results are interpreted.

1. Marriage Influencing Behavior and Parent-Child Interactions

The article by Hansen, McLanahan, and Thompson (1997) is one of the most exhaustive cross-sectional studies of child well-being and marriage. Using data from the National Survey of Families and Households (NSFH), the study assesses the correlation between the school behavior and psychological well-being of 5- to 18-year-old children and an extensive set of children's living arrangements. The comparisons are between children living with their married biological or adoptive parents and children living in stepparent, cohabiting, and single-mother families. The authors also distinguish between never-married and divorced single mothers and between cohabiting parents and cohabiting stepparents. Controlling for race, age, family size, family's income relative to needs, and some other factors, the authors find that children living with their married parents relative to children in other arrangements are less likely to exhibit behavioral problems and internalizing behaviors, are more sociable, show higher initiative, and report an higher quality of life. One interesting exception is children living with their two biological cohabiting parents. The difference between these children and children with their married parents is only statistically significant when considering behavioral problems. The absence of statistically significant differences for

children living with their cohabiting parents may be due to the relatively small number of children (5–18 years of age) who fall into this category.

In recent years, several researchers have been focusing on children in cohabiting families to distinguish between the importance of marriage and the importance of the presence of two parents. Using data from the National Survey of America's Families (NSAF), Brown (2004) finds that children ages 12–17 have more behavioral and emotional problems and show lower school engagement if they live with their two unmarried parents rather than their two married parents. Manning and Lamb (2003) find similar results using data from National Survey of Adolescent Health (Add Health). Estimates from these authors indicate that better outcomes for teens are related to marriage and not merely "male presence." Adolescents did better in married stepfamilies than in cohabiting stepfamilies. On the other hand, Brown (2004) does not find marriage superior to cohabitation when comparing outcomes for children 6–11 in married and cohabiting stepfamilies in the NSAF.

Research that takes a "life course" approach also produces varying results on the influence of marriage on child well-being. Using data from the NLSY, Carlson and Corcoran (2001) find that 7- to 10-year-olds who lived continuously in single-mother families since birth have more behavioral problems than those who lived continuously with their married parents. Some studies show that marital stability is of paramount importance in explaining children's well-being. Wu (1996) finds that the more changes in family structure a girl experiences, the more likely she is to have a nonmarital birth. Hill, Yeung, and Duncan (2001) assess how a girl's living arrangements through age 15 affect the probability that she has a nonmarital birth by age 20. Their results indicate that girls who continuously lived with their two married parents were less likely to have a nonmarital birth not only compared to girls who lived continuously in single mother families, but also compared to girls with married parents but who experienced transitions in parental living arrangements.

Some research on living arrangements and child well-being focuses on the impact of divorce. Children of divorced parents not only spend some time in single-parent families, but they also experience at least one disruption in living arrangements. As such, it is not surprising that the majority of studies find that divorce is harmful to children. In a meta-analysis of 92 papers, some with and some without statistical controls, Amato and Keith (1991) report that in over two-thirds of the studies, children in divorced families have worse self-concepts and more conduct problems than children in married-parent families. The sizes

of the effects range from 12 to 20 percent of a standard deviation. Other research documents that a substantial portion of the differences in outcomes for children in divorced and intact families is actually present before divorce (Cherlin, Chase-Lansdale, and McRae 1998; Sun 2001). This suggests that marital quality is an important factor contributing to child well-being.

Indeed, many mediating and moderating factors affect the estimated impacts of marriage on child well-being and family functioning. For example, Vandewater and Lansford (1998) find that family conflict rather than family structure accounts for behavioral differences between adolescents in never-divorced and divorced, never- remarried families. And when Carlson and McLanahan (2005) take parental relationship quality into account, they show that marriage does not significantly influence parent-child engagement at one year after birth.

One recent study by Osborne, McLanahan, and Brooks-Gunn (2004) examines the impact of a transition into marriage by biological parents on children born outside marriage. The results indicate that marriage following cohabitation is not associated with fewer child behavioral problems at age 3.

The estimated relationship between marriage and child well-being appears to vary by race. According to Dunifon and Kowaleski-Jones (2002), living with a single parent rather than two married parents is associated with greater delinquency among white children (ages 10–14) but not among black children. Salem, Zimmerman, and Notaro (1998) find no effects of marriage on psychological well-being in a sample of African American youth in Michigan.

2. The Influence of Marriage on Children's Cognitive Outcomes

The same pattern of results appears in analyses of marriage impacts on cognitive and school-based outcomes. Children living continuously with their two married biological or adoptive parents have higher test scores, higher grades, and higher graduation rates than children in single-mother families. The estimated marital advantage in cognitive outcomes depends in part on the nature of the alternative living arrangements as well as the scope of time considered, the mediating and moderating factors, and the age, race, and sex of the children.

Again, Hansen and colleagues (1997) provide a comprehensive assessment of how the cognitive outcomes of children ages 5 to 18 differ across living arrangements. In their study, children living with their two married parents perform better in school than both

children in never-married, single-mother families and children in cohabiting stepparent families. In addition, children living with divorced mothers or with their unmarried (cohabiting) parents have lower grade-point averages than those living with their married parents.

Other cross-sectional studies with extensive controls support these findings. Using data from the National Educational Longitudinal Survey, Pong (1997) finds that children living with a single parent or in a stepparent family have lower math scores in 8th grade than those living with their two parents. Interestingly, living arrangements were not correlated with 8th-grade reading scores in Pong's study. According to Cooksey (1997), children ages 6 to 9 have lower reading scores if they live with a never-married mother rather than with their married parents. Similarly, Conger, Conger, and Elder (1997) find that 10th-grade GPAs are higher for children living with their married parents than with a divorced or separated parent. According to Painter and Levine (2000), children in divorced families are less likely to complete high school and attend college than children from intact families. Although Cooksey's study indicates that school-age children with married parents have higher reading scores than children with never-married parents, no significant gap appears between children in married- and divorced-parent households. Finally, research using both NSAF (Brown 2004) and Add Health (Manning and Lamb 2003) data finds that school engagement for teens is higher among those living with married parents than for those living with cohabiting parents.

Most, but not all, studies find a benefit of marriage over most other living arrangements for children's educational and cognitive outcomes. Drawing on data from the Beginning School Study, Entwisle and Alexander (1996) did not discern a difference in cognitive growth over the first two years of school between children with married parents and those in other arrangements. This study differs from those cited above in three important ways: (1) the data; (2) the outcome, or the change in cognitive attainment rather than the level; and (3) the control for parents' assessment of a child's ability. In Ricciuti and colleagues' (2004) analysis of data on the 12–13-year-old children of mothers in the NLSY, there is no difference between the cognitive test scores of children in single-parent and two-parent households. However, in this study, two-parent households include cohabiting couples and stepfamilies as well as married, biological-parent families.

Studies that examine cognitive outcomes and living arrangements separately by race or gender or both yield mixed findings. According to Dunifon and Kowaleski-Jones (2002), math test scores for white children of single and cohabiting mothers in the NLSY are significantly lower than for white children living with their married parents. However, they find no such differences among black children. Since Dunifon and Kowaleski-Jones (2002) include child fixed-effects in their model, these results are driven by changes in children's living arrangements. Using data from the Panel Study of Income Dynamics that yield information on the number of years in various family structures, Boggess (1998) finds that residing away from a parent reduces the likelihood of completing high school, but that economic status accounts for much of the apparent gaps between youth growing up in different family structures. Blacks living with a widowed, divorced, or separated mother are less likely to complete high school than blacks living with their two biological parents, once income is taken into account. However, among black young women, years living with a never-married single mother actually increase the chances for high school completion, once economic factors are taken into account.

Evidence for the positive impact of marriage on kindergarten students comes from a recent study using the Early Childhood Longitudinal Study's kindergarten cohort. Artis (2007) finds that children in married, biological-parent households perform better on reading, math, and general knowledge than children in households with cohabiting biological parents or stepparents, even after taking account the income and education levels of the parents. Even children in married stepparent families have higher scores than children in cohabiting households, though the author found no differences between cohabiting biological and cohabiting stepparents.

In summary, the literature offers considerable evidence that living with married biological or adoptive parents from birth forward is associated with better child behavioral outcomes, better parent-child interactions, and better cognitive outcomes than any other pattern of living arrangements. The benefits look especially high for whites relative to blacks, perhaps because alternative family forms are less common among whites. The estimated magnitude of the benefits varies, depending on the specific outcome; the age, sex, and race/ethnicity of the children; the comparison living arrangement; and the mediating and moderating factors included in the model. In general, the size of the effects of marriage and living arrangements on child well-being is modest in research using multivariate controls. In

the report by Amato and Keith (1991) on 92 papers comparing the well-being of children in married-parent and divorced families, the marital advantage ranges from 12.5 to 20 percent of a standard deviation. And even part of these differences reflects differences in unobserved factors between married and unmarried parents.

These findings underscore the importance of policies aimed at reducing nonmarital childbearing, programs that focus on helping already-married families stay intact, and programs aimed at improving the quality of marital relationships. If successful in limiting nonmarital child rearing, these initiatives are likely to yield positive effects on child well-being.

3. Marriage and Adult Well-Being

Marriage plays a significant role in the well-being of adults. Here, we examine physical and mental-health outcomes along with measures of relationship quality. When assessing the influence of marital status on adults, it is important to remember that men and women may experience marriage differently and attain different benefits from marriage. Also, the presence of children and having raised children may also influence the experience of marriage for adults. Again, it is challenging to identify causal relationships. Since happier, healthier people may be more likely to marry than adults in poorer physical and mental health, the apparent benefits of marriage may simply reflect differences in the people who get and stay married versus those who do not. On the other hand, negative selection into marriage is a possibility as well, since individuals who expect to require help in the future may be more likely to marry (Wilson and Oswald 2005).

Research on marriage dating back to the 1960s and 1970s viewed marriage through the lens of women's economic opportunities and found the institution wanting for women (Bernard 1972). A stylized version of this argument is that women had few economic opportunities so they had to marry for economic security and became trapped in the role of stay-at-home mothers and housewives. In a 1966 study, Kaupfer, Clark, and Room estimated that married men showed better mental health than single men, but married women had much worse mental health than single women.

After decades of substantial economic progress for women, this view and these findings seem quite dated. The experience of marriage in today's social and economic context is different from earlier generations. Research from the 1980s forward indicates that

marriage is quite beneficial for both men and women and that there is a strong causal component to the relationship.

First, consider the ultimate outcome: mortality. Married adults are significantly less likely to die in any given year than unmarried adults. In a thorough review of the literature, Ross Mirowsky, and Goldsteen (1990) find that mortality rates for unmarried men are 250 percent higher than those for married men; unmarried women's mortality rates are 50 percent higher than those of married women. More recent research than the work included in Ross's review also finds that married adults have lower mortality rates than unmarried adults and that the marital advantage is greater for men than for women (Rogers 1995). Marriage likely reduces mortality because upon marriage, adults in general, and men in particular, tend to reduce dangerous and harmful behaviors (drinking, brawling, etc.) and develop more healthful habits (e.g., eating more nutritious food on a regular basis). As single men are more likely to have worse "habits" than single women have, it is not surprising that marriage exerts a larger impact on the mortality rates of men than of women. Wilson and Oswald (2005) cite an array of studies, some with persuasive controls for selection effects, showing marriage induces reductions in mortality for men and women. One example is the work of Brockmann and Klein (2004) that controls for selection and that captures full marriage histories, allowing analysis of the timing and sequence of marital transitions. They find that relative to married individuals, divorced men have a 60 percent higher risk of mortality and single women a 50 percent higher risk.

In addition to living longer, married adults are on average happier and healthier than unmarried adults. The correlation is especially strong in families with children. A study by Blanchflower and Oswald (2004) of happiness patterns and trends in Britain and the United States reveals large positive impacts associated with marriage, net of any gains in income. In a paper using panel data on Germany and controlling for observed and unobserved characteristics (with a fixed effect model), Winkelmann and Winkelmann (1998) find large and statistically significant positive effects of marriage on happiness, again net of the income benefits of marriage. To the extent that marriage raises incomes, these studies understate the full impact of marriage on happiness.

Hahn (1993) finds that married adults report being in better health than divorced, widowed, and separated adults. As in other areas, devising ways to estimate causal health effects of marriage is difficult because of the possibility of positive selection, in which

personal attributes not observed in the study are positively associated with both health and marriage. Drawing on Lillard and Panis (1996), Wilson and Oswald (2005) provide some evidence for negative selection into marriage (e.g., Cheung 1998); less healthy men seem more likely to marry perhaps because of concerns about caring for themselves. The Wilson-Oswald review reports several studies showing that marriage conveys substantial health benefits. In work that controls for selection by estimating health and marriage equations jointly and controlling for early health status, Lillard and Panis (1996) still find significant health gains for marriage. Other studies show that more harmonious marriages convey especially large health benefits (Prigerson, Maciejewski, and Rosenheck 1999; Wickrama et al. 1997).

The effects of marriage on mental health are broadly positive but not in all studies. Horwitz, White, and Howell-White (1996) find reductions in depression for married women and in alcohol abuse for men. Simon and Marcussen (1999) show that marriage is associated with lower depression. Interestingly, beliefs about the value of marriage affect the gains from marriage; those valuing the permanence of marriage achieve a larger reduction in depression. Controlling for relationship characteristics, Brown (2004) finds no significant difference in depression between married and cohabiting adults without children, but cohabiting adults with children are significantly more likely to be depressed than married adults. Kim and McHenry (2002), like Brown (2004), examine clinical depression and marriage, but they focus on transitions in relationships. Although they take the number of children present into account in their analyses, they do not examine whether the relationship between marriage and depression differs across adults with and without children. Kim and McHenry find that continuously never-married and cohabiting adults are no more likely to be depressed than continuously married adults. However, divorced or separated adults are more likely to be depressed than married adults, and adults who get married show improvements in mental health.

That mental health *improves* upon marriage is a key insight for assessing the extent to which marriage is responsible for the better physical and mental health of married adults compared with unmarried adults. If happier, healthier people were more likely to get married and marriage itself had no effect, then we would still find a significant positive correlation between marriage and well-being, but the relationship would not be causal. However, if well-being improves following marriage, then it is likely that marriage itself is responsible for the

higher levels of well-being among married adults. The research documents significant improvements in mental health and healthy behaviors upon marriage. Marks and Lambert (1998) use data over a five-year period and find that happiness improves following marriage and that happiness decreases following divorce, especially for women. Similarly, Horwitz, and his colleagues (1996) in a seven-year study find that marriage is associated with decreasing levels of depression and alcohol consumption.

