

## ABSTRACT

Title: EMPLOYMENT AND MARRIAGE:  
PATHWAYS OFF OF WELFARE?

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Master of Arts 2005

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Does the way women exit welfare affect their probability of returning to welfare? Using data drawn from the 1979 – 2000 National Longitudinal Surveys of Youth, I examine the effect of marital and employment transitions on recidivism rates. I find that women who combine employment and marriage after exiting welfare, in that order, have significantly lower risks of recidivism than other women. Women who marry but do not enter employment have higher recidivism rates than women who combine employment and marriage, but they are less likely to return to welfare than women who are only employed. The data suggest that simply encouraging marriage or women's employment may not reduce welfare recidivism. The best policy strategy to reduce welfare dependence and encourage healthy marriages may be to strengthen work support programs and improve the circumstances of employment (and opportunities for strong marriages) for low-income men and women.

EMPLOYMENT AND MARRIAGE: PATHWAYS OFF OF WELFARE?

By

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Thesis submitted to the Faculty of the Graduate School of the  
University of Maryland, College Park, in partial fulfillment  
of the requirements for the degree of  
Master of Arts  
2005

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## Acknowledgements

Writing this paper proved to be a learning process, as much about myself as about the academic process. I have been fortunate to be surrounded by wonderful people who have given me intellectual guidance, emotional support, and the encouragement to persevere. To all of these people I owe a tremendous debt of gratitude.

In addition to the technical skills of writing, my thesis committee taught me the process of developing ideas and creating a compelling narrative. My work has benefited immensely from their criticisms and suggestions. Steve, thank you for your patience and your commitment to excellence. John and Suzanne, thank you for your insights and encouragement.

To my parents, there are no words that express how lucky I feel that you make the words 'we are proud of you' regular sentiments and stand behind my convictions. You have always made all things possible with your love and support.

Kim, your constant belief in me has motivated me when I have doubted myself. Thank you for your strength and for the many gifts that you bring to my life. Christian, thank you for showing me what I was missing all of those years without a big brother! Thank you both for your all of your love and support. To my niece Kaylin, you remind me that we can master anything, but it must be done one step at a time. Thank you for showing me how exciting the world can be. More Kaylin, more!

Thank you to my partner in pain, Melissa. You're the best thesis buddy a girl could want! Thank you for all of your pep talks, the data sessions, and phone calls.

And finally to Chris, whose love and patience knows no bounds; thank you for your feedback, your support, and for being who you are. We are just getting started my love, and it only gets better.

To all my friends who love and support me, you make the difference. Thank you!

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## I. Introduction

Welfare caseloads have fallen by more than half in the wake of welfare reform, but recidivism rates around 60% among first time welfare recipients throughout the 1990s raise questions about women's ability to maintain their self-sufficiency over time (Cao 1996; Harris 1996; Meyer and Cancian 1996). Current welfare reform programs promote employment and marriage as avenues off of welfare and out of poverty. Research, however, offers varied conclusions about the effectiveness of these paths at *keeping* women off of welfare (Harris 1996; Rector, Johnson, and Fagan 2002; Haskins and Sawhill 2003; Lichter, Graefe, Browne, 2003). Former welfare recipients are likely to face low wages, limited wage growth, and substantial job turnover; all of which may create a renewed need for welfare (Pavetti and Acs 1997; Loprest 1999; Moffit 2002). For women who marry, high rates of divorce among low-income couples suggest that marriage often fails to ensure long-term stability (Graefe and Lichter 2002). Additionally, ethnographic research suggests that while many poor women perceive a stable marriage as an ideal situation, the economic, emotional, and even physical risks of marriage may make women hesitant to commit to a legal union (Edin 2000; Lichter, Batson, Brown 2004).

This paper follows an article by Harris (1996) that addresses the association between the route off of welfare and the risk of recidivism. Using a sample of 591 women from the 1983 waves of the Panel Survey of Income Dynamics (PSID), Harris examines whether women who leave welfare for employment face a differential risk of recidivism when compared to women who exit welfare by marriage/cohabitation or other

reasons. She finds that 54% of women who leave welfare for employment and 58% of women who leave for marriage (or cohabitation) return to welfare within six years, a difference that is not statistically significant. Harris concludes that the route of exit from welfare is not important per se; it is a woman's ability to maintain employment or remain married that largely determines her ability to remain off of welfare.

Harris's study provides a comparison of employment and marriage as routes off of welfare, but her data and methods leave some key issues unresolved. With respect to the data, the PSID is a nationally representative data set, but the sample is small, drawn from a limited time period, and captures a relatively short risk period for recidivism. With respect to methods, Harris measures the events occurring at welfare exit but does not capture the effect of subsequent events on recidivism, such as a marriage following employment, or employment following a marriage. Harris supplements the main analysis with descriptive data on how frequently women combine work and marriage, but does not estimate how effective combinations of marriage and employment are at reducing rates of recidivism. In addition, while many women do not experience work or marriage at the time of welfare exit, some of these women may ultimately transition into work and/or marriage. These transitions are not counted as marriage or employment transitions in Harris's main analyses, although she does provide descriptive data on how often such transitions occur.

As a replication and extension of Harris's 1996 study of welfare recidivism, this paper has two main aims. First, this paper tests whether Harris findings can be replicated using a different data set, the National Longitudinal Survey of Youth 1979 (NLSY79), with a larger sample and a longer time span. Second, rather than focusing on

employment and marriage as competing events measured at the time of welfare exit, this analysis examines employment and marriage as events that occur at or after welfare exit and may separately or in combination affect the probability of returning to welfare.

I begin in Section II with an overview of the existing literature on recidivism. The literature review provides a general sense of the debate surrounding marriage and employment as anti-poverty strategies and focuses on Harris's findings specifically. Section III outlines the data and methods employed in this study. The fourth section discusses the results of the data analysis. In the final section of the paper, I discuss the implications of the data analysis and make suggestions for future research and policy supports for women on welfare.

## **II. Literature Review**

### *Recidivism and Welfare Dependence*

Recidivism refers to the process of initiating another spell of welfare after a previous spell of welfare has been completed. At exit from welfare, few women have incomes substantially above the poverty line that remove them from the risk of repeat welfare use (Bane and Ellwood 1994; Meyer and Cancian 1996; Iceland 2003a). While a majority of women leaving welfare are working at exit, the average job tenure is less than a year (Kalil et al 1999; Anderson et al 2000). Small income fluctuations, unexpected expenses, or changes in family structure can create a renewed need for welfare. As a result, multiple spells of welfare are common; over 60% of the welfare population returns for a second spell and studies have reported women experiencing as many eight spells of

welfare receipt (Cao 1996; Meyer and Cancian 1996). High recidivism rates demonstrate that moving women off of welfare is only the first step; keeping them off welfare requires a more long-term solution.

David Ellwood (1986) brought the issue of recidivism to the forefront of welfare research by examining the extent of multiple spells of welfare. Other research, examining the duration of single spells of welfare only, indicated that the majority of welfare spells were of short duration, lasting less than two years (Bane and Ellwood 1983<sup>1</sup>; O'Neill, Bassi and Wolfe 1987). Using annual data from the Panel Survey of Income Dynamics (PSID), Ellwood demonstrated that when total time on welfare was considered, many of these individual short-term spells combined to create long-term welfare durations. Although many women were able to leave welfare relatively quickly initially, they were unable to remain economically independent of welfare and returned for additional spells. This finding signaled a significant rate of return to welfare after a woman's initial exit.

Ellwood's findings questioned the general assumption among researchers of welfare dynamics that women who leave welfare are able to become and remain economically self-sufficient. Although many women achieved some degree of self-sufficiency after exiting, many ultimately returned to welfare (Ellwood 1986; Bane and Ellwood 1994). Ellwood's research indicates that moving women off of welfare is only a temporary solution to reducing welfare dependence; lowering recidivism rates and helping women maintain their independence without the aid of welfare is crucial to

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<sup>1</sup> Bane and Ellwood 1983 examined the dynamics of the poverty population and not the welfare population explicitly. However, the welfare population is a subset of the poverty population and shares many of the same attributes. In addition, Ellwood 1986 and Bane and Ellwood 1994 found that the welfare population exhibited the same dual nature of spell length as the poverty population.

permanently reducing welfare dependence. Consequently, a new direction in research on welfare dynamics has emerged that studies the process of recidivism and focuses on the rate and timing of women's return to welfare, the characteristics of people most likely to return, and the routes off of welfare least likely to result in recidivism.

### *Why Study Employment versus Marriage Outcomes*

In the 1900's, research on improving welfare-reliant women's economic well-being largely focused on employment-based outcomes (Harris 1993; Pavetti and Acs 1997). This research reflects a prevailing policy orientation; the 1990s saw large financial outlays for programs designed to encourage employment among the welfare population (Scholz and Levine 2001; Patterson 2000). More recent studies on marital opportunities and the effect of increased marriage rates among the poor (Lerman 1996; Rector, Johnson, and Fagan 2002; Thomas and Sawhill 2002) reflect increasing policy attention to marriage as marriage promotion initiatives have taken precedence (Administration for Children and Families, Healthy Marriage Initiatives 2001). As welfare funding is capped by block grants, the proposed allocation of 1.6 billion dollars of federal monies for initiatives to promote marriage may mean that some of the support for working families will be scaled back.

While many papers have separately examined marriage and employment as paths off of welfare, Harris's 1996 paper represents the most comprehensive effort to compare the two paths. Harris's key finding, that recidivism rates are high for women who go directly from welfare to work as well as for other groups of women could be interpreted as a call to improve employment opportunities and training programs for poor mothers

and fathers. However, the recent shift in policy priority for marriage formation suggests that policy makers are focusing more on marriage promotion as an alternative or a supplement to improved conditions for working parents.

In the context of increasing attention to both marriage and employment paths off welfare, this paper endeavors to move beyond a marriage/ employment dichotomy by explicitly modeling the complexity of transitions that women make into employment and marriage. Previous research has suggested that the combination of employment and marriage may be crucial to sustaining self-sufficiency over time (Harris 1996), but research has usually examined these transitions as competing rather than potentially compatible events. Employment and marriage need not be competitive pathways; some women may combine these events after leaving welfare and studies on welfare recidivism need to explicitly address this possibility.

