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NAVIGATING PAID WORK AND PARENTHOOD: NEW PARENTS' LONG-TERM EMPLOYMENT PATHWAYS IN THE UNITED STATES

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NAVIGATING PAID WORK AND PARENTHOOD: NEW PARENTS' LONG-TERM
EMPLOYMENT PATHWAYS IN THE UNITED STATES

A Dissertation Presented

by

IRENE S. BOECKMANN

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University of Massachusetts Amherst in partial fulfillment
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ABSTRACT

NAVIGATING PAID WORK AND PARENTHOOD: NEW PARENTS' LONG-TERM EMPLOYMENT PATHWAYS IN THE UNITED STATES

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Mothers have contributed disproportionately to women's rising employment rates in the United States, and contemporary fathers spend more time caring for children compared to previous generations of men. Still, parenthood continues to shape women's and men's employment participation patterns in profoundly gendered ways. Changes and continuities in aggregate labor market participation patterns raise questions with regard to the variation in mothers' and fathers' employment participation, and in the ways in which different-sex couples organize engagement in paid work after they become parents. Using data from the Panel Study of Income Dynamics, this dissertation examines the variation in new parents' long-term employment pathways during the preschool-years of the first child, using sequence analysis techniques and group-based trajectory modelling. Findings show that across cohorts, stably partnered, different-sex couples have become somewhat more similar in their engagement in paid work after becoming parents. However, considerable variation remains. I argue that fathers' employment participation patterns are an important source of variation for the ways in which different-sex, two-parent families engage in paid work while children are young, and fathers' very long work hours are linked to a more "specialized" division of labor in two-parent families.

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CHAPTER 1

NAVIGATING PAID WORK AND PARENTHOOD

Life in many two-parent families in the United States has changed dramatically since the 1950s, when heteronormative, mainly white, middle-class ideals espoused a gendered division of labor with a stay-at-home mother and a breadwinning father. In a majority of American two-parent families today, both parents are engaged in paid work, even when the children are young. Over the past few decades, mothers have disproportionately contributed to rising women's employment rates, and to the increase in the average time two-parent families spend engaged in paid work (Bianchi, Robinson, & Milke, 2006). At the same time, men's overall employment rates have slightly decreased, and contemporary fathers are more engaged in their children's daily lives and unpaid household work compared to previous generations of fathers (Bianchi, Sayer, Milkie, & Robinson, 2012).

Nevertheless, parenthood continues to shape women's and men's employment participation patterns in distinctly gendered ways. The transition to parenthood is a period in the life course when the time women and men spend on paid and unpaid work is often reorganized, and gendered inequalities in employment participation are amplified. Figure 1.1 illustrates that employment participation rates, and to some extent average weekly work hours, of childless men and women (as well as mothers of older children) have converged over time. However, substantial gender gaps persist among parents, especially among those with preschoolers in the home. Fathers' employment participation rates have declined less than childless men's. And even with substantial gains in maternal labor market participation and some gains in work hours, employment rates of preschool

fathers remained 28 percentage points higher, and fathers spent an estimated eight and a half hours more per week in employment compared to mothers of preschoolers in 2010.

These changes and continuities in *aggregate* gendered labor market participation patterns raise questions with regard to the *variation* in mothers' and fathers' employment participation, and in the ways in which different-sex couples organize engagement in paid work after they become parents. In this dissertation, I focus on the variation in long-term employment patterns of first time-parents, and ask how parents with different resources, such as educational attainment and pre-parenthood income, engage in paid work long-term.

Unpacking how couples with different resources organize paid work among themselves is important for understanding the nature of class and gender inequality in the post-industrial period. With stagnating or even decreasing real wages at the lower end of the earnings distribution, many families today need two incomes to make a living. However, workplaces remain unresponsive to the needs of workers with care responsibilities. With the lack of strong work-family policies in the United States, some families try to find alternative arrangements to reconcile caring for children with employment, including part-time work and alternate shift-work, others seek help of friends or family members, or those with sufficient income may purchase services to substitute childcare and other unpaid family work. Then again, for some families, having a stay-at-home parent (most often the mother) is the most viable or preferable solution. Gendered cultural norms continue to link “good motherhood” to providing care for young children, while financial provision remains central to cultural understandings of what it means to be a “good father” (Blair-Loy, 2003; Hays, 1996; Lamb, 1997; Townsend,

2002). These norms raise different moral questions for working mothers and fathers as to how to be “good parents” to their children, and “tug” at parents in different ways. This complex web of factors, including parents’ labor market opportunities, and linked to that their earnings potential, thus shape not only the spectrum of options different parents have to secure their families’ economic and personal well-being, but may also impact gender equality within couples.

The main focus of this dissertation lies on the variation in the ways in which coupled new parents organize paid work around and after the transition to parenthood over the course of the first child’s preschool years. I examine the extent to which two-parent, different-sex families engage in paid work, i.e. whether one or two parents work for pay, as well as the number of hours each parent spends in paid work. In the first empirical chapter, I develop a typology of joint long-term employment patterns among parents who care for preschool children in the home. And I map how parents with different educational backgrounds are distributed across these types of joint employment pathways to examine how class inequalities shape how these families organize paid work. The second empirical chapter focuses on how similar or dissimilar new parents’ employment trajectories are within couples. Comparing employment patterns within couples over three generations, I ask whether new parents’ employment pathways have become more similar to each other over time, and whether and how individual, and couple characteristics are linked to greater or lower dissimilarity in couples’ joint employment pathways over time. In the third empirical chapter, I turn a spotlight on fathers: While the impact of parenthood on women’s employment participation patterns

is well researched, we know less about how parenthood shapes men's employment, especially in the long term.

I contribute to the work-family literature in several ways. The past decade has seen an intensive discussion in the popular media as well as the academic literature over the question of whether or not women increasingly "opt-out" of employment in connection with motherhood, particularly in the context of two-parent, middle-class families with male breadwinners (Belkin, 2003, 2013; Boushey, 2008; Cohn, Parker, Livingston, & Rohal, 2014; B. J. Jones, 2012; Percheski, 2012; Stone, 2008; Williams & Dolkas, 2012). Another large strand of the literature examines how employed mothers fare in the labor market, gauging the extent to which mothers' employment patterns and outcomes have become more comparable (or remain dissimilar) to those of men or childless women (Aisenbrey, Evertsson, & Grunow, 2009; Budig & England, 2001; Budig & Hodges, 2010; Budig, Misra, & Boeckmann, 2012; Waldfogel, 1998), and the importance of mothers' incomes for family economies (Wang, Parker, & Taylor, 2013; Winslow-Bowe, 2006, 2009). These work-family debates center on the experiences of individuals, most typically women. This dissertation shifts the focus to couples as the unit of analysis and to the role of fathers in different-sex couples in these processes.

Studies examining how parenthood shapes individual labor market outcomes often acknowledge that individuals are embedded in a larger household or couple context by controlling for household income, partners' employment participation or work hours. However, the unit of analysis remains the individual. By analyzing couples, I am able to examine the potential interconnectedness of partners' employment, and ask questions about how couple characteristics shape women's and men's employment patterns. For

example, in his economic theory of the family Becker (1981) has argued that households maximize their wellbeing (utility) by having the partner with the greater earnings potential (the partner with the greater human capital) specialize in market work, and the other partner, with fewer educational credentials and/or labor market experience, in unpaid work. The gender gap in earnings often contributes to men's economic advantage within couples, and Becker's economic theory suggests that couples would maximize their household utility by a gendered division of paid and unpaid work where the man engages in employment, and the woman specializes in care work. By analyzing different-sex couples, I am able to empirically examine how couples' (pre-parenthood) relative resources shape their post-parenthood joint employment patterns. In other words, does a within-couple discrepancy in earnings potential (e.g. in couples where one partner has a college degree and the other does not) lead to a "specialized" post-parenthood division of labor whether the woman has the advantage or the man? Or are there other, gendered processes that shape couples' joint employment pathways?

A further body of research examines how the increase in dual-earner parents changed family life and parents' perceptions of an intensified "time squeeze," or "speed-up" of daily life (Hochschild, 1989; Jacobs & Gerson, 2005; Schor, 1993). By developing a typology of ways in which couples organize paid work, I am able to show the variation in the time new parents jointly spend in paid work, and gauge how frequent these joint work patterns are. Furthermore, mothers' employment participation patterns are placed at the heart of the body of research examining how families organize paid and unpaid work. In contrast, men's employment participation patterns are often seen as a constant, yet unexamined background to partnered women's employment. Implicitly or explicitly

partnered fathers are most often understood as full-time, year-round workers. However, the common distinction between part-time and full-time workers hides the variation in the hours that different full-time employed men and fathers spend on paid work. I argue that fathers' employment participation patterns are an important source of variation for the ways in which two-parent families organize their engagement in paid work while children are young, noting the importance of exploring mothers' employment in relation to fathers' employment participation.

Fatherhood and men's parenting practices are in flux. Public debates around fathers often focus on men's increased engagement in the care of young children, including the challenges encountered by "new fathers" who are or want to be more actively involved in the care of their children, or the experiences of "stay-at-home" fathers (Kantor & Silver-Greenberg, 2013; Livingston, 2014; Siegel Bernard, 2013). For example, a recent Pew Research Center report which received broad national media attention highlights the increase in stay-at-home fathers that peaked in 2010 with around 2 million men who cared for children full-time in the home (Livingston, 2014). However, compared to women, stay-at-home fathers are still a very small minority, and despite the increase in fathers' time spent on childcare, parenthood is not linked to men's employment participation patterns and outcomes the same way care responsibilities are for women.

For example, studies examining the effect of fatherhood on men's earnings, have found that some men garner earnings premiums when becoming a parent. But not all men garner the same earnings advantages: Primarily white (and Latino), college educated men (Glauber, 2008; Hodges & Budig, 2010), as well as men whose earnings are at the higher

end of the income distribution receive the largest premiums (Cooke Prince, 2014). Other studies examining the linkages between fatherhood and men's employment patterns show similar diversity in how parenthood shapes men's employment. While cross-sectional analyses generally show that fathers are more likely to be employed and work longer hours compared to childless men, studies examining how the transition to fatherhood shapes men's work hours do not consistently find that men intensify their engagement in paid work when becoming parents. For example, Weinshenker (2013) finds that fatherhood is associated with an increase in employment hours mainly among younger men, while men who become fathers later in life tend to decrease employment hours (see also Astone et al. 2010).

Taken together these debates and empirical findings suggest that there is considerable heterogeneity among fathers, in their level of involvement in the daily lives of their children, in their level of engagement in employment, and whether or not they reap economic benefits from fatherhood. One question is then whether "new," more child care-centered forms of practicing fatherhood, and the persistence of "breadwinning"-oriented forms are reflected in new fathers' long-term employment patterns. Are there different identifiable employment pathways among fathers? And are men's characteristics, such as educational attainment or labor market experience, linked to different post-birth or adoption employment trajectories? In the third empirical chapter, I examine these questions by following first time fathers starting with the year before the first transition to parenthood, and following fathers into their first child's primary school years.

For the empirical analyses in all three chapters, I use longitudinal data from the Panel Study of Income Dynamics (PSID), which has been following a sample of American families and their descendants since 1968. As a household-based survey, the PSID collects information on all household members, and in particular detailed labor market information for both cohabiting partners and married spouses in coupled households. The PSID is therefore ideally suited to study couples', as well as individuals' labor market behavior over time. The majority of existing studies on the linkages between parenthood and employment participation using longitudinal data focus on average changes in the likelihood of employment, or the change in work hours associated with the transition to parenthood employing fixed effects models, or random effects/growth-curve modeling (e.g. Astone et al. 2010; Glauber 2008; Lundberg and Rose 2000; Percheski and Wildeman 2008; Weinshenker 2013).

In contrast, I employ analytical methods that allow me to examine employment pathways over time as the unit of analysis, and to explore the variation in these pathways. In the first two empirical chapters, I use different analytical techniques from the sequence analysis toolbox. Sequence analysis techniques take trajectories over time as the unit of analysis and allow the researcher to identify whether there are "common sequential patterns among data" (Abbot and Hrycak 1990:171). In the social science context, sequences are understood as "empirically observed, temporally ordered regularities" (Stovel, 2010). I use the terms *sequence* and *trajectory* synonymously. For the analysis in the first two empirical chapters, I construct women and men's employment trajectories by recording for each year of the observation whether they were out of employment, or whether they were employed within any of five work hours' brackets (for details see

methods sections of the relevant chapters). The sequences are temporally aligned with relation to the first birth or adoption among this sample of parents. My observation window starts with the year before the birth, and I follow parents until their child reaches school age. The purpose of aligning (prospective) mothers and fathers at the time they transition to parenthood for the first time is to examine whether and how this transition shapes their subsequent employment patterns.

Rather than defining types of trajectories over time a priori, sequence analysis techniques are useful to identify existing patterns in the data. Originating in computer science, sequence analysis is frequently used in molecular biology, for example to identify matching pairs of DNA sequences, and was popularized in the social sciences by Andrew Abbott (Abbott, 1995; Aisenbrey & Fasang, 2010; Macindoe & Abbott, 2004). For example, sequence analysis has been used to examine dance patterns in English country dances (Abbott & Forrest, 1986), different career pathways of employees at Lloyds Bank (Stovel, Savage, & Bearman, 1996), or patterns in residential mobility (Stovel & Bolan, 2004). I broadly situate my dissertation in the field of life-course studies where sequence analysis techniques are used to examine differences in individuals' family formation patterns (e.g. Raab et al. 2014), occupational trajectories (Guidici & Gauthier, 2009), or to study how different aspects of individuals' lives (e.g. family formation and employment trajectories) are interlinked (Pollock, 2007). The basic idea of sequence analysis is to compare pairs of sequences or trajectories (in the social sciences most often measurements over time on individuals or other entities). The sequence analysis algorithm (e.g. the optimal matching algorithm) calculates a measure that

captures how dissimilar pairs of sequences are. This dissimilarity measure subsequently becomes the input for further analyses.

In the first empirical chapter, I use multi-channel sequence analysis combined with cluster analysis to construct a typology of couples' joint employment pathways after the transition to parenthood. Multi-channel sequence analysis allows for the joint analysis of couples' employment pathways, with each partner's employment pathways forming one "channel." In turn, cluster analysis identifies groups of couples that share similar joint employment pathways.

In the second empirical chapter, the dissimilarity between couples' employment trajectories (i.e. the dissimilarity between her and his trajectory) becomes the dependent variable in regression models that examine which individual and couple characteristics are linked to higher degrees of dissimilarity in couples' employment participation patterns during the first child's preschool years.

In the third empirical chapter, I employ group-based trajectory modelling, a regression-based method, to examine the variation in men's employment patterns around and after the transition to parenthood. Like sequence analysis techniques and hierarchical growth-curve modeling, this method allows for an examination of respondent' trajectories over time. However in contrast to growth curve models, group-based trajectory models do not assume that the distribution of trajectories in the population is continuous. Group-based trajectory models assume that there are clusters of individuals among the observations who, to different degrees, follow distinct pathways. These trajectories are summarized by a set of polynomial functions of time. Unlike in sequence analysis, the types of trajectories are not derived by means of cluster analysis, but via

maximum likelihood estimation (Nagin 2005). Moreover, these models allow me to examine whether and how men's characteristics at the time of the first birth or adoption are related to their employment patterns after the transition.

Existing longitudinal studies that examine how the transition to parenthood shapes workers' employment participation patterns highlight average changes in the likelihood of employment or the average change in work hours associated with this transition (Astone et al., 2010; Weinshenker, 2013), and whether there are differences in these average effects across different groups of workers. For example, Lundberg and Rose (2000) estimated, that among men married to women who interrupted their engagement in employment, the transition to fatherhood was associated with an average increase of 118 hours per year, while men with continuously employed wives reduced their hours by 50 hours a year on average.

I shift the focus from average effects associated with the transition to parenthood to mapping the variation in the long-term employment pathways among new mothers and fathers. What are the potential pay-offs of this approach? First, examining employment trajectories over time highlights the dynamic and potentially fluctuating nature of women's and men's engagement in paid work, especially during the time of family formation as parents adjust to new demands on their time. Second, both the sequence analysis toolbox, as well as group-based trajectory modeling provides tools to identify types of similar employment pathways among couples and individual, their relative frequency within the sample, and tools to visualize these pathways. I argue that these visual maps help us to bring the variation in mothers' and fathers' employment pathways to the forefront, which tends to remain muted in studies focusing on average effects.

Third, understanding how frequent different types of employment trajectories are, whether joint within couples or those of individual fathers, helps us to better understand the extent to which parenthood shifts the engagement in paid work among mothers and fathers with different resources, including educational credentials and income levels.

And finally I argue that understanding how different couples organize their engagement in paid work may help us to better understand the variation in mothers' engagement in paid work, notably among women with higher educational credentials (Blossfeld & Drobnič, 2001). Blossfeld and Drobnič (2001) note that partners' employment characteristics are particularly crucial in order to predict highly educated women's employment participation patterns. On the one hand these women have stronger labor force attachment based on their own human capital. On the other hand they are often partnered with higher earners, which may facilitate full-time maternal care provision when the children are young. In sum, the analytical approaches I take in the three empirical chapters, allow me to construct new maps of women's and men's employment patterns during a period in the life-course which arguably holds one of the keys to our understanding of the maintenance of gendered inequalities with regard to paid and unpaid work.

CHAPTER 2

EMPLOYMENT AND WORK HOURS AMONG NEW PARENTS IN DIFFERENT-SEX COUPLES: LINKING MOTHERS' AND FATHERS' EMPLOYMENT PATHWAYS

From individual, household, and societal perspectives, the transition to parenthood represents a turning point at which individual work pathways often are redirected, the allocation of time to employment, housework and care work is reorganized, and gendered inequalities in labor market outcomes become amplified (Abbott, 1997; Jennifer Baxter, Gray, Alexander, Strazdins, & Bittman, 2007; Haynes, Heybroek, Hewitt, & Baxter, 2013; Lundberg & Rose, 2000; Sanchez & Thompson, 1997; Wethington, Pixley, & Kavey, 2003). This chapter examines this key period in the life course among different-sex couples, and asks how new mothers' and fathers' employment participation and work hours are linked within households over the course of the first child's preschool years.

In contrast to research examining individuals' labor market responses to family status changes, I focus on the variation in the ways couples jointly negotiate and organize paid and unpaid work before and after the transition to parenthood. By taking a couple-centered approach, I am able to examine how different groups of families with different sets of resources organize engagement in paid work. This approach sheds stronger light on mothers' and fathers' employment decisions, and draws a more detailed map of how much time partnered new parents (jointly) spend on paid work. My analyses are guided by three sets of questions: First, how are employment pathways of partnered first-time mothers and fathers linked within couples? Second, are there differences in the frequency of joint pathways between college educated couples and couples with fewer educational credentials? And third, I compare couples' employment participation and hours before

and after the transition to parenthood to answer the third research question: To what extent are couples' employment pathways "redirected" by parenthood?

I begin by considering how parent's employment status and work hours are linked, and how gender and class shape the organization of paid and unpaid work within and across couples. Next, I review existing studies that developed typologies of linked employment participation among coupled parents.

Linked Pathways: Employment Participation from a Couple Perspective

While women's and men's employment participation patterns are predominantly studied from a perspective that conceives of them as individuals with different personal and household characteristics, a number of studies have begun to explicitly investigate how employment participation patterns are shaped by the relationship context, notably among parents. There is evidence that both women and men shape each other's employment participation patterns, even though in different ways, and not consistently across all couples. For example, Youngjoo Cha (2010) examines whether among dual-earner, different-sex, married couples long work hours of one partner increase the likelihood of the other partner exiting employment at a later time point. Cha argues that men's overwork contributes to a more unequal division of labor, especially among couples with children. She finds that male partners who work 60 hours or more per week increase women's, and especially mothers' likelihood of quitting their jobs, while women's overwork generally does not impact men's employment participation.

Jacobs and Gerson (2005) have argued, that overwork, and experiences of the "time-squeeze" are classed, and concentrated among professional couples, who are most likely to spend very long hours in employment. However, the long hours' culture has

seeped into non-professional work as well, and workers paid by the hour may also work long hours as a way to increase their earnings (Jacobs and Gerson 2005). Furthermore, both Deutsch (1999) and Damaske (2010) found that in some working-class families, when their wives had higher hourly wages, husbands maintained their primary breadwinner status by working longer hours than their wives. Thus, spending more hours on paid work may be one avenue for working-class men to attain breadwinner status, as part of hegemonic masculinity (R. Connell & Messerschmidt, 2005; R. W. Connell, 1995).

Still, Cha (2010) finds that the effects of overwork on partners' employment differ for professional and non-professional couples. The impact of spousal overwork (defined as a spouse who works 50 or more, and alternatively 60 or more hours a week) is especially pronounced for professional mothers. Among childless professional women, Cha finds no effect of husbands' long work hours on the likelihood of quitting. In contrast, the odds of professional mothers leaving employment are 44 percent higher for mothers with husbands who work 50 hours or more and, and even 112 percent higher for those with husbands working 60 hours or more, compared to professional mothers whose husbands work fewer hours. Qualitative studies echo these findings. For many of the professional women in Pamela Stone's (2008) or Mary Blair-Loy's (2003) studies, the decision to "opt out" of employment in connection with motherhood was shaped by husbands who were "never around" (Stone 2008:62). While only 60 percent of the women Stone interviewed, explicitly mentioned that husbands played a role in their decisions to leave their job, she argues that the long-term strains involved in combining a

time-demanding professional job with childrearing without a partner who shares child care responsibilities formed an important part of nearly all of these women's narratives.

While spousal overwork also matters for mothers' likelihood of leaving non-professional jobs when their husbands work long hours, these effects are less pronounced compared to professional workers. However, in contrast to male professional workers, wives' overwork does increase the likelihood of non-professional men to leave their jobs (who have a higher likelihood to leave employment or job loss compared to professional workers in the first place). However, fathers are less responsive to their wives' long hours compared to childless, non-professional men. Perhaps fatherhood increases the salience of cultural norms to provide financially for the family among these men (Cha 2010).

Overall, Cha's (2010) findings suggest that overwork among mothers seems to have limited impact on fathers' employment participation. However, mother's work patterns may shape their male partners' employment in other ways. For instance, Lundberg and Rose (2000) examined whether men adjusted their work hours in response to fatherhood. Their findings indicate that men with continuously employed wives decreased their hours in response to fatherhood, while men with wives who did not work for pay for more than the year of birth increased their hours worked when they became fathers. Moreover, evidence from qualitative studies indicates, that wives may play a role in curbing fathers' engagement in paid work, both among professional and non-professional couples. For example, in Cooper's (2000) study of work and family conflict among professional knowledge workers in the Silicon Valley, many fathers remarked on their wives' role in making them leave work in the evenings: Their wives would call them at work to remind them to come home at a previously agreed time. While fathers in

working class jobs may face different challenges with regard to hours and schedules, Shows and Gerstel (2009) similarly found that wives of the Emergency Medical Technicians they interviewed played an important role in whether or not the father responded to calls from the firehouse to pick up extra shifts.

These studies highlight the linked nature of couples' employment participation patterns. Quantitative studies, such as Cha's (2010) or Lundberg and Rose's (2000), using longitudinal data are well equipped to study the effect of specific employment participation patterns of one spouse on a specified employment outcome of the other spouse. They can tell us something about average effects or average group differences. I examine how partners' employment patterns are linked more broadly. Rather than focusing on average effects of one partners' employment on the other partners' employment pattern, my goal is to show the real world variation in the ways in which couples organize paid and unpaid work, and how these linked patterns vary across families with parents who have different educational background.

Money, Workplaces, Policies, and Cultural Norms

Understanding how mothers and fathers with different individual and household resources engage in paid work while their children are young has important implications for unpacking class and gender inequalities. Parents are likely to make joint employment decisions, based not only on individual job opportunities, career prospects, or personal preferences, but incorporating partners' labor force participation, the resources and demands of families, as well as broader gendered cultural norms that "tug" at mothers and fathers as they make decisions about how to organize their family lives (Damaske, 2010; Kremer, 2006; Moen & Sweet, 2003). In the U.S. labor market, where access to

well-paid jobs is significantly structured by higher educational attainment (D. H. Autor, 2014; D. Autor, 2011), prospective parents with and without college education face different conditions under which to organize paid and unpaid work, providing a complex set of “push” and “pull” factors that may limit or enable particular modes of division of labor within couples.

Compared to parents without college degrees, parents with higher educational credentials are more likely to have access to *higher earnings*. Theoretically, having at least one college educated parent should facilitate “specialization” in paid work by one parent, and unpaid work by the other parent. Becker’s (1981) theory of household specialization implies that fathers will intensify their efforts in the labor market because a) children increase household economic needs, while women’s income decreases as they allocate more time to care work (due to their role in breastfeeding and lower earnings power), resulting in greater need for male earnings. And b), because men are able to focus on paid labor if mothers specialize in domestic work and alleviate men of hands-on care responsibilities (Becker, 1981). Given stagnating and even decreasing wages at the lower end of the earnings distribution, we might expect that the “1950s style male-breadwinner/female homemaker” division of labor would be most likely to be found among parents who can actually afford having one “stay-at-home” parent, i.e. among college educated parents. Furthermore, college educated mothers and fathers are more likely to work in professional jobs, where long hours are part of *workplace cultures and professional identities* (Cooper, 2000), while workers with fewer educational credentials may struggle to find jobs with enough hours to make a living (Jacobs & Gerson, 2005; Jacobs & Gornick, 2002). This long-hours’ workplace culture may pose obstacles to

continuing employment while caring for young children, especially for women in professional jobs (Stone, 2008; Williams & Dolkas, 2012). Stone's (2008) study documents these challenges of combining employment with childrearing among college-educated women, and the processes that lead to some of these mothers to "opt out" of employment. As discussed above, Cha's (2010) findings also provide evidence that being married to a professional man who works very long hours markedly increases the likelihood of two-parent families adopting a male-breadwinner/female homemaker division of labor.

Beyond the challenges of caring for children with little support from a partner who spends long hours on paid work, Cha (2010) argues that *cultural norms* may also contribute to the bifurcation of employment patterns, especially within professional, college educated couples. For example, in over half of the middle-class dual-earner couples Pixley and Moen interviewed, husbands and wives reported that his career had priority (Pixley & Moen, 2003). Other researchers have argued that specific cultural norms around motherhood and fatherhood shape parents' engagement in paid and unpaid work. For example, Hays (1996) argues that the norm of "intensive mothering" contributes to a heightened experience of conflict between employment and the care for children among mothers, something not equally experienced by fathers. The experience of "competing devotions" (Blair-Loy, 2003) to employment and childcare, and cultural norms that tie maternal care for children to understandings of "good motherhood" may "pull" some mothers into full-time care providing, or into reduced hours work.

However, with rising educational and occupational attainment among women, leaving employment in connection with motherhood comes with increasing *opportunity*

costs, including lost earnings, lost labor market experience and seniority with the employer, as well as deterioration of professional networks, and professional identity. These opportunity costs may “pull” college educated mothers (back) into (full-time) employment. Indeed, overall labor force participation rates are higher among college educated women and mothers, compared to women with fewer educational credentials (Thistle, 2006).

Furthermore, college educated parents are more likely to have jobs that grant more flexibility and autonomy over hours and schedules, and offer *work-family policies*, i.e. hold jobs that may facilitate combining paid and unpaid work. Moreover, parents with more financial resources are also more likely to be in a position to pay for high quality, and reliable childcare, enabling mothers to stay employed (Haley, Perry-Jenkins, & Armenia, 2001; Morgan, 2005; Perry-Jenkins, 2012; Williams, 2000). Notably in high-powered professional jobs, where workplace cultures perpetuate the perception that reduced hours work, or take-up of parental leave is detrimental to career development, hiring a childcare worker may be the only option for professional women with partners equally engaged in paid work to stay on the “career track.” For example, in her study of white collar workers on Wall Street, Roth (2006) found that virtually all mothers in these high powered jobs hired other women to take care of their children while they were at work. At the same time, they recognized that fathers in similar jobs had stay-at home wives who provided round-the clock care of children and their husbands.

Hours’ reduction and/or employment exit in connection with parenthood remain “choices” firmly linked to the life course of women, but not of men. Part-time work is widely perceived as one “solution” to work-family conflict for mothers. However, for

women in professional jobs, reducing work hours carries the risk of being perceived as less committed to the job, and being tracked into lines of work that offer limited options for career development, often termed the “mommy track” (Webber & Williams, 2008; J. Williams, 2000). The risks of departing from the “ideal worker norm,” i.e. the idea that ideal workers are unencumbered by “outside” responsibilities, includes wage penalties (Bardasi & Gornick, 2003, 2008; Glass, 2004), and relegation to jobs that are less challenging and rewarded (Webber & Williams, 2008; J. Williams, 2000). On the other and, mothers in professional jobs are more likely to be able to negotiate part-time, or flexible work schedules that fit their needs.

While mothers and fathers without college degrees share some of the “push” and “pull” factors experienced by college educated parents, they nevertheless face different and often harsher conditions under which to find solutions to make family lives work (Perry-Jenkins, 2012). Working-class parents have more limited resources to find and pay for affordable, quality, and reliable childcare services. Moreover, workers in less-skilled jobs often face workplaces and job conditions, which may be less supportive of combining the care of young children and employment. For example, Perry-Jenkins (2012) documents that parents in blue collar and pink collar jobs have more limited access to employer-based family policies, and often work under conditions that are structured by rigid rules. They have more limited control over hours and schedules, and risk punitive measures on the part of employers if they need to take time off from work in order to take care of children’s or other family members’ needs (Perry-Jenkins, 2012). Mothers in non-professional part-time jobs are more likely to face working conditions that are driven by employers’ needs, such as on-call (part-time) work, or unpredictable

scheduling of work shifts (Rosenfeld, 2001). Furthermore, Webber and Williams (2008) find that the part-time employed mothers often face some of the same negative outcomes of part-time work as the mothers in professional jobs, including pay discrimination relative to full-time workers, and limited avenues for upward job mobility.

Limited financial resources and more rigid working conditions with less autonomy over hours and schedules, may lead working-class parents to different solutions of work-family conflict compared to parents with more educational credentials (Perry-Jenkins, 2012). Rather than paying for non-parental care, working class parents more often rely on family members (Gerstel & Sarkisian, 2008), or shared parental care in a “tag-team” parenting system, where both parents work different shifts and take turns taking care of the children (Deutsch, 1999). In addition, parents in working-class jobs may use various strategies to carve out more flexibility in otherwise inflexible jobs, such as switching shifts with colleagues at work, or establishing a reciprocal system with co-workers that allows them to leave early when needed, while picking up extra work from co-workers at other times (Clawson, Gerstel, & Crocker, 2009; Shows & Gerstel, 2009).

With more limited access to well-paid jobs, parents with fewer educational credentials are less likely to be able to support a family on one income, increasing the need for both parents to be employed. Even so, seeing non-college educated parents’ work-family arrangements as solely driven by financial considerations is too limited. Several researchers have argued that cultural norms and satisfaction derived from paid work can shape professional, as well as non-professional parents’ decisions around work and family (Damaske, 2010; Deutsch, 1999; Perry-Jenkins, 2012). For instance, Damaske (2010) argues that among the working-class women she interviewed financial

consideration were often not the primary driving force behind women's decision to leave employment, or to start a new job. Similar to women in professional jobs, satisfaction or dissatisfaction with the job, and employment conditions were an important part of these women's narratives. But Damaske notes that women nevertheless couched their decisions around employment in terms of "the good of the family," whether the decision was to enter employment or to leave employment.

Finally, U.S. laws only provide weak regulation of working time compared to other wealthy western countries, with the consequence that American dual-earning parents jointly spend more hours on paid work on average compared to their European counterparts (Gornick & Heron, 2006; Jacobs & Gornick, 2002). Shorter overall work weeks free up more time for other activities, including care work for workers with young children or elderly parents, and may ease work-family conflict if paired with regular, and predictable work schedules (Fagnani & Letablier, 2004; Gornick & Heron, 2006). Moreover, the U.S. provides very limited public work-family support for working parents in general, and lower income families in particular. Childcare is predominantly provided through the market, and affordable, quality childcare services are often inaccessible for working-class parents (Morgan, 2005). The unpaid leave entitlement provided by the 1993 Family and Medical Leave Act is not only limited in terms of the proportion of workers covered by the Act, but also severely limits lower-income parents' ability to take up leave without providing any financial benefits during the leave period (Gerstel & McGonagle, 1999). This may put especially women in lower-income households at risk to drop out of employment entirely in connection with motherhood, compared to women

with access to higher household income who may leave employment temporarily while remaining attached to their jobs.