Finally, consider relationship quality. Brown and Booth (1996) compare reports of relationship quality between married and cohabiting couples and find that both married men and married women report higher levels of satisfaction in their relationships than cohabiters.

Marriage is associated with more happiness as well as better physical and mental health among both men and women, with men benefiting somewhat more than women. The psychological benefits from marriage appear larger for adults with children than childless adults. The studies often provide evidence of causation, leading to the conclusion that marriage itself exerts a positive influence on the well-being of adults.

4. Conflict, Poor Mental and Physical Health, and Marital Dissolution

Causal links between marriage and family functioning go in both directions. While marriage conveys benefits for mental and physical health, relationship quality, and the behavior and cognitive abilities of children, difficulties in family life, especially poor health and poor quality relationships, can lead to the dissolution of marriages. The stress of having a sick child and the challenges of maintaining a relationship when one or one's spouse is mentally or physically ill strain marriages and may contribute to divorce and separation.

The idea that stress and conflict in a relationship can contribute to divorce is not controversial. Empirical studies of divorce that include measures of conflict and relationship quality come up with the expected findings. For example, Amato and Rogers (1997) find that irritating habits, foolish spending, drinking, drug use, and infidelity all contribute significantly to divorce even after taking socioeconomic status, marital duration, and church attendance into account. Gager and Sanches (2003) find that husbands' negative assessments of marital quality and wives' negative assessments of marital stability are associated with higher divorce rates. Similarly, Sayer and Bianchi (2000) report that marital commitment and satisfaction are strong predictors of divorce. Gottman (1993) finds that couples who communicate with criticism, contempt, and defensiveness as well as those who do not communicate

(stonewalling) are far more likely to divorce than couples with more open and supportive communication styles.

Research on the causes of marital stress and unhappiness that lead to divorce yields somewhat varying results. Frisco and Williams (2003) find that perceptions of an unfair division of housework contribute to marital unhappiness and that both factors (perceived inequality and unhappiness) contribute to divorce. Interestingly, however, they uncover little support for the idea that the stress of having a seriously ill child raises the likelihood of divorce. According to Kalnins (1983), parents of children with illnesses such as leukemia and cystic fibrosis are not more likely to divorce than other parents, and some parents with seriously ill children report that caring for the child made their relationship stronger. Mauldon's (1990) study of the effect of divorce on children's health explicitly assesses the issue of selection—that caring for frail children contributes to divorce. She finds very little evidence of a selection effect. Thus, while strain, stress, and unhappiness all contribute to divorce, their impact on marital stability varies.

Although some marriages are particularly unhealthy and marred by physical and psychological violence, unhappiness and discord are not necessarily permanent. It is telling that among couples that rated their marriages as unhappy in the National Survey of Families and Households, 86 percent were still married five years later, and 60 percent of these couples now report having happy marriages (Waite and Gallagher 2000). Indeed, this suggests that unhappy marriages can be improved and sustained if stressors are removed and relationship skills are built.

5. Assessment of Links between Marital Status and Family Functioning

To summarize the evidence on connections between marital status and family functioning, we can cite the following four conclusions.

- There is a persistent positive correlation between living with married biological parents and children's well-being. Because there is no consensus on which factors (e.g., income, home environment, etc.) moderate the effects of living arrangements and which factors are themselves influenced by living arrangements, there is no consensus on the magnitude of marriage's overall effects. By some estimates, the impacts are low, about 20 percent of a standard deviation in the outcomes considered. Further, because married and unmarried parents differ in unobservable ways, it is difficult to ascribe causation.

- The marital advantage for children varies depending on the alternative living arrangements considered as well as the children's ages, races/ethnicities, and genders. For example, the benefits of marriage appear to be larger for white children than for black children.

- Married adults are in better physical and mental health than unmarried adults. Given that longitudinal studies show improvements in health following marriage, the relationship is likely causal. The health benefits of marriage are somewhat stronger for men than women and for couples with children than childless couples.

- Conflict and poor relationship quality between married partners do contribute to divorce. Other sources of strain such as caring for a seriously ill child are not consistently correlated with marital dissolution.

IV. Evidence on the Relationships among Marriage, Employment, and Family Functioning from Experimental Research

Experimental research on public programs and demonstrations can offer persuasive evidence on how employment, marriage, and family functioning interact, and on the impact of specific policies. Moreover, the results are of special interest since the interventions typically target low-income or at-risk populations. While the experiments of interest test treatments aimed at one outcome (usually employment), the results are relevant to how the intervention directly or indirectly affects the other outcomes (say, marriage or family functioning). Many experiments deal with interventions aimed at raising employment and earnings. Researchers will focus on the question of whether the intervention did indeed increase employment, but they can also assess whether the intervention or the induced employment affect marriage and indicators of family functioning.

Because experiments with healthy marriage interventions for low-income populations are in their initial stages, only limited evidence based on random-assignment demonstrations for low-income populations is available from demonstrations targeting marriage issues directly. Several experiments have examined job training and education interventions for at-risk youth, for high school dropouts, for young parents and prospective parents, for those at risk of requiring income support, for disadvantaged adults, and for welfare recipients either in or outside of the welfare-to work context. While many experiments test how to improve job skills and increase earnings, others focus on how best to improve childhood development and well-being, often through early-intervention services

to low-income families. Still other evaluations consider the effects of services provided directly to children through education or child care, or to parents in the form of parenting-skills training or father-involvement initiatives. In the sections below, we review selectively the evidence from demonstrations and program evaluations conducted to achieve these goals. We begin with employment strategies and then turn to interventions aimed at improving family functioning and marriage and other family outcomes.

This section is not an exhaustive review of all experimental evaluations of employment interventions and related family and child well-being programs. It is intended as a discussion of selected evaluation studies to complete and complement the literature review.

A. Employment Demonstrations and Program Evaluations

Experiments have tested employment-oriented interventions covering a range of policies, from job-skills training to employment-seeking and job-placement services, from employment incentives like income disregards to general education like GED completion. The interventions often target specific population groups, including individuals on a welfare program, disadvantaged youth, low-income adults, or displaced workers.

In reviewing the demonstration results, it is worth recalling findings from the observational studies. Empirical evidence connects employment and marriage in several ways. Men's employment and earnings increase the likelihood of marriage, but more employment among women could have a positive or negative effect. At the same time, marriage increases hours worked and earnings among men but not necessarily among women. The employment links to family functioning are similarly diverse. Studies suggest that negative effects of women's employment are limited to those with children younger than age 1 and that some positive effects are possible. Some evidence links nonstandard working hours to weaker family functioning, including higher rates of divorce and worse child outcomes, but the results are less clear for low-income women and single parents. For men, unemployment can have serious social as well as economic consequences and worsen the functioning of families.

1. Welfare-to-Work Demonstration Projects

Impacts on Employment, Income, and Earnings

The Federal Family Support Act of 1988 required the government to provide welfare recipients with employment, education, and other support services to encourage employment and to move recipients off of welfare. When states proposed waivers from some federal rules under the Aid to Families with Dependent Children (AFDC) program, the U.S. Department of Health and Human Services mandated experimental evaluations to determine the impact of the waivers, many of which aimed at stimulating more work effort. Since then, with the passage of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA), the welfare system has further strengthened its emphasis on employment.

Studies of welfare-to-work programs initiated by state and local governments offer a special opportunity to assess the effectiveness of job training and employment for a population of welfare recipients or families at risk of going on welfare. In this section, we review several distinctive and well-evaluated projects. One comprehensive evaluation of welfare-to-work demonstration programs is the National Evaluation of Welfare to Work Strategies (NEWWS), conducted in the early and mid-1990s (Hamilton et al. 2001; Layzer et al. 2001). This demonstration examined 11 random-assignment projects in seven sites to determine the effectiveness of education-oriented, employment-oriented, and casework-oriented programs. In three sites, there were employment-focused and education-focused experiments. The evaluation studied five-year impacts of these programs.

In general, the interventions raised the employment rates of single mothers. Those randomly assigned to the treatment group increased the number of quarters they worked and decreased their receipt of welfare compared to those randomly assigned to the control group. The employment-focused programs generally achieved a larger effect on earnings, income, and welfare receipt than did education-focused programs. While participants had higher earnings and rates of employment, these increases were mostly offset by lower amounts of welfare and other benefits (Layzer et al. 2001).

States conducted a wide range of experimental tests of welfare-to-work policies. These interventions often included new financial-incentive policies to encourage work. One disregarded additional earnings and thus reduced the benefit reduction rate for those on

welfare. Another imposed time limits on the number of months someone can receive welfare benefits. The passage of PRWORA, along with the implementation of the earned income tax credit expansions in 1996, applied financial incentives to all low-income families.

This review examines the findings from an additional five experimental welfare-to-work demonstrations. The first, the Minnesota Family Investment Program (MFIP), was a mandatory program with favorable financial incentives that operated in seven counties. Although the standard state AFDC program incorporated several welfare-to-work features, MFIP required participation in work and training programs, consolidated and cashed out related benefit programs, and provided child care subsidies directly to providers (Gennetian, Knox, and Miller 2000). It also provided an earnings disregard of 38 percent for calculating welfare assistance eligibility. The second is Jobs First, a statewide project in Connecticut. It provided single parents on welfare with an enhanced income disregard, limited the length of time that participants could receive welfare to 21 months, and imposed strong work requirements (Bloom et al. 2002).

Third, the Family Transition Program (FTP) in Escambia County, Florida, was similar to Jobs First; offered an enhanced income disregard; and put in place a shorter, 24-month limit on the number of months families could receive welfare. FTP offered other services such as health care, social services, and employment assistance along with subsidized child care (Bloom et al. 2000).

Fourth, the Los Angeles Jobs-First GAIN (LA GAIN) in California provided an earnings disregard, jobsearch assistance, and subsidized child care services (Freedman et al. 2000). Fifth, Vermont's Welfare Restructuring Project (WRP) offered an enhanced earnings disregard to applicants for and recipients of case welfare assistance and allowed those in the treatment group to accumulate more savings and more assets (such as a car) that were not counted toward welfare eligibility in conjunction with a 30-month time limit for welfare (Scrivener et al. 2002).

These five welfare-to-work programs yielded significant gains in employment, especially among the most disadvantaged groups. The added jobholding was often substantial, though often the gains did not persist beyond three years. MFIP raised the employment rate of single mothers who were long-term welfare recipients by 11–13 percent in the first three years after random assignment. The MFIP-induced employment increases were only a modest 2–3 percent for other single mothers. In contrast to the added

employment among single parents, MFIP reduced employment in two-parent families, partly by liberalizing rules that kept such families on welfare. Vermont's WRP also increased the long-term employment of single parents substantially, but no job gains accrued to low-income, married-parent families. Florida's FTP raised employment of single mothers by 15 percent over the first three years after random assignment. By the fourth year, however, the employment difference between the FTP treatment and control groups was no longer significant. As in MFIP and Vermont's WRP, two-parent families experienced no increase at all in employment by participating in FTP. Jobs First was the one demonstration that stimulated the earnings of two-parent families; in fact, the increase was higher among two-parent than among one-parent families.

All of the demonstrations achieved increases in earned income in the short term, but most gains evaporated in the longer term. One exception was Florida's FTP. The peak earnings gains of over 20 percent took place in years 2 and 3, but FTP experimentals maintained a 12 percent advantage even in the fourth year after random assignment.

Overall, the gains in employment and earnings in these welfare-to-work programs were sizable, especially for single parents in the first few years after random assignment. The gains sometimes persisted beyond three years but often they eroded. While the interventions increased earnings, recorded income gains were modest because added earnings led to reduced benefits in welfare-related programs. As was the case with the NEWWS demonstrations, the increases in earnings were mainly offset by decreases in welfare support and led to little change in total family incomes. One caveat is that some of the projects took place before the large expansions of the Earned Income Tax Credit (EITC) raised the economic benefits from working. In an environment where work becomes more financially rewarding, welfare-to-work programs might become more successful as program staff can show that recipients will gain substantially from working. On the other hand, the improved financial incentives to work might limit the need for welfare-to-work programs since more recipients will increase work effort in response to the incentives.

Income gains materialized in some, but not all, projects. In the last month of follow-up of Jobs First, the income increase was about 9 percent. FTP experimentals experienced a 6.5 percent increase, but it was not statistically significant. In MFIP, income gains did take place, but only for long-term recipients.

Impacts on Marriage

Given the design and the employment and earnings effects of these WTW interventions, what impacts should we have expected on marriage? Employment did increase in all the demonstrations, especially among single mothers for the first few years, and among two-parent families in Jobs First. Also relevant is that the designers of MFIP made a concentrated effort to lessen the marriage penalties built into the structure of income-support benefits. WRP also provided somewhat more generous treatment for two-parent families, thereby lowering marriage penalties to some extent.

Perhaps as a result, MFIP and WRP exerted positive, significant impacts on marriage in the first few years after random assignment (Gennetian and Knox 2003). Consider first the MFIP results. If women's employment were relevant to marriage, we might have expected to observe an impact on women experiencing the largest MFIP-induced increase in employment, the long-term welfare recipients. In fact, at the three-year follow-up, when these long-term recipients were achieving employment gains, they also exhibited higher marriage rates. The percent of this group married and living with a spouse rose from 7 percent to 10.6 percent. Mothers never married at random assignment showed a 2 percentage point rise in the proportion married. The more substantial effects took place among two-parent treatment families, whose rates of separation and divorce were 19.1 percent less than among their counterparts in the control group. By the 6th year of the follow-up, the treatment and control groups were equally likely to be married or divorced.

In a meta-analysis of WTW programs reviewed in this section (including NEWWS), Gennetian and Knox (2003) analyze the combined effects of all the demonstrations and subgroups of demonstrations on marriage levels at final follow-up. The pattern is that marriage rates remained exceeding low, at about 10 percent, and averaged no higher for those exposed to treatments than among those in the control group. Cohabitation did not differ by treatment status and also stood at about 10 percent. However, when pooling the effects from MFIP and WRP—two programs that offered enhanced earnings disregards and no welfare time limits—Gennetian and Knox uncover a 3.2 percentage point higher marriage rate for the treatment group, a difference that is statistically significant. A good deal of this gain comes from the WRP financial-incentives component, a treatment that did not affect employment levels.