### *Conceptual Framework*

To compare and interpret marriage and employment paths, it is necessary to make assumptions about the conditions of welfare that women leave to enter marriage and/or employment, and in many cases, eventually reenter. Working from a rational choice perspective, I implicitly assume that most women exiting welfare want to remain off of welfare and act to reduce their risk of recidivism. It is something of an oversimplification

to assume that all women want to stay off of welfare.<sup>2</sup> However, there is support for such an assumption. Welfare benefits may be considered less valuable than other forms of income because of the ‘cost’ imposed on recipients through mandatory participation requirements, bureaucratic maintenance, and welfare stigma (Harris 1996). Many women report being treated poorly by welfare caseworkers or feeling worthless because they are unable to provide for their families. Welfare-reliant women report that, given the opportunity and adequate wages, they would leave the welfare system and work to support their families (Edin 1997a, Personal interviews as part of Zedlewski et al 2003).

If one presumes that most women who exit welfare want to stay off of welfare, then they would be expected to choose a life path (employment, marriage, or both) with the highest probability of staying off of welfare. These choices will ultimately be constrained by the opportunities available. The relative proportions of women choosing a marriage or employment path, as well as the rates of welfare recidivism in each path, reflect constraints imposed by limited opportunities for stable, high income employment and for stable, successful marriages. In addition, employment and marriage paths may enhance or limit opportunities for additional transitions, such as marriage after employment, and employment after marriage. In this section, I discuss the employment and/or marriage paths women follow when they exit welfare, as well as the constraints and opportunities women face in each path.

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<sup>2</sup> Some women may choose to remain on welfare as part of a strategy for negotiating their responsibilities to their children and their roles as economic provider. There is evidence to suggest that women combine paid employment, welfare benefits, and income from friends, men, and other sources to make ends meet (Harris 1993; Edin and Lein 1997a). When deciding on the best income package available, women may measure the potential benefits available from welfare in comparison to the wages available from employment. Increasing the level of employment detracts from the amount of benefits available to a family. In addition to cash benefits, welfare also provides non-cash benefits that may be highly desirable for families, such as health insurance, food stamps, and in some cases housing and child care subsidies.

### *Employment as a Route off of Welfare*

Employment is a common pathway off of welfare. Wages from low-wage employment are typically higher than welfare cash benefits and when supplemented by the Earned Income Tax Credit (EITC), women working half time at the minimum wage earn more than the median welfare benefit (Smolensky and Gootman 2003).

Employment also introduces women to a new community of people who are engaged in daily work activities. Interacting with other working people may provide support for women transitioning off of welfare, encourage their working behavior (Wilson 1996), and create contacts in the working world that may facilitate upward mobility (Granovetter 1983). Regular employment also adds structure and meaning to women's lives, increases women's self confidence (Edin and Lein 1997a), and provides a daily routine for families (Moore et al 1995). Lastly, and perhaps most importantly, employed women may enter a new 'marriage market' as well as increase their attractiveness within in it, thereby increasing the likelihood of marriage (Oppenheimer 1997; Lichter et al. 1992).

While employment is a common path off of welfare, researchers have concerns about job quality and tenure for former welfare recipients (Sawhill 2001; Moffitt 2002). Kalil et al (1998) suggest that low-wage work is readily available for current and former welfare recipients but these jobs are largely service and clerical jobs that pay around \$6 or \$7 an hour and are not sufficient to raise a family's income above the poverty line, even if mothers work full-time. These jobs may not offer women the opportunity to advance over time or to substantially increase their hourly earnings (Loprest 1999; Sawhill 2001; Moffit 2002). In addition, most low-wage jobs do not offer employee job



benefits such as health care or paid sick leave (Kalil et al 1998). The challenge of balancing work and family commitments, low wages, and poor job readiness skills<sup>3</sup> contribute to an average job tenure of less than a year for former welfare recipients (Kalil et al 1998; Anderson et al 2000).

Ethnographic research suggests that employment itself may actually contribute to financial strain through increases in spending on childcare, transportation, and working expenses. For many women who leave welfare for work, their incomes are higher than when on welfare but their expenses are also higher, leaving them with a deficit every month (Edin and Lein 1997a). The added costs of employment as well as the challenge of balancing work schedules and child care arrangements can create a barrier to maintaining employment over time. In Edin and Lein's sample of low-income mothers (1997b), over 80% of women who are not employed report childcare concerns as the primary reason for not working. The cost and quality of available childcare may limit women's ability to find or sustain gainful employment.

### *Marriage as a Route off of Welfare*

Marriage is another possible route off of welfare. Having another adult present offers the advantage of having two potential wage earners and two parents to share childcare responsibilities in the household, as well as protection against unexpected events such as the unemployment of a parent or the illness of a child. While single

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<sup>3</sup> Many former welfare recipients have few work skills and are poorly prepared for the culture of the workplace. Kalil et al (1998) note that many former welfare recipients lose jobs because of problems with "tardiness, absenteeism, and appropriate behavior." A lack of basic skills, such as literacy, basic math, communication skills, and computer skills also constitute a sizeable barrier for many former recipients.

parents have to juggle employment, parenting, and domestic duties by themselves, married couples can share in these responsibilities. Married couple families also have higher incomes, higher income to needs ratios, and accrue more wealth than families in other living arrangements (Lerman 2002). When married couples face economic crisis, they may be more likely to receive financial aid from family members than other non-married couples (Waite and Gallagher 2000). Additionally, married couples report better mental and physical health than other individuals; resource sharing and economies of scale practiced within marriage may help reduce financial and emotional stress on parents (Waite 1995). The financial, emotional, and physical advantages of marriage for parents and children are due principally to the investments that the partners make in each other, the relationship, and any children present (Waite and Gallagher 2000).

### *Marriage- An Economic Panacea?*

The advantages of marriage are only realized if women “get married, stay married, and marry well” (Lichter, Graefe, and Brown 2003, p. 62). The decline in marriage rates in the past twenty years suggests that marital opportunities are limited for low-income women (Lichter et al 1992). Skewed sex ratios because of high rates of male incarceration and mortality have led to a demographic shortage of men in low-income areas.<sup>4</sup> Falling real wages for men and high rates of unemployment also contribute to a shortage of economically attractive male mates (Wilson 1987, 1996) and depress

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<sup>4</sup> Marriage markets are highly skewed by race; a white women aged 18 has better prospects than a black woman at any age. At age 28, for every 1000 white women, there are 762 white men of adequate earnings to choose among; for black women, by age 25 there are only 304 men with adequate earnings in the marriage pool (Lichter et al. 1992).

marriage rates, especially among the least educated (Craig, Bennet, and Bloom 1989).

For women who do marry, drug and alcohol abuse, domestic violence<sup>5</sup>, unemployment, and economic insecurity contribute to high rates of divorce. While marriage can completely economically offset the effects of coming from disadvantaged background, women who have had a nonmarital birth are still likely to face economic hardship, regardless of marital status. Additionally, for women who have had a nonmarital birth and who subsequently marry and divorce, their economic situation is worse than before they married and worse than women who never married at all (Lichter, Graefe, Browne 2003).

A woman's ability to marry well depends on the pool of mates available to her. Single-mothers on welfare may face particular challenges in finding 'marriageable' men. These women may be disadvantaged in the marriage market by having limited economic resources and employment prospects; having a child may further depress their attractiveness as mates or reduce their enthusiasm for mate search. As a result, these women have a lower probability of marriage when compared to other women (Graefe and Lichter 2001).

The theory of assortative mating argues that women who do marry will likely marry men with similar characteristics to themselves (Buss and Barnes 1986, Graefe and Lichter 2001). Therefore, few women on welfare will marry men who have incomes substantially higher than their own. When combined, the couples' total income may be higher than the poverty line, but it probably will not be high enough to place the couple beyond the threat of economic instability. In addition, the marriage tax penalty incurred

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<sup>5</sup> Rates of domestic violence for women on welfare range from 34-65% (Lawrence 2003).

as a result of union formation may further decrease the economic gain to marriage.

Wheaton (1998) notes that the marriage penalty is the highest as a percent of income for low-income married couples when considering both tax liabilities and the lost of means adjusted programs such as welfare, food-stamps, and Medicaid. She suggests that marriage penalties could erode a low-income couple's income by up to 30%.

Most low-income women perceive marriage as an ideal state but many have deep reservations about entering into a legally binding relationship (Edin 2000; Lichter, Batson, Brown 2004). Women emphasize that potential mates must 'pay to stay'; they must be employed at jobs paying more than the minimum wage and must demonstrate that they are capable of maintaining these jobs (Edin 2000). While women highly value the institution of marriage, economic security is paramount. Emotional considerations like love are often secondary to concerns for children's well-being, a woman's own safety, and her mistrust of men as providers. Limited economic resources, job insecurity, and the use of drugs and alcohol make intimate violence a reality in many women's lives. Being abandoned by men while pregnant or being left by husbands/ boyfriends in times of economic crisis erodes women's belief that men can be their partners in life. To make ends meet, women maintain tight control of their budgets and their households; previous experiences with men often make women hesitant to relinquish this control for the hope of a better future (Edin 2000).

### *Cohabitation and Marriage As A Separate Measures*

When Harris (1996) finds no difference in recidivism rates between women who leave welfare for employment and those who leave for union formation, she considers

both cohabitation and marriage at welfare exit to constitute union formation. A possible justification for considering marriage and cohabitation together is that many women cohabiting at welfare exit were married within 36 months. However, there are important reasons to consider cohabitation separately from marriage. Cohabitation is common among low-income couples and research suggests that it is a relationship form distinct from marriage (Rindfuss and VanderHueval 1990). Couples perceive that the risks associated with cohabitation are lower because it is not a legally binding union (Rindfuss and VanderHueval 1990; Seltzer 2000; Edin 1997a). However, the benefits also appear to be lower; cohabiting relationships tend to be of shorter duration than marriages and the couples involved tend to be younger, have lower levels of human capital and lower household incomes (Bumpass and Sweet 1989). Cohabiting couples may have higher rates of recidivism than married couples if they have fewer resources and are more likely to experience union dissolution. As such, analyzing marriage and cohabitation separately may strongly affect coefficients for an effect of marriage on recidivism.

### *Combining Employment and Marriage*

Combining employment and marriage after exiting welfare may lead to the best economic outcomes for women and their families. Household income is higher in the five years post- exit for women who combine work and marriage (in some order) than for other women, and their chances of being in poverty are lower (Meyer and Cancian 1996). Having a spouse who earns a steady wage may increase the resources available to purchase goods to support a woman's own employment, such as child care, transportation, and services that may facilitate managing work and family

responsibilities. As such, combining employment and marriage may serve as a double buffer against the threat of economic insecurity and recidivism. While prior research suggests that the combination of marriage and employment may reduce the risk of recidivism, it does not suggest whether the order of these events matters.

Women who transition into employment after exiting welfare may begin building their human capital and their probability of marrying may increase. Regular employment introduces women to a new marriage market in which they have a wider selection of mates. For those women who are able to remain attached to the labor force, Harris (1996) asserts that employment and steady income make them more appealing partners and many begin cohabiting relationships.