Taken together, existing research suggests that parents with different educational and professional backgrounds face different challenges when it comes to finding workable solutions to combining the demands of paid and unpaid work in two-parent families. Theoretical explanations for the division of labor, including household specialization, household resources, employment conditions, and cultural norms suggest a complex web of sometimes contradictory “push” and “pull” factors that shape parents’ decisions around paid and unpaid work. While I expect to find variation in linked employment patterns among college and non-college educated parents alike, I expect that college educated parents will be more equally distributed across types of linked employment patterns, since greater access to resources may open up a wider array of options to those couples. Furthermore, I expect that patterns that involve one partner, especially fathers, to work extra-long hours, will be more prominent among college educated parents who are more likely to work in professional jobs with long hours work norms. Next, I review studies that have focused on examining the range of couples’ joint employment participation, and the methodological approaches applied in these studies.

Analyzing Couples’ Joint Employment Participation

Quantitative studies examining couples’ employment participation patterns often use a cross-sectional approach that provides us with a snapshot of how couples organize paid and unpaid work at specific points in historical time, or over the life-course (Jennifer Baxter et al., 2007; Jacobs & Gornick, 2002; Misra, Budig, & Boeckmann, 2011; Moen & Sweet, 2003; Waite & Nielsen, 2001). For example, Waite and Nielsen (2001)

distinguish between one, one and a half (one full-time, one part-time earner), and dual-earner couples, tracing the decrease in one-earner couples since the 1960s, and the corresponding increase in 1.5 earner families, but most markedly couples with two full-time earners, notably among married couples with children. Others explicitly examine the *gendered nature* of couples' work arrangements (Bianchi et al., 2006; Misra et al., 2011). Bianchi et al. (2006) find similar changes in joint employment patterns among coupled parents over time. Like Waite and Nielsen (2001) they find that the proportion of sole male-breadwinner families has rapidly decreased, notably since the mid-1970s, and that the increase in dual-earner parents has been most prominent among those with two full-time employed parents, but also among those with a part-time working mother and a full-time employed father. In contrast to Waite and Nielsen (2001), Bianchi et al. (2006) make couples without a full-time employed father visible. This is a small proportion (between 12 and 16 percent in the period from 1970 to 2000), but includes an increasing proportion of couples with sole breadwinner mothers, which almost doubled from 3.2 percent in 1970 to 5.8 percent in 2000.

However, these studies show that the distinction between full-time and part-time employment yields a typology of linked employment patterns, where fathers' employment is predominantly the invariant part of couples' joint employment patterns: Fathers are predominantly full-time workers, and mothers the primary contributors to the variation in joint employment patterns among these couples. Only with further distinctions of work hours among full-time employed workers does the variation among men's employment participation become discernible. For example, Moen and Sweet (2003) distinguish between different work hours brackets among employed workers:

reduced hours, moderate full-time, and long full-time. They identify five different “work hours strategies” among their sample of dual-earner, middle-class couples: Couples with *high commitment* to paid work (both work 45 hours a week or more), *dual moderates* (both working between 39 and 45 hours), *neotraditionalists* (husband works more than 45 hours a week, wife does not), *cross-over commitments* (wife works more than 45 hours a week, husband does not), and couples with *alternative commitments* (neither works long hours, one works reduced hours). Moen and Sweet’s (2003) comparison across the life course highlights how caring for children in the home limits intensive engagement in paid work especially for mothers. Compared to couples at other life stages, dual-earning preschool parents were most likely to adopt an “*alternative commitment*” strategy, jointly committing less time to paid work, with one partner usually working regular full-time hours, and the other fewer hours. However, just as other couples with children in the home, preschool parents’ most frequent work hours’ strategy was for the husband to work more than 45 hours a week and the wife to work fewer hours (what Moen and Sweet call a *neotraditionalist* arrangement. Only 10 to 15 percent of parents were *dual moderates*, with both parents engaging about equally in paid work (Moen and Sweet 2003).

Methodologically, cross-sectional studies such as these face the challenge that the distinction between more levels of engagement in paid work leads to a large number of couple types in a cross-tabulation of the two partners’ employment participation pattern. Consequently, researchers using this approach need to collapse potentially meaningfully distinct categories. For example, Moen and Sweet’s (2003) distinguish between three levels of work hours (reduced hours, moderate full-time, long full-time), which would lead to 9 different dual-earner couple types. To avoid this problem, I use multichannel

sequence analysis, a method I describe in further detail below, that allows me to find the main types of linked employment patterns among the data without relying on cross-tabulation of mothers' and fathers' employment patterns.

Furthermore, couple typologies based on cross-sectional data only provide snapshots of joint employment patterns at a given point in time. To understand how employment patterns of first-time parents change before and after the transition to parenthood, and how pre-parenthood employment arrangements may change, we need longitudinal data on couples. Studies that examine employment pathways over time are rare and often do not focus specifically on the transition to parenthood (Han & Moen, 1999), do not link pathways within couples (Edgell Becker and Moen 1999), or focus primarily on mothers (Damaske, 2010; Gustafsson, Wetzels, Vlasblom, & Dex, 1996; Hynes & Clarkberg, 2005).

These researchers have used different approaches to study how employment participation patterns evolve over time, and to identify different types of employment pathways. One approach is to examine whether mothers are employed at pre-defined points in time in relation to the birth. For example, Gustafsson et al. (1996) measure employment participation three months before birth and 24 months after birth and examine how many women fall into the four resulting trajectory categories: employed before and after birth, not employed before and after birth, employed before but not after birth, not employed before birth and employed after birth.

Hynes and Clarkberg (2005) argue that such an approach is well suited to identify patterns at either extreme of the employment continuum, but it is less well suited to identify groups that fall somewhere in between. In their study, Hynes and Clarkberg

(2005) apply group-based trajectory models (Nagin, 2005), a regression-based method that identifies distinct trajectories in longitudinal data. Examining women's employment patterns starting eight months before birth to two years after the birth, Hynes and Clarkberg (2005) find six employment trajectories among new mothers, with four trajectories "in between" continuous employment, and continuous non-employment, with different timing of movement in and out of employment. Taking a qualitative approach, Damaske (2010) also analyzes employment as evolving over time, using the concept of *employment pathways*. Damaske analyzes the narratives of working-class and middle-class women to identify three different work-family pathways over time, with some women staying continuously employed, some "pulling back," and others following an interrupted employment pathway.

In this analysis, I conceptualize employment not only in terms of current employment participation and work hours, but also take a long-term perspective on work and family by examining "work pathways" over time as the unit of analysis. While the focus of my analysis is participation in paid employment the term "work pathways" emphasizes that the analysis includes respondents who may be engaged both in paid or unpaid work, broadening the perspective beyond dual-earner couples. The terms pathways or trajectories, I use both terms synonymously, draws attention to the longitudinal conceptualization of employment. Employment experience and seniority acquired over time are important factors that structure labor market outcomes and future labor market prospects (e.g. Aisenbrey, Evertsson, and Grunow 2008; Budig and England 2001). By examining new parents' employment patterns over time as the unit of analysis, I highlight the extent to which parenthood contributes to labor market inequalities

between men and women, among women, and between different groups of couples. Rather than focusing on mothers' pathways alone, I examine their pathways in the context of marriage and partnership, shedding light on the variation in the time new parents alone and jointly spend on paid work.

Data and Methods

I use data from the Panel Study of Income Dynamics (PSID) for the years 1979 to 2011 to construct employment pathways of women and their male spouses or cohabiting partners starting in the year prior to the woman's first transition to motherhood until the first child reaches school age. In this chapter, I focus on couples in order to address the linkages between mothers' and fathers' employment pathways; in the third empirical chapter I also consider the trajectories of unpartnered and non-residential fathers. The PSID provides information on a nationally representative sample of U.S. families. The data comprise consistent information on both adult partners' employment, birth, and marriage histories from 1979 onwards, and thus are well suited to study how women navigate employment in the context of parenthood and partnership (Panel Study of Income Dynamics, 2013b).¹

¹ There are some limitations to the data. Detailed employment data is only available for heads of households, and for their married or co-habiting partners. The PSID defines household heads as individuals who are at least 16 years of age, who carry the most financial responsibility for the family. With few exceptions, families are understood as the people who live together in one household in the PSID. In opposite-sex coupled households (whether married, or long-term cohabiting), the man is defined as the head in most cases even if the woman is the main breadwinner. However, the PSID conducts interviews with the person who is most knowledgeable about the households' income, which may or may not be the person defined as the head of the household (Panel Study of Income Dynamics, 2013a). Because detailed labor market data is only collected for persons defined as heads and their spouses or long-term cohabiting partners, this limits data on parents who live with other family members of kin, and are not designated "heads of household" or "wives." Since low-income families are more likely to live in multi-family households, low-income parents may be more likely to be excluded from the sample for this reason (Vespa et al., 2013).

The sample includes 2115 different-sex couples with female partners aged 16 to 45 years at the time of the first transition to motherhood (either through childbirth or adoption), who had their first child between 1979 and 2005, and were observed for at least 3 years after birth or adoption.² To examine the linkages of mothers' and fathers' employment pathways I select couples with relatively stable relationships, i.e. couples who are married or live with co-habiting partners for at least 3 years after the first birth or adoption. This excludes 21 percent of all couples in the PSID who are observed to transition to parenthood for the first time between 1979 and 2005. Among the excluded couples are 192 couples who were censored, i.e. who stopped participating in the survey, and 379 couples who separated prior to year four after the first birth or adoption. Analyses show that economically disadvantaged couples, in terms of pre-parenthood household income and parental education, are significantly more likely to be dropped because of censoring or because of separation. As a consequence my analyses focus on partnered parents in stable relationships in more advantaged families (Vespa, Lewis, & Kreider, 2013).³

Table 2.1 presents descriptive statistics for my sample of couples. Overall, comparisons of sample statistics with population data indicates that more privileged parents may be overrepresented in this sample due to the selection of relatively stable, two-parent families. In 61 percent of couples neither partner holds a college degree, in a further 192 percent either the mother or the father has at least 4 years of college, and in 19.5 percent of couples both partners are college educated. Examining women only, the

² Only 19 first time mothers and 2 fathers in the sample are under 18 years old at the time of the first birth in this sample. In robustness checks, I exclude couples with underage parents. Findings are robust.

³ Couples with at least one parent of color are also slightly more likely to be excluded.

proportion of college educated women in the sample is comparable to national statistics. In 2011, 30 percent of American women aged 25 or over had a college degree compared to 29.8 percent in the sample (U.S. Census Bureau 2013). However, my sample consists of multiple cohorts of partnered women, which limits comparability to population data based on the Census or other cross-sectional data. In 77 percent of couples, both partners are white, in 15.6 percent of couples both partners are black, and the remaining 7.4 percent are either other same-race or biracial couples, including Latino/a, Asian, and Native American parents. According to census data the proportion of white two-parent families was about 90 percent in 1980. By the year 2000 that proportion had decreased to 86 percent, and 83 percent in 2010 (U.S. Census Bureau, 2012), which approximately corresponds to the representation of white parents among younger cohorts of parents in my sample.⁴ Mothers' average age at first birth is 26.5 years. The fathers in my sample are on average two years older at the first transition to parenthood with an average age of 28.6 years.

While the focus lies on the first transition to parenthood among these couples, it is important to note that these couples differ in their fertility patterns, which in turn may impact especially women's employment pathways. A higher number of children do not only increase financial needs of a family, but may also amplify work-family conflict among parents due to increased childcare. Indeed, larger numbers of preschool children in the home are associated with decreased maternal employment participation among American women (Cohany & Sok, 2007). One quarter of couples has no additional

⁴ Significant racial differences in the employment patterns of black and white women in the United States call for separate analyses of couples' employment pathways by race (Thistle, 2006). I plan to extend my analyses in this direction in future research. Though, I test whether my findings are robust if I only examine couples with white mothers. These separate analyses show the same substantive findings as those using the full sample.

children during the observation period, 57 percent had another child, and 18 percent two more children before their first child reached school age. That said, the post-Baby Boom decrease in fertility rates had halted by 1980s, and during the time period I am examining (1979-2005), the average number of children per family has remained remarkably stable (U.S. Census Bureau, 2013a).

To identify different types of linked work-family pathways among this sample of two-parent families, I use optimal matching and multi-channel sequence analysis (Gauthier, Widmer, Bucher, & Notredame, 2010). Sequence analysis techniques take pathways, or “trajectories, over time as the unit of analysis” and allows researchers to identify whether there are “common sequential patterns among data” (Abbot and Hrycak 1990:171). Rather than defining types of trajectories over time a priori, sequence analysis techniques are useful to identify existing patterns in the data. Sequence analysis techniques in the social sciences have been applied to uncover temporal and sequential patterns of events among the data: Are there similar trajectories in terms of the order of events or duration of states a person remains in? For example, are there groups of women who are distinct in terms of whether and how long they stay out of employment after the birth of their first child?

For sequence analyses where individuals are observed over time, each individual must inhabit one “state” at each point in time that excludes the membership in other “states,” i.e. states must be distinct and mutually exclusive (Aisenbrey, 2000). I construct work-family pathways for both partners in each couple: Starting with the year before the transition to parenthood, I record whether the individual was in or out of employment, and I distinguish between different levels of engagement in employment: short part-time

employment (1 to 20 hours per week), long part-time employment (20-34 hours), regular full-time employment (35 to 42 hours), long full-time employment (43 to 49 hours), and very long full-time employment (50 hours or more per week). These hours brackets are meaningful in that they are connected to different employment outcomes for workers, especially part-time workers, who are especially vulnerable in the U.S. labor market, especially in terms of lower wages and limited access to benefits, including paid leave, pension benefits, and health care (U.S. Department of Labor & U.S. Department of Labor Statistics, 2013). In the United States, there is no general legal definition of part-time work. I use a 35-hour threshold to distinguish between part-time and full-time employment, following common practice (Gornick & Meyers, 2003). Distinguishing different hours' brackets among full-time workers is necessary to examine variation in men's employment patterns, who are less likely to be employed part-time. Following prior research, I define very long full-time hours as 50 or more weekly hours (Cha, 2010; Jacobs & Gerson, 2005).

Figure 2.1 shows an example of a mothers' employment trajectory on the left, and the fathers' on the right. This woman, for instance worked regular full-time hours (between 35 and 44 hours a week) from the year before the birth, until two years after the birth (the years marked yellow), then was three years not employed (marked purple), and then went back to part-time employment, working between 20 and 34 hours a week (shaded dark green). During this time, her partner worked standard full-time hours throughout.

Optimal matching generates a measure of how different/ similar two pathways, or sequences⁵ are to each other by counting the number of substitutions (or insertions/deletions in the case of sequences of unequal length) necessary to turn one sequence into the other. For example, the work-family pathway of the first mother could be made to look identical to that of the second mother by substituting the state “long full-time (dark green)” with the “regular full-time (yellow)” state for the last year. To arrive at a measure of dissimilarity between mothers’ pathways 1 and 2, one could simply count the number of operations (substitutions) necessary to turn one sequence into the other. Since these two mothers’ pathways are of the same length (no insertion or deletion of elements is necessary), but differ during four years, it would take four substitution operations to make them look alike. If each operation (e.g. substituting non-employment with full-time employment, and part-time employment with full-time employment) was considered equally “costly” and assigned the value 1, the total “cost” of turning pathway 1 into pathway 2 and vice versa would be 3. This total “cost” is used as a measure of how dissimilar the two employment pathways are.

In more complicated examples, especially when two sequences are of different length, there are multiple ways to make two sequences look alike. The optimal matching algorithm finds the least costly way to turn any given two sequences in the data set into the other, given pre-defined substitution and insertion/deletion costs. How these costs attached to substitution and insertion/deletion are defined, therefore centrally shape the outcome, i.e. the measure of dissimilarity of two sequences.

I use transition rates between different states of employment as the basis for the definition of the costs for the substitution of one element of a sequence for another in

⁵ I use the terms *pathway*, *sequence*, and *trajectory* synonymously in this chapter.

order to make a sequence pair look the same. The substitution costs are the inverse of the transition rates from one state to another (from one year to the next) found in the data: Transitions that occur more frequently result in lower substitution costs, compared to transitions that occur only rarely.⁶ The relationship between the highest substitution costs and the costs set for insertion/deletion operations shapes how often the algorithm “uses” substitution or insertion/deletion operations to align two sequences. Prioritizing insertion/deletion puts weight on aligning sequences according to the order of states, while a prioritization of substitution operations emphasizes the timing of states. I set the insertion/deletion cost just above the highest substitution costs to prioritize substitution operations, i.e. the timing of states (Aisenbrey, 2000).⁷ To account for the different length of sequences due to censoring or separation of couples, the dissimilarity measure is adjusted (normalized) using the length of the longer sequence (Gabadinho, Ritschard, Müller, & Studer, 2011).

I use optimal matching and multi-channel sequence analysis included in the TraMineR package (Gabadinho, Ritschard, Studer, & Müller, 2009; Gauthier et al., 2010) in R (R Development Core Team, 2011) to analyze and visualize mothers’ and fathers’ work-family pathways. In multi-channel sequence analysis, the substitution cost matrix of each channel (here: mothers’ pathways=channel 1 and fathers’ pathways=channel 2) are combined to create one matrix of dissimilarity measures. Subsequently, a cluster analysis is performed on this “dissimilarity matrix,” to reduce the complexity of information,

⁶ While it would be theoretically desirable to assign different costs to transitions in different directions (e.g. transitioning from full-time employment to being not employment may be considered less “costly” compared to transitioning from non-employment to full-time employment). However, optimal matching requires that the substitution cost matrix be symmetrical, i.e. substitutions in each “direction” are considered equally costly.

⁷ I conduct robustness analyses using different substitution and insertion/deletion costs. The substantive findings are largely robust to these different cost specifications.

resulting in a typology of work-family pathways.⁸ Each woman's employment trajectory can in this way be subsumed under one specific type. Unlike other statistical tools, such as regression analysis which assumes that patterns in the data are generated by a probabilistic process, this type of analysis does not make any assumptions about the processes that generate pattern (Aisenbrey & Fasang, 2010). In summary, sequence analysis enables researchers to create a new categorical variable that can subsequently be used in further analyses, i.e. different types of linked employment pathways among couples. I use this typology of linked work-family pathways in two-parent families derived from the OM/cluster analysis in a series of descriptive analyses including cross-tables and adjusted residuals to examine the relationship between work-family pathway types and women's or household-level characteristics.

⁸ I identify groups or clusters of pathways using a cluster analysis technique, that first finds representative trajectories (called *medoids*), and then assigns each cluster to the closest medoid (Kaufman & Rousseeuw, 2005). In this variant of cluster analysis, called "partitioning around medoids," the researcher defines the number of clusters k as part of the input for the cluster analysis. The algorithm finds k representative trajectories, and then constructs k clusters by assigning each trajectory in the data to the closest representative trajectory, so that the average dissimilarity from the representative sequence to all the other sequences in the assigned cluster is minimal (Kaufman & Rousseeuw, 2005). Not all cluster solutions in terms of number of clusters, yield equally good results: The goal is to find an optimal cluster solution where the average distance of trajectories within each cluster to the representative trajectory is minimized, and the average distance to the sequences in other clusters is maximized. There are several measures to evaluate the quality of a cluster solution that help define the appropriate number of clusters. Table A2.1 in the appendix lists the Point Biserial Correlation, Hubert's Gamma and Somers' D, which capture how the distance matrix is associated with a binary variable that takes on the value 1 if two sequences are in the same cluster, and 0 if they are in different clusters. The last column of Table A2.1, lists the average silhouette width, a tool suggested by Rousseeuw (1987), and implemented into R by Studer (2013). The average silhouette width is a measure of how well the clusters are defined. It captures the average distance of a sequence relative to the other sequences within the assigned cluster, compared to the average distance to the sequences in the next closest cluster. The measures in the table show that a 7 cluster solution yields the highest average silhouette width paired with moderate to high correlation measures. The average silhouette width is low, indicating weak clustering. But given that I am examining two channels, women's and men's employment pathways simultaneously, greater complexity is to be expected.

Findings

Women's and Men's Employment after the Transition to Parenthood

I start by laying out the broad patterns of partnered women's and men's employment patterns before and after transition to parenthood. In the year before birth or adoption, the vast majority of women (78.4 percent) in the sample were engaged in paid work, most of them full-time. Figure 2.2a shows the distribution of states in each year of the observation window, for women on the left, and men on the right-hand side. In the year before birth (labelled “-1”), almost half of the women were employed between 35 and 43 hours a week, with a further 13 percent working longer hours, and an additional 17.5 percent working part-time.

Women's employment patterns change dramatically after transition to motherhood. In keeping with what we know about maternal employment patterns, the proportion of women who does not work for pay or who works part-time increases as shown by the larger proportion of purple and green shaded areas in the post-birth/adoption years. Over half of the mothers do not work full-time during this period.

The right-hand side graph shows the corresponding employment patterns of the male partners. Nearly all future fathers in the sample were employed in the year prior to the transition to parenthood, with around 43.7 percent working regular full-time hours, and a further 43.6 percent working longer hours. In contrast to women's employment patterns after birth, the vast majority of new fathers work full-time. Long work hours are also fairly common among first-time fathers with around 30 percent of working at least 50 hours a week during the child's preschool years. Clearly new fathers are heavily engaged in market work, even to a greater extent compared to the pre-birth period observed here. That fatherhood increases paid work hours, at least for some men, is

consistent with past findings of the effects of fatherhood on employment (Lundberg & Rose, 2000).

However, Figure 2.2b shows considerable variation in the degree of to which both mothers and new fathers engage in paid work. While Figure 2.2a shows the distribution of different work-hours brackets in each year of the observation window, it hides the variation in individual mothers' and fathers' pathways over the course of the observation window. In Figure 2.2b, each individual's pathway is represented by a line, the mothers' on the left and fathers' pathways on the right hand side. Pathways are shown by increasing distance from the most common pathway among women and among men. That is, couples' pathways are not horizontally aligned in this figure. Together they demonstrate the broad variation in work-family pathways of preschool parents, especially among mothers. The dominant colors in the fathers' plot suggest that the variation in their employment participation lies mainly in the range of full-time work hours.

Continuous standard full-time employment (35-43 weekly hours) is the most common employment pathway among both mothers and fathers during the first child's preschool years (7.15 percent of mothers and 8.7 percent of fathers). Nevertheless, the second most frequent pattern among these new parents is indicative of the diverging work-family pathways of women and men after the transition to parenthood (analyses not shown): 6.6 percent of sample mothers are not employed throughout the entire observed pre- and post-birth/adoption period, while 8.4 percent of fathers work 50 or more hours a week during the entire observation period.

Still, the majority of parents follow more complex pathways, with changes in employment status and work hours over time, as Figure 2.2b illustrates. Notwithstanding

this complexity, are there groups of mothers and fathers who follow somewhat similar employment pathways? And how do these employment patterns link within couples? To answer these questions (Q1), and to examine the variation in linked work pathways among these couples, I turn to the results of the multi-channel sequence analysis.

The Landscape of Couples' Work-Family Pathways

The results of the cluster analysis indicate that couples group into seven types of linked work pathways: Two types of “male-breadwinner/female care provider” couples, and four types of “dual-earner” couples and one group of couples where women are marginally and intermittently employed and the man works longer full-time hours. Figure 2.3 illustrates these seven couple “types” by showing the average time spent in each hours' bracket during the preschool years for mothers on the left hand side, and fathers on the right. The couple types are ordered from top to bottom from couples who jointly spend the most time in paid work, to couples who jointly are least engaged in paid work.

Fathers differ in their employment patterns in two main ways: They either follow a regular full-time hours pathway (between 35 and 43 weekly hours), indicated by the yellow sections of the bars, or they predominantly work longer full-time hours, often 50 or more hours a week, shown as the dark red sections of the bars. In line with prior research, I find that women's work pathways after transition to motherhood vary more widely, ranging from a long-term focus on unpaid work to intense engagement in paid work. The next section provides an overview of the types of linked employment pathways identified by the cluster analysis among my sample of stably partnered different-sex parents, starting with variants of the male-breadwinner/female care provider couples.

In both of the couple types shown at the bottom of Figure 2.3, the father “specializes” in paid work, and the mother in unpaid work. One group of parents organize work in a “*1950s Male-Breadwinner/Female Care-Provider*” way, with fathers working standard full-time hours (35-43 hours/week), and mothers largely retreating from paid work, representing the “ideal-typical,” post-war image of (white) middle-class families (Thistle, 2006). In contrast, fathers in second male-breadwinner/female care-provider group are more intensely engaged in breadwinning, spending nearly 80 percent of the preschool years of their first child engaged in paid work for 50 hours or more a week. I call this intensified version of the male-breadwinner/female care provider model, the “*Extreme Male Breadwinner*” model. A third group of couples, which I call “*Neotraditionalists*” borrowing from Moen and Sweet (2003), also organizes engagement in paid work in a largely “specialized” and gendered way: Mothers largely disengage from employment, but still have some employment attachment, spending more time in full-time (and part-time) work compared to the mothers in the two “male-breadwinner” couples. “Neotraditionalist” fathers on the other hand work extended full-time hours, but not as many hours as the “extreme breadwinners.”

In contrast, couples in top four groups in Figure 2.3 represent different “flavors” of dual-earner couples, some more, some less intensely engaged in paid work as a couple. Rather than leaving employment (for a while) in connection with motherhood, women in the “*Reduced Dual-Earner*” group types continue to work for pay on a part-time basis, presumably to combine employment with care provision in the home. They predominantly work between 2.5 and just under 4.5 days a week (assuming 8 hour work-

days), while their partners work mainly standard hours during the preschool years of the first child.

In “*Standard Dual-Earner*” couples both parents chiefly work hours around the standard 40 hours’ workweek. In contrast, parents in the groups on the top of Figure 2.3 are engaged in paid work more intensely: In the “High commitment” group fathers spend very long hours, above 50 hours a week, at work with mothers who work standard full-time hours. In the “*High-Commitment Cross-Over*” cluster (again borrowing from Moen and Sweet’s (2003) typology) mothers are the ones who work these very long hours, but in contrast to the “high commitment” group, their partners do not necessarily reduce their hours to more standard full-time work or even part-time work.

The range of different forms of organizing engagement in paid work among these stable, two-parent families demonstrates, that both partners’ employment patterns need to be taken into consideration in order to capture the organization of work among new parents. While mothers still have more variable ways of engaging in paid work, fathers’ do vary in the number of hours they spend in paid work, with different consequences for the time parents jointly spend in paid work during this phase in the life course. Figure 2.4 summarizes the average weekly hours couples across these trajectory groups jointly spend in paid work in the year before the transition to parenthood, and at ages one, three and five of the first child. The figure illustrates that both partners contribute the variation in the time these couples spend on paid work during the first few years as new parents, from around 90 hours a week among the “High Commitment” couples to an average below 50 hours a week among the “1950s Male-Breadwinner” group. However, the reduction in the joint employment hours from the pre-parenthood year to the year after

the first birth or adoption is still mainly due to women's reduction in employment participation and work hours. Even though I am not capturing how parents spend the time they are not engaged in paid work, from the children's point of view, parents' time "off-work" is more limited in the full-time dual-earner clusters. And given the intensity of their engagement in paid work, parents in the "Standard Dual-Earner," "High Commitment," and "High Commitment Cross-Over" clusters are probably most at risk of experiencing the "time crunch" or "speed up" of daily life described by Arlie Hochschild (1989) or Juliet Schor (1993).

Some of the joint work arrangements within these stably partnered couples are more frequent than others. Table 2.2 lists couples' work arrangements in decreasing order of frequency. "Standard dual-earners" are the most frequent type of couple (25.6 percent of couples), reflecting the rise in full-time dual-earning among parents and couples in general in the past decades (Suzanne M. Bianchi et al., 2006). Still, the "*Standard Dual-Earner*" couples are followed in size by the two types of male breadwinner/female care provider couples, which combined make up 41.3 percent of the sample. Combined with the "Neotraditionalist" group who follow a largely "specialized" division of labor also, half of the stably coupled new parents organize engagement in paid work post-parenthood in a distinctly gendered way. In a further 8.8 percent of couples, women remain employed part-time, and their male partners continue to work full-time ("*Reduced Dual-Earner*" group).

The remaining two smaller groups are the "High Commitment" couples. Taken together, over one in six of these stably partnered parents jointly spend between 80 and 90 hours a week in paid work on average while caring for a preschooler at home.

Nevertheless, the “*High Commitment Cross-Over*” couples with new mothers who on average work 44 or even 50 or more hours a week, are still relatively rare (4.4 percent of the sample). In contrast, fathers in this group do not seem to consistently lower their paid work hours. This finding echoes Cha’s (2010) results, which suggest that women’s overwork has only limited impact on men’s employment participation.

Together these findings suggest a persistence of gendered patterns of engagement in employment during the early years of parenthood among two parent families, despite the increase in dual earning among American two-parent families: In over half of these families mothers either drop out of employment during most of their first child’s preschool years, or reduce the time engaged in paid work, “freeing” fathers to focus on paid work. Still, in nearly 41 percent of couples, both parents are engaged in employment full-time while caring for one or more young children in the home. Fathers are especially prone to work long hours, while long paid work hours among new mothers remain rare: In about a third of couples, fathers spend a majority of their first child’s preschool years engaged in paid work for 50 or more hours a week, which may limit fathers’ day-to-day involvement in their children’s and partners’ daily lives (Bunting, 2004; Cooper, 2000), and solidify gendered work arrangements within couples during this transitional period (Rehel, 2014; Risman, 1998).

Given the concentration of long work-weeks among professional workers, some of these work arrangements among couples may be more prevalent among couples with different educational background. Next, I examine differences in the frequency of couple types across couples with college educated mothers and mothers with fewer educational credentials, addressing Research Question 2.

Does Parents' Human Capital Shape their Joint Pathways?

Figure 2.5 shows the frequency of each couple type by couples' educational composition distinguishing whether both or either parent have a four-year college degree. I use adjusted residuals to examine whether certain couple types are significantly overrepresented (marked with an asterisk) or underrepresented (marked with the number sign #) among couples with and without college educated parents.

Couples with two college educated parents are, as expected, more evenly distributed across linked employment pattern types, perhaps reflecting a broader range of "choices" that come with greater financial resources among parents with more human capital at their disposal. Nevertheless, these parents are overrepresented among the "Extreme Male-Breadwinners" (dark purple segment of the bar graph), with fathers intensely engaged in paid work and mothers disengaging from employment. Different processes may contribute to this finding: College educated fathers generally have access to better paying jobs that may be able to sustain a family on one income. The "Extreme Male-Breadwinner" division of labor is also well represented among couples where only the man has a college degree, but the woman does not. So, economic considerations may be part of the story. However, the significant overrepresentation of this type of division of labor among the dual-college educated couples suggests that the processes underlying these patterns are more complex, including workplace related factors that "push" college educated women out of jobs requiring long hours in the workplace, heightened work-family conflicts given their partners' intense engagement in employment, as well as time-intensive parenting practices which are presumably more prevalent among middle-class mothers (Blair-Loy, 2003; Hays, 1996; Lareau, 2011).

Couples with college educated mothers are also overrepresented among couples at the high intensity end of the dual-earner spectrum. The rare “*High Commitment Cross-Over*” pattern is a form of employment arrangement almost exclusive to couples with college educated mothers. This seems to be a very specific group of highly educated women, who significantly postpone motherhood compared to the other women in the sample: The average age at first birth is 30.1 for women in this cluster, while the average age at birth ranges from 24.5 to 27.3 in the other clusters. While working very long hours during the first years of parenthood is not that unusual among fathers as Figure 2.2a shows, it remains rare among mothers. Since only few fathers in the “High Commitment Cross-Over” cluster seem to be less engaged in paid work (for short periods of time) during their first child’s preschool years, these parents are likely to rely on non-parental childcare, either by relatives, or – like the women working on Wall-Street interviewed by Roth (2006) – by childcare workers. The composition of this cluster suggests that this may be a group of “professional” couples, in which women’s employment and careers may be prioritized, flipping the more common patterns among “professional” couples (Pixley & Moen, 2003; Shows & Gerstel, 2009; Stone & Ackerly Hernandez, 2012).⁹

The two middle bars in Figure 2.5 represent couples with an “educational discrepancy” between partners, i.e. where one partner has a college degree, but the other does not. Women’s and men’s educational advantage seems to shape the division of labor in distinctly gendered way: Women’s educational advantage within couples clearly increases dual-earning. “Standard Dual-Earners” are by far the most frequent pattern among educationally discrepant parents, and they are significantly underrepresented

⁹ Further analyses (not shown) indicate that couples where woman only or both partners were in a professional or managerial job prior to becoming parents are overrepresented in the “high-commitment cross-over” group.

among “Neotraditionalists” and the “1950s Style Male-Breadwinner” couples, where women work reduced hours. In general, women with higher educational credentials have stronger labor force attachment compared to women with less education. But in couples with college educated women only, mothers’ earnings and potentially greater job security compared to the father may be especially significant. In contrast, male educational advantage seems to discourage dual-earning. Women in this group of couples are most likely to either disengage from employment or reduce work hours, perhaps facilitated by their male partners’ earnings capacity, perhaps by workplace related factors, including limited control over hours and schedules, access to work-family policies, including access to affordable and reliable childcare (Perry-Jenkins, 2012).