Impacts on Family Functioning

Impacts on family functioning vary across the demonstrations, both in the wide range of outcomes measured and in the findings themselves. In general, the demonstrations improved the behavior and academic achievement of children and increased the use of formal child care (which is linked with better outcomes) in the short term. However, the effects varied widely across demonstrations. The FTP did not stimulate statistically significant, long-term improvements in most areas of family functioning, but increased child-support payments by 5.1 percent and reduced the share of children in poor health by 2.7 percent. On the other hand, the likelihood of suspensions for adolescents in the FTP treatment group was 8 percentage points higher than among those in the control group, perhaps partly because of the lower degree of parental supervision. Although Jobs First stimulated more use of formal child care, no discernible benefits were observed for children's academic achievement and schooling, behavioral and emotional adjustment, and safety.

Evaluators of MFIP measured several indicators, including child behavioral and health problems, performance and engagement of children in school, parenting behavior, and experience of depression or domestic violence on the part of mothers. The results showed that MFIP improved several family-functioning outcomes among participants who had been on welfare at least 24 months prior to random assignment. Gains were especially notable in terms of reduced domestic violence. In the last year of follow-up, experimentals were much less likely to experience violence from an intimate partner (21.8 vs. 28.5 percent). MFIP lowered the percent of children with high levels of behavioral or emotional problems from 14.5 to 6.8 percent. The improvements in child behavior problems as well as in mother's risk of clinical depression were especially notable in cases where the focal child was over age 6 at random assignment. However, the links between these gains and employment are less clear, since income and employment gains were smaller for this group than for families in which the focal child was under age 6.

In a meta-analysis, Gennetian and her coauthors (2002) examined how 16 welfare-to-work demonstrations, taken as a group, affected schooling outcomes of adolescents.[17] Her results reveal modest negative impact on some outcomes, but no effect on others. Mother's reports of their children's school performance showed a decline of about 0.1 of a standard

[17] The demonstrations included NEWWS, MFIP, GAIN, FTP, and WRP, as well as New Hope, SSP, and Jobs First, projects which are discussed below.

deviation. Other impacts, such as more use of special-education services and increased incidence of repeating a grade, were statistically significant but were small in terms of effect sizes. The demonstrations exerted no effects on dropping out of high school, on fathering a child, or on suspensions or expulsions. Adolescents with a younger sibling had a higher chance of being suspended but, on the positive side, they were less likely to repeat a grade. One important caveat is that demonstrations with the largest impacts on mother's employment did not generate the highest negative impacts on family-functioning outcomes.

A key concern about mandatory work programs for welfare recipients was that the reduced time that mothers spent parenting would worsen child outcomes. Overall, the demonstrations reveal few such indications, at least for women who had been on welfare. Often, additional work by mothers was associated with some improvements in child functioning and in some indicators of mothers' welfare.

2. Other Models to Stimulate Employment and Earnings of Low-Income Families

Several experimental projects have aimed at helping low-income families outside the U.S. cash-assistance system. These efforts to increase earnings of low-income adults offer evidence about whether interventions increase employment and about any links between employment, marriage, and family functioning. We focus here on four experimental or quasi-experimental interventions evaluated between 1992 and 2003: New Hope, Canada's Self-Sufficiency Project (SSP), Cleveland Works, and New Visions.

The New Hope project in Milwaukee, Wisconsin, was a voluntary program targeted on low-income people living in two neighborhoods in Milwaukee. The program reached out to all low-income families, making a special effort to enroll two-parent families and to avoid financial penalties to marriage. Participants who worked a minimum of 30 hours a week were provided an earnings supplement to bring participant's earnings to 200 percent of the poverty level. They also received subsidized child care and health care in addition to job-placement assistance (Huston et al. 2003).

SSP, which operated in British Columbia and New Brunswick, offered generous but temporary wage subsidies to participants working at least 30 hours per week and not on welfare (Michalopoulos et al. 2002). The experimental evaluation used random assignment in enrolling single parents over the age of 19 who had received income assistance in at least 11 of the 12 months in the year prior to the start of the demonstration.

Jobs-Plus took place in Baltimore, Chattanooga, Dayton, Los Angeles, Seattle, and St. Paul. It targeted public housing developments where at least 40 percent of residents received welfare and no more than 30 percent of families reported having an employed family member. To help participants find and keep jobs, Jobs-Plus provided job-search assistance, basic education, vocational training, and support services including child care and transportation. In addition, the program increased work incentives by reducing the extent to which increases in earnings raised public housing rents. A third component of Jobs Plus was neighborhood support through the sharing of job-market information and encouragement to work. The hope was that increasing employment among some residents would exert a positive effect on neighborhood employment and lead to positive spillover effects into other areas of life. This study drew a comparison group from similar populations not enrolled in the demonstration (Bloom, Riccio and Verma 2005).

Cleveland Works tried to stimulate employment gains using a model of graduated stress, job-readiness training, and extensive family supports, including family counseling, child care, health care, and housing assistance. It placed participants in work environments under close supervision and slowly increased their responsibilities and work expectations (Layzer et al. 2001). It targeted hard-to-employ families receiving welfare and included primarily black women. Cleveland Works used a comparison-group methodology, with welfare recipients participating in the local Job Training Partnership Act (JTPA) programs serving as the comparison group.

New Visions in Riverside County, California, provided community college opportunities to welfare recipients with a high school diploma or equivalent qualification who worked for at least 20 hours per week as part of their welfare programs. It aimed to prepare participants for community college occupational programs through college preparatory classes, academic instruction, and guidance classes in a 24-week program (Fein and Beecroft 2006). The evaluation used random assignment of individuals to determine program impacts.

Impacts on Employment, Earnings, and Income

All of the programs except New Visions generated significant increases in employment and earnings and decreases in welfare use. The gains varied in size and timing. Some worked especially well for the most disadvantaged individuals.

The employment and earnings gains observed in New Hope were concentrated in the first few years after random assignment. Employment increased by 9 and 10 percent in follow-up years 1 and 2, while earnings jumped by 23, 11, and 13 percent in follow-up years 1 through 3 (Huston et al. 2003). In none of the subsequent years did New Hope generate statistically significant increases in employment and earnings. Still, the average increase in earnings over five years was a 7 percent gain for low-income families. Because New Hope supplemented earnings, gains in earnings-related income (including EITC and New Hope's earnings supplement) averaged over 10 percent and were statistically significant during the five years of follow-up. Income gains, net of reductions in transfers, were about 7 percent and statistically significant. But even these expanded measures exhibited no statistically significant gains in the last two years.

The generous and time-limited earnings subsidies in Canada's SSP stimulated large and significant increases in employment and earnings for new applicants. The gains peaked the second year after random assignment (Michalopolous et al. 2002). Among new applicants, earnings jumped by 23 percent. This was the period when participants had to leave welfare to obtain the earnings supplement. The gains moderated over subsequent years, but stood at 12 percent in the first quarter of the fifth year after random assignment. Earnings of experimentals were still $1,305 higher than controls at year 6. Although overall cash assistance declined, total pretax income increased over 17 percent in year 2 after random assignment and was still 7 percent higher early in the fifth quarter after random assignment. The gains in income for the SSP experimental group were substantial enough to exceed the incremental costs to the government of paying for earnings supplements instead of welfare payments. In fact, per experimental-group member, SSP yielded nearly $2,600 in net social benefits because the economic value in added earnings exceeded the added administrative expenses.

In Jobs-Plus, residents subject to the treatment achieved earnings that were 6.2 percent higher than the control group, with the effect clustered primarily in the three most strongly implemented sites (Bloom et al. 2002). The effects were larger than average for immigrant men and for residents not on welfare. Employment gains were especially notable for the most disadvantaged participants. Although disadvantaged members of the control group nearly tripled their employment rate from about 11 percent to 31 percent, their

counterparts in the Jobs-Plus treatment group achieved higher gains and maintained a 10–16 percentage point higher employment rate over the follow-up period.

The earnings and employment gains for Cleveland Works were also impressive (Layzer et al. 2001). Over a three-year period after entering the programs, those participating in Cleveland Works averaged 42 percent higher earnings and about 20 percent higher employment rates compared to a matched group of participants in the JTPA program. Although the gains declined over time, the Cleveland Works participants still were earning over 22 percent more than the JPTA participants in the third year after entering the program.

The results of the New Visions program were disappointing (Fein and Beecroft 2006). Only 27 percent of volunteers completed the New Visions core program (aimed at preparing them for occupational programs at the community college). Fewer still obtained any occupationally relevant certificate, though the New Visions treatment group did complete five more community college credits than the control group. Over the 3–4 year follow-up period, New Visions caused a decline in employment and earnings. Given the meager education gains and the fact that controls obtained more work experience in the program period, New Visions probably did not raise participant earnings.

These outcomes indicate that programs offering employment services, family support services, and earnings supplements can all raise the employment of low-income families, especially long-term welfare recipients. The one community college education initiative had no positive impact on employment.

Impacts on Marriage

The experimentally induced gains in employment offer a natural experiment on how increased jobholding affects marriage. However, employment and earnings gains varied, sometimes raising employment for single mothers, sometimes for fathers in two-parent families, and sometimes lowering employment of mothers in two-parent families. Moreover, only two of the evaluations examined impacts on marriage.

In Canada's SSP demonstration, which clearly raised employment for single mothers, evaluators found no effect on marriage. The treatment and control groups were equally likely to be married at 18-, 36-, and 54-month follow-ups. The proportion living with a spouse and a child rose from 8 percent to about 15 percent for both the control group and the

experimental group. Despite women's increased ability to support their families, any "independence effect" was not strong enough to deter marriage (Michalopoulos et al. 2002). However, the patterns differed by site. The SSP treatment raised the marriage rate from about 9 to about 11 percent in New Brunswick, but lowered the proportion married in British Columbia (Harknett and Gennetian 2003). Other evidence on SSP comes from a recent analysis that used nonexperimental methods to examine whether women who actually used SSP increased their marriage or cohabitation (Harknett 2006). The findings indicated participation in SSP increased union formation (not necessarily marriage) in one site (New Brunswick), but had no impact in the other site (British Columbia).

Perhaps because New Hope's stimulus to employment went far beyond single parents, New Hope stimulated an increase in the number of married couples in the treatment group. In an in-depth analysis, Gassman-Pines and Yoshikawa (2006) find that marriage rates of never-married mothers in the New Hope treatment group were almost double those of never-married mothers in the control group (21 percent to 12 percent). The authors are unable to account for the observed jump in marriage. It is noteworthy that marriage increased in spite of the experimentally-induced 8 percentage point increase in average quarterly employment among never-married mothers. New Hope offered a degree of income security not available to control-group members. This security, which may account for the lower depressive symptoms among treatment-group mothers, may have helped low-income women be more comfortable in moving forward with marriage. Another possibility is that, because New Hope policies reduced marriage penalties, fewer couples were deterred from marrying for fear of losing benefits. One qualification concerning these results is that New Hope operated in only two neighborhoods; thus, it is unclear that the outcomes are generalizable.

Impacts on Family Functioning

Of this group of five demonstrations, only the New Hope and SSP evaluations carefully tracked the impact of the demonstration on a number of child and adult developmental outcomes. The Jobs Plus evaluation examined possible spillover effects on the economic and social outcomes of all residents in the experimental group of public housing projects. It is worth noting that most of the participants in these demonstrations were single mothers and that two quite different perspectives guide expectations of potential impacts. On one hand,

increasing the employment of single parents might encourage their self-efficacy and motivation, make them more disciplined in parenting and other aspects of life, reduce their reliance on unstable partners, and help them serve as constructive role models to their children. The greater use of formal child care might improve the educational and social development of their children. From this perspective, not finding a positive effect on family functioning is disappointing. On the other hand, as parents spend more time in formal employment, they are likely to have less time supervising their children, helping them with homework, preventing them from getting into trouble, and providing them with the love and affection they need for healthy development. From this perspective, not finding a negative effect is reassuring.

The Canadian SSP demonstration exerted surprisingly little impacts on adult well-being along with varying impacts on child outcomes (Michalopoulos et al. 2002). Despite the significant increases in their employment, the SSP single mothers saw no improvement or worsening in their depression scale, their risk of depression, their self-efficacy, and their parenting. However, the impacts on children varied significantly by age. Notwithstanding fears about potentially detrimental effects of mother's employment on very young children, no such negative effects materialized on cognitive, health, or social functioning. For preschoolers, a few impacts were positive and a few were negative. Somewhat troubling are selected impacts on 13–15-year-olds; these children of experimental-group mothers had worse self-reports about academic outcomes and more behavioral problems than children of control-group mothers.

New Hope identified several positive impacts on adult and child functioning (Duncan, Hudson, and T. S. Weisner 2007; Huston et al. 2003). While experimental parents did not increase significantly their material well-being over control-group parents, they did rate their health status more favorable and reported fewer symptoms of depression. Some evidence indicates that New Hope engendered positive improvements in parenting and in involving their children in extracurricular and social activities. New Hope did increase the share of children in formal child care. Perhaps these increases account for some observed gains in constructive behavior, school performance, and school engagement. Gains showed up more for boys than girls. In interpreting these results, we should recognize that, given the large volume of child indicators measured in the evaluation, some were likely to show some

positive impacts, perhaps by chance. Still, New Hope appears to have exerted some modest positive impacts and few if any negative impacts.

The designers of Jobs-Plus hoped that improving employment in housing projects would increase the well-being of the community, which would in turn produce positive spillover effects in other aspects of family functioning. Unfortunately, employment gains materialized in only some of the sites and little positive spillovers could be discerned (Bloom et al. 2002). In the Dayton site, stimulating employment and earnings apparently led successful residents to move from the community, thereby limiting any potential community-wide effects. In one site, Jobs-Plus improved academic outcomes of resident children (grades and school participation) compared to their peers in the comparison project, but these improvements did not extend to the other five sites.

3. Youth-Focused Job Training and Education Demonstration Projects

A number of demonstration and experimental evaluations have focused on raising employment and career prospects of disadvantaged youth. Public policies using employment-related programs to improve the opportunities of disadvantaged youth by helping them attain productive lives and avoid crime and other social ills go back at least to the beginnings of the War on Poverty, when the Neighborhood Youth Corps and the Job Corps were enacted. Since then, several demonstrations and public programs have provided a variety of services to disadvantaged youth, including high school students, high school dropouts, teenage mothers, and other low-income youth under the age of 24.

Theoretically, raising the earnings prospects of disadvantaged youth might lead young women to see rewarding careers as feasible enough to delay early childbearing and to avoid unwed childbearing and might improve the earnings of young men sufficiently to increase the chances they will marry and become active fathers. It is possible that the programs could affect marital status and childbearing even without influencing employment. Indeed, three demonstrations tried to influence fertility patterns of teen mothers directly as well as indirectly through education and employment initiatives.