Alternately, transitioning into marriage after welfare may enable women to find higher paying jobs if having two adults in the household eases childcare burdens and reduces other work / family conflicts. A spouse's income could allow women to find paid child care or utilize new family networks for relative care that could enable women to work for pay. Additionally, having a spouse to help with domestic and parenting duties could alleviate stress and time demands, facilitating a woman's transition into employment. However, if a recent marriage creates additional children, mothers may be unable to work because of childcare responsibilities.

Not only does a marriage or employment transition affect the chance of a subsequent transition, but the order of marriage relative to employment may have important implications for recidivism rates. If women with higher levels of human capital make better matches in the marriage market, then women who build their human capital through employment may find more 'attractive' mates than women who marry at

the time of welfare exit. These couples would have greater human capital and economic resources than couples who marry at welfare exit and would likely have a lower chance of returning to welfare. If increased economic security reduces marital stress, these couples may also be less likely to divorce (Goode).

While there may be a synergistic effect of employment and marriage on recidivism rates, it is also possible that women who combine employment and marriage represent a select group of women with high levels of human capital. Rather than an true effect of the combination employment and marriage on recidivism, women who select into this combination may be those with the lowest risk of recidivism in the first place. These women may represent the most prepared women to leave welfare; of the women exiting welfare, they may have the highest levels of human capital and come from the most advantage backgrounds. As such, they would be able to find the best jobs and the best possible mates.

### *Analytical Strategy and Hypothesis*

The first section of the analysis examines whether women who exit welfare by marriage and employment face similar risks of recidivism. Using Harris's basic methodology, I focus on the events occurring at a woman's exit to determine her exit type.

*1a. Women who exit welfare through work will constitute the largest group in the sample because women will be able to find employment more easily than a marriage partner.* Throughout the 1980s and 1990s, real wages for men were eroded and opportunities for skilled workers declined. Concomitant to this decline, the service

industry has exploded, replacing high paying blue-collar labor jobs with minimum wage service work (Levy 1993). The consequences of these trends are two-fold. First, women's employment opportunities have greatly increased. Second, male employment opportunities and the income generated from these jobs have decreased. As a result of male economic instability, many couples are delaying marriage or opting not to marry at all (Lichter et al 1992, Craig, Bennett, and Bloom 1989). For women who live in areas with few available/ attractive marriage partners, employment may be the most available means to exit welfare. In addition, women may be hesitant to enter into marital unions, either because of the repercussions of losing welfare benefits (Moffitt 1998) or because of apprehensions associated with the permanency of the union (Edin and Lein 1997a).

*1b. There will be high rates of recidivism across all exit types.* The long observation period in this study will produce higher recidivism rates than those observed by Harris. Other studies on recidivism have demonstrated that women continue to return to welfare beyond the six-year observation period used in Harris's study (Cao 1996; Meyer and Cancian 1996). Employed women who do not experience job / wage progression over time remain vulnerable to the insecurities of low-wage work. The sickness of a family member or problems with child care arrangements can lead to job termination; low-wage workers are often the most vulnerable to economic downturns and may find themselves unemployed during economic recessions. Without job security, women who have remained off of welfare for many years may still be at risk of recidivism long after exiting welfare.

Harris's analysis grouped women who exited welfare by marriage and cohabitation into one exit type. I expect that when separately analyzed, women who exit



welfare by marriage will have lower recidivism rates than women who exit welfare by cohabitation. Additionally, as divorce has a deleterious effect on women's self-sufficiency, I expect recidivism rates to increase at later exit durations for married women. As Harris's study spanned only the first six years after welfare exit, it potentially did not capture the effects of divorce on recidivism. Consequently, I expect to find higher total recidivism rates than those reported by Harris for women who exit through marriage, even when using a more limited definition of 'marriage.'

In the second half of analysis, I examine whether transitioning into employment and/or marriage *after* leaving welfare affects women's risk of recidivism. Utilizing the longitudinal design of the survey, I examine all of the events that women experience in the post-exit period, rather than focusing on the singular events that occur at the time of welfare exit.

*2a. The combination of employment and marriage will produce the lowest recidivism rates over time.* The combination of employment and marriage will provide double protection against recidivism through the increased wages of two earners and the increased availability of two parents for children. Having two parents in the household creates a safety net against unexpected events such as the sickness of a family member or temporary unemployment. Women who successfully combine employment and marriage will have higher incomes and will more successfully meet the needs of their families than other women, thereby reducing their risk of recidivism.

Women who are able to successfully combine employment and marriage may represent a select group of women transitioning off of welfare, however. They may have the greatest levels of job preparation and be the most likely to marry. If these women are

less disadvantaged than other women, then they may be less likely to return to welfare a priori and their lower rates of recidivism are an effect of their personal characteristics and not of the way they leave welfare. To control for this possibility, I include measures of women's family background—their parent's educational status and their family status at age 14. Women living with both biological parents may have been exposed to greater economic and emotional parental resources; they may also have a deeper commitment to marriage themselves. I also include a measure of women's trainability to assess whether certain women are more apt to succeed in the labor force. Women who have more skills may be better prepared to succeed without the aid of welfare. These variables help indicate whether it is the individual characteristics of women that make certain women more successful than others at remaining off of welfare, or whether combining employment and marriage truly lowers the risk of recidivism.

*2b. More women will transition from employment to marriage than from marriage to employment.* The relative size of the pool of women transitioning from welfare to employment is larger than that of women transitioning from welfare to marriage. As such, it is likely that more women will transition from employment to marriage than marriage to employment. In addition, maintaining employment may build human capital, increasing women's self-esteem and increasing their desirability in the marriage market. Women's incentive to marry may also increase if the mates they attract have a steady income and offer the potential for the couple to substantially increase income (Bitler et al. 2004).

Conversely, women who marry after welfare may spend more time in family formation than women who are employed, increasing the size of their family. Increased

child care responsibilities may increase a woman's incentive to specialize in domestic duties and reduce married women's incentive or ability to transition into employment (Becker 1985).

*2c. Women who transition from employment to marriage will have lower rates of recidivism than women who transition from marriage to employment.* According to theories of assortative mating, women who build their human capital through employment after exiting welfare will marry spouses with higher levels of human capital than women who marry around the time of welfare exit. Increased economic resources may protect against recidivism directly by reducing the need for income supports and indirectly by allowing the couple to purchase the goods that facilitate the employment of both spouses. Women who marry at the time of welfare exit will likely marry spouses with similar human capital characteristics to themselves. These couples may face more economic strain over time than couples with higher educational or employment credentials.

### **III. Data and Methods**

#### *The National Longitudinal Survey of Youth 1979*

Data are drawn from the National Longitudinal Survey of Youth 1979 (hereafter NLSY). These data are a nationally representative sample of 12,686 young men and women aged 14-22 in the first year of the survey, 1979. The NLSY asks specific questions about welfare (AFDC/TANF) receipt on a monthly basis. At each interview,

respondents are asked about their participation in welfare in each month of the previous year; as such, this analysis examines welfare recipient on a monthly basis.

In keeping with the convention established by other studies of welfare dynamics and because the adult welfare caseload is predominantly female, I have limited my sample to women who live with children under the age of 18 and who have ever received welfare in a household as an adult.<sup>6</sup> Of the 6,283 women in the NLSY sample, 1,216<sup>7</sup> women with children received welfare between January 1978 and December 1999.

I define a spell of welfare as two or more consecutive months of benefit receipt (Iceland 2003a). Other studies have used one month of receipt to indicate a spell of receipt (Harris 1996; Sandefur and Cook 1998) but given the amount of administrative paperwork required to initiate welfare benefits, it seems unlikely that a person would receive benefits for just one month. A spell of non-receipt, or an exit from welfare, is defined as two or more consecutive months of non-receipt. There is more consensus about this method; most studies employ a two month non-receipt period (Harris 1996, Sandefur and Cook 1998; Cao 1996; Hofferth, Stanhope, and Harris 2002; 2004). It also

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<sup>6</sup> In a 1996 paper, Harris limits her sample to women receiving benefits as heads of households. In a later study (Boisjoly, Harris, and Duncan 1999) she changes her methodology, restricting the sample based on motherhood status and welfare receipt. By restricting the 1996 sample to single mothers, she loses two parent families who were granted welfare eligibility under the Family Support Act of 1988, as well as women who may be living in intergenerational households and not acting as the head of household. I chose to use the 1999 methodology because of increasing evidence that women are using alternative living arrangements as one strategy for coping with economic hardship (Edin 1991; Edin and Lein 1997a).

<sup>7</sup> During the sample period, 1,431 women with children received welfare. However, the sample size is further reduced due to survey non-response. The NLSY began a poor-white supplement in 1979. In 1991, this project was terminated, ending almost 900 ongoing interviews. The termination of this project affects the sample size; 213 cases in my sample are lost due to failure to follow-up during the survey period. In addition, there are two cases that were dropped from the sample because they reported receiving benefits as a child in their parents unit but were not the parent of a child themselves and had no subsequent spell of receipt after the first reported spell. Both of these first spells only lasted until the child came of age and left their parent's unit. In two other cases, a child was receiving benefits as part of their parent's welfare unit. The child had a later spell in which they both had a child and were the head of the welfare unit; in these cases, the first spell was censored and the second spell was determined to be the first spell of receipt.

seems reasonable that if a spell of non-receipt is defined as two months of non-receipt than a spell of receipt should be defined by the same period of time.

In this study, I focus on the first period of non-receipt following a period of receipt, the period of first exit from welfare.<sup>8</sup> Women can experience more than one spell of welfare during the observation period. Higher-order spells are constructed when women have experienced a period of non-receipt and then experience another period of receipt. Of the 1216 women who have received welfare in the sample, 479 women experienced only one spell of welfare while the remaining 738 experienced between two and eight spells of welfare receipt throughout the 20 year observation period.

Respondents interviewed early in the year 2000 do not provide information on their welfare status throughout the entire year. Data are therefore censored at December 1999. Additionally, cases that are not interviewed every year because of non-response are censored in June of the non-interview year if the year of non-interview occurred during the exit period. Data are not left censored because the period of observation is the beginning of non-receipt, which is inherently unaffected by whether spells were in progress when the survey began.<sup>9</sup>

### *Data Comparison- The Panel Survey of Income Dynamics*

The PSID data used in Harris's analysis have several limitations. The short

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<sup>8</sup> In an earlier paper, I find that the rate and timing of third and higher order returns to welfare are statistically different than first and second returns to welfare (Roberts 2003). As such, including all higher order spells in this sample would potentially introduce selection bias into the analysis.