Finally, couples where neither parent has a four-year college degree are over-represented in the standard dual-earner group (yellow), as well as the “1950s Male-Breadwinner” couple type (light purple). Working-class parents are also underrepresented among the “Reduced Dual-Earner” couples with part-time working mothers, perhaps due the fact that mothers’ incomes in working-class families may form a more economically indispensable part of household income (Stone, 2008; Williams, 2000). Given stagnating wages of lower-skilled workers, the ability to be sole breadwinners is limited for fathers who do not have a college education, increasing the need for two incomes among these families. Lower average work hours in non-professional jobs may also partly explain the finding that parents without a college degree are overrepresented among the “Standard Dual-Earners.” Furthermore, these working-class parents perhaps use a “tag-team” parenting strategy to accommodate the care for their infant with full-time employment more often than college educated, middle-class parents who may be in a better position to

substitute parental care with childcare services to enable full-time employment of both parents (Deutsch, 1999).¹⁰ “Tag-team” parenting may further circumscribe the length of time either parent, especially fathers, can spend engaged in paid work, since they need to take over “childcare duties” from the other parent when he or she leaves for work. On the other hand, more limited opportunities for working longer hours among non-college educated fathers, limited labor market opportunities for workers with fewer educational credentials in general, combined with limited means to pay for childcare services to enable dual-earning may contribute to the overrepresentation of non-college educated couples in the “1950s Male-Breadwinner” group. While very long hours are most prevalent among professional-managerial workers (Jacobs & Gerson, 2005), it is interesting to note that I do not find significant differences in the representation of high-commitment couples, where the father works very long hours, and the mother is employed between 35 and 43 hours a week. While long-work hours cultures are likely to contribute to long hours many college educated fathers spend in the workplace (Cooper, 2000; Shows & Gerstel, 2009), long work hours may be a strategy for low-earning families to generate sufficient income.

Overall, my findings suggest that among these new two-parent families, parents’ education shape the available “choices” to organize work within the couple. College educated workers’ earnings potential, as well as the long-hours’ culture prevalent among professional jobs may put families with college educated men especially “at risk” of having a father who is deeply engaged in paid work during the first child’s preschool years. This may shift greater responsibility and share of care work to the mother in these

¹⁰ Because the data does not include information on whether workers are employed during regular day-time hours, or whether they work nights or other types of shifts, I cannot examine shift-work employment strategies among these parents.

couples, at the same time limiting engagement in paid work, and career opportunities. On the other hand, mothers' educational advantage within couples increases the likelihood of dual full-time earning. In contrast, parents without college degrees are bifurcated between standard dual full-time earning, partly reflecting the increased need for two incomes among lower-income families, and the "1950s Male-Breadwinner/Female-Care Provider" division of labor. These couples have the lowest joint employment hours, likely reflecting limited labor market opportunities of lower-skilled workers as well as limited access to work-family policies. Given low average earnings of workers without higher educational credentials, these working-class couples seem most likely at risk of not finding enough work to secure their financial well-being (Jacobs & Gerson, 2005).

Diverging Pathways after the Transition to Parenthood?

The way couples organize paid and unpaid work not only affects families' economic well-being and daily lives, but has also important implication for gender equality. The transition to parenthood remains a period in the life-course when gendered inequalities in the distribution of paid and unpaid work, and in employment outcomes become amplified (Janeen Baxter, Hewitt, & Haynes, 2008; Goldin, 2014; Haynes et al., 2013; Misra, Budig, & Boeckmann, 2009). Next, I turn to the third research question, examining how mothers' pre-birth/adoption employment status is linked to the joint employment patterns after the transition to parenthood: Does the transition to parenthood lead some couples to more divergent employment patterns? Figure 2.6 presents mothers' employment status before birth or adoption by type of joint employment pathway after transition to parenthood. Figure 2.5 shows that with the exception of the "1950s Male-Breadwinner" couples, the majority of mothers in all couple types were employed, most of them full-time. The vast majority of prospective fathers were engaged in full-time

employment, this implies that for a considerable proportion of couples where the woman reduces paid work hours or leaves employment after birth or adoption, parenthood leads to a more gendered division of labor.

However, Figure 2.6 also confirms prior research which suggests that women with stronger labor force attachment before birth are more likely to remain employed or return faster to (full-time) employment (Aisenbrey et al., 2009; Hynes & Clarkberg, 2005; Joesch, 1994): The women in the three full-time dual earner couple types (high-commitment and standard dual-earners) are most likely to have worked full-time before birth, and they continue to do so after birth. In contrast, women who work reduced work hours or leave employment after becoming mothers are more likely to work part-time or have lower full-time employment rates even before birth or adoption.

Women in the “1950s male-breadwinner” couples are most likely to have been out of employment or have worked part-time even before becoming mothers, and compared to the fathers in the other groups, their male partners were also more likely to having worked reduced hours or being non-employed. This underlines the findings presented in Figure 2.5 that links the “1950s Male-Breadwinner/Female Care-Provider” division of labor to economic disadvantage and more limited labor market opportunities among parents. On the other hand, women in the “Extreme Male-Breadwinner” and “Neotraditionalist” groups were predominantly employed pre-birth or adoption (some part-time, but the majority full-time). This contrasts with their post-birth/adoption employment patterns which are clearly marked by a disengagement from paid work. Among these two couple groups, the transition to parenthood seems to be most strongly linked to a bifurcation in new mothers’ and fathers’ employment pathways. Still women

in the “extreme male-breadwinner” couples are somewhat more likely not to have worked for pay even before becoming mothers, while their partners’ long work hours foreshadow their post-birth/adoption employment pattern. In line with Cha’s (2010) findings this suggests that partners’ long hours may not only lead women to leave employment, but also to reduce work hours, somewhat independently of parenthood.

Conclusion

This analysis has focused on the joint employment patterns among stable, different-sex couples during a key period in the life course, the first transition to parenthood. Existing research documents the increase in the average combined number of hours American two-parent families spent on paid work over time (Suzanne M. Bianchi et al., 2006). In contrast, this chapter examines the variation in the (principal) ways in which new mothers and fathers jointly organize paid work, and the adjustments couples make to their work arrangements after the arrival of their first child. My typology of parents’ joint employment pathways shows a range of work patterns among my sample, varying in the *intensity* with which new parents engage in paid work, and the level of *gender equality* in hours spent on paid work within couples. I argue that these different work arrangements within new two-parent families may have important implications for our understanding of parents’ strategies to combining paid and unpaid work, parental work-family strain, women’s long-term economic well-being, gender earnings equality within different household contexts (Budig & England, 2001; Budig & Hodges, 2010; Winslow-Bowe, 2006, 2009), as well as class inequalities among new two-parent families.

While I do not capture parents' experiences of work-family conflict directly in the data, my findings suggest that the proportion of families who are at heightened risk of experiencing a "time crunch" due to both parents working full-time is substantial (41 percent) in my sample of new parents. Compared to Europeans, American workers spend long hours in paid employment, and this is also true for new parents, in particular fathers. Investing many hours into paid work is often portrayed as a work pattern that is predominantly found among professional and managerial workers, and thus connected to heightened work-family conflict among middle-class and upper middle-class families (e.g. Jacobs & Gerson, 2005; Stone, 2008). This analysis of joint employment patterns among new parents shows that parents without a college education are just as likely as college educated couples to have both parents engaged in full-time work while the first child is preschool aged. "Standard Dual-Earning" is especially prevalent among parents without a college education. And with fewer means to substitute housework and childcare with services bought in the market, working class "Standard Dual-Earner" families may be especially at risk for experiencing work-family strain with repercussions for their families' well-being and relationship quality. For example, existing research shows that "tag-team" parents, who work alternate shifts, have a heightened risk of divorce (Presser, 2000). For these parents, widening access to affordable, quality, and reliable childcare, as well as broadening access to paid family leave seems especially important in order to improve work-family balance for "tag-team" parents, and facilitate access to paid work for some mothers in working-class "male-breadwinner" couples. Furthermore, raising minimum wages may free some parental time hitherto spent on generating income,

especially among lower-wage workers whose total income is often a direct function of the hours they work.

Even so, college educated dual-earner parents are more likely to have one parent who spends long hours in paid work, especially fathers. New mothers who spend long hours in employment while their children are young remain rare, and in this sample are almost exclusively college educated women. However, while many “overworking” fathers are partnered with women who are either not employed (“Extreme Male-Breadwinner” couples) or are marginally employed (“Neotraditionalists”), long paid work hours among mothers are not systematically linked to reduced hours or an “opting out” of employment among fathers. Fathers in professional jobs with a long work hours’ culture are more likely to have stay-at-home partners (e.g. Roth 2006). This puts their female counterparts at a disadvantage in the workplace, since they are less likely to have a partner who is full-time engaged in care work, and women often remain the person with primary responsibility for childcare and housework even if they are equally engaged in paid work as their male partner (Maume, 2008; Roth, 2006).¹¹

While I find some differences in representation in long-hours’ work is to some extent linked to parental education, “High Commitment” couples where mothers work standard full-time hours and fathers work 50 or more hours a week, are equally likely to be found among college and non-college educated parents . But similar pathways may be shaped by different processes. Among couples with college educated fathers, long work hours may be linked to the long-hours’ work culture often found in professional jobs. For

¹¹ The small size of this group of professional women with young children who are intensely engaged in paid work is inversely related to the attention they receive in the public discourse (Williams 2000). For example, a recent front page New York Times article (Kantor & Silver-Greenberg, December 7th, 2013) portrayed “Wall-Street Mothers” and the male partners, some of them “Stay-Home Fathers.”

families with fathers in non-professional jobs, longer work hours may be a way to remain the primary breadwinner in a full-time employed, dual-earning couple (Damaske, 2010; Deutsch, 1999).

Similarly, I find that a focus on childrearing after the transition to motherhood is about equally prevalent among families with two-college educated parents and families with two parents without college degrees. Yet, different sets of factors may shape the decision not to engage in paid work among these two groups of women. The experiences of college educated mothers in Stone's (2008) study highlight workplace structures that assume unfettered workers, cultural biases against mothers who are seen as less committed to their jobs, and their partners' intense devotion to their jobs as reasons that contributed to their decision to "opt-out" of employment.

Working-class families on the other hand face a different set of challenges: In the face of stagnating male wages, especially at the lower end of the earnings spectrum, lack of affordable quality childcare, or fewer labor market opportunities for mothers without higher educational credentials, a male-breadwinner/female care provider division of labor may provide one way to organize paid and unpaid work within these couples.

Additionally, workers in non-professional jobs often face other workplace restrictions that make combining paid and unpaid work difficult, including inflexible and punitive workplace rules that may lead some mothers to focus on unpaid work when children are young, while fathers may need to compensate for their partners' foregone earnings during this time (Perry-Jenkins, 2012).

In the public discourse, and to some extent in the academic literature, mothers' increased engagement in paid work has received considerable attention, but has been

portrayed in a somewhat polarized way: On the one hand emphasizing mothers' increased employment participation and breadwinner role (Wang et al. 2013; Winslow-Bowe 2009), on the other hand, highlighting mothers who "opt out" of employment (Belkin, 2003, 2013; Stone, 2008). These disparate images perhaps reflect the tensions between the persistence of cultural norms that understand women as primary care providers for small children and the increased "normalization" of mothers' participation in the labor market.

Workplaces remain unresponsive to the needs of workers with care responsibilities, and with the lack of strong work-family policies and working time regulation in the United States, persistent cultural ideals of maternal care for small children, some mothers leave employment, at least for a while, while others seek alternative employment arrangements (Damaske, 2010; Deutsch, 1999; Marler, Tolbert, & Milkovich, 2003; Stone, 2008). This analysis shows some of this variation in new mothers' employment participation patterns. However, I argue that the limited attention fathers' employment participation patterns received thus far has rendered men's role in couples' work arrangements largely invisible. Even though fathers have increased the time they spend on childcare and housework over the past decades, their gains have not held pace with the increasing time mothers spend engaged in paid work (Suzanne M. Bianchi et al., 2006), and my findings provide evidence that men in different-sex couples remain deeply engaged in paid work after the transition to parenthood.

CHAPTER 3

PREDICTING SIMILARITY IN DIFFERENT-SEX COUPLES' JOINT EMPLOYMENT PATHWAYS AFTER THE TRANSITION TO PARENTHOOD

In the majority of American two-parent families today both parents are engaged in the labor market in some form (Suzanne M. Bianchi et al., 2006; Waite & Nielsen, 2001). Mothers have contributed disproportionately to women's rising employment rates over the past decades, and many work full-time even when their children are young. Mothers' incomes have become indispensable for many families, and in an increasing number of households mothers are the primary breadwinners (Wang et al., 2013). On the other hand, men's overall employment rates have declined over the past decades, fathers spend more time on childcare compared to previous generations of men, and the number of stay-at-home fathers has nearly doubled since the late 1980s to about two million fathers in 2012 (S. M. Bianchi, 2011; Livingston, 2014; Sweet & Meiksins, 2008). Still, parenthood continues to shape men's and women's employment participation patterns in profoundly gendered ways. Most mothers remain the main care providers for young children which leads many to reduce their work hours or leave employment, at least for a while (J. C. Gornick & Meyers, 2003; Stone, 2008), and the majority of men, especially fathers, remain full-time workers (Misra et al., 2011). These changes and continuities in *aggregate* gendered labor market participation patterns raise questions with regard to the *variation* in these pattern among women and men, and in particular in gendered labor market inequalities *within couples*. To what extent have mothers' and fathers' employment patterns within couples become more similar over time? And how can we explain the variation in couples' joint employment patterns, especially among those with young children?

In this chapter, I examine the long-term employment patterns of three cohorts of different-sex couples. I focus on the first transition to parenthood and different-sex couples' employment patterns during the preschool years of the first child, a period in the life course where gendered inequalities in paid and unpaid work often intensify (Baxter et al., 2008; Sanchez & Thompson, 1997). The majority of existing studies of couples' joint employment patterns have taken a cross-sectional perspective (Misra et al., 2011; Moen & Sweet, 2003; Waite & Nielsen, 2001), or have focused on how one partners' employment participation or work hours affects the other partners' engagement in paid work at a subsequent point in time (e.g. Cha 2010). In contrast, this analysis focuses on couples' joint employment pathways over the course of the oldest child's first five years as the unit of analysis. This focus on long-term employment trajectories, integrates the dynamic nature of labor market participation patterns in terms of transitions in and out of paid work, and fluctuations in work hours into the analysis, and highlights the complexity of two-parent families' engagement in paid work.

Before reviewing the theoretical approaches that address why couples' employment patterns may diverge, or remain similar after the transition to parenthood, I outline the changing socio-political and economic context in which parents engage in paid work.

How has engagement in paid work among two-parent families changed over time?

The proportion of two-parent families with children under the age of six with a "breadwinner father" and a "homemaking mother" has steeply decreased from nearly two thirds of couples in 1970 to 37 percent in 2000 (Suzanne M. Bianchi et al., 2006). During the same period, the proportion of dual-earners increased from a quarter to over half of

parents with preschool children. The increase in dual-earner families are linked to changes in both men's and women's employment participation, the changing economic and labor market structures, cultural changes, as well as public policies. Men's decreasing employment participation rates over time, linked to a decline in jobs in male-dominated sectors such as manufacturing, and stagnating or even decreasing wages at the middle and lower end of the earnings distribution have increased the need for two earners (Bernhardt, Morris, & Handcock, 1995; Sweet & Meiksins, 2008). At the same time women's participation in higher education, linked to higher labor market participation (Bernhardt et al., 1995), has markedly risen since the 1970s. Women have caught up with men in terms of tertiary educational attainment, and even surpassed them in many fields (Siebens & Ryan, 2012). The increase in the number of service sector jobs has also opened new labor market opportunities for many women (Sweet & Meiksins, 2008).

Moreover, Woods (2004) argues that public policies implemented in at the end of the 1980s and into the 1990s supported a family model with two income earning parents, for instance by providing tax incentives via the Dependent Care Tax Credit (1988), the Earned Income Tax Credit (1993 onwards), and the Child Tax Credit (1997). Furthermore, the impetus of the 1993 Family and Medical Leave Act was also based on the "adult worker model" (Woods, 2004), by providing the option to take unpaid time off from employment to care for children or other family members, even though for a limited number of workers only (Gerstel & McGonagle, 1999).¹² Finally, the state only provides limited public subsidies for childcare services. The dual-earner parent family model in

¹² Following the same underlying logic of the "adult worker model" (Woods, 2004), the 1996 Welfare reform was an attempt to "incentivize" employment participation among low-income, and predominantly single mothers. This public policy reform is less pertinent to the group of stable couples examined in this analysis.

the United States relies at least partially on the marketized child care service system where low wage earning women provide child care for women with (slightly) higher wages (Morgan, 2005).

Furthermore, the employment of mothers with young children has also become more accepted over time (Cotter, Hermsen, & Vanneman, 2011) linked to the cultural challenges of the second wave feminist movement, but also to the more widespread practice of employment among mothers with young children. While this trend towards more affirmative attitudes towards mothers' employment stagnated somewhat in the 1990s, more recent data shows that the male breadwinner-female homemaker model has clearly lost ground, with less than a third of Americans perceiving this division of labor as the ideal (Cotter, Hermsen, & Vanneman, 2014).

Overall, these trends suggest that coupled parents' employment participation patterns should have become more similar over time. However, with increasing disparities between lower and higher skilled workers in the U.S. labor market, couples with different personal and household resources encounter very different conditions for the organization of paid and unpaid work, and a complex and even contradictory set of "push" and "pull" factors with regard to mothers and fathers' participation in paid employment. What conditions and processes may lead to different types of organization of paid work within couples?

Theoretical Explanations for Coupled Parent's Employment Patterns

Partners' relative resources

Becker's (1981) theory of *household economics* implies that two-parent families maximize their "family utility function" if the parent with higher earnings potential will intensify his or her efforts in the labor market, while the other parent specializes in non-

market work (Blossfeld & Drobnič, 2001). Thus we should expect mothers' and fathers' employment pathways to diverge particularly if one partner has greater earnings potential compared to the other partner, i.e. more educational credentials, or higher earnings prior to the transition to parenthood¹³, all else equal. Specialization should occur especially upon transition to parenthood, because children increase household economic needs, while the care providing partners' income decreases as they allocate more time to care work. According to Becker (1981), women are likely to specialize in unpaid work due to women's different investment in education and training based on gendered societal expectations, and their lower earnings power given the existing gender gap in earnings.¹⁴ Based on the household economics argument, we should expect specialized, i.e. *diverging pathways if one partner has a comparative labor market advantage in terms of human capital compared to the other partner (Hypothesis 1a)*. However, stagnating and even decreasing wages at the lower end of the earnings distribution raise questions as to the affordability of a specialized household division of labor. Many couples cannot afford to have one parent disengage from employment. Therefore, *couples with one partner at the top-end of the earnings distribution and another partner with lower earnings should be especially likely to specialize post-parenthood transition, all else equal (Hypothesis 1b)*. Hypotheses 1a and b are thus concerned with the *relative* human capital and earnings of both partners within a couple.

¹³ Assuming that future parents use earnings prior to the transition to parenthood as a measure of their future earnings potential.

¹⁴ This perspective is at least partially tautological, since it relies on men's greater earnings power as an explanation for the specialized gendered division of labor within households, which in turn produce men's greater earnings power.

Women's own resources.

However, with rising educational and occupational attainment among women, leaving employment in connection with motherhood comes with increasing *opportunity costs*, including lost earnings, lost labor market experience, seniority with the employer, deterioration of professional networks, and possibly professional identity. These opportunity costs may “pull” mothers with more human capital (back) into (full-time) employment faster than women with fewer educational credentials and earnings. Indeed, overall labor force participation rates are higher among college educated mothers, compared to mothers with fewer educational credentials (Thistle, 2006). Other studies examining women's employment patterns around the time of birth more specifically found that more years in education lower the likelihood of discontinuous employment patterns after the transition to motherhood (Hynes & Clarkberg, 2005). This leads to expectations competing with Hypotheses 1a and 1b: Given that the majority of men remains continually employed after the transition to fatherhood, I expect that *women's higher educational credentials will increase the similarity in new parents' employment trajectories (Hypothesis 2a)*. Furthermore, mothers' income has been shown to be especially salient for shifting some of the unpaid family work from households to the market, in particular the purchase of services for feminized household tasks (including laundry, meal preparation and housekeeping), as well as childcare services which should facilitate mothers' employment participation (Brayfield & Hofferth, 1995; Treas & De Ruijter, 2008). I expect that *women's higher earnings prior to the transition to parenthood are associated with greater similarity in parents' employment trajectories (Hypothesis 2b)*.

In summary, these two sets of hypotheses (1a and 1b vs. 2a and 2b) tackle the following questions: Is pre-parenthood and educational or earnings advantage of one parent over the other linked to greater dissimilarity in post-parenthood employment patterns? Or: Are mothers' higher educational credentials and pre-parenthood earnings related to smaller dissimilarity within couples? Next, I examine how women and men's pre-parenthood employment participation and work hours may be linked to their joint post-parenthood employment trajectories. While linked to earnings, the time prospective mothers and fathers spend in employment can be seen as an indicator of labor market attachment, and predictor of future labor market patterns, especially among men whose employment patterns are shaped to a lesser degree by the transition to fatherhood.

Pre-parenthood employment

Existing studies have shown that women's labor force attachment prior to birth is a strong predictor of women's likelihood of return to employment after birth (Joesch, 1994), but that women's labor force attachment also matters in terms of shaping their partners' employment patterns. For example, Lundberg and Rose (2000) found that only men whose wives dropped out of employment for longer than a year around the birth increased their post-birth work hours, while fathers partnered with continuously employed wives did not. Weinshenker (2013) finds that men in dual-earner households worked fewer hours in the long run after becoming fathers. As an indicator of the strength of women's long-term labor force attachment, *women's full-time employment status prior to the transition to parenthood should be associated with more similarity in couples' employment pathways* by increasing women's likelihood of continuous engagement in paid work after becoming mothers, and by curbing fathers' employment hours (*Hypothesis 3a*).

Clearly, mothers' variation in employment participation patterns is central to understanding couples' joint employment pathways, yet evidence suggests that fathers' level of engagement in paid work is equally important to consider, in particular intense engagement in paid work. Cha (2010) argues that men who spend very long hours in paid work, i.e. over 50 or 60 hours a week, contribute to a more unequal division of labor particularly among parents. She finds that fathers who work 60 hours or more per week increase mothers' likelihood of quitting their jobs, while women's overwork generally does not impact men's employment participation. Qualitative studies suggest that partners' very long hours heighten work-family conflict particularly among mothers (Stone, 2008). Therefore, couples *where the male partner works very long hours are expected to have more dissimilar employment pathways compared to couples where the father works standard full-time hours (Hypothesis 3b).*

Jacobs and Gerson (2005) show that very long hours are concentrated among professional-managerial workers. Cha (2010) finds that the impact of spousal overwork is especially pronounced for professional mothers: The odds of professional mothers leaving employment are 44 percent higher for mothers with husbands who work 50 hours or more and, and even 112 percent higher for those with husbands working 60 hours or more, compared to professional mothers whose husbands work fewer hours. The impact of men's long hours should therefore be *especially pronounced in couples where the woman is a professional-managerial worker (Hypothesis 3c).*

Demographic characteristics, such as marital status, race and age at first birth may also be linked to how different coupled fathers and mothers' employment trajectories are. Compared to legally married couples, cohabiting partners are more likely to retain a

degree of economic independence. For instance, cohabiting couples are more likely to manage their money separately rather than pooling resources (Heimdal & Houseknecht, 2003). Married couples are more likely to have a “specialized” division of labor which conceivably increases economic vulnerability of the partner who decreases engagement in paid work, most often the woman (Kalmijn, 1998; South & Spitze, 1994).

Furthermore, racial and ethnic differences in inequalities in labor market participation patterns likely shape how similar couples’ employment pathways are after the transition to parenthood: Compared to white women, black women have higher employment participation rates (Thistle, 2006). In turn black men are underrepresented in professional-managerial occupations where working hours tend to be very long, and they average lower employment hours compared to white men (Stainback & Tomaskovic-Devey, 2013; Sweet & Meiksins, 2008). This may increase the similarity in black couples’ employment patterns compared to white couples.

Finally, age at first birth may be linked to post-parenthood transition employment. For example, men who transition to parenthood later are less likely to increase their work hours upon becoming fathers, and some even decrease the hours they spend in paid work which should equalize mothers’ and fathers’ engagement in paid work (Astone et al., 2010; Weinshenker, 2013).

Furthermore, women’s participation in higher education is linked to delayed motherhood. Homogamous partnership patterns also make these women more likely to be partnered with highly educated men, who have higher earnings potential. While older mothers have more potential labor market experience, which should increase their labor force attachment and theoretically lower the dissimilarity in couples’ employment

patterns, their partners' earnings may also enable a more "specialized" division of labor within couples. Expected job security, which may be linked to higher earnings, may also play a role in these decisions. However, measures that may capture expectations about future labor market opportunities or perceptions of job security are not part of the survey data I use.

In my models I control for marital status, racial composition of couples as well as mother's and father's age at first birth. Furthermore, I control for the total number of children by age 5 of the oldest child.¹⁵ A number of studies examine the effects of higher order births on parents' employment participation and work hours. They suggest that second and higher order births may have more profound effects on mothers' and fathers' employment patterns.

From a practical point of view, second (and subsequent) children not only increase the financial needs of a household, but also increases organizational challenges for parents possibly heightening work-family conflict, particularly for mothers. For example, Sanchez and Thompson (1997) found that the first child reduces mothers' weekly work hours by over 7 hours, and the second child by about 12 hours. On the other hand, fathers were estimated to increase their work hours by about three hours upon the second birth, but not the first. Similarly, Glauber (2008) found that among White and Latino men, additional children had larger effects on fathers' annual work hours compared to lower order children.

Finally, while unobserved in my data, cultural attitudes, working conditions for parents with small children, including employer behavior may also shape mothers and

¹⁵ All covariates, but the measure for additional children during the observation period, are measured before or at the time of the first birth or adoption. I estimate models with and without the control for total number of children. Findings are robust.

fathers' employment participation patterns. For example, more time and money-intensive parenting practices and ideals, sometimes described as "intensive motherhood" (Blair-Loy, 2003) or "concerted cultivation" (Lareau, 2011), may "pull" especially middle-class mothers, among whom these ideals presumably are prevalent, into full-time homemaking or reduced hours' work, especially if they are partnered to men with incomes high enough to sustain the family financially. A number of quantitative studies have examined more broadly how "gender attitudes" shape women's and men's employment participation patterns. For example, Hynes and Clarkberg (2005) found that more "traditional gender attitudes" were linked to a higher likelihood of women to disengage from paid work long-term after becoming mothers for the first time. And Weinshenker (2013) showed that among men who became fathers at age 30 or older (presumably men who have established themselves in the labor market prior to parenthood), gender egalitarian men were significantly more likely to work fewer hours post-fatherhood compared to men who scored at or below the mean of the attitude scale used in the study.

Even so, gendered attitudes and cultural norms with regard to motherhood and fatherhood do not merely shape parents' decision making processes in how to organize paid work amongst each other, working conditions and employers behaviors towards parents is equally shaped by broader cultural norms with regard to gendered parenthood. For example, having children may shape how employers evaluate workers: While men may benefit from fatherhood in terms of how they are seen as workers, mothers are more often more harshly evaluated compared to other workers without children (Correll, Benard, & Paik, 2007; Fuegen, Biernat, Haines, & Deaux, 2004). These differences in how employers view fathers and mothers in the workplace may shape men's and

women's employment trajectories over time in different ways and contribute to a bifurcation in employment pathways within couples.

Furthermore, many parents who care for small children in the home encounter working conditions that are inflexible and unreceptive to their needs, including long work hours, inflexible work schedules, or mandatory overtime. While mothers in professional or managerial jobs may encounter different workplace obstacles compared to mothers in low-wage jobs, inflexible working conditions and workplace cultures unreceptive the needs of mothers (and fathers) with small children in the home can contribute to "pushing" both professional and non-professional mothers out of paid work (Perry-Jenkins, 2012; Williams & Dolkas, 2012; Williams, 2000).

Data and Methods

I use 1979 to 2011 data from the Panel Study of Income Dynamics (PSID), which is ideally suited to study couples' labor market participation patterns over time. As a household-based survey, the PSID collects detailed labor market information for "heads of households," and for their long-term cohabiting partners or legal spouses.¹⁶ Because detailed labor market information is not available for family members other than household heads and their spouses or long-term cohabiting partners the sample is limited to couples heading their own households when they became parents. This excludes very young parents and parents with very low incomes who may be more likely to live with other family members or relatives compared to parents with more financial means.

¹⁶ As a rule, the PSID defines the male partner in a coupled household as the "head," save in exceptional cases (see below). I also include the year in which "heads" or partners are coded as "first year cohabiters" prior to becoming a "head" or "wife." Person-years in which men are "husband of head" are also included. The PSID started to collect detailed labor market data for spouses and long-term cohabiting consistently since 1979, which is why the sample is limited to couples who became parents in 1979 or later.

The PSID started in 1968 with a nationally representative sample of individuals and families who were followed annually until 1997, and biannually thereafter. I select male and female respondents who were a member of a 1968 sample family, one of the “immigrant refresher” samples drawn in 1997 and 1999, or who were subsequently born or adopted into a sample family. The sample includes 2115 couples who are observed to become parents for the first time between 1979 and 2005, and who were cohabiting or legally married at the time of the first birth or adoption. Due to the focus on employment pathways over time, couples have to be observed for at least three years following the transition to parenthood to be included in the sample.¹⁷ This excludes 21 percent of all PSID couples who are observed to transition to parenthood for the first time between 1979 and 2005. Among the excluded couples are 192 couples who were censored, i.e. who stopped participating in the survey, and 379 couples who separated prior to year four after the first birth or adoption. Analyses show that economically disadvantaged couples, in terms of pre-parenthood household income and parental education, are significantly more likely to be dropped because of censoring or because of separation. As a consequence my analyses focus on partnered parents in stable relationships in more advantaged families (Vespa et al., 2013).¹⁸

Table 3.1 presents descriptive statistics for the selected sample of couples. The vast majority of couples in the sample were married at the time of the first birth or adoption (92 percent). The sample consists of predominantly of white couples. In 77 percent of couples, both parents are white, in 15.6 percent both mother and father are

¹⁷ While the study started with a cross-section of around 5000 American families in 1968, and grew to about some 8000 families over time, the number of couples who became parents for the first time, while interviewed by the PSID is much smaller.

¹⁸ Couples with at least one parent of color are also slightly more likely to be excluded.

black, and a further 7.4 percent of couples are Latino/a, American Indian, Asian or some other same race couple (n=44), as well as 113 biracial couples.¹⁹ Mothers' age at first birth ranges from 16 to 50, and fathers' age from 17 to 63.²⁰ On average mothers are 26.5 years of age at the first birth, while fathers are two years older than mothers on average.

In the majority of couples, neither parent has a college degree (61.3 percent). In one fifth of the sample, both parents have at least a 4-year college degree, in a further 10 percent, the mother earn a college degree, while the fathers has not, and in about 9 percent the reverse is the case. In contrast to education, there are fewer couples where women have an earnings advantage compared to men: In only 2.5 percent of couples, women have income from labor in the top quartile of the male earnings distribution, while the reverse is the case in over one fifth of couples. Couples with two high earners are also rare (3.5 percent), while the in the vast majority of couples, neither parent had earnings in the top quartile prior to transitioning to parenthood. On average women earned 31.4 percent of the couples' income from labor prior becoming parents for the first time.

Pre-parenthood employment participation patterns among this sample of prospective parents show some similarities, as well as marked gender differences. A majority of both women (55.4 percent) and men (60.1 percent) worked "standard" full-time hours (between 35 and 43 hours a week). In contrast, men were considerably more

¹⁹ Due to the small number of couples who are not black or white same-race couples, I combine all other couples in one group. I run robustness checks with more detailed distinctions. These additional models show that the differentiation between "other same race couples," and "biracial couples" does not yield meaningfully interpretable results.