The demonstration projects reviewed in this section all target disadvantaged youth, but vary in timing and target group. Two deal primarily with preparing out-of school youth for employment and careers; two have tried to help at-risk, in-school youth; and three have focused on employment and childbearing behavior of young single mothers.

Job Corps is by far the most intensive and most comprehensive federally sponsored job-training program and the longest operating youth program. Participants live at Job Corps centers where they receive counseling, education, vocational training, health care, and job placement services. The program, which serves particularly at-risk, disadvantaged youth, enrolls over 70,000 participants and, as of 2000, spent nearly $19,000 per enrollee. Given that enrollees spend about eight months in the program, costs per participant per year amounted to about $25,000. The National Job Corps evaluation used random assignment to designate Job Corps applicants in 1995 as experimentals (and eligible to enter Job Corps) and as controls (ineligible to enter Job Corps). The evaluators then followed both groups for up to 48 months after application (Schochet, Burghardt, and Glazerman 2001).

JOBSTART was a major experimental demonstration project that tried to replicate Job Corps in a nonresidential setting. The project offered instruction in basic skills with self-paced learning; occupational training involving both classroom activity and hands-on experience in high demand occupations; training-related support services including transportation, child care, and life-skills training; and job-placement assistance. The model required sites to offer at least 200 hours of basic education and 500 hours of occupational training. All participants were high school dropouts, 75 percent were between the ages of 16 and 19, 90 percent were minorities (black or Hispanic), 26 percent were women living with their own child, and only 35 percent lived with both parents at age 14. This demonstration took place at 13 sites nationally between 1985 and 1988 (Cave et al. 1993).

The Quantum Opportunity Program (QOP) demonstration targeted youth with low grades entering high schools with high dropout rates and ran from 1995 to 2001 at seven sites in Ohio, Texas, Tennessee, and Washington. QOP provided a rich array of services aimed at improving grades, reducing risky behaviors, and increasing rates of high school graduation and enrollment in post–high school vocational training and other educational pursuits (Maxfield, Chrim, and Rodriguez-Planas 2003). It was an after-school program offering five years of comprehensive services meant to reduce all types of barriers. The services included case management, mentoring, supplemental education, and financial incentives. The evaluation used random assignment to determine the program's impacts.

In the late 1970s, in an effort to reduce the extremely high rates of teenage unemployment, Congress mandated the Youth Incentive Entitlement Pilot Project (YIEPP). YIEPP guaranteed part-time jobs during the school year and full-time jobs in the summer to

all poor youth who stayed in school or returned to school. The goal of the designers of YIEPP was to reduce youth unemployment while at the same time encouraging young people to graduate high school. Although YIEPP operated largely as a program to keep poor youth in high school until they graduated, the demonstration also provided incentives for dropouts to return to high school. This evaluation used a quasi-experimental design with matched comparison sites (Farkas, Smith, and Stromsdorfer 1983;).

New Chance was a 10-site demonstration project focused on young mothers who had dropped out of high school. It used random assignment of volunteers to determine the impact of offering education, employment, and job-placement services, all aimed to help postpone further childbearing and to improve the health of children (Bos, Polit, and Quint1997). The goal was to increase the long-term self-sufficiency and well-being of teen mothers and their children.

The Teenage Parent Demonstration also targeted teenage mothers, specifically those who were first-time recipients of welfare. This project used random assignment to determine the impacts of mandatory participation in education, job training, and other work-related activities. The project took place between 1987 and 1991 in Illinois and New Jersey.[18]

Ohio's Learning, Earning, and Parenting (LEAP) program was a well-evaluated initiative aimed at helping teen parents. It ran from 1989–1997 in 12 counties in Ohio. LEAP offered financial incentives to encourage teenage parents to stay in school or to return to school if they have dropped out. Teen parents were required either to stay in school or to work on their GEDs if they accepted the financial incentives provided under the demonstration (Layzer et al. 2001).

Impacts on Employment and Earnings

The most extensive evidence on impacts deals with employment and earnings. Job Corps raised educational attainment and occupational certifications, and yielded solid gains in earnings over the first 48 months after random assignment. The opportunity to participate in Job Corps raised earnings by an average of $1,258, or 12 percent, during the fourth year after application. Unfortunately, subsequent analyses using administrative data document a rapid

[18] Reports on the Teenage Parent Demonstration are available through the web site of the Assistant Secretary of Planning and Evaluation (ASPE), http://aspe.hhs.gov/hsp/isp/tpd/. (Accessed Januay 29, 2008.)

erosion of Job Corps earnings gains after the four-year follow-up and a likely overstatement of earlier earnings gains because of differential attrition (Schochet, McConnell, and Burghardt 2003). These revised estimates of earnings gains meant that projected social benefits per participant were over $10,000 (in 1995 prices) below social costs. Still, some subgroups fared better and some worse than the average participant. Those who had entered Job Corps in the early 20s sustained a gain in earnings during the longer-term follow-up. For this group, the benefits were sufficient to offset program costs. On the other hand, Hispanics and those with serious arrest records before entering Job Corps apparently suffered significant earnings shortfalls by 2000–2001, relative to their counterparts in the control group.

JOBSTART yielded few gains in earnings and employment (Cave et al. 1993). Even by the fourth year after the program (three years after nearly all of the added training), the experimentals had virtually the same rate of employment and a slight, though statistically insignificant, rise in earnings. By this time, when the youth were ages 20–25, over one-third did not work at all during the year, and average annual earnings were only about $5,600 (in 1988 dollars). Among males, although experimentals earned about $500 more per year than controls, this difference turned out not to be statistically significant at the 10 percent level. Moreover, male experimentals gave up more in lost earnings during the first two years after entering the program than they gained in the last two years of the follow-up period.

YIEPP's primary goals were to increase employment of poor youth while raising their high school graduation rates. The ultimate goal was to improve their career prospects. Substantial gains in employment during the in-program period did occur, most dramatically for the young black cohort (Farkas et al. 1984). The share of the year they spent employed at ages 17–18 jumped from 22 to 43 percent during the school year. Even in the period after age 19, employment increased by 14–20 percent. In addition, YIEPP increased wage rates by about five percent in the postprogram period.

QOP, the more recent in-school youth program, focused primarily on career outcomes (Maxfield et al. 2003; Schirm, Stuart, and McKie 2006). According to a follow-up survey of 23–25-year-old former participants, QOP failed to achieve its main goals. It did not increase high school graduation, postsecondary education and training, or employment and earnings. Neither did the program improve grades or reduce risky behaviors (Schirm et al. 2006). Using evidence through 2003, the costs of QOP far outweighed the benefits (Aos

et al. 2004). If the investments in postsecondary education and training yield a higher return than the gain from work experience, QOP may yet induce gains in long-term earnings.

The three programs for teen mothers yielded little in the way of gains in employment and earnings. New Chance registered no improvement in earnings, though some indicators of completed training were positive and might augur well for future long-term earnings. The Teenage Parent Demonstration increased employment and job training during the short term, but these employment effects did not persist in the long term. The evidence suggests that as mandatory activity requirements ended, mothers in the regular-services group caught up to their counterparts in the enhanced-services group, and program impacts on employment, earnings, and educational attainment faded. After sanctions for noncompliance with program requirements ended, impacts on welfare receipt and benefit amounts largely disappeared (Kisker, Rangarajan, and Boller 1998). Ohio's LEAP demonstration led to a modest employment gain at two years after random assignment, but no increases in earnings or employment for the period as a whole.

Impacts on Marriage

Although gains in employment were modest and largely short lived, other program services might have led young people to move toward stable relationships, including marriage. In fact, none of the evaluations found statistically significant increases in marriage. The Job Corps evaluation, at four years after random assignment, found very low marriage rates for experimentals (16 percent) and controls (15 percent) (Schochet et al. 2001). Similarly, JOBSTART exerted no impact on the proportion ever married (Cave et al. 1993). The final report on YIEPP did not provide comparative information on marriage rates. However, it did show marriage proportions for the entire sample through fall 1981 (Farkas et al. 1984). By that time, about 9 percent of young men and 15 percent of young women had ever been married. Already, nearly 4 percent of young women had been separated or divorced by about age 19–21. The QOP evaluation did not report on marriage outcomes.

The New Chance evaluation, which did not distinguish between living with a partner or a husband, reported virtually identical rates of living with either (about 30 percent). The Teenage Parent Demonstration exerted no significant effect on marriage and cohabitation patterns, except in Newark, where enhanced-services group members were significantly less

likely to be married and significantly less likely to be living with a husband or partner (12 vs. 18 percent). Ohio's LEAP offered no information on marriage outcomes.

Impacts on Family Functioning

Some of the demonstrations improved educational and training outcomes. Job Corps stimulated participants to achieve a GED or high school diploma. The gains in vocational certification were especially notable, with 37 percent of the experimental group but only 15 percent of the control group earning a certificate. JOBSTART substantially increased the proportion earning a GED or high school diploma from 29 percent to 42 percent. Occupational training yielded a 16 percentage point advantage in the receipt of trade certificates (from 17 percent to 33 percent). The educational gains from YIEPP and QOP were disappointing. Neither appeared to increase the proportion graduating high school, though QOP did raise postsecondary education and training modestly.

The teen parent demonstrations generated modest increases in educational certification, especially GEDs. New Chance experimentals were 8 percentage points more likely to receive either a GED or high school diploma than controls, but the advantage was entirely in GEDs along with a negative impact on receiving a full diploma. The Teenage Parent Demonstration resulted in increased school attendance and jobs training, but only in the short term. After a few years, the controls caught up in degree attainment. Ohio's LEAP program led more teenage parents to complete 11th grade, but achieved no statistically significant increases in high school graduation or GEDs for the entire sample. However, those who were in school when they started LEAP were about 7 percentage points more likely to earn a GED or high school diploma.

The evaluations measured an array of other effects related to family functioning, especially risky behaviors and early childbearing. Job Corps registered a reduction in the share of participants arrested, convicted, and incarcerated. Although the program exerted no overall effects on fertility, some increase in fertility did occur among experimental women who were not mothers at random assignment. Job Corps had no effect on cigarette, alcohol, or drug use. JOBSTART exerted similar effects in reducing crime, but raised fertility, especially among women who had ever been married at program entry. Some reduction in drug use also took place as a result of JOBSTART. YIEPP did not find significant effects on crime or fertility. Among those over age 14 at program entry, QOP managed to reduce drug

and alcohol use, but apparently increased unmarried parenthood and use of welfare and food stamps.

New Chance exerted no significant effects on births or pregnancies. However, the program apparently worsened mental-health outcomes; experimentals were 6.2 percent more likely to report stress than the control group. Unfortunately, New Chance generated little or no gain in parenting outcomes, though New Change parents did use formal child care more than did control parents. Similarly, the Teenage Parent Demonstration exerted no significant effects on births or pregnancies, increased the use of formal child care, and had no effect on children's cognitive and social-emotional well-being and physical health. Ohio's LEAP did not measure any family-functioning outcomes.

4. Summary of Results from Selected Employment-Related Demonstrations for Welfare Recipients, Poor Adults, and Low-Income Youth

Experimental evidence may yield critical knowledge about causal connections between marriage, employment, and family functioning. Unfortunately, most studies of employment initiatives do not focus on the connections between jobholding, marital status, and family functioning. Moreover, it is often hard to know definitively whether an experimentally induced impact on one outcome (say, employment) leads to impacts on other outcomes (say, marriage). An alternative possibility is that effects on marriage or family functioning arise from the direct impacts of services provided to an experimental group and not to a control group.

Still, we can draw some conclusions from the variety of impacts of employment-oriented demonstrations. Beginning with programs for low-income adults, mainly single parents, we find the following.

- Most employment-related programs for single parents—including welfare-to-work programs that involve strong work requirements, time limits, and financial work incentives—raise employment and earnings, at least in the short run. Often, the gains are highest among the least advantaged participants and short-run effects of employment programs exceed short-run effects of education-oriented programs. In most demonstrations, the job gains last for a few years before the control group catches up.

- Because the increased employment often brings little added income, single-mother experimentals do not significantly increase their financial independence from partners or potential spouses, though they do become less reliant on government

welfare-related benefits. Still, several of the experimental results provide a test about the impact on marriage and family functioning of employment by single mothers.

- The evidence on how single parent employment affects marriage is far from conclusive. Some of the evaluations do not provide evidence on marriage effects. Although the results generally show little impact on marriage, two projects (MFIP and New Hope) apparently increased marriage. It is striking that both of these projects provided generous help to two-parent families along with efforts to increase mothers' employment.

- The demonstration stimulus to single mothers' employment generally did not lead to weaker family functioning. Children generally functioned as well or better, when mothers volunteered for or were mandated to participate in a work program. One exception is the apparent negative impact on the education of adolescent children with younger siblings. It is not clear that the cause was increased mothers' employment, since the demonstrations that did most to raise jobholding were not more likely to be the ones that were associated with worse adolescent outcomes.

Based on the evidence from youth demonstrations on employment, marriage, and family functioning, we conclude the following.

- Achieving long-term increases in youth employment and earnings is difficult, even with such intensive programs as Job Corps. Although Job Corps stimulated earnings gains over the first few years after random assignment, the gains eroded over time. YIEPP exhibited positive earnings gains after the intervention. None of the others managed to raise earnings even for a few years.

- Although some of the programs and demonstrations missed the opportunity to investigate marriage and relationship effects, the available evidence indicates the initiatives exerted little or no impact on marriage. One might have expected to observe an impact of marriage of the added employment induced by Job Corps, but we did not.

- On family functioning, the youth programs registered some, but modest, improvements. Job Corps and JOBSTART induced gains in education attainment, but the others did little to increase education. QOP's lack of an effect on high school graduation was particularly disappointing, given the significant investment from QOP in each participant. Job Corps and JOBSTART reduced involvement in criminal activity. QOP reduced drug and alcohol use. The programs for teen mothers were disappointing in their failure to reduce future pregnancies or to delay future childbearing, especially since the programs did not increase marriage.

B. Family-Functioning Demonstrations

Demonstrations focusing primarily on family functioning are highly variable and broad in scope. This next section breaks the family-functioning demonstrations into four categories:

parent-focused demonstrations, child-focused interventions, demonstrations oriented toward family functioning, and future directions and recent developments. As in the employment section, we consider impacts of each demonstration on employment, marriage, and family functioning.

1. Parent-Focused Demonstrations

In recent years, at least four rigorously evaluated demonstrations have focused on parenting and family life skills that have impacts on the core domains of this review. Demonstrations in this section vary a great deal in their implementation structure (case management, home visiting, and classes), but they all include efforts to improve parenting skills. Two of these studies yielded positive short-term outcomes while neither of the other two reported positive findings. All four programs used a randomly assigned study design.