<sup>9</sup> These 103 spells (8%) tend to be of long duration; the mean length is approximately nine years. Censoring these spells would remove long-term recipients from the analysis and potentially bias the results of the hazard model. Those recipients who began the survey period on welfare tend to receive benefits for long durations and may be less likely to successfully transition off of welfare.

period of observation in the 1983-1988 waves of the PSID creates a small, period-specific sample of 591 women and potentially limits the incidence of recidivism observed in Harris' sample (57%). The sampling design of Harris's study allows for a full recidivism history of six years for only a portion of the sample; the rest of the sample has a shorter observation period. Studies of recidivism that use longer periods of observation report higher recidivism rates at around 70% (Cao 1996; Meyer and Cancian 1996). As other studies demonstrate that recidivism continues past six years, it is unclear what effect the route of exit has beyond this threshold. As marital dissolution and unemployment have deleterious effects on a woman's ability to remain off of welfare, a truncated observation period that does not capture all of the transitions that women make into and out of work and marriage may underestimate the incidence of recidivism and limit the utility of a comparison of these two exit types. The long sample period of the NLSY makes it ideal for this type of study.

## *Methods*

Life table techniques and hazard models are used to assess the risk of recidivism. Life tables produce an estimation of the proportion of the women who have not yet returned to welfare at each point during the observation period (Christensen 1987). The survival rate is a function of surviving the interval (time  $t$ ) without a return to welfare; the basic survivor function is:  $S_j = 1 - F(t_j)$ , where:

$F$ =cumulative distribution function

$t$ = time

$j$ = 1,2,3...

A hazard model assesses the risk that an event will occur at time  $t$  given that it has not already occurred (Alison 1982). A multivariate Cox proportional hazard model assesses the rate at which women return to welfare controlling for a vector of covariates known to affect recidivism. The basic Cox model is:  $\text{Log } \lambda(t) = \lambda_0(t) + \exp[\beta'x]$ , where:

$\log \lambda(t)$  = rate of return to welfare

$\beta'x$  = a string of explanatory variables that effect the instantaneous probability of occurrence of an event,

$\lambda_0(t)$  = baseline hazard rate

There are several advantages to using a Cox model as opposed to parametric hazard models or discrete logistic regression models. Unlike parametric hazard models, a Cox model makes no assumption about the distribution of the underlying hazard rate. Additionally, while discrete logistic regression models assume a fixed duration period in which an event can occur, a Cox proportional hazard explicitly allows for staggered entrances into the model. As such, the Cox model should provide a more powerful assessment of the relationship between employment, marriage and recidivism than discrete logistic regression models (Ingram and Kleinman 1988).

### *Monthly Rate of Return to Welfare*

The outcome variable of interest is the monthly rate of return to welfare, which is measured as the proportion of women who return to welfare in a given month. When a woman reports receiving benefits again after a period of non-receipt, she is coded as returning to welfare. If the recipient returned to welfare within the survey period, then

the date of her return is coded as the start date of her second spell. If the recipient has not returned to welfare by the end of the survey period, she is censored at December 1999, the end of the survey period. For women who did not respond to the survey in any year during the non-receipt period, they are censored as of June of the non-response year.

I use two different methods to create the explanatory variables used in the analysis, the exit types and the pathways off of welfare. The first method uses Harris's basic methodology, which examines whether marriage, employment, or cohabitation occurred at the time of a woman's exit from welfare. The second method diverges from Harris's methodology, focusing on the transitions that women make into employment and marriage after exiting welfare.

### *Status at Welfare Exit*

One of the principle assumptions of event history analysis is that there is a moment at which subjects become at risk of experiencing an event. In the first section of the analysis, I assume that all women become at risk for recidivism at the time they exit welfare. The duration of the risk period is the time between welfare exit and return to exit or the end of the sample.

In an approach based on the events occurring at welfare exit only, the explanatory variables are the routes off of welfare. These are coded as four dummy variables: employment, marriage, cohabitation, and other exits. These categories are constructed by examining the events in the recipients' lives immediately preceding and following their initial exit from welfare. Employment exits are constructed by comparing yearly earnings in the year prior to exit with those in the year of exit. If a woman's earnings



increased by \$500 or more, she is coded as having left welfare for employment.<sup>10</sup>

Marriage exits and cohabitation exits capture whether a woman began a marital or a cohabiting relationship within twelve months of exiting welfare. The NLSY asks about marital status and partner status in every interview.<sup>11</sup> ‘Other’ exits are coded as the residual. They constitute the remainder of exits for which no reason for exit could be attributed.<sup>12</sup> These exit categories are coded independently of each other, i.e. there is no hierarchy imposed.

In comparison, Harris employs a hierarchical methodology in which she determines the reason for exit. She first examines whether women marry at the time of exit, then whether they experience an increase in earnings. If a woman marries at the time of exit, she is precluded from being in the employment category. Hence, some women who entered employment at the time of welfare exit are not counted as such because they also entered a marriage at welfare exit. In this analysis, 57 women (5% of

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<sup>10</sup> The fielding of the survey created some problem for creating the employment exit variable. From 1994 to 2000, the survey was only fielded biennially. Therefore, wage information is not available in every year. The number of people who exited welfare after 1993 is 157 or 12% of the total sample. The survey asks wage information on a retrospective basis, so I have wage data for all of the 157 cases for either the year of exit or the year preceding exit. For women exiting in 1996 (wage95), I compared their wages in the year 1993 with the year of exit. I used the same technique for women exiting in 1998. For women exiting in 1995 (wage94), I compared their wages in the year prior to exit with the year post exit. I used this same technique in 1997. To avoid losing data, I created another employment exit variable based on increased hours of work. The NLSY asks detailed information about the number of hours worked per week for every year, asking about two years of data from 1994-2000. This variable was created using both a part-time threshold- began working more than 20 hours per week, and a full-time threshold – began working 35 hours per. Potential problems with recall accuracy and a general inability to translate the number of hours worked into an economic indicator led me to accept the wage variable as a better indicator of ‘employment exits.’

<sup>11</sup> For years in which marital status was not collected (ie. 1995, 1997, 1999), I created marital status variables based on questions about marital status and marital change in the years preceding and following the unreported year. I could not refine the measure to account for years in which data were not collected on partner status (95, 97, 99).

<sup>12</sup> Exits that are right censored, (ie. still in progress in Dec 1999) are not included as other exits.

the sample) became both employed and married at the time of welfare exit<sup>13</sup>. These women are counted in both the marriage and the employment categories.

### *Transitions At and After Welfare*

In the second part of the analysis, I utilize the 20 year sample period to examine the transitions that women make into employment and marriage in an attempt to remain self-sufficient after exiting welfare. This approach examines all transitions into employment and marriage occurring at or after welfare exit and assumes that the possibility of entrance into a new state continues after welfare exit. Whereas the approach that identifies the events occurring at welfare exit only assumes that women are all at risk of recidivism at welfare exit, this approach explicitly allows women to enter the risk set after welfare exit, at different times during the sample period and allows me to assess whether the risk of recidivism changes as women transition into employment and/or welfare *after* leaving welfare. The duration of risk for recidivism is the time from entry into a new state (transition into employment or marriage) to recidivism or to the end of the sample period. For women who transition from employment to marriage or from marriage to employment, the transition from one state to the next marks the beginning of the period of risk of recidivism.

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<sup>13</sup> Women may also enter into cohabiting relationships and employment at the time of welfare exit (13 women), or experience cohabitation and subsequently marriage (10 women). If women experience multiple events, they are classified as leaving welfare by each of the events they enter. In subsequent analysis in which the order of these events is important, I use the date at which women enter employment, marriage, or cohabitation to determine which occurred first and then code the events in order of occurrence.

### *Pathways Off of Welfare*<sup>14</sup>

The approach examining transitions at or after welfare exit uses a set of dynamic pathways as the explanatory variables. These pathways put the life events that women experience after exiting welfare into sequence. The life events that I examine include employment,<sup>15</sup> marriage, cohabitation, marital<sup>16</sup> or cohabitation dissolution, and recidivism. The pathways begin with the event occurring at the time of a woman's exit from welfare and proceed in sequence, capturing the events in a woman's life until she either returns to welfare or the sample period ends. For example, if a woman exits through employment, then marries and does not return to welfare in the sample period, her pathway would be employment-marriage- no return to welfare. The forty different pathways are mutually exclusive categories and are listed in III.

In this analysis, I collapse the detailed pathways into time-varying categories denoting whether a woman is currently in a state of employment with no prior marriage, marriage with no prior employment, employment after marriage, marriage after employment, or neither marriage nor employment. A woman is considered to be in an employment pathway (for example) if she exits welfare by employment *or* if she enters employment some time after leaving welfare but had not entered into a marriage. If women marry after becoming employed in one of these two ways, they are categorized in the marriage after employment state. A woman who is employed for two years

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<sup>14</sup> For a complete list of the possible pathways off of welfare, see Appendix III.

<sup>15</sup> I used two different methods to create the 'became employed' variable. The first method was to code employment as moving from 0 hours of work to positive hours of work. The second method was to code employment as moving from 20 hours or fewer to 21 hours or more. Both of these methods yielded the same result.

following a welfare exit, then transitions into marriage will be counted in the employment state for the first two years and the marriage after employment state from year three to censoring.

### *Control Variables*

To control for women's individual characteristics, I include a set of demographic, family background, and human capital variables. The demographic variables include a woman's race, the number and age of her children, the region of the country that she lives in, and the time period in which she exited welfare. The number of children that a woman has is captured as a dichotomous variable signifying whether a woman has three or more children at exit from welfare. To measure the age of the youngest child, I use a dichotomous variable, signifying whether the youngest child is under the age of six at the time a woman exits welfare. There is mixed evidence about the effect of the number and age of children. Some research suggests that having several children may offset the effect of having young children if older siblings provide child care (Sandefur and Cook 1998). Other research suggests that large families and families with young children face budgetary constraints and additional child care responsibilities that create challenges for women transitioning off of welfare (Bane and Ellwood 1994). Harris finds that having three or more children increases the odds of recidivism by 50%.

Race is measured as a series of dichotomous variables; Black, White, Hispanic, and Other are all coded 1. Research suggests that black women have an increased risk of

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<sup>16</sup> Marital dissolution includes both separation and divorce.

recidivism compared to white women (Bane and Ellwood 1994; Blank and Ruggles 1994; Harris 1996). Bane and Ellwood suggest that it is not race itself that increases the likelihood of recidivism but instead the increased incidence of low educational attainment and single-parenthood, especially at young ages, that place black women at increased risk of recidivism.