²⁰ For robustness checks, I exclude mothers younger than 18 (n=8) and above 42 (n=1). The findings are robust.

likely to work long full-time hours compared to women, and women were significantly more likely to be part-time employed or not engaged in paid work pre-parenthood. While prior research shows that women's pre-parenthood labor market attachment is predictive of their post-parenthood employment, less is known about how prospective partners' level of engagement in paid work shapes the extent to which couples' employment pathways diverge or remain similar once they become parents.

I use a combination of sequence analysis techniques and Ordinary Least Squares regression to examine a) how similar (or rather dissimilar) couples' employment pathways²¹ are after the transition to parenthood, and b) which individual, and couple characteristics are linked to more dissimilar (or conversely similar) joint employment trajectories among these new parents. Sequence analysis techniques take pathways, or "trajectories, over time as the unit of analysis" and allow researchers to construct a measure of how similar two trajectories are to each other (Abbot and Hrycak 1990:171).

For sequence analyses each individual must inhabit one "state" at each point in time that excludes the membership in other "states," i.e. states must be distinct and mutually exclusive (Aisenbrey, 2000). I construct employment pathways for both partners in each couple using usual weekly employment hours in each year of the observation window: Starting with the year of the first birth or adoption, I record whether the individual was in or out of employment, and I distinguish between different levels of engagement in employment: short part-time employment (1 to 20 hours per week), long part-time employment (20-34 hours), regular full-time employment (35 to 43 hours), long full-time employment (44 to 49 hours), very long full-time employment (50-59 hours), and extreme full-time employment (60 or more hours per week). These hours brackets are

²¹ I use the terms *pathway*, *sequence*, and *trajectory* synonymously.

meaningful in that they are connected to different employment outcomes for workers, especially part-time workers, who are especially vulnerable in the U.S. labor market in terms of lower wages and limited access to benefits, including paid leave, pension benefits, and health care (U.S. Department of Labor & U.S. Department of Labor Statistics, 2013).

In the United States, there is no general legal definition of part-time work. Following common practice, I use a 35 hour threshold to distinguish between part-time and full-time employment, (Gornick & Meyers, 2003). Distinguishing different hours' brackets among full-time workers is necessary to examine variation in men's employment patterns, among whom part-time work is rare. Following prior research, I define very long full-time hours as 50 plus or 60 plus hours a week (Cha, 2010; Jacobs & Gerson, 2005).

In a first step, I use Optimal Matching (OM), to construct a measure of how dissimilar mothers' and fathers' employment pathways are within each couple (Macindoe & Abbott, 2004). The Optimal Matching distance captures how dissimilar two pathways are to each other by counting the number of substitutions necessary to turn one sequence into the other. For example, if two partnered parents worked standard full-time hours, except for two years around the birth where the mother took "time off" to care for the child, the two employment trajectories could be made to look alike if the years out of employment were substituted with the standard full-time employment "state." To arrive at a measure of dissimilarity between these two parents' pathways, one could simply count the number of substitutions necessary to turn one sequence into the other. If each substituting would be considered as equally "costly" and assigned the value 1, the total

“cost” of turning the mothers’ employment pathway into the fathers’ pathway (or vice versa) would be 2.

In this analysis I base the substitution costs on the transition rates between different states of employment. The substitution costs are the inverse of the transition rates from one state to another (from one year to the next) found in the data, making transitions that occur more frequently less “costly” compared to transitions that occur only rarely.²² Some couples’ employment trajectories are truncated because the couple stopped participating in the survey or because they separated. The Optimal Matching algorithm uses insertion/deletion of “states” (elements of a sequence) to align two sequences of unequal length. The relationship between the highest substitution costs and the costs set for insertion/deletion operations shapes how often the algorithm “uses” substitution or insertion/deletion operations to align two sequences.

Prioritizing insertion/deletion puts weight on aligning sequences according to the order of states, while a prioritization of substitution operations emphasizes the timing of states. I set the insertion/deletion cost just above the highest substitution costs to prioritize substitution operations, i.e. the timing of states (Aisenbrey, 2000).²³ Given the substitution and insertion/deletion costs, the Optimal Matching algorithm finds the “least costly” way to align any given pair of employment pathways. These costs are the measure of how similar, respectively dissimilar a pair of sequences is. To account for the different length of sequences due to censoring or separation of couples, the dissimilarity

²² While it would be theoretically desirable to assign different costs to transitions in different directions (e.g. transitioning from full-time employment to being not employment may be considered less “costly” compared to transitioning from non-employment to full-time employment). However, the substitution cost matrix be symmetrical, i.e. substitutions in each “direction” are considered equally costly.

²³ I conduct robustness analyses using different substitution and insertion/deletion costs. The substantive findings are largely robust to these different cost specifications.

measure is adjusted (normalized) using the length of the longer sequence (Gabadinho et al., 2011).

I use the Optimal Matching (OM) algorithm implemented in the TraMineR package (Gabadinho et al., 2011, 2009; Needleman & Wunsch, 1970) in R (R Development Core Team, 2011) to analyze and visualize mothers' and fathers' employment pathways. In contrast to the first empirical chapter, women's and men's employment pathways in this chapter are combined into a file with 4230 individual trajectories (2115 couples times 2 partners). The algorithm compares each employment trajectory to every other trajectory in the data set, and produces a matrix of dissimilarity measures comparing all individual pathways to each other. I then extract the dissimilarity measures for each couple from this matrix and merge these dissimilarity measures with data on parents' and couples' characteristics (analytical sample: $N = 2115$). The OM dissimilarity measure, ranging from 0 to 1.98669, becomes the dependent variable for the subsequent regression analyses.²⁴

Robustness Checks

While I use OLS regression for the main models presented in this chapter, I conduct robustness checks to ensure that the skewed and censored distribution of the dissimilarity measure does not affect my substantive findings (see Table A3.1 in the appendix). The dissimilarity measure is left censored, i.e. there are 81 couples (3.8 percent of the sample) with a score of 0, indicating identical employment trajectories. However, given the translation of work hours into hours' brackets, there will be variation in the actual dissimilarity of these couples' employment pathways (=left censoring), even

²⁴ This method has been previously applied in a small number of other studies, including for example to compare the similarity in family formation patterns among sibling and unrelated pairs of individuals (Raab et al., 2014).

though they all have a dissimilarity score of 0 (Greene, 2005). To account for the left-censoring of the dependent variable, I compare the OLS regression result to those based on Tobit regression models. The models presented in Table A3.1 in the appendix show that findings are robust. Furthermore, the distribution of the dissimilarity measure is left-skewed. I use rank-based Inverse Normal Transformation to normalize the distribution (Beasley, Erickson, & Allison, 2009). There are minor differences in the findings, however using this normalized version of the dissimilarity measure does not change the substantive findings (see Table A3.1).

Independent Variables

I use mothers' and fathers' individual characteristics and construct couples' characteristics to predict the degree of dissimilarity of couples' employment trajectories. These variables are measured in the year before the birth or adoption of the first child, unless otherwise noted. Control variables include demographic characteristics, including legally married status at the time of birth or adoption (reference category=cohabiting), racial composition of the couple (both parents black, other same race or biracial couple; reference category=both parents white) and mothers' and fathers' age at first birth or adoption.²⁵ I also control for the number of additional children couples had within the observation period.²⁶

Covariates include parents' human capital and employment characteristics prior to the transition to parenthood. Education is measured as a set of dummy variables indicating whether a) both parents, b) the mother only, c) the father only, or d) neither

²⁵ Various measures of couples' relative age were tested, however these alternative models fit the data less well and did not produce statistically significant results.

²⁶ Because this variable is measured at the end, rather at the beginning or prior to the measurement of the dependent variable, I conduct robustness analyses excluding this control variable. Findings are robust.

parent has at least a 4-year college degree. To test how earnings discrepancies within couples favoring women and favoring men shapes new parents' employment pathways I include a set of dummy variables capturing whether the mothers', the fathers', or both parents' earnings from labor in the year prior to birth or adoption are in the top quartile of the male earnings distribution. Further models include a measure of mothers' earnings from labor as a proportion of the couples' total labor income. I also tested models with women's and men's earnings in 2005 U.S. dollars as control variables. The findings are robust controlling for individual's labor income. However, the final model includes the relative measure of earnings, since this is the model with the best model fit using the Bayes Information Criterion.

A set of dummy variables captures whether each parent was gainfully employed, whether they worked part-time (1-34 hours), full-time hours (35-49 hours), very long full-time hours (50-59 hours a week), or extremely long full-time hours (60 or more hours) in the year prior to birth or adoption.²⁷

Finally, I estimate a model with interactions between fathers' long hours and parents' professional-managerial status in the year prior to the birth or adoption. Following Cha (2010) I examine whether the fathers' long hours have a different effect among couples with parents in professional-managerial jobs compared to other parents. This measure is also constructed as a couple-level characteristics with an indicator for both parents in professional or managerial jobs, mother only, father only, and neither parent in professional-managerial work (=reference category). However, since professional-managerial status may be endogenous, I do not include professional-

²⁷ I also used a more detailed version of these variables, distinguishing hours' brackets further. But this more parsimonious version of the variable captures the same substantive findings.

managerial status in the main full model (Model 4 in Table 3.3), but test this interaction in an additional model (Model 4a).

Findings

Couples' Employment Trajectories after the Transition to Parenthood

I start by illustrating mothers' and corresponding fathers' employment trajectories starting in the year of the birth and adoption, following each of them over the course of the first five years of the child's life. Figure 3.1 visualizes mothers' trajectories on the left and fathers' on the right, sorted by the level of dissimilarity from the most dissimilar at the top to most similar at the bottom. For each quartile of the dissimilarity measure distribution, 50 randomly selected employment pathways are shown.²⁸

Each parents' trajectory is represented by a line with differently colored segments. Purple segments indicate periods out of employment, light and darker shades of green part-time hours (1 to 19 hours, and 20 to 34 hours a week respectively), yellow segments indicate that the parent worked standard full-time hours (between 45 and 43 hours), and orange (44-49 hours) and red segments long-full time hours (darker shades of orange 50-59 hours; and red symbolize 60 or more weekly hours).

The figure illustrates that couples with the most similar post-parenthood employment patterns work standard full-time hours over the entire observation period. With increasing dissimilarity, mothers are more likely to either not work for pay or work reduced hours, illustrated by the increasing prevalence of purple and green segments towards the top region of the graph. However, it is not only mothers' employment patterns that contribute to couples' dissimilarity: The fathers' trajectories on the right

²⁸ If large numbers of trajectories are plotted, trajectories are plotted over other parents' trajectories, which can be misleading. To avoid this problem, I select a random sample of trajectories.

hand side clearly show that fathers in the couple with highest dissimilarity scores are predominantly working longer full-time hours. Interestingly, the couples with the most dissimilar employment trajectories are not couples where the mother is (mostly) not employed, but couples where mothers' work variable part-time hours and fathers work very long hours. These plots also illustrate the dynamic nature of employment pathways.

Dissimilarity in Couples' Employment Trajectories over Time

Next, I examine whether the employment trajectories of new parents have become more similar over time. Figure 3.2 shows the percentage of couples in each quartile of the dissimilarity measure by birth cohort of the mother: Mothers born between 1941-1955, 1956-1964, and 1965-1987. The light green bars show the percentage of couples with the most similar employment trajectories, and the orange bars on the right of each cohort chart the percentage of couples with the most dissimilar employment trajectories.

Figure 3.2 shows that the proportion of couples with the most dissimilar employment trajectories (orange bars) clearly decreases over time, and representation in the 2nd and 3rd quartile increases over time, i.e. couples shift to more similar employment trajectory groups (Chi-square 17.1577, df=6, p= .009). Adjusted residuals show that in the oldest cohort, couples are significantly overrepresented, and in the youngest cohort they are underrepresented in the most dissimilar group. This does suggest a shift to more similar employment trajectories among new parents over time, but perhaps in a non-linear fashion since there are no significant differences in the average dissimilarity measure across cohorts (ANOVA, $F(2, 2112) = .84, p=.434$).²⁹ In summary, this analysis

²⁹ In initial models, I included the cohort measure in the multivariate models, but there were no significant effects, even when interactions were introduced to examine whether covariates had cohort-specific effects. For reasons of parsimony the cohort measure is not included in the multivariate models presented in the chapter.

shows that the employment pathways of stably partnered, different-sex new parents have become somewhat more similar, but that there remains a good deal of dissimilarity in long-term employment participation within these couples after they become parents. So what are the characteristics of the couples with more and less similar employment pathways after the transition to parenthood?

Bivariate Analyses

In Table 3.2 the sample is split into four equal groups, i.e. quartiles of the dissimilarity measure, to examine the profiles of couples with different levels of dissimilarity in their post-birth/adoption employment trajectories. The first results column (1st quartile) represents couples with the least dissimilar employment pathways, and the 4th quartile those with the most dissimilar trajectories.

Panel A shows the proportion of couples in each quartile by education of the parents, and Panel B mothers' and fathers' earnings prior to the transition to parenthood, mothers' relative earnings contribution to the couples' total labor income, and measures of earnings inequality within the couple. These measures provide evidence to assess the questions implied in the first two sets of hypotheses (1a and 1b vs. 2a and 2b): Is educational and earnings disparity within couples linked to greater dissimilarity of employment patterns? Or do mothers' higher human capital and pre-parenthood earnings increase similarity of partners' employment trajectories during their first child's pre-school years? If educational differences within couples were linked to greater dissimilarity, we would expect couples where the mother only or the father only have a college degree to be significantly overrepresented in the 4th, i.e. the most dissimilar, quartile (Hypothesis 1a). However, this is only the case for couples where the father has an educational advantage over the mother, not the other way round. Similarly, pre-

parenthood earnings disparity is clearly linked to greater dissimilarity in couples' post-parenthood employment trajectories only if the father earns considerably more than the mother (he has earnings in the top quartile, i.e. earnings above 53,400 2005 U.S. dollars, she does not).

Couples where the mother has the earnings advantage, and potentially sufficient wages to be the sole breadwinner, are underrepresented among the couples with the least similar employment pathways (Hypothesis 1b), though couples where prospective mothers have the earnings advantage are very rare (less than 3 percent of the sample). Together these bivariate findings suggests that specialization, i.e. more divergence in employment pathways, may not necessarily occur if one parent has a comparative advantage in human capital in the form of educational attainment, or earnings as the household economics would suggest. Couples where women have higher pre-parenthood earnings and higher educational attainment compared to their male partners gender seems to trump what the household economics approach may deem the most economically "rational choice." However, because different-sex couples with female earnings advantage are so rare, findings need to be interpreted with caution.

Turning to Hypothesis 2a and b: Mothers' educational advantage does not seem to be consistently linked to less specialized post-parenthood employment patterns. Whether mothers' higher education is linked to more similar employment pathways depends on the couple context: Couples with two college-educated parents are (against Hypothesis 2a) overrepresented among the least similar couples, while couples where the mother has the educational advantage tend to follow more similar pathways, though the differences in distribution of these couples across quartiles is not statistically significant. On the other

hand, Panel B provides stronger evidence for Hypothesis 2b, that women's higher pre-parenthood earnings are linked to greater equality in post-birth/adoption employment patterns within couples: Couples with women who earn in the top quartile tend to follow more similar employment pathways post-birth or adoption. And the higher women's contribution to couples' earnings prior to parenthood, the more similar their post-parenthood employment patterns: On average, women in the most similar trajectories group earned around 40 percent of the total couples' income from labor prior to the first birth or adoption, while employed women among the most dissimilar couples earned less than a quarter of the couples' total income from wages or salaries.

Next, I examine whether parents' pre-parenthood labor market participation patterns and job characteristics are linked to greater or smaller dissimilarity of couples' employment patterns post-birth or adoption. In line with Hypothesis 3a, stronger labor market attachment of prospective mothers is linked to greater equality in employment participation patterns within couples post-parenthood: Couples with full-time employed women are significantly overrepresented in the most similar group, while couples with women who were not gainfully employed or worked part-time before becoming parents are underrepresented.

I also find evidence for Hypothesis 3b: Couples where future fathers work very long hours before the birth or adoption are more likely to follow dissimilar employment pathways afterwards. These findings are in line with Cha (2010) who finds that men's long work hours increase the likelihood of women dropping out of paid work, while the reverse, women working 50 or more hours a week does not seem to affect divergence of new parents' employment pathways. Similarly, I do not find that women's long pre-

parenthood work hours increase the likelihood of following dissimilar trajectories post-parenthood. Linked to long work hours, couples with men who are professionals or managers before they become fathers are more likely to follow dissimilar employment pathways after the parenthood transition, whether the woman was a professional-managerial worker pre-parenthood or not. On the other hand, couples who both do not work in professional or managerial jobs are more likely to follow more similar employment patterns.

Finally, I find differences among couples based on marital status, race, and fertility pattern. As expected, couples who are married when they have their first child are more likely to organize participation in paid work in less equal ways compared to cohabiting couples. And black couples as well as other parents of color and mixed race couples are overrepresented among the couples who are more similar in the way they participate in the labor market as new parents, while the opposite is true for couples with two white parents.

Taken as a proxy measure of potential labor market experience, men's and women's average age at first birth across dissimilarity groups shows unexpected patterns: There are no significant differences in men's average age at first birth across dissimilarity quartile groups. On the other hand, mothers in the most dissimilar group tend to be slightly older than women in the other groups. This is unexpected, since couples where women have more human capital are expected to follow more similar trajectories (competing Hypothesis 2a). This may be linked to the fertility and partnership patterns: Women with higher educational attainment tend to delay childbearing longer than women with fewer educational credentials. At the same time, these women are also likely to be

partnered with higher earning men, which may enable more specialized division of labor within these couples. Lastly, as expected having additional children within the observation period seems to be linked to more divergent pathways among new parents.

However do these bivariate relationships hold if other characteristics of the couple are controlled for? Next, I present the findings from the multivariate analyses.

Multivariate Analyses

Table 3.3 presents standardized coefficients from Ordinary Least Squares models regressing the dissimilarity measure on the covariates. *Positive coefficients* indicate that the variable in question is linked to *greater dissimilarity* in post-parenthood employment pathways within couples, while negative coefficients imply greater within-couple similarity.

Models 1 controls for basic demographic characteristics. Confirming the findings from the bivariate analysis, legally married status is significantly linked to greater dissimilarity within couples, and black couples (as well as other same race or biracial couples) are significantly more similar in their post-parenthood employment pathways compared to white couples. This is likely linked to more general differences in labor market participation, including black women's higher employment participation rates, and black men's lower average hours.³⁰ Parents' age at first birth is not significantly related to dissimilarity within couples. In line with prior research, I find that having additional children during the preschool years of the oldest child increases the dissimilarity in parents' employment pathways.

³⁰ Figure A1 in the appendix illustrates these racial differences in new parents' employment patterns: In same-race couples, black mothers are more likely to work regular full-time hours (yellow segments), compared to white women, who are more likely to drop out of paid work for a while or work part-time hours (purple and green segments). In turn, black fathers are more likely to work regular full-time hours compared to black fathers in same-race couples, as illustrated by the higher proportion of red segments in the plot of the white fathers compared to the black fathers on top.

Models 2 through 3a test the first two sets of contrasting hypotheses, examining whether educational and earnings disparities with couples are linked to greater dissimilarity in new parents' employment pathways (Hypotheses 1a and 1b), or rather whether women's higher educational attainment and earnings reduce dissimilarity (Hypothesis 2a and 2b). Model 2 includes covariates capturing couples' relative educational attainment in addition to individual and couple characteristics controlled for in Model 1. Confirming the bivariate findings, only educational advantage of the father is linked to more dissimilar employment pathways, i.e. greater specialization in post-parenthood work patterns, whereas mothers' educational advantage is linked to more similar pathways.

Model 3a tests how pre-parenthood earnings advantage is linked to dissimilarity in couples' employment pathways. Again, male earnings advantage is linked to more specialized post-parenthood pathways, while the coefficient for women's earnings advantage is also positive, but small and not significant. Thus findings from the multivariate model do not provide evidence in support of Hypothesis 1a and 1b, that greater educational and earnings disparities within couples before the birth or adoption of the first child are consistently linked to more dissimilarity in employment patterns afterwards. However, are women's own educational credentials and pre-parenthood earnings related to how couples organize paid work after they become parents?

Models 2 and 3b provide some evidence for the second set of hypotheses: Mothers' college education is linked to more similar couple trajectories, but only in couples where the father does not have higher educational credentials also. Though the coefficient is only marginally significant and loses significance once mothers' labor

market participation and earnings contribution to couples' pre-parenthood income are taken into account. On the other hand, in the context of couples where both have a college degree, mothers' higher educational attainment does not seem to have a significant effect. Thus multivariate findings provide only limited evidence for Hypothesis 2a with the caveat that the couple context mediates the effect of women's educational attainment on couples' post-birth joint employment pathways.

The multivariate findings provide no evidence that women's high earnings (i.e. earnings in the top quartile) are significantly linked to couples' post-birth employment pathways. Yet, I find that the higher the proportion of women's earnings of the couples' total income from labor prior to the transition to parenthood, the lower the dissimilarity in new parents' employment participation patterns.

Including women's and men's earnings, rather than the proportion of women's earnings (models not shown) leads to the same substantive conclusion: Higher women's earnings decrease couple dissimilarity (though the coefficient is not significant), while men's higher earnings is related to more dissimilarity in post-birth/adoption trajectories, net of demographic characteristics and educational attainment.³¹ Taken together, the findings suggest that the absolute amount of women's pre-parenthood earnings does not significantly impact new parents' joint employment pathways. However, Model 3a provides clear evidence that the higher women's share in the couple's pre-parenthood income from labor, the smaller the differences in their post-parenthood employment pathways, all else equal.

³¹ Due to better model fit, I include the proportion of women's earnings rather than women's and men's earnings in the models presented in the chapter.

In summary, these multivariate findings do not provide unequivocal support for the expectations formulated in Hypothesis 1a and 1b that educational or earnings advantage of one parent is linked to more specialization within the couple. While this is true for fathers' advantage, mothers' educational advantage seems to decrease dissimilarity within couples, even though this effect is only marginally significant, which provides some support for the competing Hypothesis 2a. On the other hand, mothers' pre-parenthood earnings advantage is not linked to greater or lower dissimilarity in couples' post-parenthood employment. But women's relative contributions to the couple's total labor income matters, providing support for Hypothesis 2b.

In Model 4 examines how parents' employment participation and work hours are related to their post-parenthood couple-level employment patterns. In line with expectations conveyed in Hypotheses 3a, women's full-time employment attachment prior to birth significantly reduces the dissimilarity in couples' post-parenthood employment trajectories. Women who work at least 35 hours a week at the time of the survey interview preceding the first birth or adoption are more likely to follow similar employment patterns post-birth or adoption as their male partners, net of demographic characteristics, education, income and partners' pre-parenthood employment attachment.

On the other hand, fathers' very long pre-parenthood work hours (50 hours or more per week) has a significantly positive effect on the dissimilarity of parents' joint employment trajectories (all else equal), providing evidence for Hypothesis 3b. The size of the standardized coefficients in Model 4a suggest, that men's long hours pre-birth or adoption are strongly related to more divergent employment pathways. On the other

hand, mothers' full-time employment, and higher contribution to couples' earnings is strongly linked to more equal employment patterns of new parents, net of covariates.

Following Cha (2010), Model 4a examines whether men's long hours increase the dissimilarity in couples' employment pathways more so among professional workers than among non-professional workers. The model includes interactions between couples' professional-managerial occupational status (woman only, man only, both, or neither=reference category) and the indicator capturing men who work 50 hours, or 60 hours or more prior to the transition to fatherhood. While couples where men work in professional-managerial jobs prior to fatherhood seem to follow more dissimilar post-birth/adoption employment patterns, none of the interaction terms are significant. Unlike Cha (2010), I do not find evidence that that men's long hours prior to the transition to parenthood are linked to greater dissimilarity in employment participation among professional couples (Hypothesis 3c).

Discussion and Conclusion

To my best knowledge, this analysis is the first to estimate how similar, or dissimilar new parents' employment trajectories are over a period of several years, and to examine how parents' characteristics are linked to the divergence in post-birth/adoption employment patterns. The analysis focuses on a transition period in the lives of stably partnered, different-sex couples, during which many couples readjust the organization of paid and unpaid work as they deal with new financial and care needs of a growing family. My findings show that partnered new parents in the U.S. organize earning income in a broad range of ways, from couples who both continuously work full-time, for around 40 hours a week, to couples where mothers disengage from paid work entirely or are

marginally employed and fathers spend very long hours in employment. Even with increasing levels of women's educational attainment, and mothers' increasing engagement in paid work, my findings suggest that stably coupled new parents' employment patterns have become somewhat more similar to each other over time, but that parenthood continues to pull many couples towards more unequal engagement in paid work.

While couples' division of paid and unpaid work is often portrayed as driven by couples' economic considerations, my findings show that the pattern is gendered: Male earnings advantage is linked to greater specialization among new parents, all else equal. However, even if the woman earns an income that is in the top quartile of the male earnings distribution and her partner does not (prior to parenthood), those couples do not seem to be equally likely to choose a "specialized" division of labor. While a gender division of labor is often rationalized as "making economic sense," my findings suggest that other decidedly gendered mechanisms contribute to new parents' organization of paid and unpaid work. Candidate mechanisms might include gendered norms about who is "better suited" to take care of infants, cultural norms that continue to emphasize breadwinning as an important element of "good fatherhood," and labor market discrimination encountered by women after they become mothers (Townsend, 2002; Williams, 2000).

Findings also clearly show that mothers' pre-parenthood labor market attachment and contributions to the couple's earnings significantly shape whether partnered new parents engage more equally in the labor market during the preschool years of their first child. By examining couples, I am able to show that net of mothers' characteristics,

including prior labor market engagement, fathers' earnings, as well as the time fathers spend in employment centrally shape how divergent new mothers' and fathers' employment pathways are. Unsurprisingly, fathers' educational and earnings advantage are linked to a more specialized division of labor of new parents. However, net of earnings, educational attainment, and women's pre-parenthood engagement in paid work, men's very long employment hours increase the likelihood of a more unequal engagement in paid work within couples while the first child is very young.

Couples where both partners work in professional-managerial jobs prior to the first birth or adoption are also more likely to follow more dissimilar post-parenthood employment pathways. Qualitative studies suggest that for women in professional-managerial jobs a combination of factors may "pull" and "push" them to reduce their engagement in employment or to leave employment. For instance, hours and schedules incompatible with caring for young children, together with workplace cultures that assume "ideal workers" unfettered by care responsibilities (Blair-Loy, 2003; Roth, 2006; Williams, 2000). Furthermore, in contrast to many fathers in professional or managerial jobs, mothers are unlikely to have partners who do most of the unpaid work in the home, heightening the risk of work-family conflict for women in these jobs (Roth, 2006).

I argue that in order to understand mothers' engagement in paid work, it is crucial to take the couple-context into account. Blossfeld and Drobnič (2001) note that it is particularly hard to predict highly educated women's employment participation patterns, unless their partners' employment characteristics are taken into account: On the one hand, the opportunity costs for leaving paid work for college educated women is higher compared to women with fewer educational credentials. This should make them more

likely to remain in employment after the transition to parenthood. On the other hand, they are often married to partners who have comparatively high earnings, which may allow some of these women to take employment breaks in connection with motherhood.

Unsurprisingly, my analysis suggests that controlling for women's human capital and prior labor market participation, fathers' educational and earnings advantage are linked to more unequal employment participation patterns within couples. However, net of these and other characteristics, prospective fathers' very long work hours also seem to contribute to post-parenthood specialization of mothers in unpaid work, and fathers in paid work. Different processes may contribute to these findings: Some men may increase their work hours in anticipation of fatherhood, and continue to spend long hours in the workplace while the child is young, either to generate more income (hourly workers) or to advance their careers, perhaps in the hope to increase earnings long-term. In turn, this may create greater work-family conflict contribute to decisions to leave employment among new mothers.

While there have been undeniable changes in fathers' participation in the care of children and mothers' participation in employment, parenthood continues to shape men's and women's labor market participation patterns in profoundly gendered ways. The discontinuity of women's (full-time) employment after they become mothers is strongly related to the earnings penalty they incur for having children (Budig & England, 2001), and explains why married mothers are less likely to remain primary breadwinners within families, even if they out-earn their husbands at some earlier point (Winslow-Bowe, 2006, 2009). This chapter suggests that in different-sex couples, fathers' engagement in paid work centrally shapes the division of labor among new parents. Many new fathers in

the U.S. labor market spend very long hours in the workplace, especially professional-managerial workers. While strengthening work-family policies such as publicly supported childcare that support mothers' employment participation is important, my analysis suggests that stronger working time regulations and higher wages at the bottom of the earnings distribution that would curb the time fathers spend at work may help to decrease gendered labor market inequalities based on parenthood.

CHAPTER 4

FATHERHOOD AND BREADWINNING: RACE AND CLASS DIFFERENCES IN FIRST-TIME FATHERS' LONG-TERM EMPLOYMENT PATTERNS

Compared to previous generations contemporary fathers have increased the time they spend on childcare and many are more actively involved in their children's daily lives. However, children continue to shape fathers' lives in profoundly different ways compared to mothers, particularly in relationship to employment. In contrast to women, men with children are more likely to be full-time employed compared to childless men, and at least some men increase their work hours after becoming fathers (Astone et al., 2010; Eggebeen & Knoester, 2001; Misra et al., 2011; Weinshenker, 2013). Townsend (2002) and others have argued, that despite new cultural ideals of fatherhood, and fathers' changing parenting practices, *stable, full-time employment and the breadwinner role remain salient markers of "good fatherhood"* (Brescoll & Uhlmann, 2005; Coltrane, 1996a, 2006; Day, Lewis, O'Brien, & Lamb, 2005; Gerson, 1993; Lamb, 1997; Townsend, 2002). This is the case even though full-time work no longer guarantees a breadwinner wage for many workers in the United States (Sweet & Meiksins, 2008).

However, the existing literature suggests heterogeneity in the relationship between fatherhood and men's employment participation patterns based on marital and partnership status, co-residence with children, age at first fatherhood, race, and men's educational and occupational attainment (Astone et al., 2010; Cooper, 2000; Glauber, 2008; Lundberg & Rose, 2000; Percheski & Wildeman, 2008; Shows & Gerstel, 2009; Weinshenker, 2013): Some men increase their employment participation and work hours on becoming fathers, some experience no change, then again, for others the transition to fatherhood is linked to decreasing employment participation.

In addition, there is considerable variation in how much time men, including new fathers, spend in paid work: Fathers in professional occupations especially, may spend very long hours in employment (Cooper, 2000; Shows & Gerstel, 2009), while other fathers, particularly those who have fewer educational credentials and marketable skills may have difficulties to find enough paid work to make a living for themselves and their families (Jacobs & Gerson, 2005; Tamis-LeMonda & McFadden, 2010).

This chapter contributes to the literature on fatherhood and employment by focusing on fathers' long-term employment patterns. I follow a sample of black and white first-time fathers from the year before they transition to fatherhood and over the course of the first eight years of their oldest child's life. By doing so, I am able to ask questions about changes in the *intensity of employment* after the transition to fatherhood, and the *stability* of employment. Studies that examine changes in employment and hours linked to the transition to fatherhood are less well able to consider these aspects. For example, the negative effects of fatherhood on employment and hours found for some men (e.g. Astone et al. 2010; Weinshenker 2013) may be indicative of fluctuations in hours and unstable employment attachment, rather than a permanent change. And short-term impacts of fatherhood on men's work hours may not persist, or may unfold over a longer period of time (Percheski & Wildeman, 2008).

In this chapter, I address the following questions: 1) whether there are different, distinct employment pathways among fathers, 2) how frequent these employment pathways are, and 3) whether men's individual and household characteristics are linked to the pathways they follow. In particular, I examine how differences in educational background and potential labor market experience, race, as well as partnership status and

co-residence with children shape these fathers' employment pathways. I argue that disparities in access to stable (well-paying) full-time jobs in the post-industrial era limits access to socially valued and rewarded forms of practicing fatherhood for some men, especially those with fewer educational credentials and skills who have higher risks of being unemployed or underemployed, and earning low wages (Sweet & Meiksins, 2008). For example, public discourses frequently portray low-income (non-residential) fathers as "deadbeat dads" who take little (financial) responsibility for the children they father (Tamis-Lemonda & McFadden, 2010). Conversely, men with more education and marketable skills in professional jobs are often found at the other "pole" of labor market participation, being intensely engaged in employment. Working very long hours may limit their involvement in the day-to-day care of their children (Cooper, 2000; Shows & Gerstel, 2009). Nevertheless, they are unlikely to be sanctioned for their breadwinning-centered fatherhood practices.