A series of Nurse Home Visiting random-assignment demonstrations have worked with disadvantaged and unmarried women who were pregnant with their first children, by having nurses provide services initially in the hospital and subsequently through home visits.[19] The goals are to improve pregnancy outcomes, children's health and development, and parents' well-being through education, work, and family planning. In projects in Elmira, New York, Denver, Colorado, and Memphis, Tennessee, Olds and his colleagues tested the impact of similar interventions on a variety of outcomes affecting mothers and their children (Olds et al. 1997; Olds, Robinson, et al. 2004a; Olds, Kitzman, et al. 2007). The Memphis demonstrations enrolled young, pregnant women who had no chronic illness linked to fetal growth but nearly all were unmarried, poor, and teenagers.

The Comprehensive Child Development Program (CCDP) in 21 sites across the United States took place between 1991 and 1996. It was a voluntary program that aimed to increase economic self-sufficiency of low-income families with children and to enhance child development. The treatment involved providing assistance through case managers who referred families to services in the community or provided services such as counseling or skills training directly (St. Pierre et al. 1997b). In particular, each local CCDP grantee was to (1) intervene as early as possible in children's lives; (2) involve the entire family; (3) ensure the delivery of comprehensive social services to address the intellectual, socioemotional, and physical needs of infants and young children in the household; (4) ensure the delivery of services to ensure the parents' ability to contribute to the development of their children and

[19] In the Memphis demonstration, nurses visited 7 times during pregnancy and 26 times from birth to age 2.

achieve economic and social self-sufficiency; and (5) ensure continuous services until children enter elementary school at the kindergarten or 1st-grade level. The design of CCDP relied heavily on an approach in which a case manager was responsible for coordinating the service needs of a group of families.

The Family Development and Self-Sufficiency Program (FaDSS) was run at 10 sites in Iowa (1989–1993) and targeted those welfare families identified as being at the greatest risk of becoming long-term welfare recipients. FaDSS aimed to improve their daily functioning skills, confidence, and psychological well-being through a case-management approach (Layzer et al. 2001). Grantees were to try to improve parenting, family functioning, community support, education, and employment. They were to offer home visits, assessments, goal setting, support services, referrals, advocacy, and funds for group activities.

Parents' Fair Share, a demonstration operating at seven sites from 1994 to 1996, was distinctive in its efforts to work with noncustodial fathers. It aimed to help low- income noncustodial fathers attain more stable, higher-paying jobs, to pay their child support, and to become more involved with children and more responsible parents. The program provided employment and training, peer support, voluntary mediation between parents, and modification of child-support orders (Miller and Knox 2001).

Impacts on Employment, Income, and Earnings

Although two of the demonstrations did not emphasize employment gains, we report on all four, in part to see the interaction between family-functioning efforts and employment. The Nurse Home Visiting approach raised schooling and employment in the Elmira, New York, demonstration but not in the others (Olds et al. 1988). The program also lowered use of food-stamp and welfare programs in two of the three Nurse Home Visiting sites. In Memphis, the demonstration did decrease the use of AFDC by 22 percent and significantly the use of food stamps by 24 percent (Olds et al. 2004b). Parents' Fair Share exerted small effects on the employment and earnings of the full sample, but generated gains for the most disadvantaged fathers (those without high school degrees) (Miller and Knox 2001). Among the high school dropouts, experimentals earned $7,431 compared to $4,924 earned by controls, nearly a 50 percent gain. Given that the demonstration explicitly provided on-the-job training, some of the employment gains took place directly as a result of in-program

activity. Since Parents' Fair Share had no impact on most groups of fathers, the potential for sustained impacts on employment and earnings is unclear.

Neither the CCDP demonstration nor the FaDSS measured impacts on employment but neither project led to significant gains in any employment-related outcomes.

Impacts on Marriage

It is striking that the evaluation of the Nurse Home Visiting Project is the only one in this section to assess marriage effects. Apparently, three of the four evaluations did not believe the role of marriage was particularly important for the range of outcomes of primary interest, even parenting and the ability to pay child support. The data are available in some of the other evaluations, but the final reports make no reference to these outcomes. The Memphis Nurse Home Visiting Project exerted no significant effect on marriage, however, it did lead to a significant increase in the duration of mothers' relationship with their partners and in their likelihood of marriage, cohabitation, or partnering with child's father at the 9-year follow-up (Olds et al. 2007). The CCDP evaluation report did provide comparisons of the share of families with an employed husband or partner. Although this measure does not capture marriage directly, it is interesting that there was no difference between experimentals and controls; for both groups, the percent with an employed husband or partner was only about 33 percent.

Impacts on Family Functioning

The Nurse Home Visiting study identified statistically significant results on a number of family-functioning measures. In Denver, the nursing intervention program component was linked to a delay in second births and a reduction in domestic violence, but no other favorable effects (Olds et al. 2004a). In Memphis, treatment mothers had 10 percent fewer pregnancies than the control group and nearly a 7-month longer average interval between births. Of major interest are the large and significant impacts on children's developmental outcomes caused by the Nurse Home Visiting program (Olds et al. 2007). Child participants achieved higher GPAs and test scores in grades 1 to 3 in math and reading, and fewer failures in conduct in the first three years of elementary school. The effect sizes of the gains for children were in the range of 0.17 to 0.33. The project increased mother's use of Head Start from 75 percent by controls to 82 percent by experimentals. Data from a 15-year

follow-up of the randomized trial in Elmira, New York, show reduced subsequent births, increased time between births, reduced AFDC use, reduced behavioral impairments related to alcohol or drug use, and reduced criminal behavior (Olds et al. 1997).

For some reason, the CCDP demonstration did not achieve any of these improvements in family functioning. The evaluators of CCDP assessed cognitive and social-emotional development of children, children's health, and the parenting skills of mothers (St. Pierre et al. 1997a). In none of these areas did CCDP generate a positive impact.

The evaluators of FaDSS did not measure family-functioning measures except for substantiated incidents of child abuse or neglect (Layzer et al. 2001). On this measure, there were no significant differences in nearly all individual years except for year 7, when the treatment group did exhibit a smaller proportion of incidents than did controls.

Evaluators of Parents' Fair Share found significant and positive outcomes in a few areas of family functioning (Miller and Knox 2001). The central program goals were to increase the involvement of fathers with child-support orders in the lives of their children and their financial support for their children. Of these two indicators, Parents' Fair Share succeeded in one—stimulating nearly 5 percent higher child-support payments—but did not cause a significant increase in visitation. Some positive effects on father-child activities appeared in the results, but, except for a significant increase in religious activities, the treatment-control differences were not statistically significant. A third family-functioning goal was to improve communications between noncustodial fathers and custodial mothers. Here, the results show Parents Fair Share increased the amount of disagreement between parents. Such a finding may not be entirely negative, since it might represent a more active interest by fathers in parenting and in outcomes for their children. It should be remembered that the sample represented fathers who were already largely disconnected from their children. Moreover, there was no expectation in the design of the demonstration that cooperation between parents would improve.

2. Child-Centered Demonstration Projects

Demonstrations reviewed in this section focus directly on the child and improving developmental outcomes. The interventions target different age groups; some work mainly with early childhood while others with elementary school–age children. The four

demonstrations relate to employment and family-functioning dimensions in this review, but not to marriage impacts.

The Abecedarian project in North Carolina enrolled low-income children from infancy through age 5, the majority being black, from 1972 to 1977. Abecedarian provided full-time, high-quality early-childhood educational programs to participants. The evaluation used random assignment to follow treatment and control participants through the age of 21.[20]

The nation's largest preschool effect is the Head Start program. Initiated in 1965, the program provides over $6.5 billion in grants to local public and private nonprofit and for-profit agencies to provide comprehensive child development services to economically disadvantaged children and families, with a special focus on helping preschoolers develop early reading and math skills. A major experimental evaluation is under way to assess the impacts of Head Start. The evaluation began in 2002 and covered 378 centers, 2,783 Head Start participants and 1,883 nonparticipants. Another evaluation tracked the impacts of Early Head Start, which provides access to children younger than age 3. An evaluation of this initiative used random assignment in analyzing impacts in 17 sites nationwide between 1995 and 1996 (Westat et al. 2005). The program enrolled low-income families, with sites setting their own specific enrollment criteria. Early Head Start aimed to enhance children's development and to strengthen families and support staff serving low-income families. The demonstration operated through three service delivery models—center based, home based, and a third mixed model.

Project Vision targeted mostly white rural children in three elementary schools in the Santa Rosa school district in Pensacola, Florida (Calfee, Wittwer, and Mimi 1998). Project Vision's goals were to integrate health, social, and educational services and to make them more readily available to children and families. This project included case-management and counseling services, parenting classes, and screening of children for behavioral and academic problems. The study used a historical comparison group comprised of students enrolled in the schools three years prior to the treatment.

The fourth program, Families and Schools Together (FAST) targeted poor black families with at-risk children attending elementary school. FAST was a community-based,

[20] See the Carolina Abecedarian Project web site at https://www.fpg.unc.edu/~abc (accessed January 29, 2008.)

eight-week program for at-risk children and their families, and offered a variety of services including parent help groups, child playgroups, family interaction events, substance abuse counseling, and parent follow-up services (Hernandez, Hernandez and Lopez 2000).

Impacts on Employment, Income, and Earnings

Of these projects, Abecedarian was the only one to exert statistically significant employment effects. Teenage mothers of children in the program were 26 percent more likely to be employed after the 15th year of follow-up than those in the control group. After the 21st year of follow-up, participants themselves were 20 percent more likely to have a skilled job than those in the control group. These are striking differences and evidence that some interventions in early-childhood education can yield long-term benefits (Campbell and Ramey 2002; Campbell et al. 2001).

Impacts on Marriage

None of these studies looked at marriage outcomes.

Impacts on Family Functioning

Given that these were largely interventions to increase learning, it is reassuring to observe large positive effects on educational attainment and cognitive achievements. The Abecedarian project generated a dramatic average increase of 5.71 points higher cognitive IQ scores through age 21 (Campbell et al 2001). Abecedarian participants achieved an 8.34 average increase in reading achievement scores, completed more years of education, and were 22 percent more likely to attend college. The project also raised the educational achievement of mothers of participating children.

The Head Start Impact Study found a number of positive impacts on child participants as well as several outcomes on which Head Start had no impact (Westat et al. 2005). The gains were typically modest, with effect sizes typically ranging from 0.1 to 0.2. The largest advantages linked to Head Start were in parent-reported literacy skills, with an effect size of 0.29–0.34. Parental reading to children increased, but only by 0.13–0.18 of a standard deviation.

Early Head Start exerted some positive impacts as well. Relative to controls, experimental children increased cognitive and language development by 12 percent and exhibited greater engagement with parents, increased attentiveness during play, decreased aggressive behavior, and several other improvements (Love 2002). Again, parents of child participants increased participation in education and job-training activities.

In Project Vision, children participating as experimentals attained higher scores in both reading and math tests than control-group children (Calfee et al. 1998). The increases in children's short-term academic achievements were consistent. Unfortunately, projections from the evaluation of Project Vision suggest that the gains are not likely to be maintained in the long run. The FAST initiative resulted in improved child behavior, although it did not have any other statistically significant impact on academic achievement or cognitive functioning.

A few initiatives apparently improved parental well-being. In Early Head Start, parents realized positive emotional impacts and decreased negative parenting behaviors. Fathers experienced positive outcomes, with decreased spanking of children and increased participation in program-related child-development activities. The Abecedarian evaluation found that participants delayed the birth of their first child, but the results were not statistically significant. FAST increased family volunteer work and leadership positions in the community. Project Vision's impacts were limited to the children in the study and no spillover effects were identified.

In general, child-focused demonstrations appear to generate an array of positive impacts for children as well as some spillover effects that improve the well-being of their parents. Like other types of demonstrations, some evidence suggests that the gains may not be fully maintained in the long run. Planners of future demonstrations may want to consider evaluations with longer periods of follow-up.

3. Summary of Demonstrations Oriented toward Family Functioning

Both the interventions and the specific goals of these demonstrations were quite diverse. Some striking results emerged.

- Several interventions attempting to improve educational and behavioral outcomes for young children did so. One of the successful models focused on mothers (the Nurse Home Visit program) and three child care initiatives worked directly with very young children. The nurse visits, which presumably involved advice trusted by

mothers, led to other positive impacts, including fewer pregnancies among mothers and decreases in welfare and food-stamp receipt. One puzzling result is the absence of beneficial family-functioning outcomes from the CCDP.

- There is no evidence that these gains in the functioning of single mothers and their young children led to added marriages, though most of these programs did not measure this outcome.

- Parents' Fair Share, the initiative aimed at noncustodial fathers, improved some aspects of family functioning (higher child-support payments) but did little for others (greater father involvement). Although the poorest noncustodial fathers increased their earnings substantially, the evaluators found no overall employment or earnings impact nor any carryover into father involvement. The evaluation did not provide estimates of impacts on marriage and on couple relationships of men offered services, partly because the targeted noncustodial fathers were already behind in their payments, and relationships with other parents were strained at best. The treatments were not aimed at improving parental relationships.

4. Future Directions and Recent Developments

Evaluations of additional interventions aimed at improving family functioning are continuing. Legacy for Children is a demonstration using random assignment that aims at improving the parenting and family life skills of low-income families and, in turn, increasing the cognitive outcomes and well-being of the children. The project emphasizes mother's clubs and weekly meetings to discuss the challenges of parenting and includes plans to organize social activities involving both fathers and their families.

The evaluation of the Child Care Subsidy demonstration is investigating different child care subsidy policies and the effects that subsidized child care may have on families, child care providers, and children.[21] Potential interventions include increased payments to child care providers, reduced copayments for parents, increased duration of eligibility for subsidies, and training of child care providers.

An evaluation of a long-standing program, the Even Start Family Literacy Program, is continuing (Ricciuti et al. 2004). This program targets low-income parents with children under age 8 to improve literacy and English-language skills while providing valuable parenting skills to participants. The Even Start Family Literacy Program also includes an intensive child-focused intervention where children must participate in early-childhood education and care, sometimes through an existing Head Start center.

[21] MDRC is conducting this evaluation. For more details, see http://www.mdrc.org/project_11_38.html.

The National Institutes of Health (NIH) has funded research on workplace and family functioning, including both time-management and stress issues. Studies at Penn State University focusing on hotel employees are under way to examine these issues in the context of a specific industry.[22] The project involves conducting interviews with management and obtaining time diaries from workers, with the goal of developing effective workplace policies. The research and subsequent demonstrations have the potential to look at the work, stress, and family-time tradeoffs for ways that employers may help ease the difficult balancing act between professional and family responsibilities.