Region is coded as a dichotomous variable that denotes whether a recipient lives in the South. Almost 40% of the nation's poor live in the South and Harris (1996) finds that these women have 45% lower odds of recidivism than women living in other areas. Additionally, the states in the South offer the nation's lowest welfare benefits; few of these states have increased their benefit levels since the 1980s (Welfare Rules Database). Women who exit welfare in other regions may have greater impetus to return to the program when facing economic shortfall if program benefits are more generous than those in the South.

To control for potential period effects, I include a series of dichotomous variables that capture whether a woman exited prior to 1990, between 1990 and 1996, or after 1996<sup>17</sup>. These three time periods capture important periods in welfare policy. Prior to 1990, standard Aid to Families with Dependent Children (AFDC) practices were in place. Between 1990 and August of 1996, many states applied for and received waivers that allowed them to change standard AFDC practices. Many of these states enacted time limits, work requirements, and sanction policies. These policies limited the amount of time that a woman could receive aid in her lifetime, potentially affecting her recidivism options and/ or decisions. The emphasis on work, with a sanction for women who did not

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<sup>17</sup> I also ran a sensitivity analysis in which I interacted the period variables with the pathway variables. None of these interactions were significant.

comply, compelled many women into the work force which may have increased women's ability to support themselves and therefore lowered recidivism rates. In August of 1996, the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) was passed, officially mandating work requirements, time limits, and tougher sanction policies.

Human capital variables include a woman's educational attainment at the time of exit and her Armed Forces Qualification Score. A series of dichotomous variables measure women's educational attainment. They capture whether a woman has less than a high school diploma, a high school diploma or GED, or has college experience. Previous research on recidivism suggests that women with at least a high school education of the equivalent have 75% lower odds of recidivism than high school dropouts (Bane and Ellwood 1994; Harris 1996). Education may serve as a proxy for earnings potential or it may signify greater knowledge/ skills that may be applicable in the labor market.

The Women's Armed Forces Qualification Score (AFQT) is regarded by the Armed Forces as a general measure of trainability. It tests a person's knowledge and skills in the following areas: (1) general science; (2) arithmetic reasoning; (3) word knowledge; (4) paragraph comprehension; (5) numerical operations; (6) coding speed; (7) auto and shop information; (8) mathematics knowledge; (9) mechanical comprehension; and (10) electronics information (Documentation from the NLSY). The NLSY provides a percentile score based on a 1989 calculation procedure. I transformed this percentile score into a z-score to create a standardized measure.

Family background variables include parental educational attainment and women's family structure at age 14. Parental education is measured separately for

mothers and fathers. Dichotomous variables captures whether mothers and fathers have less than a high school education, a high school diploma/ GED, or have some post-secondary education. Family structure at age fourteen is coded as two dichotomous variables signifying whether a woman lived with her two biological parents or in another arrangement. Research suggests that children who grow up living with their two biological parents are better adjusted as adults, acquire better jobs, and have a lower risk of living in poverty (McClanahan and Sandefur 1994). Women who grow up with both biological parents may also have a deeper commitment to marriage and may be more likely to pursue marriage themselves.

#### **IV. Results**

Table One presents sample means on the demographic, human capital, and family background of women exiting welfare between 1978 and 1999. The average age for women exiting welfare is 25. Almost half of women exiting welfare are white (46%) and have graduated from high school (49%). Around a sixth of women have three or more children and more than five-sixths of women have children under the age of six. Roughly half of women grew up in households with both of their biological parents present but parental educational attainment is low on average in this sample. The majority of mothers (52.3%) of mothers and 44% of fathers have less than a high school education.

<Insert Table 1 About Here>

The average Armed Forces Qualification Test score is 0.23<sup>18</sup>, suggesting a low degree of skill and job preparation within this group. Examining AFQT scores by pathway, women who exit welfare by employment pathways have higher AFQT scores than women who exit welfare by marriage, cohabitation, or other means. The confidence intervals suggest that there is no statistical difference in the mean AFQT scores by pathway; however, there may be an association between women's skills and the path through which they leave welfare. Women with a larger skill set may be more likely to enter employment pathways than other women.

Most women who work earn wages around \$7.50 and their average yearly earnings in the year of exit are around \$7,250 (1999 dollars). Over 60% of women exiting welfare find work in service and clerical occupations. Studies of women exiting welfare find similar results and suggest that wages do not significantly increase over time (Loprest 1999). Additionally, at exit from welfare, more than half of women report household incomes below the poverty threshold. Other studies on welfare dynamics report that close to 60% of women exiting welfare will be poor in at least one year in the first five years post exit and 18% will be poor in all five years (Meyer and Cancian 1998). The fact that many women exit welfare while still in poverty suggests a desire to leave the program when other options are available. High rates of poverty in the post-exit years suggest high levels of economic insecurity, regardless of welfare status.

Table Two displays the ways in which women exit welfare using both an approach that focuses only the events occurring at the time of welfare exit and one that considers all of the events occurring at and after exit. Examining the singular events

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<sup>18</sup> AFQT scores have been standardized using z-scores for the analysis. Using a percentile score, the average z-score is 25%.



occurring at welfare exit only, 44% of women leave through employment, 14% leave through marriage, 5% leave through cohabitation, and the remaining 45% leave for 'other' reasons. The relatively low percent of women leaving welfare for cohabitation does not necessarily reflect that women in the sample do not cohabit but perhaps that for many cohabiting couples, even combining incomes is not sufficient to raise them above the welfare ceiling. The comparatively small percentage of women exiting through cohabitation may suggest the inability of cohabitation to move women off of welfare.<sup>19</sup>

<Insert Table 2 About Here>

When using a transition approach to defining the pathways off of welfare, 39% percent of women experience employment only and 11% percent experience marriage only. Another 12% of women transition from marriage after employment and 1% transition from employment after marriage.<sup>20</sup> Those women who are categorized as transitioning from one state to another in this approach would simply be categorized as the state in which they exited welfare in an approach that focuses simply on the events occurring at welfare exit. Over 120 women, 11% of the sample, who initially exited welfare for other reasons are categorized in one of the four pathways; focusing on the events at welfare exit only, I would have no information about how these families supported themselves after exiting welfare.

### *Returns to Welfare By Employment and Marriage Status At Welfare Exit*

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<sup>19</sup> Many women cohabit for several years during their spell of welfare receipt. In cases where relationships span several years, including the exit period, it does not appear that cohabitation is the primary reason for exit.

<sup>20</sup> The pathways do not sum to 100% because there are women in the sample who do not experience some combination of employment or marriage.

In this section, I examine only the singular events occurring at welfare exit to assess whether the way a woman exits welfare affects her risk of recidivism. Figure 1 replicates Harris's analysis, displaying the failure curves for women exiting welfare between 1978 and 1999 by employment, marriage, or other means. Women who leave welfare by employment have a total recidivism rate of 0.60 compared to 0.54 reported by Harris. The total recidivism rate for women who leave welfare by marriage is 0.61 as compared to 0.58 reported by Harris. Using a sample period of six years, Harris reports a total recidivism rate of 0.57. At six years post exit, both studies report a recidivism rate of 0.57 (Table 3). I find a significantly higher recidivism rate, 0.67, when using a 20-year sample period, indicating the continued incidence of recidivism after six years in this sample.

<Insert Figure 1 About Here>

The analysis in Figure 1 and in Harris's study combined marriage and cohabitation into one exit type. As cohabiting relationships tend to be of shorter duration and possess fewer resources, the combination of these two relationship types potentially overestimates the incidence of recidivism due to 'marriage'. To determine a true effect of recidivism due to marriage, I separate cohabitation and marriage into two different exit types. Table Three presents the yearly rate of return to welfare and Figure Two displays the failure curves for the four exit types: employment, marriage, cohabitation, and other.

<Insert Table 3 About Here>

<Insert Figure 2 About Here>

There is little difference in the total recidivism rates between women who exit welfare by marriage and employment. Women who leave welfare for employment return

to welfare more quickly initially but ultimately the total recidivism rates converge at approximately 60% (0.57 for marriage and 0.60 for employment). The difference in the initial rate of return for marriage and employment exits may be the difference between the volatility in the labor market and that of the marriage market. Women who leave welfare for work are subject to high-turnover rates in low-wage jobs; the average job tenure of women transitioning from welfare to work is less than a year (Anderson 2000). They may be under-prepared for a job or have trouble managing work and family commitments. Without a job, these women may have few other options than to return to welfare. Additionally, the costs associated with employment, such as child-care, transportation, and the fees paid in clothing and personal needs may make employment prohibitively expensive.

Women who leave for marriage may experience a more delayed process of recidivism. Marriages often take a period of time to dissolve which could delay recidivism. Stress caused by economic instability can cause marital conflict and lead to divorce. Additionally, the birth of an additional child could place stress on a budget, causing a renewed need for welfare or causing marital stress. Couples who are able to maintain their relationships may find themselves back on welfare if their combined incomes are not sufficient to lift them above the poverty line or in periods of unemployment.

Recidivism rates in the first two years range from three-tenths (.29) for women who exit through marriage to almost a half (.49) for women who exit through cohabitation. The total recidivism rate for women who exit welfare for marriage is 0.57 compared to 0.72 for women who exit welfare by cohabitation. This large difference in

recidivism rates for marriage and cohabitation may suggest a difference in the ability of these relationships to keep women off of welfare. Research has suggested that cohabiting relationships tend to be less permanent than marriages (Bumpass and Sweet 1989); as such these relationships may serve to temporarily move women off of welfare but not to improve their economic well-being over time. Additionally, if cohabiting couples have fewer resources (economic and otherwise) than married couples at the beginning of a relationship, they may have an increased likelihood of dissolution and consequently recidivism, which could be reflected in these higher initial rates of return. Harris's study, which groups cohabitation exits and marriage exits together, likely overstates the incidence of recidivism due to marriage.

While life table techniques produce differential recidivism rates by exit type, it is unclear whether any one route significantly improves a woman's chances of remaining self-sufficient when controlling for various characteristics of women themselves. I use two nested models to examine the risk of recidivism by exit type, controlling for various characteristic of women. The first model examines the exit types controlling for the demographic, human capital, and family background characteristics of women. The second model, discussed below, adds a set of controls for the time period in which a woman exited welfare. Table Four shows the results of the hazard analysis.

<Insert Table 4 About Here>

The hazard ratio for employment exits is 1.05, confirming Harris' finding that there is no statistically significant difference between exiting welfare through employment and marriage. While Harris's analysis grouped women who left welfare through marriage and cohabitation together, this model analyzes these two groups

separately. The hazard ratio for cohabitation exits is 1.16, a positive but not significant finding, suggesting that women who exit through marriage and cohabitation do not have statistically different chances of returning to welfare. For women who exit welfare for other reasons, the hazard ratio is 1.31. When employing a 90 percent confidence interval, women who leave welfare for other reasons are significantly more likely to return to welfare; their risk is 31% higher than women who leave welfare by marriage when controlling for various characteristics of women.