Furthermore, black and white fathers with similar skill sets and education encounter different labor market opportunities in a racialized labor market based on racial discrimination and continuing racial disparities in the access to well-paid and stable employment. For example, black men have higher risks of unemployment in the wake of deindustrialization and economic crises, and they continue to be underrepresented in professional and managerial jobs (Stainback & Tomaskovic-Devey, 2013). Additionally, existing research suggest that black fathers are less likely to benefit from fatherhood in the workplace compared to white fathers, in terms of evaluation as workers, as well as earnings (Denny, 2013; Hodges & Budig, 2010). Racial and educational differences are often included as control variables in existing quantitative studies, but are not a central

focus of study (for exception, see Glauber 2008). This analysis contributes to the existing literature in taking an intersectional approach to fatherhood, examining how both individual resources (i.e. human capital) and race shape men's employment trajectories around and after fatherhood.

I start by discussing existing research and theoretical explanations for the relationship between fatherhood, men's employment participation and work hours that underpin the present analysis. While my data does not allow me to observe most of these underlying processes, they provide a theoretical perspective for interpreting the patterns I find in my data.

Theoretical Explanations and Existing Evidence

I begin by reviewing explanations for a positive effect of fatherhood on men's employment participation and work hours, before considering why men's employment patterns may be impervious to a change in parenthood status, or why men's employment attachment may decrease after the transition to fatherhood. An intensification of men's employment participation and increase in work hours after the transition to fatherhood may be explained by at least two types of processes: men's *behavioral changes after the transition to fatherhood* due to increased financial need, shifts in behavior linked to changes in men's identities as new fathers, or *different treatment of fathers by employers*. On the other hand, we may not see any changes in men's post-fatherhood transition employment patterns, because men may have *already increased their labor market behavior before becoming fathers*, or because men who have a higher propensity to be more intensely engaged in the labor market are also more likely to become fathers (*selection processes*). Finally, fatherhood may be associated with decreased engagement

in paid work: Some men may embrace *new ideals of fatherhood* that are centered on care provision rather than breadwinning, and may therefore follow employment patterns more commonly associated with mothers. On the other hand, *limited labor market opportunities* may be linked to less stable employment patterns or lower levels of engagement in paid work. Based on these explanations, I derive a set of hypotheses that guide the analyses.

Intensification of Engagement in Paid work

Men's behavioral changes

The arrival of children arguably increases parents' *financial needs* that have to be accommodated either by the reallocation of household resources or by generating more household income. While the increase in total income is a direct function of the hours worked for workers paid by the hour, salaried workers may also spend more hours at work in an effort to increase their income in the long run. Especially in professional occupations, long hours dedicated to the job continue to signal commitment and reliability (Cooper, 2000; Williams, 2000).

Thus, salaried new fathers may increase their work hours in order to build a basis for future career advancement and pay increases, or some perhaps to avoid family work (Cooper, 2000). Beyond increasing work hours, previously marginally or unemployed men may enter into employment, or seek out employment opportunities with more job stability (Gerson, 1993). Particularly, co-residence with children may impact the salience of breadwinning for fathers: While both resident and many non-resident fathers contribute to the financial maintenance of their children, financial contributions to children who do not live with the father depend on a complex set of circumstances including fathers' employment status and income, formal child support agreements,

parenting role, relationship to the mother, or visitation rights (e.g. Manning, Stewart, and Smock 2003; Sorensen 1997). The pressure to increase efforts in the labor market may therefore be more uneven across non-resident fathers. *Co-resident fatherhood should therefore be more consistently, i.e. more strongly associated with employment patterns that indicate an intensification of employment participation (Hypothesis 1)*. Weinshenker (2013) finds some evidence for an increase in work hours in connection with the transition to co-residential fatherhood, but only among young, unmarried (either cohabiting or single) fathers. Non-resident fathers on the other hand, decreased their employment hours.

Furthermore, there may be differences among fathers, based on relationship status. Becker's (1981) *household economics* approach implies that fathers in coupled households will intensify their efforts in the labor market because a) children increase households' economic needs, while women's incomes decrease as they allocate more time to care work, resulting in greater need for male earnings, and b) because men are able to focus on paid labor if mothers specialize in domestic work and alleviate men of hands-on care responsibilities. From this perspective, which chiefly applies to different-sex couples, small initial differences in women and men's capacities to care for newborn children (such as women's ability to breastfeed), and existing earnings advantages of men, a male breadwinner–female caregiver division of labor will maximize household utility. Household specialization predicts that *partnered men increase their engagement in the labor market in response to fatherhood more than other men (Hypothesis 2)*. However, findings of existing studies examining how relationship status shapes employment patterns of new fathers are not entirely consistent. Among married men,

Lundberg and Rose (2000) find a positive effect of fatherhood on men's paid hours for men whose spouse is not continuously employed after birth. However, more recent studies do not find a significant effect, or find a negative effect of fatherhood on married men's employment participation and work hours (Weinshenker, 2013). Astone et al.'s (2010) analyses suggest that married men may begin to work longer hours upon marriage (preceding fatherhood). This is consistent with Percheski and Wildeman (2008) who find that married men already work longer hours before they become fathers.

Another set of (qualitative) studies suggests that some men experience fatherhood as a *transformative event in their life-course* that prompts adjustments in labor market behavior (Edin, Nelson, & Paranal, 2004; Gerson, 1993; Percheski, 2012). For example, Edin et al. (2004) found that low-income men who became nonresident fathers reported that becoming a parent prompted them to "settle down" and to stop "rippin' and runnin' the streets" (p. 56). Similarly, lower income men in Waller's (2002) study reported that becoming a father encouraged them towards more pro-social behavior.

Gerson (1993), who interviewed 138 men with various class, racial and ethnic backgrounds, argues that men who earlier in life were reluctant to take on the breadwinner role, felt compelled to intensify their focus on paid work and securing a stable job upon entering parenthood. This may be especially salient for men who become fathers at younger ages. Older fathers are more likely to have established themselves in the labor market already at the time of transition to parenthood. Both Astone et al (2010) and Weinshenker (2013) find that especially young men tend to increase their employment participation and work hours upon becoming parents.³² Therefore, I expect

³² Some of these effects also depended on other factors, including marital status and co-residence with children.

that *younger fathers (those transitioning to fatherhood before age 25) are most likely to follow employment pathways that indicate entry into (full-time) or an increase in the time spent in employment upon transitioning to fatherhood (Hypothesis 3).*

While the existing evidence suggest, that some men's employment intentions and aspirations may change in connection with fatherhood, the actual realization of their labor market aspirations, i.e. intentions for adjustments in employment behavior, remains dependent on their labor market opportunities structured by their human capital, and other individual characteristics, but also by the opportunities they are given by employers.

Fatherhood as a signal of positive worker characteristics

In general, fatherhood may be viewed as a proxy for other valued worker characteristics from an employer perspective. Research shows that fathers tend to be perceived as more stable and committed employees, which may increase their chances to get hired or promoted (Correll et al., 2007; Fuegen et al., 2004). If fatherhood signals more reliability, and job commitment to employers, fathers may benefit in terms of getting and retaining a job, as well as promotions on the job. Higher likelihood of promotions into higher level positions, may also lead to increased work hours, as managerial positions often entail longer work hours (Jacobs & Gerson, 2005). However, Hodges and Budig (2010) argue that different "interlocking systems of privilege and disadvantage" linked to "gendered organizational processes" (p. 719) open or limit labor market opportunities for different groups of men.

For example, Percheski and Wildeman (2008) argue that employers may not perceive unmarried fathers or men who do not live with their children in the same

favorable light as married fathers, and that unmarried, non-cohabiting fatherhood may even be perceived as a sign of irresponsibility. If employers treat unpartnered non-resident fathers less favorably compared to married co-resident fathers, *men who neither live with a partner nor their children should be less likely to follow employment pathways that indicate and intensification of engagement in paid work as well as stable employment*, especially compared to partnered, co-resident fathers (*Hypothesis 4*).³³

Furthermore, Glauber (2008) finds that the first transition to fatherhood is associated with an increase in work hours among married white men only. She argues that in a racialized labor market, black men's opportunities for full-time jobs, and longer hours' work may be blocked. Along the same lines, Gerson (1993) notes in her interview study, that men's work-family narratives often included stories of unexpected, more stable, and more hours-intensive job opportunities upon entering fatherhood, notably for white men.

Moreover, Denny (2013) finds that in a laboratory experiment white (and Asian) fathers who are described as more involved with their child are evaluated more positively in terms of job commitment, and are offered higher salaries than less involved and childless men.³⁴ In contrast, higher involvement with children did not confer these privileges on black fathers, and less involved black fathers were even penalized in terms

³³ If non-residential, unmarried fathers are less likely to follow stable employment trajectories and work longer hours employer behavior may be one plausible explanation. Selection processes that channel men with certain characteristics into more intensive engagement in paid work or more stable employment as well as into fatherhood would be another process that may lead to similar patterns.

³⁴ Among unmarried fathers, Lerman and Sorensen (2008) also find that fathers' involvement with children also impacts new fathers' labor market outcomes. Their findings suggest that higher involvement with children (via cohabitation or frequent visitation) is associated with both higher subsequent earnings and higher annual work hours. However, the direction of the relationship between fatherhood and employment may not be unidirectional. In Lerman and Sorensen's analysis higher earnings were also associated with a higher likelihood of moving in with the mother and children, and therefore higher levels of father-child involvement.

of their likelihood of being hired, while Denny finds no such penalty among white men. Given the existing evidence, I expect that *black fathers are less likely to follow employment patterns that involve longer and increasing hours (often found to professional jobs where these men are underrepresented) (Hypothesis 5).*

Explanations for Unchanging Labor Market Patterns After the Transition to Fatherhood

Selection

Cross-sectional studies generally find significant differences in employment hours between co-residential fathers and comparable men who do not live with children in the same household. However, the positive relationship between fatherhood and men's employment may be spurious, and explained by unmeasured characteristics that are related to both, the likelihood of becoming a (co-resident) father (and/or being partnered or married) and higher levels of employment participation. For example, men who are more sociable, have been shown to be more likely to become married and to become (co-resident) fathers (Jokela, Kivimäki, & Elovainio, 2009). If sociability and similar characteristics also predict greater engagement and effort in the labor market, average differences between fathers and childless men in their employment patterns at one point in time may be due to selection processes, i.e. *selection* of men with greater propensity for more intense engagement in the labor market into fatherhood.

Furthermore, men with higher educational attainment (and broader employment opportunities) are also more likely to delay parenthood, allowing them to accrue more labor market experience before they become fathers (Eggebeen, 2002). Moreover, selection processes may lead to differences between non-resident and co-resident fathers, partnered and unpartnered men (Percheski & Wildeman, 2008). For example, men with lower educational attainment (and more limited labor market opportunities) are also less

likely to become co-resident fathers (Eggebeen, 2002). If these selection processes account for some of the differences in intensity of labor market attachment, and employment stability (defined as experiencing periods out of employment), I expect that *men with high educational attainment, and men who delayed fatherhood, will be over-represented among men who follow employment pathways that are stable and unaffected by the transition to fatherhood (Hypothesis 6).*

Increasing engagement in paid work in anticipation of fatherhood

The life-course perspective highlights that individuals are simultaneously engaged in “multiple domains of life” (Elder Jr., Kirkpatrick Johnson, & Crosnoe, 2003:7). Astone et al (2010) argue that men may co-ordinate their lives across these domains, proposing that some men increase the effort they put into the labor market in anticipation of becoming a father, or pursue fatherhood once they feel established in the labor market. However, there is also evidence that some men may *not* include fatherhood among the factors they take into consideration when planning their future employment trajectories.

Among a sample of young middle- and upper-middle class married men Bass (2014) found that parenthood was generally *not* part of men’s “mental work” when considering their employment aspirations. However, some men did take children into consideration when thinking about their future. These men expressed feeling pressure in connection with anticipated fatherhood, including the need for a stable job and sufficient income as a prerequisite of having children. In contrast to women, many of whom downshifted their career goals in anticipation of motherhood, some middle-class men expressed that breadwinning was a salient part of “being a good husband” and possibly a good father (Bass 2014:26).

However, Edin and Kefalas (2005) argue (with regard to low-income mothers), that economic security may be out of reach for many workers with fewer skills and educational credentials, and postponing parenthood until they can secure stable employment and a breadwinner wage may be an unworkable plan. Increasing engagement in paid work in anticipation of fatherhood may therefore be especially prevalent among men with higher educational credentials and potential labor market experience, and thus greater opportunities to realize “pre-fatherhood” employment aspirations. If men anticipate fatherhood by “ramping up” their engagement in employment, or if they become fathers once they feel they achieved some level of security and stability in employment, we would expect to see no change in employment behavior in response to fatherhood. And these *unchanging employment pathways should be more frequent among men with more human capital*, such as men who have a college degree and older men who tend to be more established in the labor market (*Hypothesis 7*).

Decreasing engagement in paid work in response to fatherhood

Coltrane (1996) and others argue that cultural norms around fatherhood are in flux and new ideals of fatherhood are emerging to include more personal care, involvement in the daily lives of children, and a more equitable division of labor within households. Qualitative studies show that some fathers embrace a more care-centered kind of fatherhood, and often actively try to distinguish themselves from their own fathers’ parenting practices (Cooper, 2000; Deutsch, 1999; Goldberg, 2012; Rehel, 2014). While these “new” practices among fathers often do not entail a reduction in the level of engagement in paid work, some do curtail their hours, or disengage from employment entirely, at least for a while (Coltrane, 1996b; Deutsch, 1999; Goldberg, 2012).

While the number of “stay-at-home” fathers who specifically say they stay home to care for children has increased over the past three decades, this remains a fairly small group of fathers. According to Livingston (2014), around 2 million men were stay-at-home fathers in 2012, but only 21 percent of whom said that they chose to stay home to look after children.³⁵ While “new” ideals of fatherhood may compel some men to reduce or disengage from paid employment to care for children, men’s limited labor market opportunities are more often connected to “stay-at-home” fatherhood and reduced employment hours. Livingston (2014) estimates that about 4 out of 5 “stay-at-home” fathers say that they are caring for children at home because they are unable to find work, are ill, have some form of impairment, or are in school or retired.

Similarly, Chesley (2011), who interviewed couples with “reversed” gender divisions of labor, found that limited labor market opportunities (including job loss and job instability) were a frequent factor in men’s decisions to take up a primary caregiver role, while their female partners became primary breadwinners.³⁶ Men who work reduced hours by their own choosing in order to care for children are also very rare. Men’s part-time work is more frequently related to economic disadvantage and considered “involuntary” part-time work. Jacobs and Gerson (2005) have argued that men in non-professional jobs are more likely to say that they cannot find enough work, in contrast to men in professional jobs who more often report to be “overworked.”

Both “new ideals of fatherhood” and economic disadvantage predict that some fathers may work reduced hours or disengage from employment. Existing evidence about

³⁵ The Census Bureau estimates that less than 1 percent of married households with children under 15 had a stay-at-home fathers, while over 20 percent had a stay-at-home mother in 2012 (U.S. Census Bureau, 2013b).

³⁶ Chesley (2011) argues that nevertheless, gender-atypical work-family arrangement in different sex couples due to economic reasons can lead to more gender equitable parenting practices over-time.

the factors that lead fathers to be “stay-at-home dads,” and the nature of part-time work among men suggests that employment patterns that involve reduced hours or periods outside employment are predominantly connected to economic disadvantage. I therefore expect that *men with fewer educational credentials will be more likely to follow employment patterns that include breaks in employment and reduced-hours’ work (Hypothesis 8).*

Data and Method

Data and Sample

I use data from the Panel Study of Income Dynamics (PSID). The PSID started in 1968 with a nationally representative sample of individuals and families who were followed annually until 1997, and biannually thereafter. I select male respondents who were either a member of a family that was part of the sample drawn in 1968, the “immigrant refresher” samples drawn in 1997 and 1999, or were subsequently born or adopted into a sample family. The PSID collects detailed labor market information for respondents designated heads of households (as a rule the male partner in a coupled household), as well as their long-term cohabiting partners or legal spouses.³⁷ The sample is limited to years in which male respondents were “heads of household.”³⁸ In order to examine how the transition to co-residential and non-residential fatherhood may shape

³⁷ I also include the year in which “heads” or “wives” are coded as “first year cohabiters” prior to becoming a “head” or “wife.” Since weekly hours refer to the year prior to the survey year, I have information on average weekly hours in the year prior to the first year a respondent becomes “head” or “wife,” even though detailed labor market information is not collected for first year cohabiters and other household members.

³⁸ Men in different-sex households are assigned to be “heads of household,” save in exceptional cases. Person-years in which men are “heads of household” are also included.

men's employment pathways differently, I only include respondents with detailed information on their birth and adoption histories.³⁹

There are 2340 men who are observed to transition to fatherhood for the first time while they participate in the survey.⁴⁰ Because my research interest lies in examining employment pathways after the transition to fatherhood, I only include men who are observed in the year of birth and for at least three years thereafter.⁴¹ To examine differences by race, I compare black non-Hispanic men to white non-Hispanic men,⁴² and I limit my sample to men aged 18 or older at the time of the first birth. This results in a final sample of 1,877 men. These men were born between 1943 and 1988, and became fathers for the first time between 1968 and 2008.

Construction of Men's Employment Trajectories

To examine men's long-term employment patterns around and after the time of the first transition to fatherhood, I construct employment trajectories for each respondent, starting in the year before the first adoption or birth, and following him over the course of the first ten years of his oldest child's life. For each year, I record the average number of weekly work hours, setting hours to zero if he is not employed. To reconstruct annual data for the years in between the biannual data collection (starting in 1999), I use

³⁹ Detailed birth histories were collected in 1984 and onward. Respondents who dropped out of the survey by 1984 are therefore excluded from my sample. Demographers have voiced concerns over men's underreporting of children. Rendal et al. (1999) find evidence that white, but not black respondents, underreport children in the retrospective fertility histories of the PSID.

⁴⁰ This excludes 34 men with missing birth date information for the first child.

⁴¹ This excludes 352 men (14.8 percent of the sample). While men with fewer educational credentials are not more likely to be among these excluded men relative to men with higher educational attainment, men of color are significantly more likely to be excluded relative to white men ($\chi^2=47.599$, $df=1$, $p<.000$). Nearly 80 percent of the men are observed for the entire 10 year period, the rest is right censored. Group-based trajectory models are able to accommodate trajectories with missing data (completely at random).

⁴² I exclude a small number of respondents who identify as Latino, Asian, Pacific Islander, Hawaiian Native, American Indian, Alaska Native, or some other racial/ethnic identity. The size of these groups among my sample of men is too small to make statistically meaningful comparisons.

information on tenure with the employer, working hours at the start and/or end of a job, as well as information on current employment status.⁴³

Independent Variables

I use four sets of time-invariant variables, measured at the time of the first birth or adoption, to examine the factors that shape the employment trajectories of new fathers. All independent variables are categorical and entered as dummy variables into the models. The modal categories are defined as the reference categories.

I use men's education and age at first birth as a measure of potential work experience to capture men's human capital. Educational attainment is captured by a categorical variable with four categories: College degree or more, some college, high school diploma or GED (=reference category), and less than high school. Following Astone et al. (2010) and Weinshenker (2013), I examine how the timing of fatherhood shapes men's post-birth/adoption employment trajectories. Age at first-time fatherhood serves as a rough proxy for labor market experience: Older first-time fathers had more time to establish themselves in the labor market and acquire job experience compared to younger fathers. I create three dummy variables capturing age at first fatherhood to capture non-linear effects of age at first birth or adoption. I distinguish "young fathers" (aged 18 to 24 at first birth or adoption), "on-time fathers" (aged 25 to 30), and "late fathers" (30 or older, =reference category). I also include a measure for respondents' race distinguishing black, non-Hispanic and white, non-Hispanic men (=reference category).

⁴³ Usual weekly work hours are collected for the past calendar year, while the reference period for employment status is the time of the survey. For respondents who indicate that they were not employed at the time of the survey, I impute work hours with zero. This may lead to an underestimation of work hours in some years for some men. On the other hand, I use usual weekly hours in the main job while the respondent was working in the previous calendar year. This may overestimate engagement in paid work for men who were only employed part year. While I could use annual hours, there is limited data available to reconstruct annual hours for the "off-years."

Finally, I use a categorical variable to capture the household context in which men transition to fatherhood measuring partnership status and residence with children: unpartnered, non-resident and co-resident fathers, and partnered non-resident and co-resident fathers (co-resident partnered fathers = reference category).⁴⁴

Sample Descriptives

Table 4.1 presents weighted descriptive statistics for educational attainment at the time of the first birth or adoption, age, and household composition at age at first transition to fatherhood by fathers' race and in the pooled sample (in the right-most column).⁴⁵ I use chi-square tests to test for group differences. These sample descriptives show white fathers' privileged position at the time of the first birth or adoption compared to black fathers.

White men are significantly overrepresented among individuals with higher educational credential. Moreover, a larger proportion of black men transition to parenthood at an earlier age, compared to white men, which suggests that they may be less likely to have established themselves in the labor market at that point. While both black and white men in this sample are most likely to start being parents as co-resident, partnered fathers, black men are about ten times as likely as white men to be single, non-resident fathers. While the proportion of co-resident fathers may seem high, this variable only captures the household context at the time of the first transition to fatherhood, and

⁴⁴ While the PSID includes information on cohabitation and legally married status, further distinction of partnered men based on marital status yields groups that are too small for statistically meaningful analysis.

⁴⁵ Since the PSID sample consists of two independently drawn samples with different sampling probabilities for sample members, I use individual longitudinal weights to calculate descriptive statistics. However, since I align every respondent at the year of the first transition to parenthood this is problematic. Weights adjust for sampling probability and sample attrition to obtain correct population estimates for given years. I compare weighted and unweighted statistics to ensure that the substantive patterns in the data are the same. To account for the different sampling probabilities, I use the weighted statistics.

does not account for the dynamic nature of household composition that may be captured by a cross-sectional sample that includes fathers at different points over the life-course.

Method and Analytical Strategy

I use Group-Based Trajectory Modeling (B. L. Jones, Nagin, & Roeder, 2001; Nagin, 1999, 2005) to examine whether men follow different employment trajectories around and after they transition to fatherhood for the first time, and what types of employment patterns they follow. Furthermore, these models are suitable to estimate whether and how men's characteristics at the time of their transition to fatherhood shape their employment patterns after the transition.

The method is akin to hierarchical growth-curve models, in that it allows examination of respondent's developmental trajectories over time. Unlike growth curve models, group-based trajectory models do not assume that the distribution of trajectories in the population is continuous. Rather, these models assume that there are groups or clusters of individuals among the observations who, to different degrees, follow distinct trajectories that may take on different shapes. These trajectories, i.e. "longitudinal sequence of measurements on individual i over t periods" (Nagin 2005:24), can be summarized by a set of polynomial functions of time. Unlike in Optimal Matching (sequence analysis), which is another method used to identify groups of individuals following similar trajectories, the types of trajectories are not derived by means of cluster analysis, but are the result of maximum likelihood estimation (Nagin 2005).

For a given number of trajectories chosen by the researcher, the basic model estimates a set of coefficients describing the shape of each trajectory, as well as the proportion of the sample in each trajectory group. Individuals are not assumed to fall neatly into one of these groups, rather the trajectory groups are better understood as a

“statistical approximation to a more complex underlying reality” (Nagin 2005:5), and the estimate group trajectories should be understood as the typical trajectory for the group members. Based on the model coefficients one can calculate the (posterior) probabilities for each individual’s membership in any of the trajectory groups given the individual’s observed measurements at each time point (Nagin 2005). These posterior probabilities are useful to gauge how neatly individuals’ trajectories follow the typical group trajectories and as weights to construct profiles of individual and household characteristics for each group.

Beyond this basic model, group-based trajectory models allow me to test hypotheses about how individual and household characteristics shape men’s likelihood of following particular employment pathways. Conceptually, this model with predictors measured at the beginning of the observation period, is a multinomial logistic model, estimating the change in log odds of being in a given employment trajectory group vs. the reference group, given a one unit change in the independent variable. The coefficients describing the group trajectories and the coefficients of the “predictor” variables are estimated simultaneously. That is, rather than assuming that individuals fall neatly into trajectory groups, the multivariate model takes into account that group membership is probabilistic.⁴⁶

In group-based trajectory modeling, the researcher chooses the number of groups to be estimated as well as the shape of the different trajectories, using the Bayesian Information Criterion (BIC), a measure of model fit, as a guide. However, Nagin (2005)

⁴⁶ I use the user-written Stata package “traj” to estimate these models (B. L. Jones & Nagin, 2013). This package allows to model binary, count, and continuous data. To estimate my models, I assume a censored normal distribution of my data, with working hours that are roughly normally distributed, with some “censored cases” of men who are not employed.

notes, that model selection also requires substantive knowledge about the phenomenon under study, especially with regard defining the shape of the trajectories.⁴⁷ Theoretically, researchers would choose the model with the largest BIC among a set of models. However, Nagin (2005) notes that in some applications, as in the present analysis, the BIC steadily rises with the addition of more trajectory groups. For such as case Nagin (2005) suggests that the model selection process should consider model parsimony and using existing knowledge about the phenomenon under study to construct a model that captures the “distinctive features of the data” (p. 75).

I use these guidelines to specify a model with eight group trajectories. Models with fewer groups did not capture some of the trajectories suggested by the existing literature, and models with more groups showed employment trajectories that were very rare, and similar to other trajectories. To specify the shape of the trajectories, I draw on existing studies about the relationship between fatherhood and men’s employment patterns. For example, previous research shows that some men do not adjust their employment participation in response to fatherhood (Lundberg and Rose 2000). These trajectories are accommodated by zero order, i.e. flat trajectories in my model. I also conducted robustness analyses using observation windows of different lengths and slightly different sample specifications. The patterns of trajectories in the final model were those found under other specifications as well, which increases my confidence in the substantive findings.⁴⁸

⁴⁷ It is virtually impossible to run models for every possible combination of different numbers of groups, and different definitions of trajectories (trajectories can be modelled using zero-order, linear, quadratic, and cubic terms using “traj” in Stata).

⁴⁸ Furthermore, I use individuals’ predicted probabilities of membership in each trajectory group (posterior probabilities) to gauge how well men’s individual trajectories fit the trajectory groups they were assigned to. Individuals are assigned to a group based in their (highest) predicted probability of membership in any of the groups. In Table A4.1 in the appendix, I tabulate average predicted probabilities in each trajectory

My group-based trajectory analysis proceeds in three steps: First, I fit the basic model estimating the group trajectories, the posterior probabilities, and the sizes of each group. Then I estimate a model with time-invariant predictor variables that are measured at the time of the transition to fatherhood to examine the association of men's human capital, demographic, and household characteristics with different employment trajectories after birth or adoption. The output of this model is essentially a multinomial model that estimates the change in log-odds of membership in a given group versus the reference group, given a one unit change in the independent variable. Third, I estimate predicted probabilities for different individual men's profiles to illustrate how different personal resources (education, potential labor market experience), and the household composition at the time of birth or adoption shapes the probability of membership in the different trajectory groups for both men of color and white men. Additionally, I use sequence analysis tools implemented in the TraMineR package for R to visualize fathers' employment trajectories (Gabadinho et al., 2009).

Findings

Employment Participation, Work Hours, and Employment Stability

I start by comparing the broad differences in black and white father's employment patterns starting one year before the transition to parenthood and over the course of the following 9 years. In Figure 4.1 each year of the observation window is represented by a

group by the group assigned to each individual based on the highest predicted probability of group membership. If each individual would follow the predicted trajectory of a given group perfectly, the individual's probability of group membership would be 1. For individuals who are not assigned to a given group based on their predicted probabilities, the probability of group membership should be low. Therefore, high average posterior probabilities for the assigned groups would ideally approach 1, and 0 for the other groups. Table A4.1 shows very high average posterior probabilities for groups 1 to 5, and somewhat lower, but still high averages over .79 for the rest. According to Nagin's (2005) rule of thumb, average predicted probabilities should be at least .70 to conclude that the data fits the model adequately. The slightly lower average posterior probabilities for clusters 6 through 8 indicate that the group assigned (at least) for some individuals in these clusters is less certain compared to the group assignments in clusters 1 to 5.

stacked bar chart showing the proportion of men who are not employed (in purple), and the proportion employed by different hours ranges (part-time hours in shades of green, and full-time hours in yellow, orange, and red). The significantly larger purple areas in the right hand side bars illustrates that black fathers are between two to three and a half times as likely to be out of employment in each year during the observation window compared to white men. Furthermore, the significantly larger areas of red and orange in the left graph indicates that white fathers are more likely to work very long full-time hours above 50 and 60 hours a week. Black fathers on the other hand are more likely to work standard full-time hours (35 and 42 hours a week) indicated by the length of the yellow segments of the bars. These patterns are consistent with labor market participation differences between black and white men in the general population: Black men are exposed to higher risks of unemployment, and are employed for fewer hours compared to white men (U.S. Bureau of Labor Statistics, 2014).

Variation in First-time Fathers' Long-Term Employment Trajectories

Beyond these broad differences in employment participation, and work hours' patterns between black and white fathers, are there different types of long-term employment trajectories among this sample of fathers? To examine this question, I present the findings from the basic group-based trajectory model. Following Nagin's (2005) guidelines for model selection, I fit a model with eight different trajectories.⁴⁹ Figure 4.2 plots the estimated "ideal typical" trajectories for each group with upper and

⁴⁹ Accommodating two steady trajectories, I define two trajectory equations with zero order terms only, one linear trajectory with a first order term, and the rest as cubic equations of time.

lower bounds of the confidence intervals shown as thin dotted lines.⁵⁰ The legend below lists the estimated group sizes, and the number of each trajectory is shown in parentheses next to the corresponding line in the graph

Only two, relatively rare, trajectories exemplify an intensification of men's employment following fatherhood: Fathers in Group 1 (representing 6.6 percent of the sample), are not employed in the year before the birth or adoption of the first child, but they enter into (standard) full-time employment around the time they become fathers (*"Entry into full-time employment"*). For these men, fatherhood may coincide with the end of education and entry into the labor market, or, as prior studies have found, fatherhood may be a motivator for these men to seek out stable, full-time employment (Gerson, 1993).

On the other hand, men in Group 2, who are a very small minority (3.3 percent), work very long hours even before they become fathers, yet still increase the time they spend on paid work over their first child's preschool and primary school years (*"Extreme and increasing full-time employed"*). The grey dot below the lower bound of the confidence interval of group 2 in the year of birth or adoption indicates the actual average hours calculated from the data, as opposed to the predicted hours marked by the line (B. L. Jones & Nagin, 2013). This may indicate a possible "dip in work hours" around the time of birth, but with increasingly longer hours spent in paid work during early childhood of the first child. Together, these two groups make up only about one tenth of the sample.

⁵⁰ The small grey dots represent the actual average hours for each trajectory group at each time point where individual responses are weighted using the posterior probabilities, while the lines show the estimated trajectories (B. L. Jones & Nagin, 2013).

The predominant employment pathways among this sample of fathers are stable and unchanging labor market participation patterns around the first transition to fatherhood. 19 percent of men average around 51 hours per week (Group 3), and well over half of the sample works a standard 42 hours' work week over the entire observation period (Group 4). For the majority who are stably employed, selection processes or intensification of employment preceding the transition to fatherhood may be plausible explanations for this pattern. Either these men already intensified their engagement in employment prior to the observation window, perhaps in anticipation of fatherhood (or marriage), or become fathers once they feel they have established a secure position in the labor market. Alternatively, these men may have some characteristics that endow them with a higher propensity for more intense labor market engagement and broader labor market opportunities involving stable full-time employment, as well as a higher likelihood of becoming fathers.

The remaining 16.4 percent of the sample represents four trajectory groups characterized by fluctuating employment participation patterns (Groups 5 to 7), and marginal employment (Group 8). Most men in the fluctuating groups start out working in jobs with hours that are full-time or nearly full-time hours, but they experience spells out of employment, or significant reductions in their work hours over the course of the observation window. For each of these three groups, Figure 4.3 displays individual men's employment pathways, using different hours' brackets to show the fluctuation in work hours for individual men over time and the variation in trajectories across fathers within each group. The trajectories are sorted by the hours worked in the year before birth or adoption. The purple segments illustrate that Group 6 (5.6 percent of the sample)

experiences a “*break in employment around infancy*” of the first child, while men in Group 5 (6.6 percent) experience gaps in employment later on, dipping around primary school age of the first child. Group 5 is subsequently called the “*Slow Disengagement*” group for the slowly decreasing slope in intensity of employment over the observation period. Finally, men in Group 7 (3.6 percent of the sample) are steadily employed before becoming fathers and over the course of the first child’s preschool years, but experience a period out of employment towards the end of the observation period (“*Fast Disengagement*”).