Another interesting intervention currently under way is the Enhanced Services initiative for the hard-to-employ recipients of TANF.[23] One particularly relevant model involves Early Head Start (EHS) and is being tested in Kansas and Missouri. It focuses on poor families who have children 4 years old or younger or are expecting a baby. This experiment attempts both to enhance child development and to increase employment of TANF recipients. The intervention includes EHS services as well as home visits to help parents in their parenting roles and in working toward self-sufficiency.

It would be desirable to piggyback on these and other future demonstrations to insure that data are collected and reported on marriage and employment, as well as the family-functioning outcomes that are the primary concerns.

C. A Housing Mobility Demonstration

This section examines Moving to Opportunity (MTO), a 10-year demonstration of the efficacy of housing vouchers requiring participants to live outside impoverished neighborhoods (Orr et al. 2003). Eligibility for MTO was limited to those already provided project-based assistance in areas with poverty rates of 40 percent or more. The design of the experiment involved randomly assigning participants into one of three groups: (1) those given vouchers that could only be used in census tracts with poverty rates below 10 percent (these individuals also received counseling and assistance in finding a suitable unit); (2) those provided with Section 8 vouchers on a standard basis; and (3) those who continued receiving project-based assistance. The location-limited vouchers encourage residents in the experimental group to move to nonpoor neighborhoods.

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[22] A brief description by Nan Crouter is available at http://cwfr.la.psu.edu/projects/hotels.htm.
[23] For a description, see http://www.acf.hhs.gov/programs/opre/welfare_employ/enhanced_hardto/enhced_hardto_overview.html.

The evaluation tests whether schooling, employment, family-status, and family-functioning outcomes improve when low-income families move to economically less-advantaged neighborhoods. The philosophy is that more affluent neighborhoods will provide social capital and generate positive spillover effects that will yield important gains for low-income families. The cities participating are Baltimore, Boston, Chicago, and New York City. Although a large share of eligible subjects encouraged to move to nonpoverty census tracts did not do so, the MTO program significantly reduced the amount of time those in the treatment group spent in poor neighborhoods.

Employment and Earnings Outcomes

Despite moving to neighborhoods with much-improved employment opportunities, neither adults nor youth in the MTO experimental group managed to achieve gains in employment, income, or even receipt of welfare (Orr et al. 2003). This is a surprising result that deserves further analysis.

Impacts on Marriage

Surprisingly, Orr and his coauthors (2003) did not report or investigate the impact of MTO on marriage rates. One would expect that more favorable neighborhoods might either lead women to more marriages because of the increased availability of employed men or fewer marriages because of a greater mismatch between the characteristics of MTO participants and other neighborhood residents. Using the data from the MTO to evaluate such differences would bring important new evidence concerning the causes of marriage outcomes.

Impacts on Family Functioning

Orr and his coauthors (2003) found that MTO exerted several effects on different measures of family functioning MTO has improved the housing and neighborhood conditions, including safety, of the treatment groups. MTO apparently led to significant improvements in the health of the participants. Participants improved mental health, reduced psychological distress (especially for girls) and lowered the prevalence of obesity. While the prevalence of risky behaviors for girls fell by 84 percent, boys showed an increased prevalence of risky behavior, though not criminal activity. Moreover, most impacts on boys were not generally

statistically significant. Still, MTO did appear to increase behavioral problems of boys, ages 5–11, and to reduce the share of boys attaining Bs or better in school. MTO did not improve the educational performance of children, but did increase school attendance among girls.

The influence of MTO on the behavior of peers is particularly interesting and in some ways disappointing. The 12–19-year-old boys in the experimental group were no less likely to have peers carrying weapons than boys in the control group. In fact, experimental boys were more likely to have peers engaging in illegal drug use than were boys in the control group, who were poor neighborhoods.

Summary of MTO Impacts

Given expectations about the importance of neighborhood barriers in blocking the career, educational, and social development of people from neighborhoods with extreme poverty, Orr and his coauthors found that the gains that have so far emerged from MTO are disappointing. However, the results cited here come from an interim evaluation and more promising impacts may emerge from the longer-term follow-up.

D. New Marriage Demonstrations

New demonstrations funded by the Department of Health and Human Services are beginning to take place to encourage and support healthy marriages among married couples and those choosing marriage. Findings from the Fragile Families and Child Well-Being study and other studies suggest that, at the time of their children's birth, many couples are interested in marriage and in pursuing a long-term relationship.[24] Some indicators lend support to the idea that demonstration projects offering marriage education, mentoring, and related services might increase the number of healthy marriages. As described in section III.E., the observational literature has indicated that marriage can improve adult and child well-being. Limited evidence suggests even more positive impacts of healthy marriages. Findings from a household survey indicate that premarital education increases marital quality and reduces marital conflict and divorce (Stanley et al. 2006).

[24] See research drawn from the Fragile Families and Child Well-Being Study at http://www.fragilefamilies.princeton.edu/.

At this point, three major demonstrations to promote healthy marriages are under way and evidence about their impacts will emerge over the next few years. Building Strong Families (BSF) and Supporting Healthy Marriage (SHM) are the two demonstrations involving random assignment of couples, while the Community Health Marriage Initiative (CHMI) focuses on how education, services, publicity, and social support can influence marriage and related outcomes at the community level (Dion 2005).

BSF targets unwed low-income couples who have some interest in marriage, shortly before or after the birth of their child. The intervention includes marriage and relationship-skills classes in conjunction with other family life skills like parenting classes or substance-abuse referrals as needed. SHM also offers marriage and relationship-skills classes and referrals to an array of other services that might improve family functioning, but targets low-income couples who are already married and have children. Both of these studies will be multiyear randomly assigned studies.

CHMI involves an effort to build local coalitions to sponsor relationship and marriage classes and other services designed and delivered by community-based organizations as well as community events and media messages about marriage and responsible fatherhood. The community coalition and local providers have leeway in determining who is incorporated in their target population. They may include couples who are already married or are about to get married, or couples who have children together. Delivery of services may vary as well and may mean direct service provision of marriage and relationship classes, or it may be a more diffused model of training people in the community to provide services in their own organizations.

The demonstrations offer both opportunity and challenges in learning about the interaction between marriage, employment, and at least some indicators of family functioning. From one perspective, if the random-assignment demonstrations (BSF and SHM) actually stimulate marriages and healthy marriage, then one might be able to attribute any experimental-/control-group changes in labor-market outcomes as associated with added marriages. On the other hand, since the projects will be offering referrals to supportive services that might directly affect employment and family functioning, it may be difficult to attribute gains in these outcomes to marriage rather than to the services. As these demonstrations and CHMI move forward, evaluators should be encouraged to devote some

time and energy to methods that allow them to distinguish marriage effects from other effects on employment and family functioning.

V. Some Implications for Understanding and Improving Interactions between Marriage, Employment, and Family Functioning

This examination of the observational research and findings from demonstrations and program evaluations yields important insights on the interactions between marriage, employment, and family functioning. This section attempts to highlight these insights and offer a limited discussion of implications for policy and demonstrations.

First, the strength of the connections between marriage, employment, and family functioning vary significantly by sex, family status, and income class. Marriage raises the employment and earnings of men, including low-income men, but the relationship between marriage and employment among women is modest and sometimes negative. Similarly, the impact of employment and earnings on marriage is positive for men, but less clear for women. Women's employment and earned income allow them to maintain households independent of men, partially offsetting the positive association between employment and marriage.

A mixed picture emerges in the relationships between employment and family functioning. In two-parent families, employment of fathers conveys benefits while father's unemployment imposes difficulties for the functioning of families. How mother's employment affects the well-being of children is more ambiguous and depends on the context. The studies reveal evidence of negative effects of mother's employment on newborns and very young children, especially among high-income families, but not on toddlers or school-age children. Mother's employment has fewer and weaker negative effects on low-income children. The impacts of single parent employment are uncertain as well. Generally, studies reveal few harmful consequences of maternal employment for children, but some demonstration results suggest poorer outcomes for adolescents, especially those with younger siblings. Family functioning also influences maternal employment. For example, the evidence clearly shows that a serious heath problem or disability of a child is associated with reduced maternal employment, especially for low-income families.

Finally, the evidence is quite persuasive that marital status and the health of marriages affect several dimensions of how families function. Growing up in a married-

couple family conveys a range of advantages for children, though the size of the benefits and the way they occur is in dispute. Studies indicate a causal positive impact of marriage on the health of adults, especially for men and couples with children, but also for women. Some family-functioning indicators influence marital status as well. Conflict and poor relationship quality between married partners can contribute to divorce. However, some other sources of strain—including caring for a seriously ill child—do not consistently lead to the breakup of marriages.

Second, the evaluations of demonstrations and programs yield less evidence than they could about the relationships between marriage, employment, and family functioning. A key lesson from the analysis is that existing and future demonstrations related to one of these outcomes should incorporate potential interactions with the others. Past demonstrations aimed at stimulating employment, even among noncustodial parents and female teen parents, did not collect or report impacts on marital status. The demonstrations have done little to examine how differences in the dynamics of family life—including romantic involvement, cohabitation, marriage, divorce, the health of a marriage, and presence of grandparents—influence employment outcomes.

One key question that has gone unaddressed is how the extensive involvement of single mothers with men in cohabiting or romantic relationships affects employment, household income, and consumption. The projects offer scant if any discussion about stimulating employment of single mothers in the context of financial incentives and disincentives to marry. Few of the demonstrations aimed at improving child well-being examine the potential effects on other indicators of family functioning, including parent relationships. The demonstrations have paid close attention to possible negative effects of the employment of single mothers on children, but little on possible influences of jobholding and earnings of fathers or cohabiting partners on children or on other family interactions.

Third, before undertaking new demonstration initiatives on marriage, employment, or family functioning, policy analysts should examine the literature, existing policies, and financial incentives for potential interactions among these key outcomes. Consider, for example, the strategy of helping low-income single parents increase their employment and earnings. Such an approach is understandable, given that single parents have primary responsibility for children. But, in undertaking such a strategy, it is important to consider

interactions between how mother's employment is affected by and will itself affect the incentives to marry, subsequent marital and household relationships, and child well-being.

Ideally, in developing new initiatives dealing with this or related objectives, policymakers should understand the interactions that might limit the effect of the intervention and should consider how best to maximize desired spillovers and to minimize the undesired consequences. We are still in the early stages of this learning process. However, we believe that the evidence presented in this paper can provide an important starting point, not only for conceiving of potential interventions, but also for incorporating components to mitigate interactions that could limit the intervention's effectiveness and limit or prevent harmful side effects.

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Table 4. Maternal employment and Child Outcomes

Study	Outcomes	Key Independent Variables	Results on Key Variables
Baum (2003)	Child's cognitive development: measured by Peabody Picture Vocabulary Test (PPVT) score, Peabody Individual Achievement Test of Mathematics (PIAT-M) score, and Peabody Individual Achievement Test of Reading Recognition (PIAT-R)	Maternal employment and work effort: measured by any work (1/0), work hours, number of weeks worked, number of weeks worked fulltime (at least 35 hours/week), and/or a set of indicators for the period in which the mother first started working after giving birth	Hours worked in the first quarter of the first year of a child's life have a negative effect on PPVT scores, whereas the PIAT-M and PIAT-R scores are not significantly affected by maternal labor in the first quarter of a child's life. The study suggests that maternal labor supply partially affects child development through increased family income--increasing family income increases child development and hence the increased family income from maternal work may partially offset the negative effects of maternal labor supply. The effects of maternal labor supply on child development generally remain the same when controls for childcare mode are included.
1988-1993 NLSY of mother-child pairs where the mother was between the ages of 23 and 30 in 1988. Longitudinal.			
Baydar and Brooks-Gunn (1991)	Child outcomes: PPVT-R and Behavioral Problems Index (BPI)	Maternal employment status throughout the child's life assessed by week-by-week employment histories taken at each survey and maternal work hours assessed by "usual hours" survey question	Maternal employment in the child's first year of life had detrimental effects on both PPVT-R and BPI. Of mothers who worked during their child's first year of life, children whose mothers worked less than an average of 10 hours per week experienced the least negative effects of maternal employment on cognitive development. Further, working mothers who delayed entry into the LF until the fourth quarter of the child's first year of life had higher PPVT-R scores and lower BPI scores than the children whose mothers entered the LF earlier.
1986 NLSY of 1,181 children who were 3 to 4 years of age in 1986 plus the work histories of their mothers (obtained in prior panels of the NLSY), restricted to White children. Longitudinal.			
Belsky and Eggbeen (1991)	Child's socioemotional functioning: "adjustment" (behavior problems total + insecurity - compliance) and "shyness" (inhibition - sociability)	Maternal employment: no work, parttime, and fulltime work during each quarter of the first three years of her child's life	Children whose mothers were employed full-time beginning in their first or second year of life scored lower on "adjustment" than children whose mothers were not employed during the first three years. This effect was driven primarily by the "compliance" component of this measure, such that early and extensive maternal employment was associated with high levels of noncompliance.
1986 NLSY of 1,248 Black and White children who were 4 to 6 years of age plus the work histories of their mothers (obtained in prior panels of the NLSY). Longitudinal.			

Blau and Grossberg (1992)	Child's PPVT score	Maternal work effort: proportion of weeks worked in 1st year of child's life and proportion of weeks worked in 2nd+ years of child's life	Maternal employment has a negative effect on children's PPVT score in the first year of life, but a positive effect in subsequent years for a net overall effect throughout the child's first 3-4 years of zero. This study builds on previous studies summarized in this review in that it addresses the unmeasured heterogeneity of employed and nonemployed mothers (although the study finds no statistical evidence of such unobserved heterogeneity).
1986 NLSY of 874 children who were 3 to 4 years of age. Longitudinal.			
Brooks-Gunn, Han and Waldfogel (2002)	Child cognitive outcomes: Bayley Mental Development Index (MDI) at 15 months, revised Bayley MDI at 24 months, Bracken School Readiness Scale at 36 months.	Maternal employment status at 1, 3, 6, 9, 12, 15, 24, 36 months of child's life as well as fulltime/parttime status (1-30 hours)	No effect of maternal employment within the first year of life on children's MDI scores at 15 or 24 months, but Maternal employment by the ninth month had a negative effect on the Bracken score at 36 months. Children whose mothers started working by the ninth month and worked 30 hours/week or more had lower 36-month Bracken scores than children whose mothers had not worked by 9 months. Part-time work by the ninth month had no effect on 36-month Bracken scores. Effects remained significant even after controlling for child-care quality, quality of the home environment, and maternal sensitivity.
1991 NICHD Study of Early Child Care (SECC) of 900 European American, non-Hispanic children observed at ages 6, 15, 24 and 36 months. Longitudinal.			
Desai, Chase-Lansdale, Michael (1989)	Child's PPVT score	Maternal employment: continuously worked all 4 years of child's life, intermittently worked, worked in the first year, stopped work after the first 3 months, began work in the second year, continued work in the second year	Mother's employment has a negative effect on their 4-year-old child's PPVT score, but only among boys in higher income families. The effect was not found for girls or for children in low-income families, or families where mothers resumed their employment after the child's first year of life. Overall, there is no discernible influence of maternal employment on child's PPVT score at age 4.
1986 NLSY of 503 4-year-old children and their mothers. Longitudinal.			