Women's personal characteristics affect their risk of recidivism, especially education. Women without a high school degree have a 32% higher risk of returning to welfare than women who have graduated high school, and women who have some college experience have a 33% lower risk of returning to welfare than high school graduates. Educational experience may serve as a proxy for work preparation to employers. Women with increased educational attainment may locate and retain work more easily than less educated women.

Other studies on recidivism have found that Black women, women with young children, and women living in the South have an increased risk of recidivism (Harris 1996; Bane and Ellwood 1994; Cao 1996). When controlling for the year in which women exited welfare, I do not find similar effects. The period in which women exit welfare suppresses the effect of race, region, and age of children and exerts a strong effect on a woman's risk of recidivism; women exiting welfare from 1990-1996 have a 42% lower risk of recidivism than women exiting welfare from 1978 to 1989 and women exiting after August 1996 have a 51% lower risk of recidivism than women exiting in the earliest period. This reduced risk of recidivism may be due in large part to the changes in

welfare policy that began with state waivers passed in the 1990s. However, economic and political changes may also have affected women's risk of recidivism during this period. No previous studies on recidivism have spanned the 1990s or addressed the changing economic and political climate of this period and its effect on recidivism.

### *Returns to Welfare By Employment and Marriage Transitions After Welfare Exit*

The analysis in the previous section has focused on the events occurring at the time of a woman's exit. In the following section, I examine the transitions that women make into employment and marriage *after* exiting welfare. Understanding the reasons why women leave welfare is important, but to understand how women support themselves after exit is imperative; examining the transitions that women make into employment and marriage is a step in this direction.

Figure Three presents failure curves for the five pathways: employment, no marriage; marriage, no employment; employment after marriage; marriage after employment; and neither marriage nor employment. The marriage after employment group clearly stands out as having the lowest failure rates over time with around forty percent of the group returning to welfare. The employment after marriage group also stands out, but it is notable for its high failure rate (0.75). It is important to note that there are only thirteen women in this group however; so all results must be interpreted with caution. The women in the marriage, no employment group return to welfare in lower proportions than the women in the employment, no marriage group in the first eight years but ultimately their total recidivism rate is comparable or even higher (0.54

compared to 0.51). The increase in the rate of return for married women at longer durations may be suggestive of the impact of divorce on recidivism.

<Insert Figure 3 About Here>

To assess the risk of recidivism for these five pathways, I ran a set of hazard models shown in Table Five. The first model examines the risk of recidivism for the five pathways, using the marriage, no employment group as the reference group; the second model adds controls for women's human capital, demographic, and family background characteristics. In the third model, discussed below, I added controls for the year in which women left welfare.

<Insert Table 5 About Here>

Women who combine employment and work have a significantly lower risk of returning to welfare than other women. The large, significant, negative coefficient in model 3 suggests that women who transition into marriage after employment have a 45% lower risk of returning to welfare than women who experience marriage only; in other words, women who experience marriage, no employment have almost twice the risk of returning to welfare as women who get employed before marriage.

Women who experience employment only after exit have a significantly higher risk of returning to welfare than women who marry; they have a 44% higher risk of recidivism than women who marry only during the exit period. While women who experience employment only after welfare exit have a lower total recidivism rate than women who marry only, Figure Three demonstrates that for the first eight years post exit, the proportion of employed women returning to welfare is higher than that of married women. The figure suggests that there may be differential timing involved in the risk of

recidivism for these two groups. Women who leave welfare for employment may face more immediate challenges to their self-sufficiency than women who leave for marriage. While ‘married’ women have the potential benefit of an additional earner, ‘employed’ women face the instability of low-wage work and the challenges of balancing the responsibilities of children and employment by themselves. Additionally, working women may be fired shortly after leaving welfare if they lack the skills necessary for the job, have trouble meeting the rules or standards of the job<sup>21</sup>, or if the company downsizes. Marriages may take time to dissolve, somewhat delaying recidivism for women who leave welfare for marriage. The observed difference in the time of return is the relative difference between the instability of the job market and that of the marriage market.

Combining employment and marriage appears to provide double protection against recidivism. However, the order of those events is important. The coefficient for women who get employed after marriage is not significantly different than zero, suggesting that they do not have significantly different chances of recidivism than women who only marry after welfare. The inability of employment to provide additional protection against recidivism may be the result of the reasons why women enter into employment after marriage. Women may be compelled into the labor force because a spouse becomes unemployed or to help make ends meet. In addition to the stress caused by economic insecurity, women’s new roles as wife and wage earner may create role conflict and marital disruption. Women may also be compelled into the labor market by

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<sup>21</sup> For many people working low-wage jobs, transportation to work is a serious problem. The movement of jobs from urban areas to suburban areas has meant that many workers can no longer take public transportation to work. Additionally, studies of job preparedness report that many low-wage workers lose their jobs because of a lack of knowledge of workplace culture, such as the importance of being on time, of following the rules, and of respecting the chain of authority (Kalil et al).



marital instability; the threat of marital dissolution may cause women to seek an alternate source of income. However, the small sample size of women who enter marriage before employment make it difficult to draw many conclusions.

Women who transition into marriage after becoming employed not only have lower rates of recidivism than women who enter marriage after exiting welfare, but Table Two suggests that the path to marriage may be through employment. The modal pathway to marriage is the marriage after employment pathway; almost 12% of the sample transition into marriage after entering employment, compared to 11% of women who transition into marriage after welfare exit, and only 1% of women who enter marriage and then transition into employment. That more women transition into marriage after employment may suggest a human capital building process through which women are able to increase their own resources, increase their attractiveness in the marriage market, and marry a mate with increased human capital; all of which decrease their risk of recidivism and potentially increase marital stability.

The results of the hazard model suggests that women who do not experience employment or marriage in the post-exit period have the highest risk of recidivism; they are 94% more likely to return to welfare than women who married. It is unclear how these women support their families in the absence of employment or marriage. They may rely on partners, family, or friends to make ends meet, but it appears that they are likely to ultimately return to welfare for a second spell.

Model Three suggests that education, region, and the time in which women exited welfare have significant effects on a woman's risk of recidivism. High school dropouts have a 30% higher risk of recidivism and women with some college experience have a

33% lower risk of recidivism than high school graduates. Similar to other studies on recidivism, I find that women who live in the South have a lower risk of recidivism (25%) than women living in other areas. Women who exited between 1990 and 1996 have a 41% lower risk of recidivism and women who exited after 1996 have an even lower risk of recidivism, 50%.

## **V. Conclusion**

At a basic level, this study constitutes a replication of Harris (1996). I confirm several of Harris's key findings - that roughly 60% of women who exit welfare through employment or marriage will eventually return to welfare, that women who exit welfare by employment and marriage face similar risks of recidivism, and that many more women exit welfare to enter employment than to enter marriage. In addition, a separate analysis of marriage and cohabitation as distinct relationship forms suggests that while recidivism rates are higher for women who exit welfare through cohabitation, there is no significant difference in the risk of recidivism between these two exit routes when controlling for background factors.

This study also extends Harris's work through a more complex analysis of marriage and employment transitions. My results indicate that while the specific events occurring at the time of exit do not affect a woman's chance of self-sufficiency over time, the employment and marriage paths women follow after leaving welfare lead to quite different rates of welfare recidivism. Women who marry after entering employment experience the lowest rates of recidivism, followed by women who marry but did not

enter employment, women who enter employment but did not marry, women who enter employment after marriage, and finally, women who neither marry nor enter employment.

Of all women who leave welfare, women who find employment and then marry are the least likely to return to welfare over time. This finding is robust with respect to statistical controls used to test for selection effects, and is likely influenced by the fact that as these women increase their own resources, they are able to attract mates with increased resources and hence experience higher economic security within marriage and a lower possibility of a marital dissolution. The results of this analysis suggest that increasing women's human capital through employment is important to a successful marriage; to reduce the risk of returning to welfare, women need not simply to marry, but to marry well.

Women who experience marriage and not employment in the post-exit period experience a lower risk of recidivism than women who are employed only; this pattern suggests that marriage may reduce welfare dependence over time. Additionally, marriage may convey economic and emotional benefits to families. However, the comparatively small sample size of this group raises questions about marriage as a self-sufficiency strategy for the general welfare population; the group of women who marry after exiting welfare represents only a small portion of the total sample of women exiting welfare. More women marry after finding employment than marry without becoming employed.

While employment leads to marriage for many women, and may lower their risk of recidivism, there is large group of women who only experience employment in the post-exit period. The risk of recidivism for these women is significantly higher than for

women who transition into marriage or who only experience marriage, and this group outnumbers all marriage groups combined. Increasing the success of employment outcomes may significantly reduce the rate of recidivism, given the number of women who travel employment pathways. Increasing child care or housing subsidies may be a way to help support many of the employed women who are currently unable to maintain their self-sufficiency. Improving policies to “make work pay” could be a significant way to reduce recidivism.

The last group of women, with the highest rates of recidivism, was women who entered employment after marriage. As I predicted in the hypotheses, this group was much less numerous than women who became employed first and then married, but the high rates of recidivism in this group were unexpected. It is possible that marriage hinders rather than facilitates entry into employment, but it is also possible that these results were skewed by endogeneity, and women with troubled marriages were likely to seek employment.

In conclusion, these results produce a more complex story about marriage and employment exits from welfare than in Harris’s 1996 paper. One path, employment followed by marriage, seems to predict low levels of recidivism for the 12 percent of women who follow that path after leaving welfare. However, Harris’s main conclusion appears to hold; for the majority of women who leave welfare, neither employment nor marriage, in isolation, is sufficient to protect a woman against the risk of recidivism.

These results primarily cover the time period before 1996, and women who are currently leaving welfare may face different program requirements as a result of welfare reforms passed in 1996. The period controls in the hazard models suggest that women’s

welfare decisions may currently be affected by time limit policies, work requirements, and sanction policies. While work requirements may have aided women's transition to employment, the lifetime limit on federal aid may reduce the number of women who initiate new spells of welfare. The effect of these policies on recidivism is not well-studied, but these data suggest that the significant changes in the risk of recidivism occurred both in the period during which waivers were in effect and after welfare reform policies were passed.