Figure 4.3 illustrates that men characterized by “Fast Disengagement” (Group 5) are in relatively stable full-time work prior to the period out of employment at the end of the observation period, while men in Groups 5 and 6 are more likely to experience periods out of employment or part-time employment. Further analyses show that the “Slow Disengagement” (no. 5) and “Break around Infancy” (no. 6) groups experience significantly more transitions in and out of employment compared to the “Fast Disengagement” group (7) or any of the other groups.

I conduct additional analyses (not shown) to examine the nature of these men’s periods out of employment.⁵¹ During non-employed periods, most of these men indicate that they are “looking for work.” These periods of unemployment often coincide with periods of economic recession. This suggests that these less steady employment trajectories are likely connected to limited labor market opportunities, rather than to men’s “deliberate choices” to care for their young child (or children). The fact that very

⁵¹ There are data limitations to a systematic analysis of activity status during periods of non-employment. Due to the biannual data collection starting in 1997, information on men’s activity status is only available every other year (while hours for “off-years” can be reconstructed using start and end dates of jobs). These analyses should therefore be understood as more tentative in nature.

few of these men indicate that they are “keeping house” during these employment breaks seems to support this interpretation. However, as Chesley (2011) found, these men may take-up a more active role in child rearing and housework while not employed.⁵² Nevertheless, they may be reluctant to identify themselves as “keeping house” due to the gendered connotation and the possible stigma associated with being a stay-at-home father (Brescoll & Uhlmann, 2005).

In summary, this initial model shows that most men’s employment engagement seems relatively impervious to the transition to fatherhood, and that nearly three quarters of men (73.7 percent) work steady hours while their first child is young (groups 3 and 4).⁵³ Only 10 percent of the fathers in the sample follow trajectories that suggest an intensification of engagement in paid work after the transition to fatherhood, and a further 14 percent experience fluctuating in their employment participation and work hours.

This finding suggests that the occasional significant effects of the transition to fatherhood on men’s employment participation and work hours found in prior studies may be driven by a relatively small group of men. Furthermore, this analysis sheds light on fathers’ longer-term employment participation patterns, namely aspects of the stability of employment, that remain hidden in studies examining the how men’s employment participation and work hours change at the time they become fathers.

That said this model may not pick up smaller changes in hours that other studies have found in association with the transition to fatherhood, especially if the change is not

⁵² Bianchi et al. (2000) find no significant effect of husbands’ unemployment on his housework hours, while Brines (1994) in an older study finds that unemployed husbands were doing less housework.

⁵³ The narrow confidence intervals around the trajectory lines of these groups indicate that there is comparatively little variation in work hours among the steadily employed men. In contrast, the less stable trajectory groups 2, 4 and 5, as well as the steadily increasing trajectory (group 8) have comparatively wider confidence intervals. This indicates that these group trajectories approximate a more “diverse” set of trajectories, underscoring Nagin’s (2005) cautionary note that trajectories should be interpreted as approximations of a more complex set of underlying patterns that unfold over time.

persistent over time and not similar in timing for a sizeable proportion of men.⁵⁴

Weinshenker (2013) notes that the effect sizes of fatherhood on employment hours are comparatively small, for example relative to the effect size of marriage on work hours. Changes in employment participation and work hours upon marriage cannot be examined in this analysis, since all men are aligned at the time of the first birth.⁵⁵ Nevertheless, the group-based trajectory model shows the variation in men's long-term employment patterns around the transition to fatherhood, and gauges the frequency of these patterns, which other regression-based models estimating the change in hours associated with the birth of children are less well able to explore.

Linking Fathers' Characteristics to Employment Trajectories

While the basic model presented in Figure 4.2 shows the variation in employment trajectories of new fathers, it does not answer the question whether some men are more likely to follow specific employment trajectories than others. To address this question, I estimate a second group-based trajectory model using individual and household

⁵⁴ To examine whether the trajectory groups are driven by the periods of unemployment among men, and to test whether including men with breaks in employment prevents the model from picking up trajectories that show changes in employment hours only, I run an additional model using only men who are employed over the entire observation period (findings presented in Figure 1A in the appendix). This model confirms that steady employment trajectories are the norm, but finds two trajectories with slowly increasing hours, one in the longer full-time hours range, and one in the extreme full-time hours range (similar to the main model presented in the body of the chapter). On the other hand, the additional model shows two interesting trajectories of decreasing hours after transition from fatherhood, from extreme pre-birth/adoption hours to long full-time, and another one from long pre-transition full-time hours to a standard 40-hour week. These two trajectories may represent men who "curb" their hours in connection to fatherhood, perhaps in attempts to take a more active role in child rearing (Cooper, 2000; Gerson, 1993). The even smaller group sizes in this model (compared to the main model presented in the text) limits further analyses of group characteristics.

⁵⁵ Marriage may pre-date the beginning of the observation window, happen around or after the time of birth or adoption. Future research should examine how both the transition to marriage and parenthood shape men's long-term employment trajectories. Panel data of individuals (rather than households) such as the National Longitudinal Study of Youth which offers a broader observation window (since the measurement of labor market data is not restricted to "heads of household") may be more suitable, since the data includes years prior marriage and parenthood. If marriage, and/or parenthood coincides with the establishment of the respondent's own household, the PSID does not include labor market information for years prior to that point in time.

characteristics measured at the time of birth or adoption as predictors to gauge the direction and statistical significance of the relationship between covariates and the likelihood of membership in the different trajectory groups (relative to the modal, most “normative” standard and steady full-time employment pattern of group 4).

While significant relationships do not necessarily indicate causal relationships, these models are informative with regard to characteristics that distinguish the trajectory groups, holding other individual and household constant.⁵⁶ Table 4.2 presents the coefficients for the “multinomial regression part” of this model. Significant coefficients (indicating change in log odds) are marked in bold.⁵⁷ The reference group in this model is steady full-time employment, and therefore each effect should be read as the change in the log-odds of the likelihood of membership in a given group relative to the “Steady Standard Full-time Employment” group (Group 4). The reference groups for each of the categorical variables are the modal groups (shown in italics in parentheses).

Panel A shows the association between the likelihood of membership in the trajectories with increasing employment intensity and the covariates in the model. Contrary to Hypotheses 1 and 4, that co-resident fathers and partnered fathers are more likely to follow employment trajectories with increasing engagement in employment and an increase in work hours over time, none of the variables capturing partnership status and co-residence with children is significantly linked to the likelihood of following trajectory 1, “Entry into Full-time Employment,” or trajectory 2, the “Extreme,

⁵⁶ To interpret these relationships as causal would also be problematic because age at first fatherhood as well as partnered and co-residence with children are not measured at or before the earliest time point of the observation window (year of birth/adoption-1), but in the year of birth or adoption. However, the point of measurement of these “predictor variables” precedes 80 percent of the time points included in the observation window.

⁵⁷ Due to rather small group sizes, especially among black men, I also include marginally significant coefficients, i.e. significant at the .10-level (two-sided test) in the discussion.

Increasing Full-time” (with one exception).⁵⁸ To test whether being partnered and living with the child (modal group, vs. all other types of fathers) is significantly related to these two increasing employment participation patterns, I ran an alternative model. This additional model confirms the results of the main model presented in Table 4.2. Thus, my findings do not lend support for the proposition that co-residential (partnered) fathers may increase their engagement in employment more so than other fathers, because of the salience of the increased financial needs of the family or because becoming a “normative,” i.e. partnered, and co-resident father may be positively valued in the workplace.

As expected (Hypothesis 3), men who become parents before they turn 25, who are less likely to have established themselves in the labor market are more likely to enter full-time employment upon fatherhood (group1), or follow the high and increasing hours’ trajectory (Group 2), rather than work full-time already (Group 4). Also in line with Hypothesis 3, becoming a father after age 30 decreases the likelihood that a man enters full-time employment around the time of birth or adoption. Younger men had less of chance to get a foothold in the labor market, and fatherhood may be a stimulus, or motivator for these men to increase their engagement in paid work. Alternatively, fatherhood may also coincide with finishing education, and entry into the labor market.⁵⁹

Furthermore, having no high school degree at the time of fatherhood also increases the likelihood of that a men enters into full-time employment on becoming a

⁵⁸ Being partnered, but not living with the first child at the time of birth or adoption, increases the likelihood of working extreme, and increasing full-time hours, relative to following the steady standard work hours trajectory (reference group=group 4). However, this finding cannot be interpreted in a meaningful way, since there is one father in group2 who is partnered at the time of birth or adoption, but does not live with the child.

⁵⁹ The PSID does not provide consistent information on full-time enrollment in education. While graduation dates and dates of last attendance are available for some respondents, there is a lot of missing information, especially older men.

father (relative to steady full-time employment, group 6). These findings are consistent with Hypothesis 3, that men with more limited human capital at the time of the transition to fatherhood are especially prone to enter full-time employment when they become fathers. For these men with more limited labor market opportunities, fatherhood may be a benefit in the labor market: Employers may perceive them as more committed, and dependable employees once they become fathers (Correll et al., 2007; Denny, 2013). In contrast, the group of men that already works long hours before they become fathers, and then seem to increase their work hours even more post fatherhood transition are more likely to be men who have at least some college education, particularly men who have at least a 4-year college degree.

Panel B shows the relationships between the coefficients and the likelihood (log odds) of membership in the steady, long full-time trajectory (averaging around 52 hours a week) versus the steady standard full-time employment trajectory (averaging 42 hours a week). Again, men with higher educational attainment have a higher likelihood to work longer full-time hours, rather than standard hours. In summary, the findings from the multivariate model shows that men with higher educational attainment are more likely to be found among men that work very long (group 3), and even increasing hours (group 2), which links these trajectories to positions of privilege. In general workers with higher educational credentials are more likely to work in professional and managerial jobs that are connected to long hours' and so-called "overwork" (Cha, 2010; Jacobs & Gerson, 2005), furthermore, white men remain overrepresented among both occupational groups (Stainback & Tomaskovic-Devey, 2013).

The findings in Panel B also lend support for Hypotheses 6 and 7, that men with higher levels of human capital will be more likely to follow employment trajectories unaffected by fatherhood, either due to selection processes or because men with higher educational credentials have broader opportunities to realize aspirations of stable employment prior to becoming a father.

Confirming the racial differences in work hours presented in Figure 4.1, and in line with Hypothesis 5, black fathers are significantly less likely to work longer full-time hours (Group 2), and less likely to follow the extreme, increasing full-time pathway (Group 3). While these findings speak to the broader labor market inequalities between black and white men, this analysis shows, that black fathers' access to jobs with longer hours is more limited compared to white fathers.

Existing research shows that black fathers tend to reap fewer or no benefits based on fatherhood status compared to white men (all else equal) (Denny, 2013). In addition, black men are overrepresented among non-residential fathers, which Denny (2013) finds is not a rewarded status. Compared to white fathers, black fathers may be given fewer opportunities to move into professional-managerial jobs where performance expectations are more likely to include working long hours. Black men are also more likely (more than twice as likely in 2013) to be part-time employed for "economic" reasons compared to white men, i.e. they are more likely to wish to work more hours than their jobs entail (U.S. Bureau of Labor Statistics, 2013).

Finally, Panel C of Table 4.2 presents the results for the fluctuating employment trajectory groups (no. 5, 6, and 7) and the marginal employment group (no. 8). Membership in all of these groups is associated with relative disadvantage. Having less

than a high school degree most strongly increases fathers' likelihood of being permanently out of employment or marginally employed during the entire observation window. Furthermore, having no high school degree also increases the likelihood of following the less stable trajectories 5 and 6, while, high educational attainment significantly decreases the likelihood of following the "Slow Disengagement" trajectory number 5 (relative to stable full-time employment). Connected to economic disadvantage (Eggebeen, 2002), non-residential fatherhood significantly increases the likelihood of following marginal and fluctuating employment trajectories (relative to stable full-time employment), although only single non-resident fathers seem to have a significantly higher risk of following the least stable employment trajectory (Group 5), holding all other variables constant.

While also included in Panel C as a less stable trajectory, the "Fast Disengagement" trajectory (Group 7) warrants separate discussion. As Figure 4.3 illustrates, fathers in this trajectory are predominantly full-time employed, until the end period out of employment at the end of the observation window. They are also less likely to be unemployed prior to becoming fathers compared to the men who follow the more unstable employment pathways of Groups 5 and 6. Educational differences do not seem to significantly shape the likelihood of membership in this trajectory group, and neither does potential labor market experience (or age at first birth).

On the other hand, single, co-residential fathers and partnered non-residential fathers are more likely to follow this trajectory compared to steady full-time employment, for reasons that remain unclear. Further analyses show that as for the other fluctuating employment trajectories (Groups 5 and 6), the periods out of employment at the end of

the observation for men in Group 7 are identified as “unemployment,” and often happen during periods of economic downturn. Other than these commonalities, I cannot discern any other observable factors (e.g. separation or divorce) that may lead to these men sharing this employment pattern. Due to the small size of this group (n=54, 2.88%), I am inclined to attribute the experience of a period out of employment around age 7 or 8 of the first child to chance, rather than some systematic process connected to fatherhood or partnership status.

Furthermore, the multivariate model shows that black fathers are significantly more likely than white fathers to be represented among the less stable employment trajectories (Groups 5, 6, and 7) compared to the steady standard full-time hours (reference group), controlling for human capital measures as well as partnership status and co-residence with children.⁶⁰ However, being a black man most strongly predicts following the marginal employment trajectory, speaking to black men’s overall greater risk of unemployment. The variable capturing respondents’ identification as a black man presumably picks up labor market disadvantage beyond those captured by education and age at first fatherhood, such as racial residential and racial occupational segregation, both of which are linked to reduced labor market outcomes for minority men (Huffman & Cohen, 2004; Stainback & Tomaskovic-Devey, 2013).

To summarize, these findings provide evidence for Hypothesis 8 that fathers with less human capital will be more likely to follow employment patterns that include breaks in employment or reduced hours’ work. In line with previous research (e.g. Chesley

⁶⁰ This is consistent with additional analyses of men’s employment stability by race presented in Table A4.2 in the appendix. The left panel shows the proportion of men who experience no periods outside employment within the observation period, and the right hand panel a measure of employment instability based on the number of transitions in and out of employment. Both panels confirm that black fathers are more likely to follow less stable employment trajectories compared to white fathers.

2011), the additional analyses of men's employment status during employment breaks suggest that fathers' time out of employment is more often linked to limited labor market opportunities, rather than "new fatherhood" ideals.

How does the likelihood of following a given trajectory shift for fathers with different profiles?

To more closely examine, how multiple factors together shape the likelihood of trajectory membership, I use predicted probabilities for men with different sets of characteristics. Table 4.3 shows the predicted probabilities of group membership for men with different profiles. Because the vast majority of fathers works a steady 42 hours a week, the other groups are fairly small which limits the meaningful interpretation of the predicted probabilities for these groups, especially among black men, who are only 25 percent of the sample.⁶¹ I therefore focus on the question which profiles shift the probability of membership away from the modal group (no. 4).

In panel A I examine how different levels of education affect group membership among white men and men of color who are partnered, co-residential fathers, and who transition to fatherhood between the ages of 25 and 30 (the most frequent characteristics). For both black and white fathers, having a 4-year college degree shifts the likelihood of group membership from steady standard full-time employment to working longer hours (Group 3). Still, having a college degree "protects" fathers of color less than white fathers from following employment patterns that do not conform with the "male full-time breadwinner" pattern. And for white college educated fathers, working over 50 hours a week becomes the most likely trajectory group, while for black fathers working 42 hours a week over the entire observation period remains the most likely trajectory. This may

⁶¹ For some profiles, no individuals are observed in the smaller trajectory groups, or only very few.

reflect fewer opportunities of black fathers to move into professional jobs with longer hours.⁶²

Panel B examines how different timing of fatherhood or potential labor market experience shapes the probabilities of membership in the eight trajectory groups. While varying the timing of fatherhood among high school educated, partnered, co-resident fathers does not significantly shift the group membership probability away from following the standard full-time employment trajectory, among both black and white fathers increasing age at first fatherhood decreases the likelihood of entering full-time employment when the first child is born or adopted, confirming the findings presented in Table 4.3.

The final panel contrasts men with the very low and very high levels of human capital: young fathers with less than a high school degree versus older fathers with a 4-year college degree. For both groups, Panel C in Table 4.3 presents probabilities of group membership for men who started fatherhood in different household contexts. The most striking finding is the shifts in the most likely trajectory: For young white fathers without a high school degree, the most likely predicted employment pattern remains steady 42 hours a week employment, while black fathers with these characteristics are most likely to be continuously marginally or not employed, except if they are partnered, co-resident fathers.⁶³ The lower half of Panel C presents the probabilities of group membership by household context for college educated, older fathers. Again, for black fathers, the modal

⁶² On the other hand, these college educated, partnered fathers are also more likely to have (full-time) employed partners compared to white fathers (Thistle, 2006). Having a full-time employed spouse may curb the work hours of some of these black fathers. However, Cha (2010) finds, that women's work hours (specifically very long full-time hours) do not significantly impact the number of hours professional men work.

⁶³ Young black fathers without a high school degree are either partnered with co-resident children or single, non-resident fathers, i.e. one father is a single co-resident dad, and the other cell is empty.

trajectory group remains steady full-time employment, while for white fathers, very long full-time hours become the most prevalent pattern, except if they live apart from their child and are unpartnered. Panel C illustrates that especially among black fathers with low levels of human capital “non-normative” ways of fatherhood, i.e. living apart from children or parenting without a partner, are strongly linked to significant economic disadvantage. But even among the arguably most advantaged fathers, black men, especially those who start parenting in these “non-normative” household contexts are more at risk of experiencing periods out of employment compared to similar white fathers.

Conclusions

I do not find strong evidence for the proposition that (most) men increase the level of engagement in paid work after becoming fathers. In this sample, only a small minority (comprising 9.9 percent) show increasing levels of engagement in employment, with Group 1 entering the labor market, rather than increasing work hours. The central finding of this analysis is that vast majority of fathers follow stable employment trajectories, which are at least in terms of employment participation and work hours seemingly unaffected by parenthood.

This has implications for analyses of gendered labor market inequalities in general, namely research on parenthood and wages inequality between women and men. While many women continue to incur a wage penalty when they become mothers, many men seem to benefit from fatherhood in terms of earnings. My findings suggest that this fatherhood bonus is unlikely driven by men’s “ramping up” their engagement in the labor

market, at least in terms of hours worked.⁶⁴ In contrast, women more frequently “downshift” their engagement in paid work when they become mothers.

Bass (2014) found that the middle-class women who participated in her interview study even anticipated this downshift before they actually have children, while fatherhood was not on men’s minds when they considered their professional futures. In contrast to women, most men seem to be able to consider family, parenthood and employment participation as separate spheres, which contributes to the maintenance of labor market inequalities based on gender and parenthood. Thus, while time use research shows that the average time fathers spend on housework and childcare has increased over time, the time new fathers’ spend on paid work seem to be largely unaffected by these shifts in fathers’ overall time use.

Furthermore, this analysis shows that black fathers are generally more likely to face periods out of employment or marginal labor market attachment that limits their access to stable, full-time employment, and with that to socially valued forms of “good fatherhood.” While college education protects black fathers from employment instability, white fathers’ racially privileged position in the labor market opens opportunities for spending very long hours in paid work. This raises questions for family life, and the gendered division of unpaid work, especially in families with two parents and a white college educated father. The fact that well educated black fathers are underrepresented in long hours’ work certainly reflects their historical underrepresentation in professional-managerial jobs.

⁶⁴ As multivariate analyses using hourly wages or using control variables for labor supply confirm (Glauber, 2008; Hodges & Budig, 2010; Killewald, 2013).

Race and class differences also raise questions for future work: How are changes in in the economy, economic restructuring and the rise of non-standard employment relations, connected to new fathers' employment participation patterns and work hours (Kalleberg, Reskin, & Hudson, 2000; Kalleberg, 2000)? Or how are these long-term trajectories connected to partners' employment patterns, given continuing differences in black and white women's employment participation?

In further research I will consider how changing household composition after the transition to parenthood impacts the employment trajectories of fathers. For example, Glauber's (2008) findings indicate, that the birth of higher order children intensify white men's engagement in paid work even more than the first or second child. But how does divorce and residential separation from children impact men's work hours and employment participation? My data and analytical approach are well suited to examine this question: As a household-based survey, the PSID collects detailed information on birth and marital histories, but also tracks the composition of households over time, so that the residence of biological and adoptive children with mothers and fathers can be reconstructed.

While I have not examined how time-changing variables shape fathers' employment pathways over time in this chapter, group-based trajectory modelling allows the researcher to examine whether changes in covariates that occur after the initial period change the shape of the employment trajectories, or whether they impact the likelihood of following a given trajectory. While existing studies of how parenthood shapes the employment participation and work hours of parents has predominantly focused on the addition of co-residential children to a parent's household, we know much less about how

children (and partners) moving out of a shared household impacts fathers' (and mothers') employment participation patterns.

Furthermore, existing research has focused on the impact of the transition to fatherhood, or the change in work hours or employment participation with the addition of children among different groups of men. This chapter shifts the focus to the variation in men's long-term employment trajectories after the onset of fatherhood, and shows that most men's employment participation patterns seem to remain unchanged by this transition. While highlighting shifts in men's fathering practices and changes in cultural understandings of what "good fatherhood" entails are important, my findings suggest caution in a too optimistic interpretation of changes in men's lives in connection with parenthood.

Many men are more actively involved in the care of young children, and spend more time on other unpaid work within households than their fathers. Nevertheless, men's engagement in paid work remains very much shielded from the impact of care responsibilities. In order to work towards greater gender equality in the division of paid and unpaid work, structural obstacles, such as women's relative lower wages and workplaces structures and cultures unreceptive to active fathers' needs, or even punitive against fathers who attempt to reconcile paid work with active fathering need to be addressed.

CHAPTER 5

MAPPING NEW PARENTS' LONG-TERM EMPLOYMENT PATHWAYS

In the three preceding empirical chapters, I examined whether and how the birth or adoption of the first child shapes new mothers' and fathers' employment patterns during the child's preschool years, and the linkages of employment participation pathways within couples during this period. My analyses focus on a transition period in the life-course during which the time allocated to paid and unpaid work is often reorganized, as new parents deal with new demands on their time as well as additional financial needs. In this chapter, I highlight the central findings, and discuss their broader implications.

The first empirical chapter maps the variation in the organization of paid work among stably partnered, different-sex couples transitioning to parenthood for the first time between 1979 and 2005. Findings show that there is considerable variation in terms of the time new two-parent families spend on paid work: For example, "1950s style" Male-Breadwinner/Female Home-Maker" couples jointly spend around 50 hours a week on paid work on average. This contrasts with couples where both parents work full-time, especially the "High Commitment Couples" with one or both partners working extended full-time hours. These couples jointly average between 74 and 92 hours a week in paid work in the year after the birth, and continue to do so over the course of the first child's preschool years.

The degree of joint employment variation raise questions with regard to joint parental time spent in paid work, how this is linked to the maintenance of class inequalities, and to disparities in working time within couples. For example, the "High Commitment Cross-Over" pattern is almost exclusively found among couples with

college educated women. Mothers in these couples are significantly older compared to first time mothers in the other groups, and thus likely better established in their careers, compared to younger parents. These college-educated dual-earners likely have access to more income, which broadens their options to substitute otherwise unpaid family work, including child care, with services bought in the market, in turn enabling both parents to be employed and spend long hours at work even when their child is young.

At the other end of the joint employment time spectrum are the “1950s Male-Breadwinner” couples, among which non-college educated new parents are significantly overrepresented. Together, they spend only about half as much time in paid work compared to the “High Commitment Cross-Over Couples.” Workers without a college education have more limited opportunities to find well-paying jobs, and one income only may leave these families struggling economically.

While this division of labor may be based on preferences for parental care of small children in the home just as among other parents, it is also likely linked to fewer labor market opportunities of workers with limited human capital, and means to purchase affordable, and quality child-care services enabling dual-earning among other factors. Thus, structural factors, such as the lack of access to work-family policies among lower-skilled workers, likely contribute to the perpetuation of economic inequalities between two-parent families, and within couples.

At the same time, class and gender inequalities “crisscross:” For example, the “extreme male-breadwinner” division of labor, with new fathers intensely engaged in paid work, and mothers disengaging from employment is disproportionately often found among parents with college degrees. While this type of division of labor within couples

seems to be facilitated by economic privilege, divergence in post-parenthood employment participation augments or possibly creates economic disparities within couples. The price for these college educated mothers' disengagement from work while children are young, include foregone earnings and potential future earnings penalties for lost experience. At the same time, fathers in these couples likely continue to solidify and advance their employment trajectories by intensely focusing on paid work. In these couples, economic privilege seems to co-exist with gender disparities in present and potentially future earnings.

Mapping the variation of within couple differences in engagement in paid work over the course of several years contributes to questions researchers have raised about the impact of parenthood on women's and men's incomes. While a number of factors help explain earnings penalties incurred by women when they become mothers, lost experience due to employment breaks and part-time work account for a substantial part of the motherhood earnings penalties (Budig & England, 2001; Glauber, 2007). The visual maps of different types of couple's engagement in paid work can help to further our understanding of which mothers are at increased risk of incurring motherhood penalties, because they spend extended periods out of employment in connection with the birth or adoption of their first child.

I propose that mapping couple-level employment participation patterns over-time can be a useful tool to highlight the variation in engagement in paid work, something that remains relatively muted in analyses focusing on average changes in labor market outcomes connected to parenthood. Nevertheless, these couple types need to be

understood as “ideal types.” Each couple type groups together couples with employment patterns that, to varying degrees, fit these ideal typical patterns.

In other words, there remains considerable variation within groups. The analyses in the second empirical chapter make use of this variation in the measure that captures the dissimilarity in employment patterns within couples, examining whether and how individual and couple characteristics that are linked to greater or lesser dissimilarity in employment pathways within couples. Findings indicate that the ways in which coupled new parents organize engagement in paid work are shaped not merely by economic considerations.

Within-couple discrepancy in earnings potential (e.g. in couples where one partner has a college degree and the other does not) does not necessarily lead to a “specialized” post-parenthood division of labor as predicted by Becker’s (1981) economic theory of families. Rather, findings indicate that gendered processes shape couples’ joint employment pathways: While men’s pre-parenthood earnings and educational advantage within couples is clearly linked to greater disparities in new parent’s employment pathways, within-couple advantage favoring women is not linked to greater dissimilarity.

The ways in which women’s characteristics are linked to post-parenthood pathways seems to be dependent on the couple context. For example, women’s college education increases couples’ post-parenthood similarity in employment participation, but only in couples where she has a college degree and he does not. In couples with two college educated parents, women’s higher educational credentials do not seem to have

this equalizing effect rather these couples follow more divergent post-parenthood employment pathways.

Furthermore, my findings show that men's pre-parenthood employment patterns are equally, if not more important than parents' relative education. In line with prior research, I find that men's pre-parenthood long work hours are linked to greater divergence of mothers' and fathers' employment participation patterns after the first birth or adoption. Prospective fathers' long work hours may be linked to higher earnings that may financially enable new mothers to decrease or disengage from employment, it may signal men's commitment and prioritization of paid work, and not least may push new mothers who are trying to combine paid and unpaid work out of employment (Stone, 2008).

I argue that the relatively limited attention fathers' employment participation patterns received in the work-family literature thus far has rendered men's role in couples' work arrangements, as well as the variation among fathers' engagement in paid work largely invisible. In the third empirical chapter, I broaden the focus beyond stably partnered fathers and examine the variability in new fathers' employment pathways and the characteristics of men that follow different employment trajectories after they become fathers for the first time.

One question is then whether "new," more child care-centered forms of practicing fatherhood, and the persistence of "breadwinning"-oriented forms are reflected in new fathers' long-term employment patterns. Are there different identifiable employment pathways among fathers? And are men's characteristics, such as educational attainment

or labor market experience, linked to different post-birth or adoption employment trajectories?

My findings suggest that fatherhood continues to be centrally connected to breadwinning. Fathers who reduce engagement in paid work seem to do so often in connection with limited labor market opportunities. While evidence from qualitative studies and anecdotal evidence in media reports suggest that there is an increasing number of “new fathers,” who limit their engagement in paid work in favor of greater involvement in the daily lives of their children, this change still seem to happen at the margins. The majority of fathers remain full-time workers, some working very long hours while their children are at preschool age, limiting the time these fathers potentially can spend with their children, their partners, and on sharing in unpaid work in the home.

On average, American workers spend considerably more time at work compared to workers in other industrialized countries (Gornick & Heron, 2006). And my findings show that this is also true for parents who care for very young children, especially for fathers. In contrast to many European countries, working time in the U.S. labor market is only weakly regulated, without statutory rules about normal weekly work hours or vacation time entitlements to workers. Lower standard work weeks can help parents to combine paid and unpaid work, as Fagnani and Letablier (2004) argue based on France’s 35-hours work week norm. 60 percent of French parents evaluated the lowering of the standard work week as positive for their work-family balance. However, their evaluation was mediated by the working conditions they encountered. Gornick and Heron (2006) note that the increase in reduced hours work in Europe has been accompanied by less predictable scheduling and flexibility based on employers’ rather than workers’ needs,

experiences shared especially by lower-skilled workers in the United States (Perry-Jenkins, 2012; Rosenfeld, 2001).

Policies aiming at curbing very long hours may help parents with sufficient income limit the hours they spend at work. However, for parents who struggle to find enough work hours to make a living, an increase in (minimum) wages and protection from flexibilization of hours and schedules solely based on employers' needs seem especially important for lower-income families. Better knowledge of the variation in the ways in which new parents organize engagement in paid work over a longer period of time and the characteristics of the parents who gravitate towards different forms of engagement in paid work, can help us consider how different policy initiatives intended to support mothers and fathers of young children may impact different types of families.