Han, Waldfogel, Brooks-Gunn (2001)	child's PPVT-R (at ages 3-4), PIAT-Math (ages 5-6 and 7-8), PIAT-Reading (ages 5-6 and 7-8), Behavior Problems Index (ages 4+)	Maternal employment: employed during first year of child's life, employed during the 2nd or 3rd year, employed after age 3, currently working; quarter of the 1st year that maternal employment began, and FT/PT work in 1st year (FT=21+ hours/week)	Same results as above study (Waldfogel, Han, Brooks-Gunn 2002), though they did not examine Hispanic Children. No effects of maternal employment were found for African American children, so all results reported in the rest of this summary pertain to White children only. This study tests whether effects vary by income and finds employment in the 1st year has negative effects on all outcome measures for children of low-income families, compared with lower/fewer negative effects among middle-income and high-income families. The study also examines marital status and finds that among single-mother families, there are no significant differences between single-mother families where the mother worked and those were the mother did not work in the 1st year. Lastly, the study also looked at BPI and found no overall effects of maternal employment on child's BPI, but the timing of maternal employment before the 4th quarter of the 1st year has a positive effect on children's behavioral problem (the higher the score, the more problems).
1986-1990 NLSY of 462 7 to 8-year-old children and their mothers. Longitudinal.			
Hill, Waldfogel, Brooks-Gunn, Han (2005)	child's PPVT-R (at ages 3-4), PIAT-Math (ages 5--8), PIAT-Reading (ages 5-8), BPI (ages 4-8)	Maternal employment: no work in first 3 years postbirth, work only after 1st year, par-time work in 1st year, and full-time work in 1st year	Negative effects of maternal employment on children's cognitive outcomes were found in our analysese primarily for children whose mothers were employed full time in the first year postbirth as compared with children whose mothers postponed work until after their child's first year of life and also as compared with mothers who worked part time in the first year. Negative effects in terms of increased externalizing behavioral problems were evident in each of these comparisons involving mothers who worked full time in the first year. Standard missing data methods might overstate the negative effects of full-time maternal employment in the first year of life on children's cognitive development, and some might miss the detrimental effects on externalizing behavioer as well. Moreover, standard regression methods that use only complete case data might overstate the advantages associated with part-time work in the first year in terms of cognitive measures. Results suggest that the effects of early maternal employment vary across different types of children and families.
1986-2000 NLSY of 6114 children of the NLSY born from 1982 to 1993. Longitudinal.			

James-Burdumy (2005)	child's PPVT-R (at ages 3-4), PIAT-Math (ages 5-18), PIAT-Reading (ages 5-18)	Maternal employment: hours worked in years 1, 2, and 3 of the child's life; weeks worked in years 1, 2, and 3.	Fixed effects results show that only PIAT-M was negatively affected by maternal work hours and weeks worked in the 1st year of the child's life. PIAT-R was negatively affected by weeks worked in year 1, but not by work hours. Weeks or hours worked in year 2 were not associated with any outcomes. Weeks worked in year 3 positively affected PIAT-M scores, but hours worked in year 3 were not associated with any outcomes. To examine the effect of family income, Hours were interacted with very low income and findings indicated that none of the interactions were siginficant for PIAT scores. However, when hours worked in year 1 were interacted with low income, they had a negative effect on PPVT scores, suggesting that hours worked by low-income mothers in the child's first year are associated with lower PPVT scores. The coefficients on the interactions between a White race dummy and mother's hours worked in year 3 were positive for PIAT-M and PIAT-R (meaning work hours in year 3 were positively associated with PIAT-R and PIAT-M for White mothers only).
1986-1994 NLSY of 498 siblings and their mothers as well as the full sample, 2,119 children. Longitudinal.			
Ruhm (2004)	child's PPVT-R (at ages 3-4), PIAT-Math (ages 5-6), PIAT-Reading (ages 5-6)	Maternal employment is measured in the year prior to the birth through the 4th years of the child's life as well as average weekly work hours divided by 20.	Maternal employment in the first year is associated with lower PPVT at ages 3-4, but higher ability for maternal employment in the 3rd and 4th years. Maternal employment in the first year is associated with lower PIAT-M and PIAT-R at ages 5-6, with negative effects persisting for maternal employment in the 3rd and 4th years. Coefficients on maternal employment decline (become more negatively associated with child outcomes) with the addition of more complete controls for heterogeneity. This occurs b/c the author claims to more carefully control for the heterogeneity between working and nonworking mothers than previous analyses. (Note: the author does not carefully indicate statistical significance in this study)
1986-1996 NLSY of 1,872 7 to 8-year-old children and their mothers. Longitudinal.			

Waldfogel, Han, Brooks-Gunn (2002)	child's PPVT-R (at ages 3-4), PIAT-Math (ages 5-6 and 7-8), PIAT-Reading (ages 5-6 and 7-8)	Maternal employment: employed during first year of child's life, employed during the 2nd or 3rd year, employed after age 3, and currently working; employment hours were also assessed during the first year of child's life	For white children, maternal employment during the first year of life is associated with poor scores on all outcome measures. Current employment is also associated with lower scores on the PIAT-Math (ages 5-6). Yet, maternal employment after the child's first year of life is positive for PPVT-R, PIAT-R and PIAT-M (at ages 7-8). For African American children, there are no effects of 1st year maternal employment and positive for PIAT-R (age ages 7-8) for maternal employment during the second or third year of life. For Hispanic children, there are no effects of maternal employment during the 1st year of maternal employment, but negative effects for maternal employment during the 2nd or 3rd year on PIAT-M (age ages5-6) and PIAT-M (age ages 7-8) scores.

1986-1990 NLSY of 1,872 7 to 8-year-old children and their mothers. Longitudinal.

Table 5. Nonstandard Work Schedules, Long Work Hours, and Instability in Work Hours/Schedules and Child Care, Parenting and Child Outcomes

Study	Outcomes	Key Independent Variables	Results on Key Variables
Casper and O'Connell (1998)	Father's primary or secondary care of children while mother is working (1/0)	Fathers' availability for child care (weekly hours father is not at work while wife is, relative work shifts of spouses, relative FT/PT status of spouses	Job structures affect fathers' ability to care for preschoolers while mother's at work: father's time available to care for children is positively related to his care. Father's time w/children is maximized when couples work different vs. overlapping shifts.
1988, 1991, 1993 SIPP. Cross-sectional. Dual-earner parents with children under age 5. Reg controls for spouses relative/absolute income and education, # preschool children, region of country, sex of household head, wife's age, spouses relative ages.			
Dunifon, Kalil, and Bajracharya (2005)	Children's internalizing and externalizing behavior problems and levels of positive behavior	Maternal work conditions: long work hours (40+ hours/week), erratic work schedules ("a lot" of variation in number hours worked week to week), nonday shifts ("mostly" evening or mixday and evening hours), lengthy commutes (25+ minutes, top quartile of commute time)	Sig positive association between having a lengthy commute at 2 or more waves (relative to never having a lengthy commute) and children's internalizing behavior problems (effect size of 25% of a std dev in internalizing behavior). No Sig predictors of matneral work conditions on children's externalizing behavior problems. Children's positive behavior decreases when mothers have a long commute at one wave and when mothers have long commmutes at 2 or more waves (effect sizes of 30% and 35% of std dev in positive behavior).
Women's Employment Study, 1997-2002, of 372 mothers with children ages 5 to 15 leaving welfare for employment (mothers were single at Wave 1). Longitudinal. Reg controls for number of children under 18 in HH, maternal age, whether the mother lives with her mother, whehter the mother is married or cohabiting, mothers' educational level, mothers' race, child age in years, child sex, whether the mother has poor or fair health, parental stress, domestic violence, learning disability, several measures of mothers' mental health, mothers' average hourly wage, number of waves the mother was employed.			
Greenstein (1995)	Marital stability: assessed by years of intact marriage, marital disruption	Women's employment hours (weekly), gender ideology (five likert-style items based on survey responses)	Weekly work hours negatively related to marital stability only for women with nontraditional gender ideology, not women with traditional views.

Table 6. Low Wages, Job Instability and Unemployment

Study	Outcomes	Key Independent Variables	Results on Key Variables
Anderson, Kohler, and Letiecq (2005)	Fathers' depressive symptomology (Center for Epidemiological Studies Depression Scale)	7-point "resource challenge" scale including current unemployment, inability to pay full amount of child support order, limited access to reliable transportation, no permanent place to live, problems with alcohol or drugs, health problems or disability, and ever convicted of a crime	Fathers' resource challenges were strongest predictor of depression scores (compared with measures for rural/urban residence, miles from child, social support, and coparent conflict). As the number of challenges increased, father's depression scores increased.
127 predominantly single African American men in 2 urban and rural responsible fatherhood programs, part of a larger study evaluation the Maryland Responsible Fathers Demostration Project (RF) The primary purpose of the porgram is to help fathers become more capable of financially supporting their children, more compliant with Child Support Enforcement, and more involved in their children's lives as positive role models and nurturers.			
Broman, Hamilton, and Hoffman (1990)	Family tension and stress assessed by:1) level of conflict with their spouse or partner (married/cohabitating only) and their children (parents only) and 2) series of questions about children's problems in school, behavioral/emotional problems, and trouble sleeping	Unemployment	Unemployment is positively associated with spousal conflict (but no sig relationship with children's problems, child conflict, or corporal punishment of children. Path analysis indicates that employment status (employed vs. unemployed vs. anticipate being unemployed) has sig effects on financial hardship, and that, in every case, financial hardship exerts a significant impact on family tension and stress (all in expected directions). The authors observe that from 15 to 75% of the effect of unemployment or its anticipation on family tension and stress is mediated through financial hardship. A series of interaction terms indicated that though the three employment status groups differend in their exposure to financial hardship, there was no evidence that the impact of financial hardship on family conflict and stress differed for the three groups. Further, the impact of financial hardship in producing conflict involving the spouse is greater for men than for women--separate regs for men and women reveal that financial hardship is not a sig predictor of spouse conflict for women, but it is for men.
1987 study of three GM plants in the Detroit area and one from Flint which were scheduled to close (n=831). A pool of workers from 12 comparison plants in the same area that were not experiencing a shutdown were used as controls (n=766).			

Study	Outcomes	Key Independent Variables	Results on Key Variables
Flanagan (1990)	Mother and child perceptions of parent-child conflict	Change in parental work status (deprived families=job loss at Time 1 and 4, recovery families=job loss at Time 1 and reemployment at Time 4, nondeprived families=stable employment over time)	When families are coping with a job loss or demotion, adolescents report higher levels of conflict with their parents relative to other adolescents. However, the conflict associated with a loss of work status declines when the family recovers (there is a compensatory effect). Mothers' perceptions of conflict were not as sensitive to changing patterns of employment.
1983-84 Transitions at Early Adolescence Project, four wave panel study of 504 adolescents and their mothers from working and middle-class communities with auto manufacturing. Longitudinal (1st and 4th waves).			
Flanagan and Eccles (1993)	Adolescents' social competence (teacher's report of adolescent's ability to get along with peers) and disruptiveness in school (adolescent report)	Change in parental work status (deprived families=job loss at Time 1 and 4, recovery families=job loss at Time 1 and reemployment at Time 4, nondeprived families=stable employment over time)	Teachers reported that adolescents in deprived and declining families were less competent than their peers in stable or recovery families. In addition adolescents whose parents experienced a decline in work status were the most disruptive in junor high school. Most students had difficulty adjusting to junior high school, but the transition was parituclarly difficult for those students whose parents were changing work statuses.
1983-84 Transitions at Early Adolescence Project, four wave panel study of 883 adolescents (in sixth and seventh grade), their mothers, and their teachers from working and middle-class communities. According to mothers, 8.17% were married, 8.5% remarried, and 9.8% were divorced, separated or widowed. Longitudinal (1st and 4th waves only).			
Howe, Levy, Caplan (2004)	Depressive symptoms	Secondary stressors after job loss: 67 items (e.g. applying for or being refused welfare, unemployment or bank loans; restrictions in spending and increased debt; changes in routines; new demands for job search and training; and physical relocation)	Secondary stressors are associated with increases in depressive symptoms for the job seeker, but also have an effect on the mental health of the partner. Secondary stressors also appear to degrade the quality of the relationship, which contributes to increased distress.
1992 Interview study of married/cohabing white and black English-speaking couples where one partner had been laid off permanently from a nonseasonal job (recruited from five state employment agencies in urban/suburban conties in southern MD). Cross-sectional.			

Study	Outcomes	Key Independent Variables	Results on Key Variables
Kalil and Ziol-Guest (2006)	Children's academic progress: parental report of grade repetition and expulsion/suspension	Parents' job loss: parents who were underemployed, had one job loss, had multiple job losses, or were persistently unemployed over a 2-year period	Mother's employment is never significantly associated with children's academic progress (even when mothers outearn fathers), but fathers' job losses are adversely associated with children's academic progress. Elementary school children whose fathers experience an involuntary job loss show double the odds of grade repitionion compared to those whose fathers are continually working and this relationship is mediated by family economic resources. The odds of suspension/exulsion for children whose fathers experience multiple job gaps, whether voluntary or involuntary, are 5.3 and 2.8 times higher compared to children whose fathers continually work.
1996 SIPP of 4,500 school-age children in 2,569 two-parent primarily white families. Longitudinal (uses waves 6-12).			
Kalil and Ziol-Guest (2005)	Adolescents' mastery (Pearlin Master Scale), self-esteem (Rosenberg self-esteem), grade repitition, school dropout (for at least 1 month)	Single mother's employment patterns: continually employed in a good job ("good" = at least 35hr/wk for $7/hour w/health insurance OR $8.5 w/out health insurance), continually employed in a bad job, continually unemployed, exactly one job loss followed by reemployment, exactly one job loss without regaining employment, and more than one job loss (reemployment not specified)	Relative to being continuously employed in a good job, adolescents whose mothers lose a job without regaining employment show declines in mastery and self-esteem, those whose mothers are continuously employed in a bad job show an increased likelihood of grade repetition, and those whose mothers are either persistently unemployed or lose more than one job show an increased likelihood of school dropout. These effects are not explained by concomitant changes in family income.
1994-1996 and 1996-1998 waves of unmarried female respondents from the LNSY79 merged with their young adult children (ages 14-16 at beginning of the 2-year period). The 1994-1996 cohort of 14-,15, and16-year-olds consists of 495 mothers with 538 adolescent children. The 1996-1998 cohort consists of 6757 mothers and 695 adolexcent children.			