At the time Harris wrote her paper comparing employment and marriage exits from welfare, employment promotion policies were being debated as a part of welfare reform. Quite relevant to that debate, Harris concluded that simply promoting employment or marriage was less likely to keep women off welfare than changing employment structures to facilitate women's employment. Currently, as welfare is being reauthorized, marriage promotion policies have emerged as a strategy to reduce welfare dependence. This analysis suggests a conclusion similar to Harris's; simply promoting employment or marriage may not substantially lower welfare recidivism. The best policy strategy to reduce welfare dependence and encourage healthy marriages may be to strengthen work support programs and improve the circumstances of employment (and opportunities for strong marriages) for low-income men and women.

# Appendix 1: Figures

Figure 1: Proportion of Women Returning to Welfare: Using Harris's (1996) Definitions of Exit Types

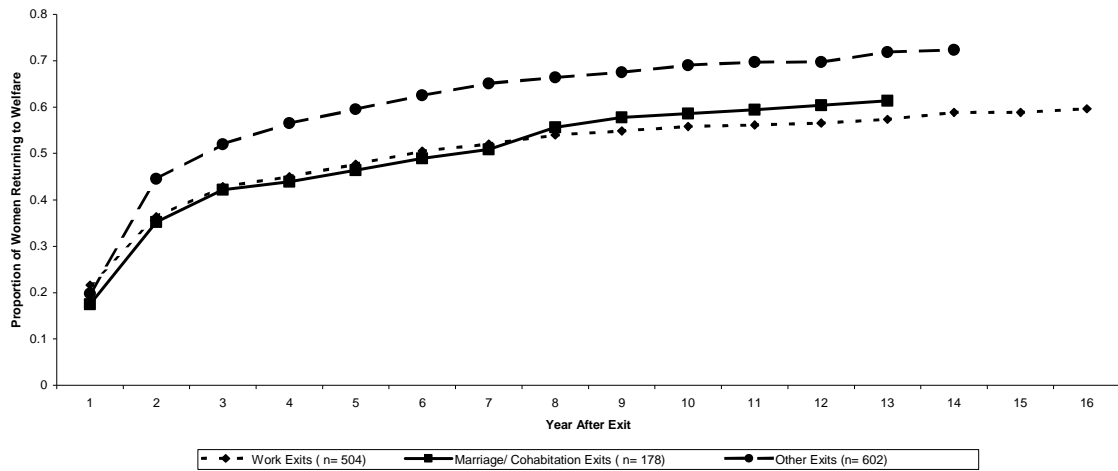


Figure 2: Proportion of Women Returning to Welfare By Exit Type

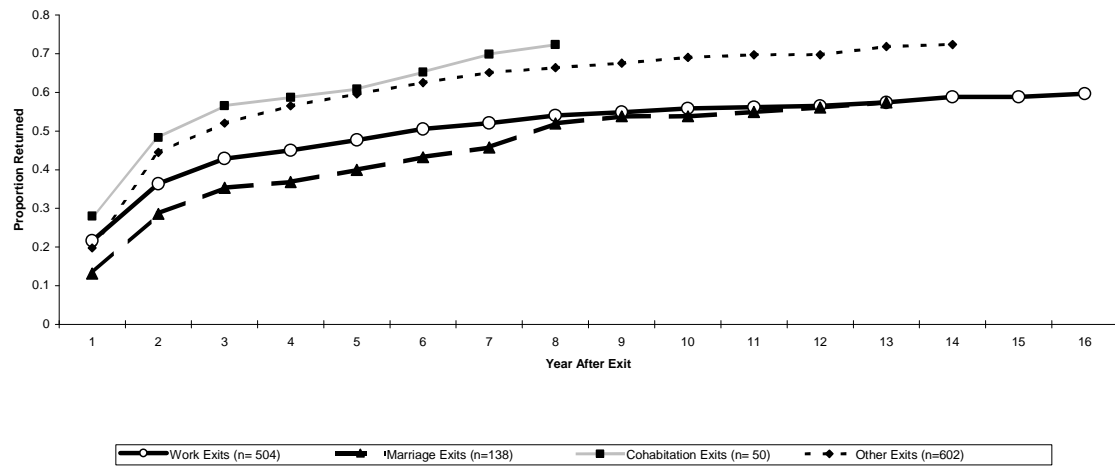
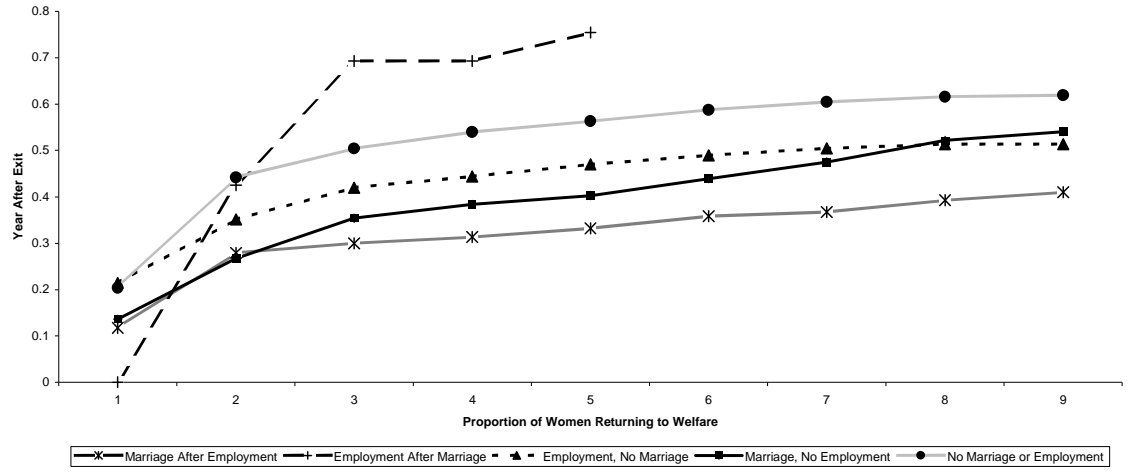


Figure 3: Proportion of Women Returning to Welfare By Pathway Off of Welfare



## Appendix II: Tables

Table 1: Weighted Means of the Women Exiting Welfare Between 1978-1999

| Variable   | Mean         | Standard Deviation |
|--|--------------|--------------------|
| Mean Length of First Welfare Spell                     | 29.11        | 38.27              |
| Mean Length of Total Time on Welfare                   | 62.0         | 57.23              |
| % of Spells Right Censored                             | 9%           |                    |
| <b>Background Characteristics</b>                      |              |                    |
| <i>Mother's Educational Attainment</i>                 |              |                    |
| Less than HS   | 52.3%        | 0.50               |
| HS   | 33.6%        | 0.47               |
| HS+  | 6.5%         | 0.25               |
| <i>Father's Educational Attainment</i>                 |              |                    |
| Less than HS   | 44.0%        | 0.50               |
| HS   | 26.1%        | 0.44               |
| HS+  | 9.3%         | 0.29               |
| <i>Family Structure at Age 14</i>                      |              |                    |
| Living wqith Both Biological Parents                   | 53.9%        | 0.50               |
| Other Arrangement                                      | 46.1%        | 0.50               |
| <i>Armed Forces Qualification Score (Standardized)</i> |              |                    |
|  | 25% (0.231 ) | 1.08               |
| By Pathway: Employment Only                            | 0.376        | .273-.480*         |
| Marriage Only  | 0.162        | -.026-.349*        |
| Marriage after Employment                              | 0.394        | .210-.578*         |
| Employment after Marriage                              | 0.347        | -.268-.963*        |
| No Marriage or Employment                              | 0.042        | -.056-.139*        |
| <i>Race</i>  |              |                    |
| White  | 46.5%        | 0.50               |
| Black  | 37.5%        | 0.48               |
| Hispanic   | 9.4%         | 0.29               |
| Other  | 6.5%         | 0.25               |
| <b>At First Exit From Welfare:</b>                     |              |                    |
| <i>Educational Attainment</i>                          |              |                    |
| Less than HS   | 33.9%        | 0.47               |
| HS   | 49.1%        | 0.50               |
| HS+  | 15.7%        | 0.36               |
| <i>More than 3 Children</i>                            |              |                    |
|  | 14.6%        | 0.35               |
| <i>Child Younger than 6</i>                            |              |                    |
|  | 84.7%        | 0.36               |
| <i>Age</i>   |              |                    |
| >=20   | 25.7         | 5.6                |
| 21-25  | 15.1%        |                    |
| 26-30  | 40.8%        |                    |
| 31-35  | 22.4%        |                    |
| 36-40  | 16.1%        |                    |
|  | 5.3%         |                    |
| <i>Lives in South</i>                                  |              |                    |
|  | 34%          | 0.47               |
| <i>In poverty</i>                                      |              |                    |
|  | 54%          | 0.50               |
| <i>Exiting During Years:</i>                           |              |                    |
| 1978-1989  | 73%          | 0.44               |
| 1990-July 1996   | 23%          | 0.42               |
| August 1996- 1999                                      | 4%           | 0.20               |
| <i>Yearly Earnings (Self)**</i>                        |              |                    |
|  | \$7,251.95   | \$7,240.24         |
| <i>Hours Worked In Year of Exit**</i>                  |              |                    |
|  | 1039.3       | 721.4              |
| <i>Median Wage Per Hour in Year of Exit**</i>          |              |                    |
|  | \$7.67       | \$13.05            |
| <i>Occupation **</i>                                   |              |                    |
| Professional and technical                             | 5.6%         |                    |
| Managers and officials                                 | 3.4%         |                    |
| Sales workers  | 5.2%         |                    |
| Clerical   | 31.3%        |                    |
| Craftsmen  | 1.2%         |                    |
| Operatives   | 11.2%        |                    |
| Laborers   | 4.0%         |                    |
| Farmers and Farm Managers                              | 0.2%         |                    |
| Farm Laborers and Foremen                              | 1.8%         |                    |
| Service Workers (Except Household Workers)             | 30.1%        |                    |
| Household Workers                                      | 5.3%         |                    |

\* Numbers represent the 95% confidence interval.

\*\* Of women who reported working positive hours for positive earnings. Numbers are in 1999 Dollars.