Table 2.1 Sample Statistics (N=2115)

	Mean	Standard deviation
Education		
Both have college degree	.195	.396
She has college degree (he does not)	.104	.305
He has college degree (she does not)	.088	.284
Neither has college degree	.613	.487
Race		
Both parents white	.770	.421
Both parents black	.156	.363
Other racial identifications	.074	.262
Age at first birth or adoption		
Mothers' average age	26.5	5.0
Fathers' average age	28.6	5.6
Number of Additional Children by the Time the First Child Reaches School Age		
No additional children	.244	.430
One more child	.572	.495
Two or more additional children	.183	.387

Table 2.2 Frequencies of Types of Different-Sex Couples' Work Arrangements (N=2115)

	Percent Couples
"Standard Dual-Earner" (both FT)	25.6
"1950s Male-Breadwinner" (man FT/woman NE)	23.5
"Extreme Male-Breadwinner" (man FT++/woman NE)*	17.8
"High Commitment" (man FT++/woman FT)	10.9
"Neo-traditionalists" (man FT+/woman marg. employed)	9.0
"Reduced Dual-Earner" (man FT/woman PT)	8.8
"High Commitment Cross-over" (man FT(+)/woman FT++)	4.4

Table 3.1 Means and Standard Deviations (in parentheses) (N=2115)

	Mean	SD
Marital Status at first birth or adoption		
Married	.916	.278
Cohabiting	.084	.278
Race		
Both parents white	.770	.421
Both parents black	.156	.363
Other same race and interracial couples	.074	.262
Age at first birth or adoption		
Mothers' age	26.5	5.0
Fathers' age	28.6	5.6
Education		
Both parents have college degree	.195	.396
Mother only has college degree	.104	.305
Father only has college degree	.088	.284
Neither parent has college degree	.613	.487
Earnings in Year before 1st Birth or Adoption		
Both have earnings in the top quartile	.035	.185
She has earnings in the top quartile, he does not	.025	.155
He has earnings in the top quartile, she does not	.214	.410
Neither partner has earning in the top quartile	.726	.446
Women's earnings as % of couples' total earnings	.314	.240
Employment Status & Work Hours in Year prior to 1st Birth or Adoption		
Woman not employed	.217	.412
Woman part-time employed	.174	.379
Woman full-time employed	.554	.497
Woman works (50-59 hours)	.043	.203
Woman works (60 or more hours)	.012	.110
Man not employed	.070	.255
Man part-time employed	.057	.231
Man full-time employed	.601	.490
Man works (50-59 hours)	.175	.380
Man works (60 or more hours)	.096	.295

Table 3.2 Means and standard deviations (in parentheses) by quartiles of the dissimilarity measure (N=2115)

	1st Q. (least dissimilar)	2nd Q.	3rd Q.	4th Q. (most dissimilar)
A. Education				
Both parents have college degree	.146 (.353)	.160 (.367)	.187 (.390)	.287 *** (.453)
Mother has college degree, father does not	.132 (.339)	.098 (.298)	.083 (.276)	.103 (.304)
Father has college degree, mother does not	.070 (.255)	.075 (.264)	.092 (.290)	.116 * (.320)
Neither parent has college degree	.652 (.477)	.666 (.472)	.638 (.481)	.494 *** (.500)
B. Income from Labor in Year prior to First Birth or Adoption				
Both have earnings in top quartile	.047 (.212)	.034 (.181)	.034 (.181)	.027 (.161)
Woman only earning in top quartile	.025 (.155)	.021 (.143)	.042 (.200)	.011 *** (.106)
Man only earning in top quartile	.121 (.326)	.119 (.324)	.217 (.413)	.401 *** (.491)
Neither earning in top quartile	.807 (.395)	.826 (.379)	.708 (.455)	.561 *** (.497)
Mothers' earnings as % of couples' total earn.	.392 (.226)	.346 (.253)	.293 (.247)	.226 *** (.200)

Note: Chi-square and ANOVA tests were used to test for significant differences between quartiles: p<.001***, p<.01**, p<.05*

Table 3.2 Means and Standard Deviations (in parentheses) by Quartiles of the Dissimilarity Measure (continued)

	1st Q. (least dissim.)	2nd Q.	3rd Q.	4th Q. (most dissim.)	
C. Employment Status and Work Hours in Year prior to First Birth or Adoption					
Woman not employed	.142 (.349)	.208 (.406)	.264 (.441)	.253 (.435)	***
Woman part-time employed	.112 (.315)	.175 (.381)	.185 (.389)	.224 (.418)	***
Woman full-time employed	.690 (.463)	.543 (.499)	.496 (.500)	.485 (.500)	***
Woman works (50-59 hours)	.047 (.212)	.060 (.238)	.038 (.191)	.027 (.161)	*
Woman works (60 or more hours)	.009 (.097)	.013 (.114)	.017 (.129)	.010 (.097)	
Man not employed	.096 (.295)	.085 (.279)	.062 (.242)	.036 (.187)	**
Man part-time employed	.053 (.224)	.087 (.282)	.068 (.252)	.019 (.137)	***
Man full-time employed	.709 (.455)	.628 (.484)	.591 (.492)	.477 (.500)	***
Man works (50-59 hours)	.108 (.310)	.136 (.343)	.183 (.387)	.276 (.447)	***
Man works (60 or more hours)	.034 (.181)	.064 (.245)	.096 (.295)	.192 (.394)	***
D. Occupational Status in Year Prior to First Birth or Adoption					
Both parents professional-managerial workers	.079 (.271)	.121 (.326)	.113 (.317)	.190 (.393)	***
Mother professional-managerial worker, father is not	.129 (.335)	.096 (.295)	.106 (.308)	.101 (.301)	
Father professional-managerial worker, mother is not	.095 (.293)	.113 (.317)	.147 (.355)	.192 (.394)	***
Neither parent professional-managerial worker	.698 (.460)	.670 (.471)	.634 (.482)	.517 (.500)	***

Note: Chi-square and ANOVA tests were used to test for significant differences between quartiles: $p < .001$ ***, $p < .01$ ** , $p < .05$ *

Table 3.2 Means and Standard Deviations (in parentheses) by Quartiles of the Dissimilarity Measure (continued)

	1st Q. (least dissim.)	2nd Q.	3rd Q.	4th Q. (most dissim.)	
E. Demographic Characteristics					
Married in yr. of birth/adoption	.879 (.326)	.891 (.312)	.932 (.252)	.962 (.191)	***
Cohabiting in yr. of birth/adoption	.121 (.326)	.109 (.312)	.068 (.252)	.038 (.191)	***
Both parents white	.626 (.484)	.753 (.432)	.811 (.392)	.892 (.311)	***
Both parents black	.274 (.446)	.189 (.392)	.117 (.322)	.042 (.200)	***
Other same race couples & interracial couples	.100 (.301)	.058 (.235)	.072 (.258)	.067 (.249)	
Mothers' age at first birth/adoption	26.5 (5.3)	26.2 (5.2)	26.3 (4.9)	27.0 (4.8)	
Father's age at first birth/adoption	28.5 (5.9)	28.4 (5.6)	28.4 (5.7)	28.9 (5.1)	
Total no. of children at age 5 of 1st child	.836 (.713)	.908 (.710)	1.051 (.787)	1.087 (.684)	***

Note: Chi-square and ANOVA tests were used to test for significant differences between quartiles: $p < .001$ ***, $p < .01$ ** , $p < .05$ *

**Table 3.3 Standardized OLS Coefficients and Standard Errors (in Parentheses)
Predicting Couples' Employment Dissimilarity**

	(1)	(2)	(3)	(3a)
Married	.048 *	.043 *	.032	.022
	.043	.044	.043	.042
Both parents black	-.230 ***	-.221 ***	-.207 ***	-.212 ***
	.033	.034	.033	.033
Other same race & biracial couples	-.051 *	-.050 *	-.043 *	-.050 *
	.045	.045	.045	.044
W age at first birth/adoption	.010	-.003	-.005	.047
	.004	.004	.004	.004
M age at first birth/adoption	.004	-.001	-.028	-.018
	.003	.003	.003	.003
Number of additional children	.118 ***	.112 ***	.111 ***	.112 ***
	.016	.017	.016	.016
Both parents have college degree		.055 *	.026	.069 **
		.035	.035	.034
W has coll. degree, M does not		-.038 +	-.040 +	-.006
		.042	.041	.040
M has coll. degree, W does not		.058 **	.037 +	.055 *
		.043	.043	.042
Both have earnings in top quartile			-.032	
			.067	
W earns in top quart. (M does not)			.017	
			.077	
M earns in top quart. (W does not)			.180 ***	
			.031	
Ws earn. as prop. of couple's earn.				-.247 ***
				.049
W not employed				
W full-time employed				
W works 50-59 hours				
W works 60 or more hours				
M not employed				
M full-time employed				
M works 50-59 hours				
M works 60 or more hours				
Intercept	.081 ***	.087 ***	.087 ***	.084 ***
R-squared	.078	.086	.117	.143
BIC	3441	3446	3396	3316
N	2115	2115	2115	2115

Note: p<.000***, p<.01**, p<.05*, p<.10⁺

**Table 3.3 Standardized OLS Coefficients and Standard Errors (in Parentheses)
Predicting Couples' Employment Dissimilarity (Continued)***

	(4)	(4a)
W not employed	-.041	-.038
	.037	.037
W full-time employed	-.166 ***	-.168 ***
	.032	.032
W works 50-59 hours	-.088 ***	-.089 ***
	.061	.061
W works 60 or more hours	-.038 +	-.040 +
	.105	.106
M not employed	-.002	.001
	.063	.063
M full-time employed	.010	.004
	.049	.049
M works 50-59 hours	.159 ***	.161 ***
	.054	.060
M works 60 or more hours	.162 ***	.148 ***
	.059	.068
Both are prof.-managerial workers		.063 *
		.048
W prof.-managerial worker, M is not		.020
		.045
M prof.-managerial worker, W is not		.069 **
		.041
Both PM work. X M works 50-59 hours		-.007
		.096
W PM worker X M works 50-59 hours		-.016
		.084
M PM worker X M works long 50-59 hrs.		-.001
		.084
Both PM work. X M works 60+ hours		.014
		.133
W PM worker X M works 60+ hours		-.008
		.110
M PM worker X M works 60+ hours		.019
		.102
Intercept	.097 ***	.098 ***
R-squared	.196	.201
BIC	3244	3298
N	2115	2115

Note: Models also control for marital status race, age at first birth, additional number of children, and parents' educational attainment
p<.000***, p<.01**, p<.05*, p<.10+

Table 4.1 Means and Standard Deviations (in Parentheses) by Race, weighted¹

	Men of color (N=470)	White men (N=1407)		Total (N=1877)
Education				
Less than high school	.110 (.313)	.067 (.250)	***	.070 (.255)
High school	.471 (.500)	.388 (.487)	***	.395 (.489)
Some college	.219 (.414)	.230 (.421)		.229 (.420)
College degree	.200 (.401)	.316 (.465)	***	.307 (.461)
Age at first transition to fatherhood				
Young father (age 18-24)	.429 (.495)	.312 (.463)	***	.321 (.467)
“On-time” father (age 25-30)	.342 (.475)	.400 (.490)	**	.395 (.489)
Late father (older than age 30)	.229 (.421)	.289 (.453)	**	.284 (.451)
Household composition at the time of birth or adoption				
Single co-resident father	.079 (.269)	.013 (.114)	*	.018 (.134)
Partnered co-resident father	.650 (.478)	.948 (.222)	***	.924 (.264)
Single non-resident father	.240 (.428)	.023 (.149)	***	.040 (.196)
Partnered non-resident father	.032 (.175)	.016 (.126)	**	.017 (.130)

¹ Significant differences based on Chi-square tests marked with asterisks: p<.05*, p<.01**, p<.001***

Table 4.2 Unstandardized Coefficients from Group-based Trajectory Models Estimating Change in Log-odds of Group Membership¹

	B	s.e.	t	p	B	s.e.	t	p
Panel A. Increasing Employment Participation Intensity								
	1 Entry into FT (n=127)				2 Extr. incr. full-time empl. (n=52)			
Intercept	-2.281	.231	-9.858	.000	-3.085	.440	-7.006	.000
Black (<i>White</i>)	.137	.248	.552	.581	-.720	.418	-1.723	.085
Less than high school	.744	.305	2.437	.015	.213	.526	.405	.686
Some College	-.331	.303	-1.095	.274	.737	.341	2.161	.031
College degree (<i>High school degree</i>)	.433	.329	1.318	.188	1.083	.389	2.783	.005
Young father	.397	.240	1.650	.099	.709	.346	2.050	.040
Late father (<i>“On time” father</i>)	-.785	.389	-2.020	.043	.368	.372	.990	.322
Single co-residential father	.620	.830	.746	.456	-.464	2.895	-.160	.873
Single non-residential father	.506	.370	1.367	.172	-.983	1.323	-.743	.458
Partnered non-resid. father (<i>Partnered co-resid. father</i>)	.574	.744	.772	.440	1.374	.695	1.976	.048
Panel B. Steady Employment Trajectories								
	3 Long steady full-time (n=326)				(4 Standard steady full-time, n=1078)			
Intercept	-1.005	.257	-3.909	.000				
Black (<i>White</i>)	-1.312	.343	-3.828	.000				
Less than high school	.043	.399	.108	.914				
Some College	.444	.244	1.815	.070				
College degree (<i>High school degree</i>)	1.358	.246	5.522	.000				
Young father	-.114	.218	-.522	.602				
Late father (<i>“On time” father</i>)	-.124	.239	-.519	.604				
Single co-residential father	.283	.924	.306	.759				
Single non-residential father	-.318	.605	-.525	.600				
Partnered non-resid. father (<i>Partnered co-resid. father</i>)	.470	.824	.570	.569				

¹ Note: Significant coefficients highlighted in bold

Table 4.2 Predicting Group Membership (Continued)¹

	B	s.e.	t	p	B	s.e.	t	p
Panel C. Fluctuating Employment Trajectories and Marginal Employment								
	5 Slow disengagement (n=92)				6 Break around infancy (n=103)			
Intercept	-2.750	.266	-10.346	.000	-2.705	.261	10.351	.000
Black (<i>White</i>)	.776	.272	2.855	.004	.782	.259	3.021	.003
Less than high school	1.103	.340	3.243	.001	.816	.325	2.511	.012
Some College	-.355	.322	-1.103	.270	-.339	.322	-1.050	.294
College degree (<i>High school degree</i>)	-1.032	.537	-1.920	.055	-.541	.469	-1.154	.249
Young father	-.300	.295	-1.017	.309	.277	.274	1.011	.312
Late father (<i>“On time” father</i>)	.528	.327	1.614	.107	.052	.375	.138	.891
Single co-residential father	1.089	.703	1.548	.122	-.076	1.392	-.055	.956
Single non-residential father	1.193	.345	3.464	.001	.968	.340	2.846	.004
Partnered non-resid. father (<i>Partn. co-resid. father</i>)	.601	.837	.718	.473	1.153	.662	1.741	.082
	7 Fast disengagement (n=54)				8 Marginally employed (n=45)			
Intercept	-3.105	.350	-8.872	.000	-4.668	.477	-9.792	.000
Black (<i>White</i>)	.945	.323	2.922	.004	1.825	.424	4.307	.000
Less than high school	.233	.520	.448	.655	1.816	.382	4.753	.000
Some College	-.093	.391	-.238	.812	-.605	.578	-1.046	.295
College degree (<i>High school degree</i>)	-.110	.482	-.228	.820	-1.139	1.068	-1.067	.286
Young father	.168	.359	.467	.641	.203	.402	.505	.613
Late father (<i>“On time” father</i>)	.306	.426	.719	.472	-.532	.687	-.775	.439
Single co-residential father	1.269	.758	1.675	.094	1.832	.882	2.077	.038
Single non-resid. father	.089	.559	.160	.873	1.624	.403	4.025	.000
Partnered non-resid. father (<i>Partn. co-resid. father</i>)	1.227	.738	1.662	.097	1.936	.707	2.738	.006

¹ Note: Significant coefficients highlighted in bold

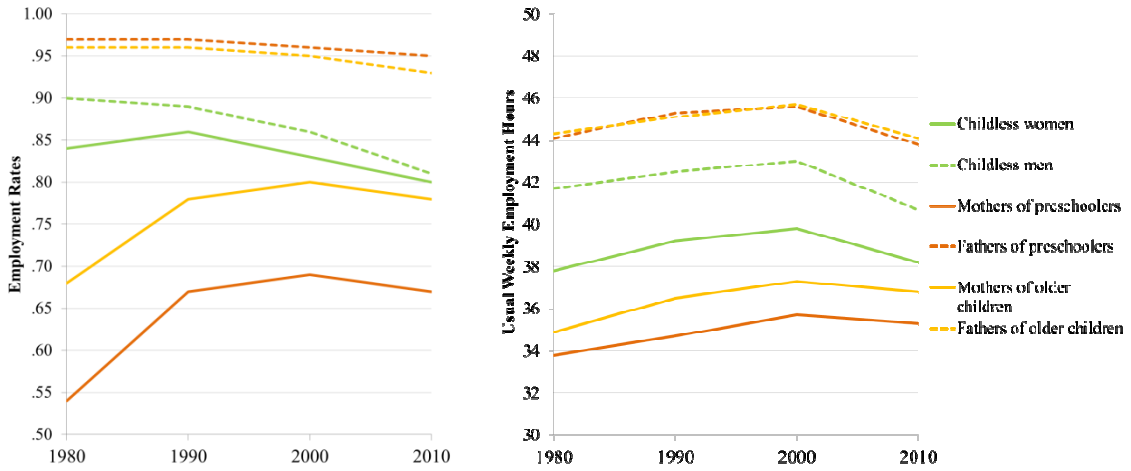
Table 4.3 Predicted Probabilities of Group Membership for Fathers with Different Characteristics

	1	2	3	4	5	6	7	8	
	Entry into FT	Extreme (incr.) FT	Long steady FT	Standard steady FT	Slow disengage- ment	Break around infancy	Fast disengage- ment	Not employed	Most likely group
A. Education									
<i>Partnered, co-resident fathers, aged 25-30 at time of first fatherhood</i>									
<i>Black men</i>									
High school educated	.069	.013	.058	.589	.082	.086	.068	.034	6
College educated	.096	.035	.203	.530	.026	.045	.055	.010	6
<i>White men</i>									
High school educated	.060	.027	.216	.589	.038	.039	.026	.006	6
College educated	.056	.048	.505	.354	.008	.014	.014	.001	7
B. Timing of fatherhood									
<i>High school educated, partnered, co-resident fathers</i>									
<i>Black men</i>									
Young fathers (aged 18-24)	.096	.025	.049	.552	.057	.107	.075	.039	6
“On-time” fathers (aged 25-30)	.069	.013	.058	.589	.082	.086	.068	.034	6
Late fathers (older than 30)	.030	.018	.050	.570	.134	.088	.089	.020	6
<i>White men</i>									
Young fathers (aged 18-24)	.086	.052	.184	.564	.027	.050	.030	.006	6
“On-time” fathers (aged 25-30)	.060	.027	.216	.589	.038	.039	.026	.006	6
Late fathers (older than 30)	.028	.039	.192	.595	.064	.042	.036	.003	6

Table 4.3 Predicted Probabilities of Group Membership for Fathers with Different Characteristics (Continued)

	1	2	3	4	5	6	7	8	
	Entry into FT	Extreme (incr.) FT	Long steady FT	Standard steady FT	Slow disengage- ment	Break around infancy	Fast disengage- ment	Not employed	Most likely group
C. Household composition at transition to fatherhood (comparing men with lowest and highest potential human capital)									
<i>Young fathers (aged 18-24) with less than a high school degree</i>									
<i>Black men</i>									
Single co-resident fathers	.105	.005	.019	.153	.141	.062	.094	.421	1
Partnered co-resident fathers	.128	.019	.032	.348	.108	.152	.060	.153	6
Single non-resident fathers	.097	.003	.011	.159	.163	.183	.030	.354	1
Partnered non-resident fathers	.086	.029	.019	.132	.074	.182	.077	.401	1
<i>White men</i>									
Single co-resident fathers	.174	.021	.133	.293	.124	.054	.070	.130	6
Partnered co-resident fathers	.142	.051	.151	.443	.063	.088	.030	.031	6
Single non-resident fathers	.163	.013	.076	.308	.145	.162	.023	.110	6
Partnered non-resident fathers	.136	.109	.131	.239	.062	.151	.055	.117	6
<i>Late fathers (older than 30) with a 4-year college degree (or higher)</i>									
<i>Black men</i>									
Single co-resident fathers	.060	.023	.176	.390	.097	.032	.195	.027	6
Partnered co-resident fathers	.045	.052	.184	.543	.046	.049	.076	.006	6
Single non-resident fathers	.064	.017	.115	.467	.129	.110	.072	.026	6
Partnered non-resident fathers	.048	.123	.177	.327	.050	.093	.157	.025	6
<i>White men</i>									
Single co-resident fathers	.041	.037	.509	.304	.035	.012	.059	.003	7
Partnered co-resident fathers	.027	.073	.473	.376	.015	.015	.021	.001	7
Single non-resident fathers	.049	.030	.380	.414	.053	.045	.025	.004	6
Partnered non-resident fathers	.030	.179	.467	.232	.016	.030	.043	.003	7

Figure 1.1 Employment Rates and Average Weekly Employment Hours by Parenthood Status and Gender (18 to 49 year olds)



Data: 1980, 1990, 2000 U.S. Census, 2010 American Community Survey (IPUMS) (Ruggles et al., 2010)

Figure 2.1 Examples of Work-Family Pathways

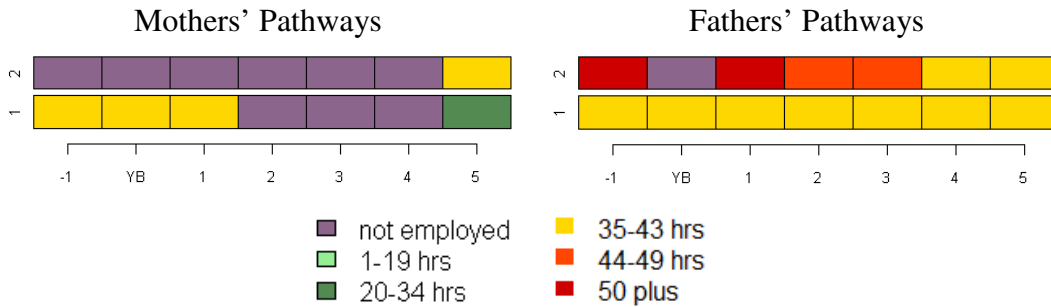


Figure 2.2a Distribution of states in each year of the observation window for mothers and fathers (N=2115)

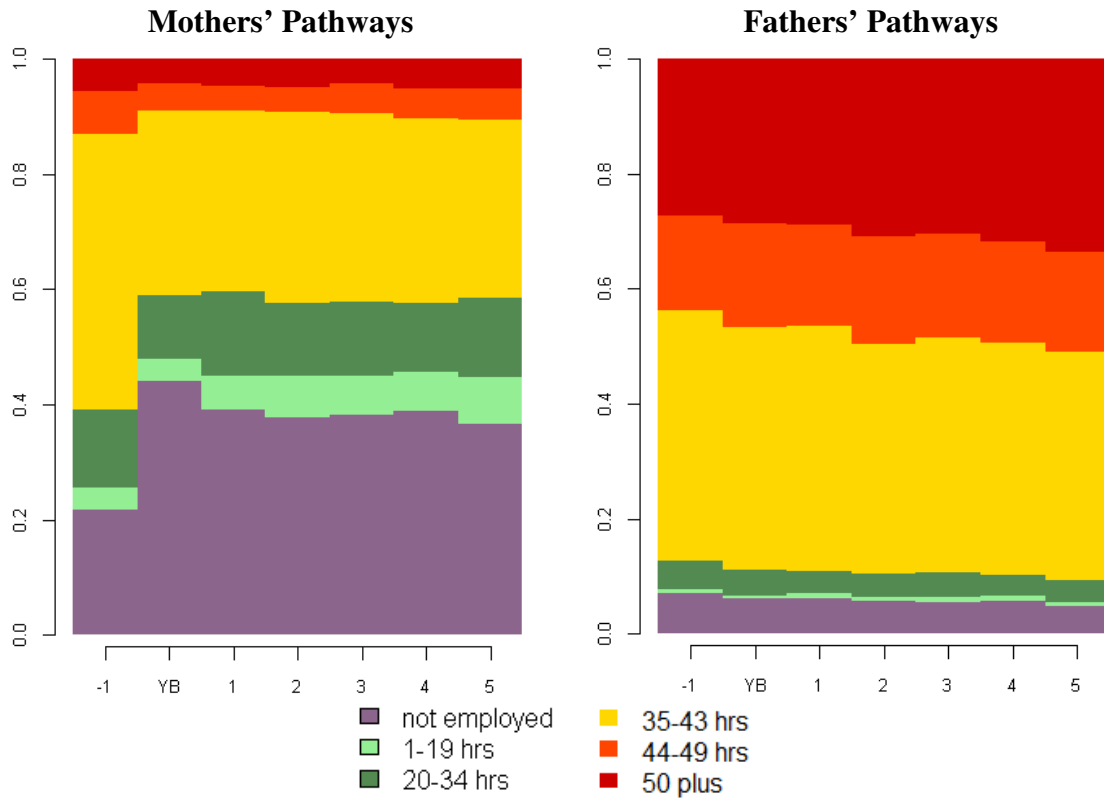


Figure 2.2b Linked Mothers' and Fathers' Work-Family Pathways

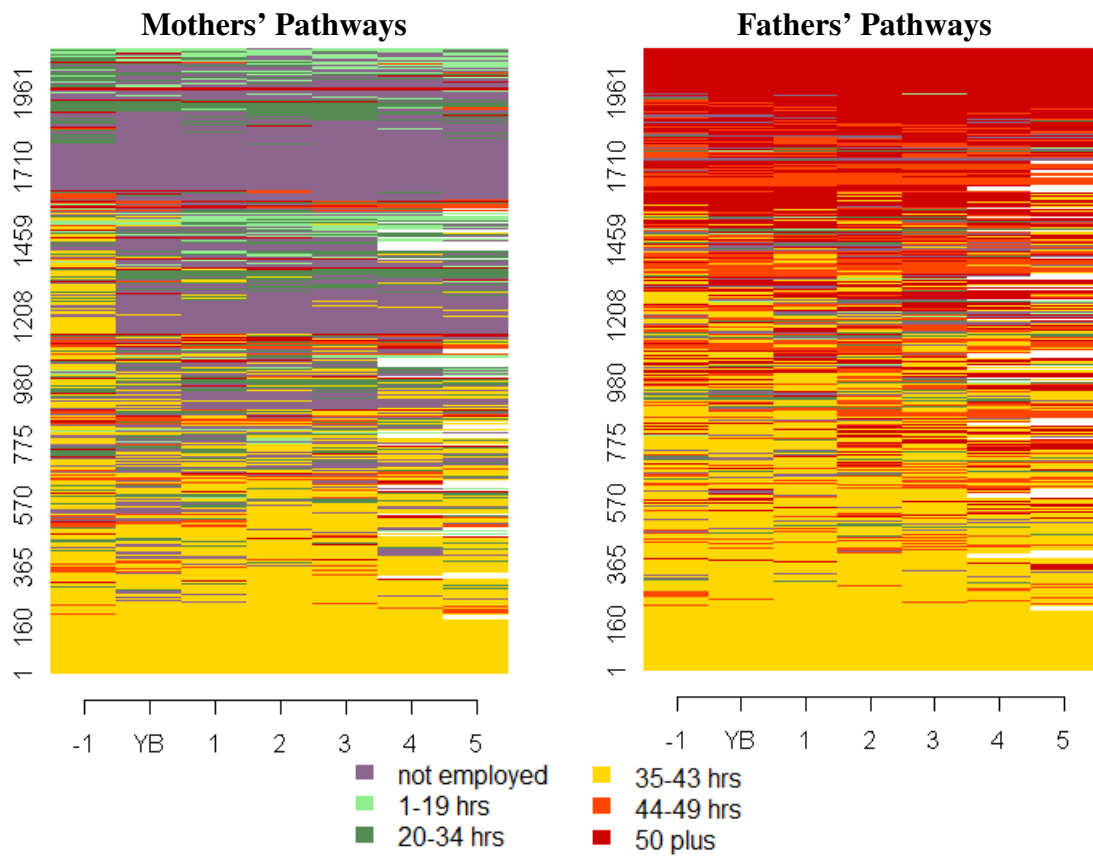


Figure 2.3 Average Time Spent in Each State after Transition to Parenthood by Couple Type

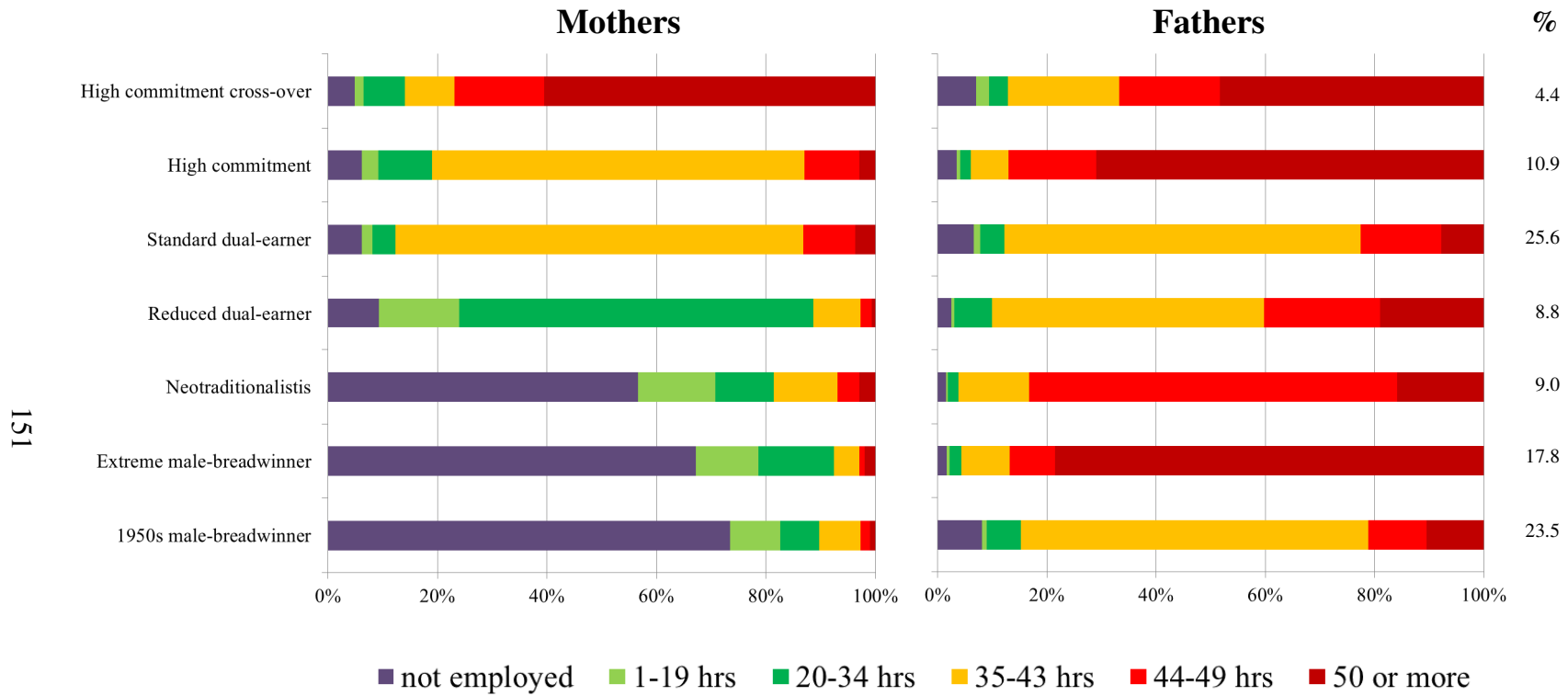


Figure 2.4 Couples' Joint Weekly Hours by First Childs' Age

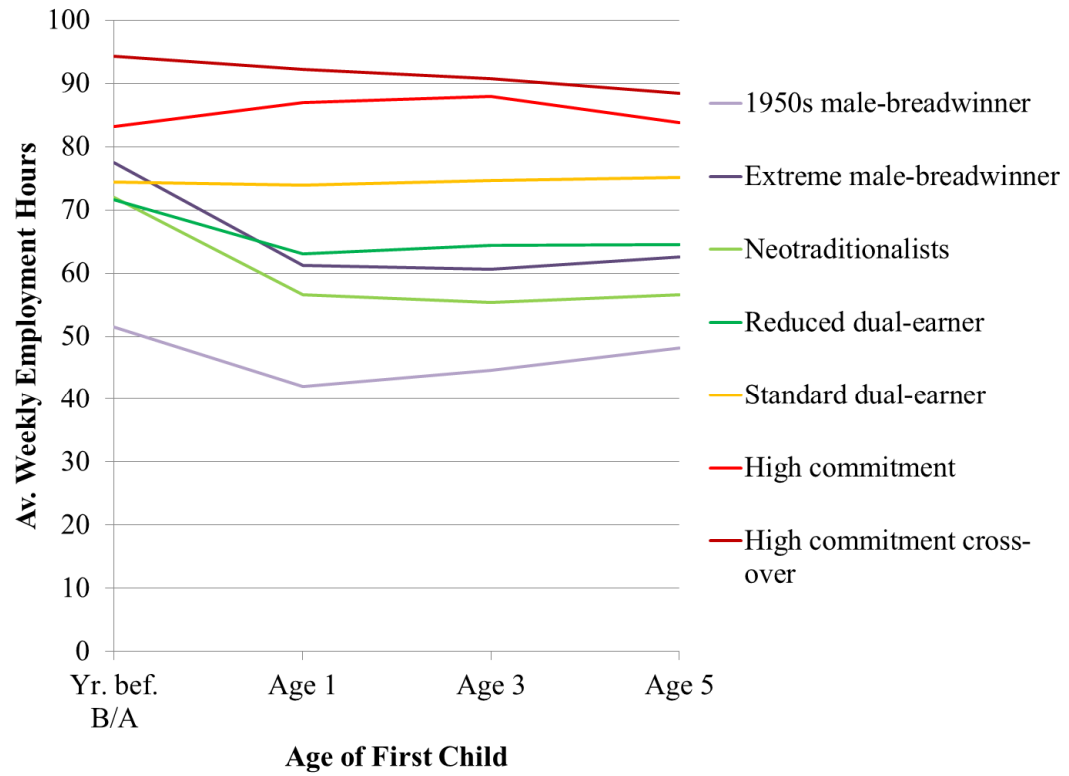
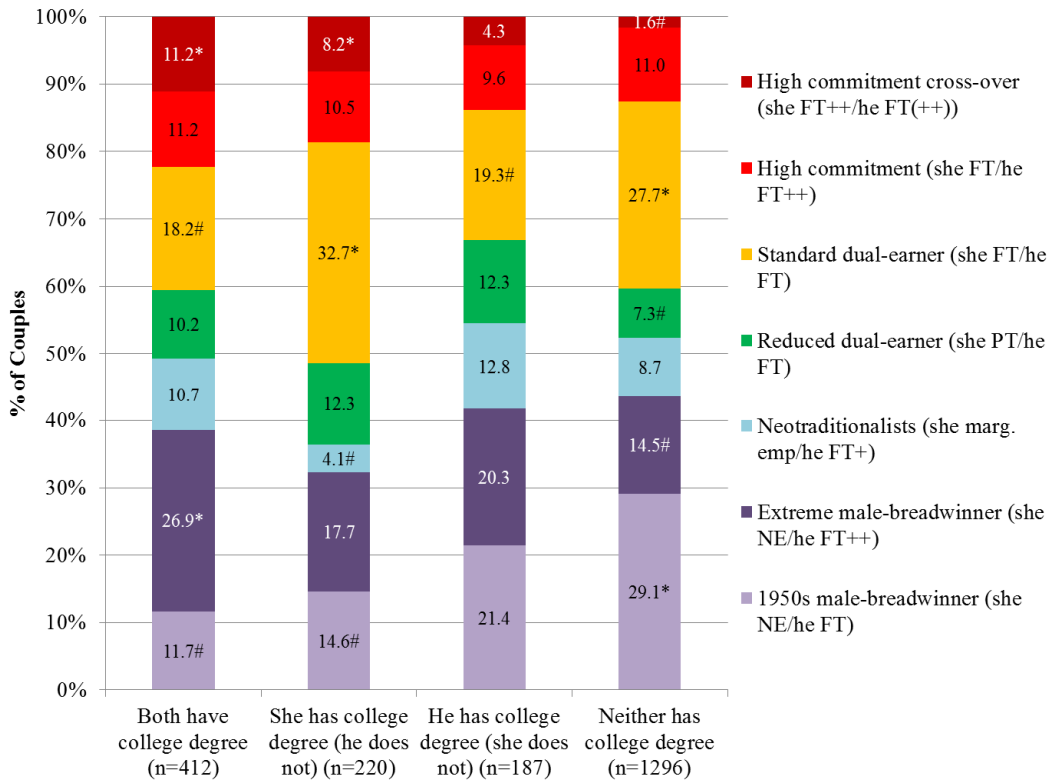


Figure 2.5 Difference in Representation by Couple’s Educational Composition



Note: Percentages flagged with an asterisks indicate that couples are statistically overrepresented in a given employment trajectory group, and percentages flagged with hashtags indicate underrepresentation (using adjusted residuals above 2 or below -2 as a statistical measure of significant over- and underrepresentation).