Study	Outcomes	Key Independent Variables	Results on Key Variables
Kessler, Turner and House (1989)	emotional fuctioning (depression, anxiety, and somatization subscales of the SCL-90) and physical health (self-evaluation)	unemployment and subsequent reemployment	All three distress measures (depression, anxiety, somatization) were significantly elevated among the currently unemployed compared to the stably employed at Time 1. Distress is slightly positively associated with probability of reemployment (suggesting people who are highly distressed by unemployment might search have more intense job searches). Finally, the authors assessed the effect of distress on subsequent reemployment and found reemployment is associated with imporovements in depression. Further the reemployed experienced complete emotional recovery within a year of returning to work.
1984 Community interview survey of 391 respondents (146 unemployed, 162 previously unemployed and 184 stably employed) from14 census tracts in southeastern Michigan. Follow-interview in 1985. Longitudinal.			
Liem and Liem (1988)	Individual and family functioning: husbands' and wives' affective states using 10-item Affect Balance Scale, psychological symptoms using Derogatis' Brief Symptom Inventory, and overall family climate using Moos and Insel Family Environment Scale	Recent job loss (respondent had to have held the job for at least one year prior to termination)	In comparison to their employed counterparts (control group indentified through a compbination of telephone surveys based on town census data and random scrrenings at grocery stores), unemployed blue- and white-collar workers reported higher levels of psychological symptoms following their job loss. They also reported a more negative mood. Workers who found employment before the second wave of interviews (4-5months) derived considerable emotional relief from their employment compared to those who were still unemployed. However, reemployment at midyear were associated with only a slight positive effect on psychological well-being. The degree of interest and challenge in the job was positively associated with depression (so that the more challenged the respondents were by the job the lost, the more depressed they were). Wives' responses to their husbands' unemployment differed in two ways: 1) their symptoms did not manifest until 4 months following unemployment and 2) the absolute level of the effects was smaller than their husbands.
1981 Boston interview study of 82 recently involuntarily unemployed men and their families, conducted over a at 2, 4, 7, and 12 months. Longitudinal.			

Study	Outcomes	Key Independent Variables	Results on Key Variables
McLoyd, Jayaratne, Ceballo, Borquez (1994)	Mothers depressive symptomatology and Adolescent socioemotional functioning (adolescent's perception of negative relations w/mother, perception of family's economic hardship, cognitive distress, depressive symptomatology, general anxiety, and self esteem)	Maternal employment status (1/0) and any employment interruption between 1988 and 1990, time of interview (1/0)	With the exception of general anxiety, none of the measures of socioemotional functioning was significantly correlated with maternal unemployment or work interruption directly. However, current maternal unemployment was associated with increased depressive symptomatology in mothers. Mothers who experienced layoffs and job loss or who stopped working were no more depressed than mothers who had not experienced these events. Maternal depressive symptomology was, in turn, positively associated with harsher punishment of adolescents.
1990-91 Interview data from 241 single African American mothers and their seventh-and eighth-grade children in predominantly lower- and working-class neighborhoods from mid-sized midwestern city.			
Vinokur, Price, and Caplan (1996)	depression (self reports and partner reports based on Hopkins Symptom Checklist), marital/relationship satisfaction (Spanier's Dyadic Adjustment Scale)	Financial Strain (measured with 3-item index: difficulty in living on total HH income, anticipation of financial hardship in next 2 months, anticipation of reducing standard of living)	Financial strain increases symptoms of depression in the partner as well as the job seeker. These depressive symptoms dampen the partner's ability to privde support to the job seeker (express carea nd concern, provide help) and increase the partner's undermining behaviors (criticize, insult). This combination of decreased support and incrased undermining has two separate effects on the job seeker: it increases depressive symptoms (above the already elevated level that is due to financial strain) and reduces satisfaction with the marital relationship.
1991 Experimental study of 815 Recently unemployed job seekers and their spouses or partners from four state unemployment offices in southeast Michigan (501 were included in experimental condition of job search skills and 314 were control). Eligible respondents were those who had lost their job within the last 13 weeks and were still seeking reemployment, follow-up study conducted six months later. Longitudinal.			

Study	Outcomes	Key Independent Variables	Results on Key Variables
Yeung and Hofferth (1998)	Family reduction in total food expenditures ≥ 20%, Residential move, Receipt of food stamps, Wife's increase in work hours ≥ 150 (married/cohabiting only), Divorce or separation (married only)	Income loss (decrease of 50% or more in the ratio of total family income to needs over the period of study)***Note this study is NOT about explicitly losing a job, but they examine decreases in work hours***	Families that experienced either substantial income loss or whose head experienced reduced work hours at either t+1 or at both t and t+1 were much more likely than families experiencing no loss to reduce their food expenditures at t+1. Families that experienced a major income loss were significantly more likely to move in the subsequent year than those with no or a smaller income loss. Families which experienced a major income loss were significantly more likely to receive food stamps the following year than those with no, or a smaller, income loss. Families in which the head lost work hours in t+1 also were significantly more likely to receive food stamps in that year than those in which the head was stably employed. White families with a 50%+ loss of income was not associated with an increase in the work hours of the spouse, nor was the loss of head's work hours in the present or prior year associated with an increase in her work hours. Income loss was associated with a significantly increased probability of divorce or separation from a partner.

PSID of all families of all children born between 1967 and 1973 and present in the PSID between birth and age 20. Information about the oldest child in the family in 1968 was used to select families for inclusion in this study.

Table 7. Child Health and Maternal Employment

Study	Outcomes	Key Independent Variables	Results on Key Variables
II.C.3. How child health and disability affect parental employment			
II.C.3.a Effects on parental employment			
Heck and Makuc (2000)	Parental employment	Presence of child with special needs	Both in two-parent and in single-parent families, children with special needs were significantly more likely than other children to have a parent who did not work full-time (adjusted odds ratio = 1.27 in two-parent families and 1.66 in single-parent families
1994 National Health Interview Survey N=21415 children 5-17 yrs old, including 1604 children with special needs			
Hodapp and Krasner (1994)	Likelihood of having two or more wage-earners	Presence of child with disabilities: visual impairments, hearing impairments, deafness, and orthopedic impairments	As a combined group, families of children with disabilities were more likely than remaining families to have only one wage earner (as opposed to two or more); difference appears to be due to families of children with orthopedic and visual impairments
National Educational Longitudinal Study of 1988: Families of 8th grade children with disability (N=283) and without disability (N=22368)			
Loprest and Davidoff (2004)	Parental employment	Presence of child with special health care needs (CSHCN)	Controlling for differences in demographic and family characteristics, authors find no significant association between having a CSHCN and the probability of work or the number of hours worked among low-income single-parent families; Separate analysis of different dimensions of special health care needs shows that parents of children with activity limitations are significantly less likely to work and work fewer hours; this result does not hold true for the group of children defined based on elevated or special service use, or for the groups of children with specific chronic conditions; Only a specific subset of children with special needs present difficulties for low-income parents' work;
1999 and 2000 National Health Interview Survey: children living in single-parent families with incomes under 200% of the poverty line N=9844 low-income			

Rogers and Hogan (2003)	Anyone in the family made any or all of six types of job changes: not taken a job to care for child; quit working other than normal maternity leave; changed jobs; changed work hours to a different time of day; turned down a better job or promotion; worked fewer hours	Presence of child with functional limitations: limitation in mobility, self-care, communication, and learning ability; or medical condition: physical, neurodevelopmental, learning/behavior, asthma	Each of the 4 types of medical conditions is associated with increased likelihood of experiencing job changes; limitations in children's mobility, limitations in self-care, and moderate and severe but not mild learning disabilities were all associated with the likelihood of job changes. Functional limitations in mobility and self-care were both associated with intensive care requirements, which resulted in parents making various job changes;

1994 and 1995 National Health Interview Surveys: 3446 children ages 5-17 with a disability

Smith, Romero, Wood, Wampler, Chavkin, and Wise (2002)	Current parental unemployment and work absence(s) in previous 6 months b/c of child illness	Presence of child with chronic illness: asthma, diabetes, sickle-cell anemia, epilepsy, hemophilia, cerebral palsy, or cystic fibrosis	Parents of children with high health care use rates were more likely to be unemployed (odds ratio =1.7); high rates of child health care use were not associated with parents missing work. Among the subgroup of parents of children with asthma, former welfare recipients (odds ratio=3.6) and denied applicants (OR=3.6) were significantly more likely to have missed work b/c of child illness. A high asthma severity score was strongly associated with work absences in parents (OR=4.6)

2001 study of 504 predominantly low-income English or Spanish-speaking parents or primary caretakers of children aged 2-12 years with one of 7chronic illnesses (see above). Respondents identified at clinical sites and welfare offices at San Antinio, Texas.

II.C.3.b How maternal and child health and disability affect maternal employment

Earle and Heymann (2002)	Maternal job loss: the involuntary end of a job, followed by a period of unemployment of at least 3 months	Existence of children's or mother's health conditions that limit activities	Controlling for personal, human capital, family, and local economic characteristics, having a health condition increased a woman's probability of job loss by 57% while having a child with a health limitation increased a woman's probability of lob loss by 33%

National Longitudinal Survey of Youth: 783 former female welfare recipients who held at least one job between 1979 and 1996. Longitudinal.

Lukemeyer, Meyers, and Smeeding (2000)	Maternal employment	Presence of disabled or chronically or mentally ill child	Controlling for individual and structural factors, children's disabilities explained a significant share of variation in employment outcomes; the presence of a child with only moderate limitations was not significantly related to mothers' employment; in families with a child with severe limitations, mothers' probability of employment was 15% lower, and mothers who were employed worked an average of 15 fewer hours/wk
1995 data from Wave II of the AFDC Household Survey N=1756 families			
Meyers, Lukemeyer, and Smeeding (1998)	Maternal employment	Presence of child with activity-limiting chronic illness, or emotional, mental, or physical condition that could result in a functional limitation	61% of mothers with no disabled children, 62% of mothers with a single, mild or moderately disabled child, and 79-83% of those with more than one or any severely disabled children were not employed when contacted; mothers' self-reports indicated that care for special-needs children depressed employment; 33% of those with only one mild to moderately disabled child, 65% of those with a single severely disabled child, and 90% of those with multiple and severely disabled children reported barriers to employment
1995 data from Wave II of the California AFDC Household Survey N=1756 families			
Parish, Seltzer, Greenberg, and Floyd (2004)	Maternal employment	Presence of child with developmental disability	Differences are b/t 61 mothers of children with developmental disabilities and 61 comparison mothers with no disabled children: In 1974, 46% of mothers with disabled children were employed, 12% were employed full-time, and 34% were employed part-time vs. 64% of mothers w/out disabled children were employed, 38% full-time, and 28% of employed part-time. Mothers of children with disabilities were less likely to have ever had a job spell that exceeded 5 yrs in duration and were less likely to have full-time jobs as their children grew older
Wisconsin Longitudinal Study 1957-1992: 61 mothers of diabled children and 61 comparison mothers were examined for maternal employment outcome			
Porterfield (2002)	Work choices (full-time, part-time, not at all) of single and married mothers	Presence of child with a disability (autism, cerebral palsy, learning disabilities, mental retardation, other disabilities, or physical limitations) or existence of maternal disability	The variable with the largest effect on a mother's probability of choosing not to work at all is the disability status of the mother herself. A single mother with a young child with disabilities is 14% more likely to be out of the paid labor force and 17% less likely to work full-time than a single mother with no disabled child. The labor supply effect of having a young child with disabilities is not as great for married mothers as for single mothers; married mothers with young children with disabilities are more likely to work part time and less likely to work full time than are married mothers with no disabled children
1992 and 1993 panels of the Survey of Income and Program Participation: single (N=3680) and married (N=9804) mothers with children under the age of 20			

Powers (2003)	Maternal employment and usual weekly work hours	3 child-disability definitions: (1) mobility limitations on physical activities (2) health problems impacting learning activities (3) incorporates 1 and 2 and receipt of therapy or diagnostic services	For each definition of disability, the estimated effect of disability is always more negative for female heads than wives; a definition-3 disability is predicted to reduce wives' labor force participation by 6 percentage points; the probability of female heads' employment is reduced by 11 percentage points in the case of a definition-2 disability. While female heads' growth in work hours over time and probabilities of entering employment are negatively affected by child disability, evidence was not found for an analogous effect on wives
1992 and 1993 pooled Survey of Income and Program Participation: wives (N=9594) and female heads (N=2756) with children under 21			
Salkever (1990)	Single mothers' labor supply(worked at all in past year, hours of work in past year) and earnings(log of earnings in past year, log of earnings per hour in past year)	Presence of child with disability limiting participation in play activities or child's ability to do regular school work	The negative effect on earnings per hour increases with the age of the disabled child. The presence of a disabled child reduces the probability of maternal employment, but evidence for an effect of child disability on hours, wages, and earnings for working mothers was much weaker
1976 Survey of Income and Education: 597 households with disabled children and 457 households with no disabled children that are female-headed, have at			
Wolfe and Hill (1995)	Single mothers' employment, wages, and earnings capacity	Existence of ADL of mother (activity of daily living mother has difficulty performing); mothers' self-report of poor-fair health; presence of child with mobility limitations or mental or emotional problems limiting learning or schoolwork	The direct effect of own health (ADLs and poor/fair health) is to reduce labor force participation (coefficient on ADLs is negative and significant at the 1 percent level); the influence of having a disabled child is also negative (the coefficient is significant at the 1 percent level). Since poor health and disabilities reduce wages, the results of the wage measure suggest that health plays an important role through its influence on potential earnings. Authors' simulation "made healthy" 25% of women with a health problem and found labor force participation would increase by 2.2 percentage points among all single mothers (0 among healthy women; 8.4 percentage points among women who had originally had a health problem)
1984 Survey of Income and Program Participation: 1647 single mothers			