Table 2: Routes off of Welfare

| <b>Exit Types- Status At Welfare Exit</b>                            | <b>Percent of Sample</b> |
|--|--------------------------|
| Work   | 44.0                     |
| Marriage   | 13.7                     |
| Cohabitation   | 4.8                      |
| Other  | 44.7                     |
| <b>Pathways off of Welfare- Transitions At or After Welfare Exit</b> |                          |
| Employment, no Marriage  | 38.5                     |
| Marriage, no Employment  | 10.9                     |
| Marriage After Employment  | 11.9                     |
| Employment After Marriage  | 1.3                      |
| Neither Employment nor Marriage                                      | 37.3                     |
| Weighted using the sample weight in the first year of survey         |                          |
| For a complete listing of the Pathways, see Appendix 1               |                          |

Table 3: Proportion of Women Returning to Welfare By Exit Types For Women Who Have Left Welfare

| <b>Year After Exit</b> | <b>All Women</b> | <b>Work Exits</b> | <b>Marriage Exits</b> | <b>Cohabitation Exits</b> | <b>Other Exits</b> |
|------------------------|------------------|-------------------|-----------------------|---------------------------|--------------------|
| 1                      | 0.2046           | 0.2162            | 0.1309                | 0.2800                    | 0.1977             |
| 2                      | 0.4070           | 0.3636            | 0.2856                | 0.4828                    | 0.4448             |
| 3                      | 0.4796           | 0.4286            | 0.3529                | 0.5656                    | 0.5200             |
| 4                      | 0.5121           | 0.4500            | 0.3681                | 0.5868                    | 0.5649             |
| 5                      | 0.5406           | 0.4766            | 0.3995                | 0.6085                    | 0.5953             |
| 6                      | 0.5687           | 0.5051            | 0.4322                | 0.6520                    | 0.6251             |
| 7                      | 0.5895           | 0.5205            | 0.4574                | 0.6984                    | 0.6510             |
| 8                      | 0.6094           | 0.5398            | 0.5192                | 0.7235                    | 0.6639             |
| 9                      | 0.6221           | 0.5487            | 0.5382                |                           | 0.6751             |
| 10                     | 0.6343           | 0.5581            | 0.5382                |                           | 0.6902             |
| 11                     | 0.6402           | 0.5615            | 0.5490                |                           | 0.6970             |
| 12                     | 0.6436           | 0.5653            | 0.5607                |                           | 0.6970             |
| 13                     | 0.6564           | 0.5737            | 0.5736                |                           | 0.7185             |
| 14                     | 0.6649           | 0.5885            |                       |                           | 0.7234             |
| 15                     | 0.6649           | 0.5885            |                       |                           |                    |
| 16                     | 0.6686           | 0.5965            |                       |                           |                    |
| Total N=               | 1216             | 504               | 138                   | 50                        | 602                |

Table 4: Hazard Analysis Examining The Effect of A Women's Exit Type on Recidivism Using a Status At Welfare Exit Approach

| Variable   | Model 1      |                | Model 2      |                |
|--|--------------|----------------|--------------|----------------|
|  | Hazard Ratio | Standard Error | Hazard Ratio | Standard Error |
| <i>Exit Type (Reference is Marriage)</i>                                   |              |                |              |                |
| Work Exit  | 1.056        | 0.159          | 1.046        | 0.157          |
| Cohabitation Exit  | 1.211        | 0.253          | 1.164        | 0.242          |
| Other Exit   | 1.311^       | 0.198          | 1.308^       | 0.196          |
| <i>Education (Reference is High School Graduate)</i>                       |              |                |              |                |
| Less Than High School  | 1.428***     | 0.129          | 1.318**      | 0.121          |
| More than High School  | 0.652***     | 0.085          | 0.667**      | 0.087          |
| Lives in the South   | 0.724***     | 0.063          | 0.736***     | 0.065          |
| Has a Child Younger than 6   | 1.636***     | 0.219          | 1.260        | 0.182          |
| Has Three or More Children   | 0.812^       | 0.092          | 0.930        | 0.109          |
| <i>Race (Reference is White)</i>   |              |                |              |                |
| Black  | 1.198^       | 0.128          | 1.142        | 0.123          |
| Hispanic   | 0.968        | 0.124          | 0.962        | 0.124          |
| Other  | 0.928        | 0.180          | 0.917        | 0.178          |
| <i>Mother's Education (Reference is High School Graduate)</i>              |              |                |              |                |
| Less Than High School  | 1.0304       | 0.0903         | 1.013        | 0.088          |
| More than High School  | 1.4304       | 0.2562         | 1.418*       | 0.253          |
| <i>Father's Education (Reference is High School Graduate)</i>              |              |                |              |                |
| Less Than High School  | 0.9228       | 0.0784         | 0.938        | 0.080          |
| More than High School  | 0.889*       | 0.1482         | 0.899        | 0.149          |
| <i>Family Structure at Age 14 (Reference= Married, Biological Parents)</i> |              |                |              |                |
| Other  | 1.0720       | 0.0866         | 1.070        | 0.087          |
| Armed Forces Qualification Score   | 0.9738       | 0.0488         | 0.951        | 0.048          |
| <i>Year of Exit (Reference= 1978- 1989)</i>                                |              |                |              |                |
| 1990- July 1996  |              |                | 0.581***     | 0.073          |
| August 1996- 1999  |              |                | .493*        | 0.174          |

Source: Data are from the authors tabulations of NLSY 79 data.

^p<.10, \*p<.05, \*\*p<.01, \*\*\*p<.001

Table 5: Hazard Analysis Examining the Effect of Pathways Off of Welfare on Recidivism using a Transition Approach

| Variable   | <u>Model 1</u> |                | <u>Model 2</u> |                | <u>Model 3</u> |                |
|--|----------------|----------------|----------------|----------------|----------------|----------------|
|  | Hazard Ratio   | Standard Error | Hazard Ratio   | Standard Error | Hazard Ratio   | Standard Error |
| <i>Pathway (Reference is Marriage, no Employment</i>           |                |                |                |                |                |                |
| Employment, No Marriage  | 1.280          | 0.193          | 1.437***       | 0.221          | 1.440*         | 0.221          |
| Employment After marriage                                      | 1.642          | 0.671          | 1.484          | 0.608          | 1.416          | 0.581          |
| Marriage After Employment                                      | 0.468***       | 0.107          | .562**         | 0.130          | 0.549**        | 0.127          |
| No Marriage or Employment                                      | 1.824***       | 0.270          | 1.905***       | 0.288          | 1.943***       | 0.294          |
| <i>Education (Reference is High School)</i>                    |                |                |                |                |                |                |
| Less Than High School  |                |                | 1.402***       | 0.126          | 1.300**        | 0.119          |
| More than High School  |                |                | 0.662***       | 0.086          | 0.674**        | 0.087          |
| Lives in the South   |                |                | 0.733***       | 0.064          | 0.748***       | 0.066          |
| Has a Child Younger than 6                                     |                |                | 1.584***       | 0.212          | 1.232          | 0.178          |
| Has Three or More Children                                     |                |                | 0.793*         | 0.090          | 0.899          | 0.104          |
| <i>Race (Reference is White)</i>                               |                |                |                |                |                |                |
| Black  |                |                | 1.164          | 0.124          | 1.116          | 0.120          |
| Hispanic   |                |                | 0.960          | 0.124          | 0.954          | 0.123          |
| Other  |                |                | 0.875          | 0.169          | 0.863          | 0.167          |
| <i>Mother's Education (Reference is High School Graduate)</i>  |                |                |                |                |                |                |
| Less Than High School  |                |                | 1.039          | 0.091          | 1.021          | 0.089          |
| More than High School  |                |                | 1.574**        | 0.281          | 1.555**        | 0.277          |
| <i>Father's Education (Reference is High School Graduate)</i>  |                |                |                |                |                |                |
| Less Than High School  |                |                | 0.926          | 0.079          | 0.940          | 0.080          |
| More than High School  |                |                | 0.798          | 0.132          | 0.803          | 0.132          |
| <i>Family Structure at Age 14 (Reference= Married Parents)</i> |                |                |                |                |                |                |
| Other  |                |                | 1.043          | 0.084          | 1.045          | 0.084          |
| Armed Forces Qualification Score                               |                |                | 0.981          | 0.048          | 0.961          | 0.048          |
| <i>Year of Exit (Reference= 1978- 1989)</i>                    |                |                |                |                |                |                |
| 1990- July 1996  |                |                |                |                | 0.598***       | 0.076          |
| August 1996- 1999  |                |                |                |                | 0.509**        | 0.180          |

Source: Data are from the authors tabulations of NLSY 79 data.

^p&lt;.10, \*p&lt;.05, \*\*p&lt;.01, \*\*\*p&lt;.001

## Appendix III: Complete Listing of the Pathways Off of Welfare

### Appendix III: All Traveled Pathways Off of Welfare

| Outcome   | Number      |
|---|-------------|
| Employment- Marriage- Divorce- Return to Welfare                              | 9           |
| Employment- Marriage- Divorce-No Return to Welfare                            | 29          |
| Employment- Cohabitation- Marriage- No Return to Welfare                      | 18          |
| Employment- Cohabitation- Dissolution- Return to Welfare                      | 3           |
| Employment- Cohabitation- Dissolution- No Return to Welfare                   | 5           |
| Employment- Marriage- Return to Welfare                                       | 16          |
| Employment- Marriage- No Return to Welfare                                    | 50          |
| Employment- Cohabitation- Return to Welfare                                   | 9           |
| Employment- Cohabitation- No Return to Welfare                                | 13          |
| Employment and Return to Welfare  | 233         |
| Employment and No Return to Welfare   | 119         |
| Marriage- Divorce- and Return to Welfare                                      | 2           |
| Marriage- Divorce- and No Return to Welfare                                   | 11          |
| Marriage- Employment- and No Return to Welfare                                | 6           |
| Marriage- Employment- and Return to Welfare                                   | 7           |
| Marriage and Return to Welfare  | 39          |
| Marriage and No Return to Welfare   | 16          |
| Cohabitation - Dissolution- and Return to Welfare                             | 5           |
| Cohabitation - Dissolution- and No Return to Welfare                          | 3           |
| Cohabitation- Employment- Marriage- No Return to Welfare                      | 1           |
| Cohabitation- Marriage- and Return to Welfare                                 | 1           |
| Cohabitation-Employment- and Return to Welfare                                | 1           |
| Cohabitation and Return to Welfare  | 18          |
| Other- Marriage- Return to Welfare  | 7           |
| Other- Marriage- No Return to Welfare   | 25          |
| Other- Employment- Return to Welfare  | 30          |
| Other- Employment- No Return to Welfare                                       | 32          |
| Other-Cohabitation- Return to Welfare   | 13          |
| Other-Cohabitation- No Return to Welfare                                      | 13          |
| Other and Return to Welfare   | 333         |
| Other and No Return to Welfare (and no Employment, Marriage, or Cohabitation) | 118         |
| Other- Marriage- Dissolution- No Return                                       | 6           |
| Other- Marriage- Dissolution- Return  | 6           |
| Other- Employment- Marriage- Return   | 4           |
| Other- Employment- Marriage- No Return  | 7           |
| Other- Employment- Marriage- Dissolution- Return                              | 1           |
| Other- Employment- Marriage- Dissolution- No Return                           | 7           |
| <b>Total</b>  | <b>1216</b> |

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