Figure 2.6 Pre-parenthood Employment Participation and Work Hours

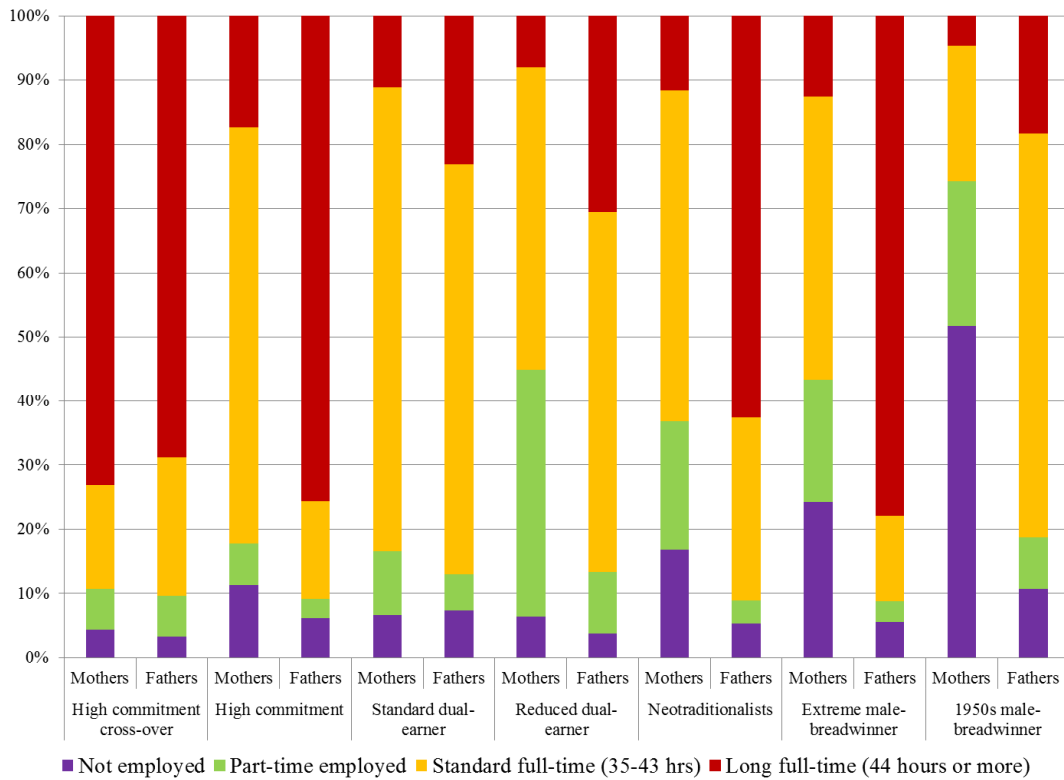


Figure 3.1 Mothers' and Fathers' Pathways in Descending Order of Dissimilarity

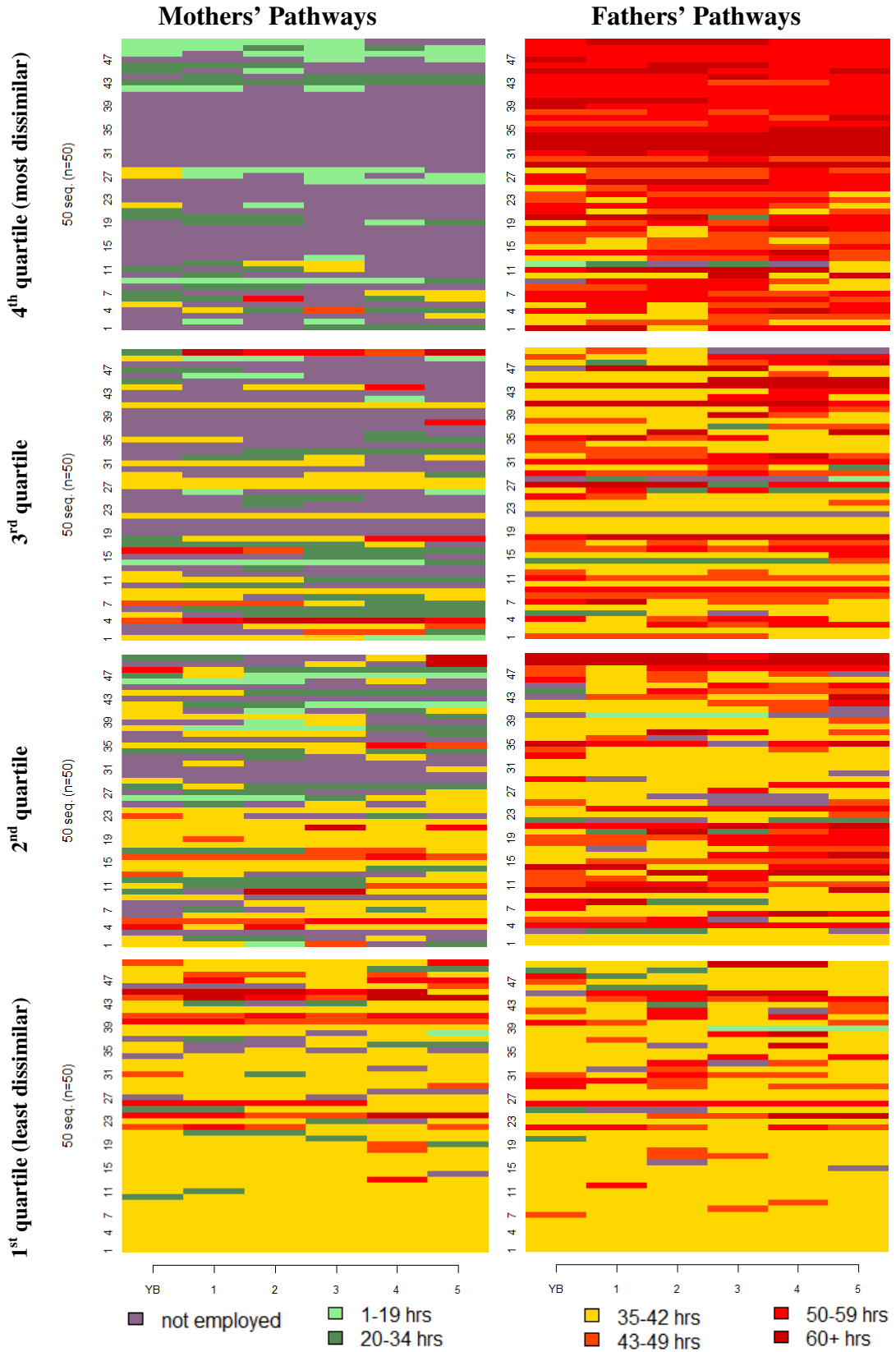


Figure 3.2 Frequency of Couples' Employment Trajectories by Quartiles of the Dissimilarity Measure and Birth Cohort of the Mother

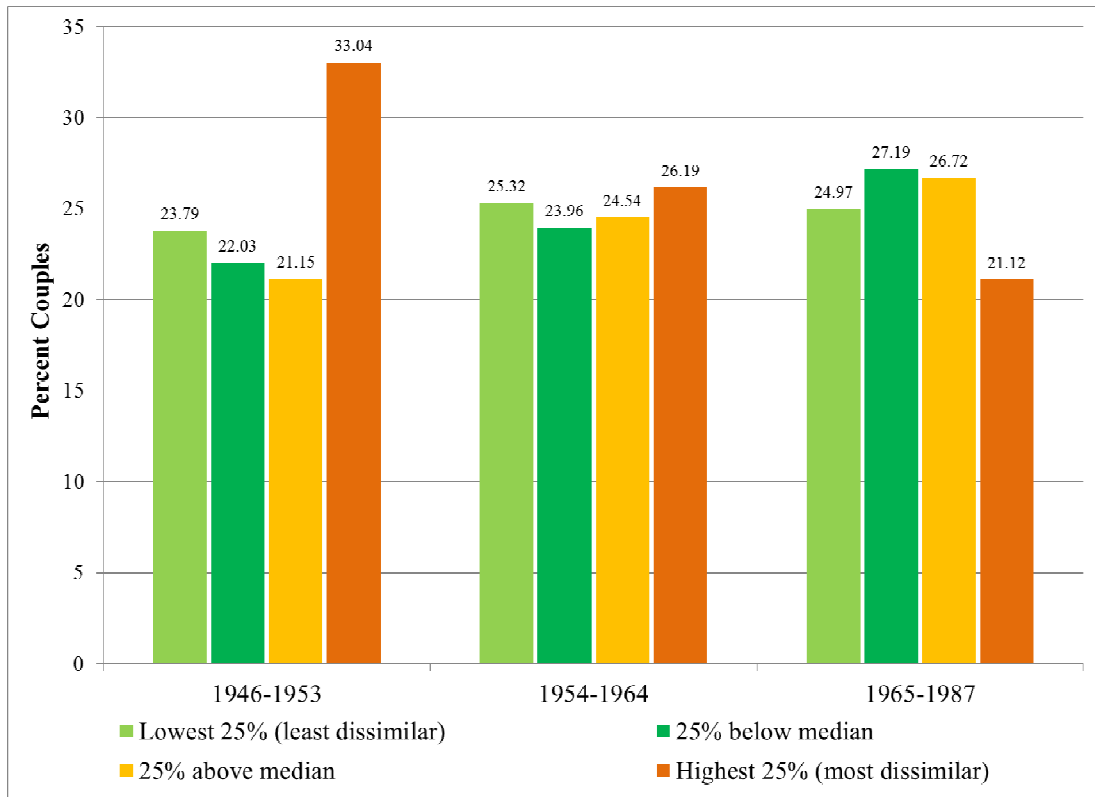


Figure 4.1 Employment and Paid Work Hours by Race

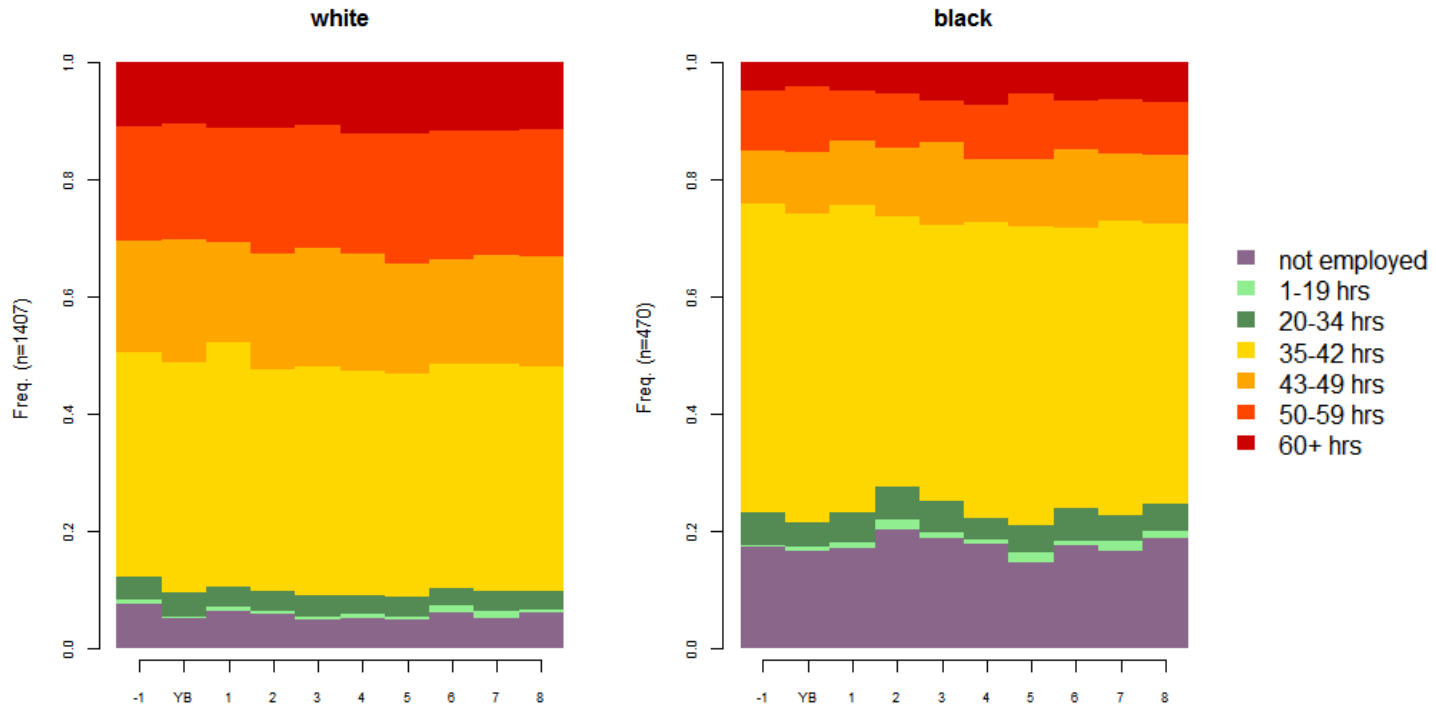
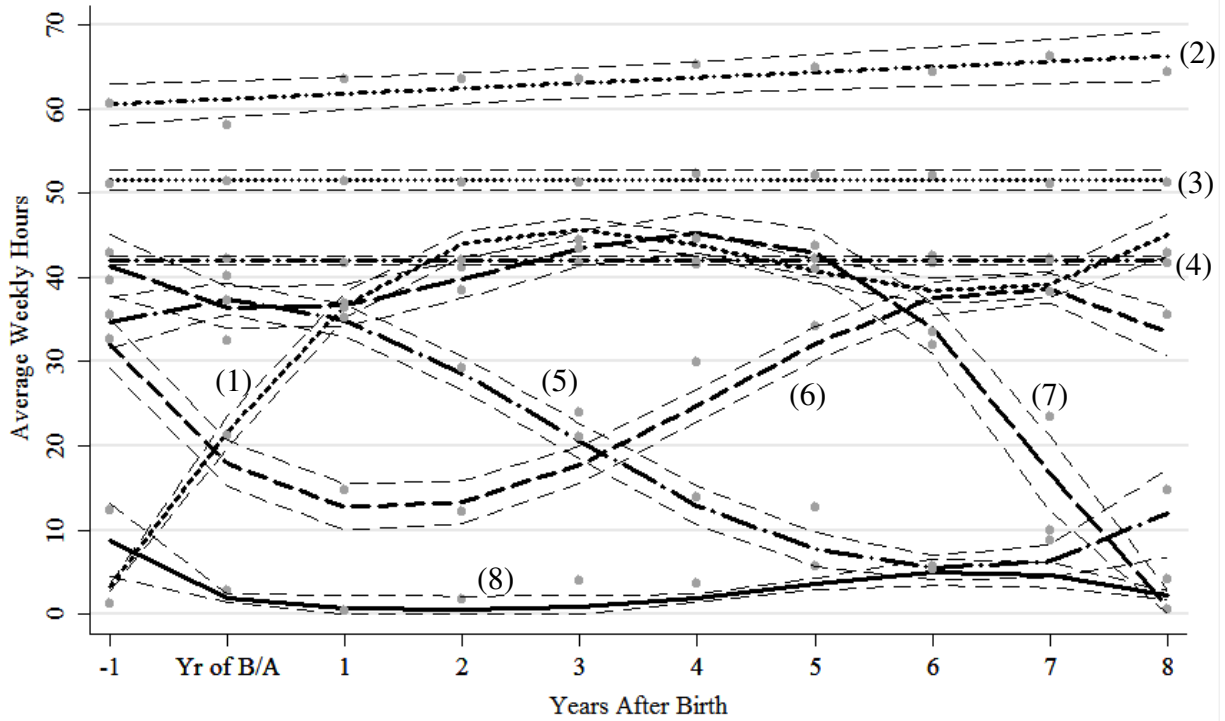


Figure 4.2 Group Trajectories and Estimated Group Sizes



Pathways with Increasing Engagement in Paid Work:

- 1 6.6% Entry into Full-time Employment
- 2 -.-.-.-.- 3.3% Extreme and Increasing Full-time Employment

Steady, Unchanging Employment Pathways:

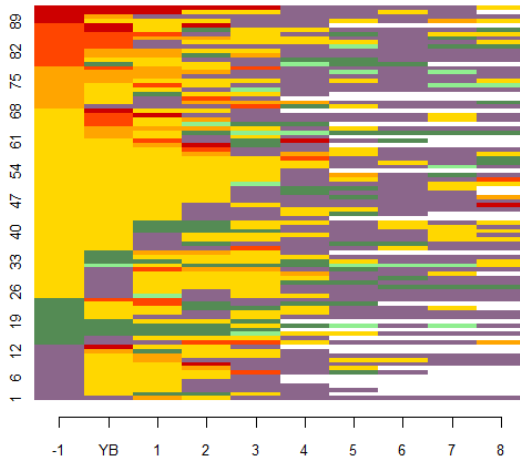
- 3 18.7% Steady Long Full-time Employment
- 4 -.-.-.-.- 55.0% Steady Standard Full-time Employment

Less Stable and Marginal Employment Pathways:

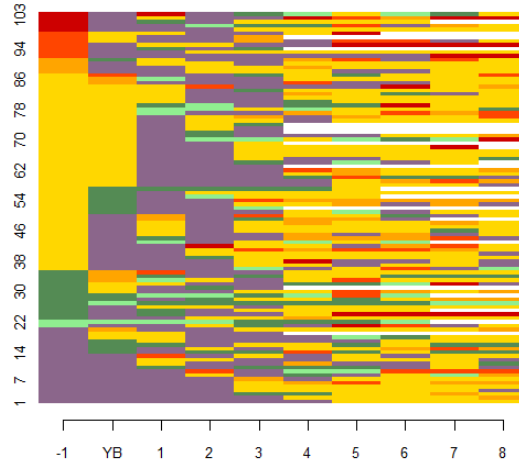
- 5 -.-.-.-.- 4.8% Slow Disengagement
- 6 -.-.-.-.- 5.6% Employment Break Around Infancy
- 7 -.-.-.-.- 3.6% Fast Disengagement
- 8 -.-.-.-.- 2.4% Marginal Employment

Figure 4.3 Individual Employment Trajectories for Men with Fluctuating Patterns by Group (using hours' brackets)

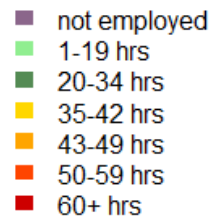
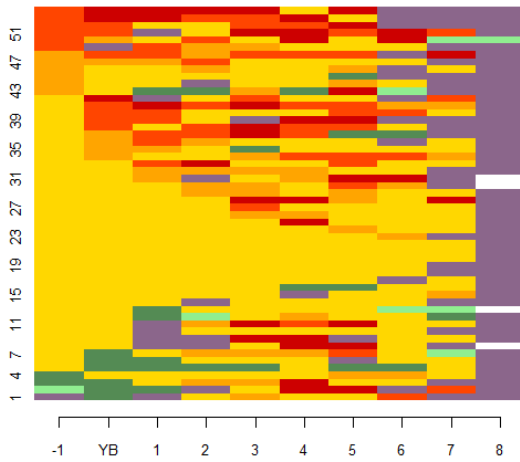
Group 5: Slow Disengagement
(N=92, 4.8%)



Group 6: Break around Infancy
(N=103, 5.6%)



Group 7: Fast Disengagement
(N=54, 3.6%)



APPENDIX A

TABLES

Table A2.1 Measures of Cluster Quality

No. of Clusters	Point Biserial Correlation	Hubert's Gamma	Somers' D	Average Silhouette Width
3	.487	.579	.579	.184
4	.482	.598	.598	.151
5	.513	.664	.664	.165
6	.507	.682	.682	.170
7	.528	.726	.726	.171
8	.529	.738	.738	.165
9	.514	.739	.739	.159

Table A3.1 Robustness Analyses: OLS vs. Tobit regression, Raw vs. Normalized Dependent Variable

	Unstand. OLS coef.	Unstand. Tobit coeff.	Stand. OLS coeff. (raw dissim.)	Stand. OLS coeff. (norm. dissim.)
Married	.068 (.042)	.068 (.046)	.034 (.042)	.033 + (.067)
Both parents black	-.302 *** (.032)	-.313 *** (.036)	-.195 *** (.032)	-.183 *** (.052)
Other same race & biracial cpl	-.108 * (.043)	-.110 * (.048)	-.051 * (.043)	-.043 * (.077)
W age at first birth/adoption	.006 (.004)	.006 (.004)	.052 (.004)	.060 * (.006)
M age at first birth/adoption	-.002 (.003)	-.002 (.003)	-.018 (.003)	-.015 (.005)
Number of additional children	.082 *** (.016)	.085 *** (.016)	.107 *** (.016)	.106 *** (.027)
Both have college degree	.071 * (.033)	.073 * (.034)	.050 * (.033)	.094 *** (.059)
W has coll. degree, M does not	-.011 (.039)	-.011 (.043)	-.006 (.039)	.015 (.072)
M has coll. degree, W does not	.093 * (.041)	.097 * (.040)	.047 * (.041)	.063 ** (.071)
W's inc. as % of couples' inc.	-.412 *** (.055)	-.423 *** (.055)	-.176 *** (.055)	-.194 *** (.092)
W not employed	-.056 (.037)	-.058 + (.033)	-.041 (.037)	-.073 ** (.060)
W full-time employed	-.188 *** (.032)	-.195 *** (.030)	-.166 *** (.032)	-.174 *** (.055)
W works 50-59 hrs.	-.243 *** (.061)	-.243 *** (.059)	-.088 *** (.061)	-.110 *** (.108)
W works 60+ hrs.	-.195 + (.105)	-.195 + (.100)	-.038 + (.105)	-.061 ** (.175)
M not employed	-.005 (.063)	-.010 (.070)	-.002 (.063)	.030 (.109)
M full-time employed	.011 (.049)	.002 (.050)	.010 (.049)	.047 (.077)
M works 50-59 hrs.	.234 *** (.054)	.232 *** (.053)	.159 *** (.054)	.222 *** (.088)
M works 60+ hrs.	.309 *** (.059)	.307 *** (.055)	.162 *** (.059)	.216 *** (.095)
Intercept	1.350 *** (.097)	1.363 *** (.100)		
Sigma Intercept		.521 *** (.009)		
N	2115	2115	2115	2115

Note: p<.001***, p<.01**, p<.05*, p<.10+, two-sided tests

Table A4.1 Average Posterior Probabilities by Assigned Trajectory Group

Assigned Trajectory Group	Not empl.	Break around infancy	Entry into full-time empl.	Slow dis- Engage- ment	Fast dis- engage- ment	Standard steady full- time empl.	Long steady full- time empl.	Extreme (incr.) full- time empl.
Not employed	.987	.002	.000	.011	.000	.000	.000	.000
Break around infancy	.001	.923	.011	.016	.004	.045	.000	.000
Entry into full-time employment	.000	.009	.934	.003	.014	.037	.004	.000
Slow disengagement	.003	.030	.007	.922	.006	.033	.000	.000
Fast disengagement	.000	.003	.000	.006	.937	.052	.002	.000
Standard steady full-time employment	.000	.006	.003	.002	.013	.895	.081	.000
Long steady full-time employment	.000	.000	.001	.000	.002	.159	.789	.048
Extreme (increasing) full-time employment	.000	.000	.000	.000	.000	.000	.098	.901
Estimated group size	.024	.056	.066	.048	.036	.550	.187	.033

Table A4.2 Measures of Employment Stability by Race

		A. All men: <i>Proportion of men with stable employment patterns</i>					B. Men with less stable employment trajectories: <i>No. of transitions in and out of employment¹</i>				
		Less than high school	High school or GED	Some college	4-year college degree	Total	Less than high school	High school or GED	Some college	4-year college degree	Total
Black men	Mean	.328	.447	.544	.814	.485	3.06	2.68	2.60	2.42	2.72
	SD	(.473)	(.498)	(.501)	(.394)	(.500)	(1.51)	(1.32)	(1.36)	(1.87)	(1.38)
	N	67	257	103	43	470	44	142	47	8	241
White men	Mean	.532	.689	.773	.853	.741	2.53	2.49	.227	.200	.237
	SD	(.501)	(.463)	(.420)	(.354)	(.438)	(.121)	(.121)	(.125)	(.114)	(.122)
	N	111	586	321	389	1407	51	182	73	57	363
Total	Mean	.455	.616	.717	.850	.677	.277	.257	.240	.205	.251
	SD	(.499)	(.487)	(.451)	(.358)	(.468)	(.137)	(.126)	(.130)	(.124)	(.130)
	N	178	843	424	432	1877	95	324	120	65	604

¹ Note: To account for unequal length of the observed employment trajectories due to right-censoring, I adjust this measure for the time the individual is observed.

APPENDIX B

FIGURES

Figure A3.1 Couples' Employment Pathways by Race

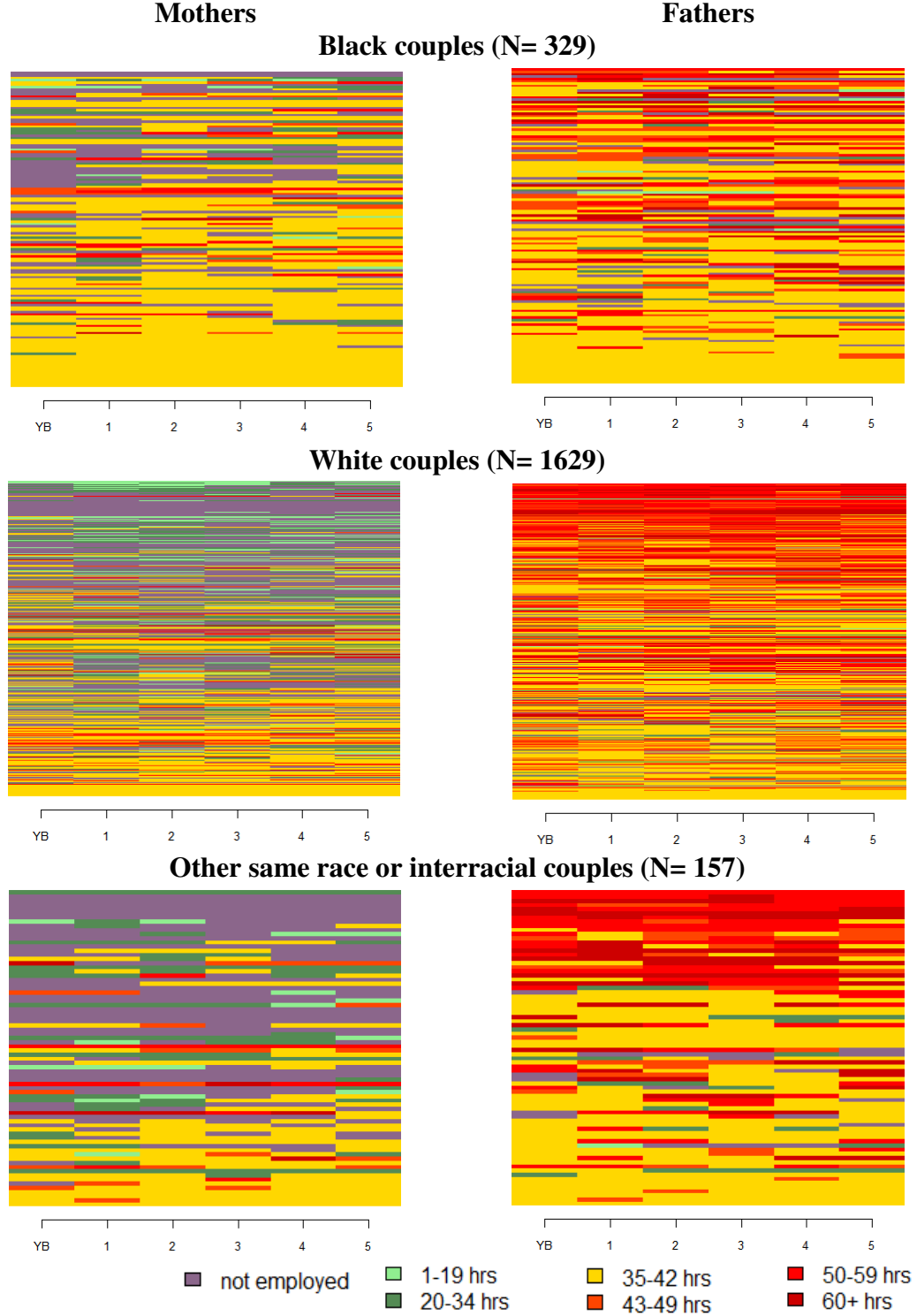
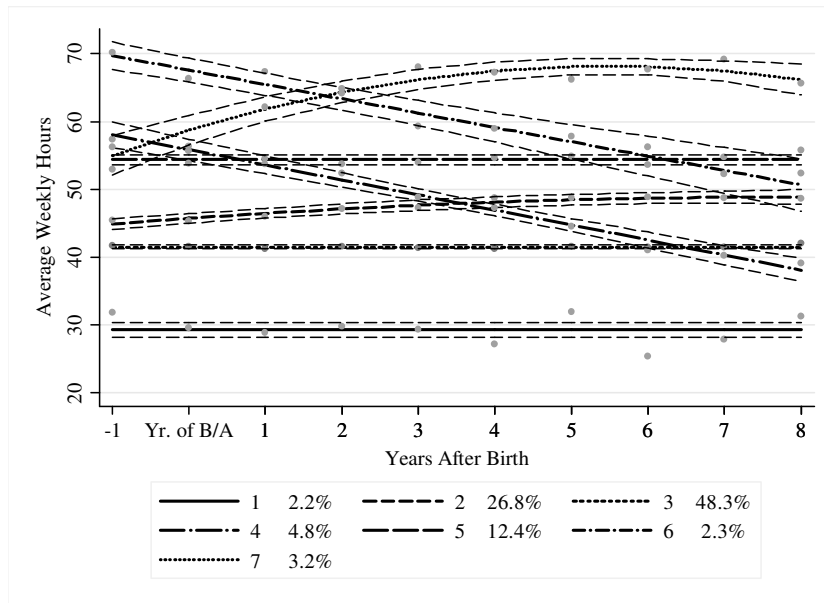


Figure A4.1 Employment Trajectories among Steadily Employed Men¹



¹ Note: Figure is based on sample which excludes never employed men, and men with periods out of employment.

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