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# Culture or Constraints? Parenthood and the Persistence of Inequality

Ishizuka, Patrick Steven

Princeton, NJ : Princeton University

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CULTURE OR CONSTRAINTS?  
PARENTHOOD AND THE PERSISTENCE OF INEQUALITY

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A DISSERTATION  
PRESENTED TO THE FACULTY  
OF PRINCETON UNIVERSITY  
IN CANDIDACY FOR THE DEGREE  
OF DOCTOR OF PHILOSOPHY

RECOMMENDED FOR ACCEPTANCE  
BY THE DEPARTMENT OF  
SOCIOLOGY

Adviser: Sara McLanahan

September 2016

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## **Abstract**

Parenthood plays a critical role in both reproducing socioeconomic inequalities across generations and exacerbating gender inequalities in the family and in the labor market. Three important empirical patterns related to parenthood and inequality motivate this dissertation: (1) differences in the parenting behaviors of more- and less-educated parents, (2) differences in the parenting behaviors of mothers and fathers, (3) differences in the motherhood wage penalty experienced by low- and high-skilled women. While each of these patterns is well documented, understanding how and why they occur has been challenging with existing data. Explanations center on the relative contributions of culture and constraints. This dissertation aims to evaluate these explanations.

The dissertation is divided into three empirical chapters and draws on data from two original, large-scale experiments. In the first chapter, I use data from a vignette survey experiment about parenting attitudes conducted on a nationally representative sample of parents. I ask whether parents differ by education in their views about “good” parenting. Next, using data from the same survey experiment, the second chapter examines how gender shapes evaluations of different parenting behaviors. Finally, the third chapter relies on data from an audit study. I replicate previous research on labor market discrimination by motherhood status by submitting fictitious resumes and cover letters to apply to actual marketing manager job openings, experimentally manipulating the motherhood status of applicants. However, the study extends prior work by examining how motherhood status affects women’s labor market opportunities in different low- and high-skilled occupations.

Evaluating the causal mechanisms hypothesized to underlie these parenthood-related inequalities has potentially important scientific and policy benefits. Billions of dollars are spent

annually on programs that aim to support parental investments in children, and current welfare policy assumes that low-income mothers do not face significant employment barriers. Findings from this dissertation matter not only for improving our understanding of the relative contributions of culture and constraints in generating inequality, but also for informing effective social policy.

## **Acknowledgments**

I am tremendously grateful to so many individuals who have supported, guided, and encouraged me throughout this journey.

To Sara McLanahan, my dissertation chair and mentor: Thank you for teaching me how to think about research, how to ask questions that matter, and how to focus on what is most important. I am so grateful for your kindness, generosity with your time, and always insightful and detailed feedback. You not only reassured me when challenges arose, but you also helped me find a way forward. I cannot imagine my training as a social scientist without your phenomenal mentorship. Thank you for providing a model of exceptional scholarship and mentorship to which to aspire.

To Devah Pager: Thank you for teaching me to take risks and be ambitious in my research. I learned so much from working with you as a research assistant and observing your meticulous thought process. Thank you for serving on my committee from afar, for your critical feedback, and for teaching me, in turn, to develop a critical eye.

To Matt Salganik: Thank you for always pushing me to think in different and original ways about research. You taught me to be creative and to do what makes sense from the perspective of advancing science and our collective understanding rather than simply doing what is standard. Thank you also for providing an inspirational model of excellence in teaching. You showed me that we can take the same relentless approach to teaching as we can with research: always strive to be better.

To Viviana Zelizer: Thank you for your continued support, encouragement, wisdom, and vision. You reminded me to always consider how my work fits into a much larger conversation taking place in the social sciences, and to think about the broader theoretical contributions of

research. Your Gender and Economic Activity course impacted me greatly. The course, together with your expert guidance, exposed me to a whole new and exciting intellectual area and inspired me to dramatically shift the focus of my research.

To Betsy Armstrong: Thank you for making me feel welcome at OPR from the moment I arrived, and for great conversations about ethics in class and around the OPR espresso machine. Thank you for serving as an external reader and for providing what will no doubt be extremely valuable and thoughtful feedback.

To Brandon Stewart: Thank you for the generosity with your time even before you started at Princeton. Your willingness to sit down with me to discuss the design and analysis of my survey experiment was tremendously helpful and kind. Thank you also for serving as an external reader in what has surely been a very busy first year.

Many other faculty members have been instrumental in supporting my growth as a social scientist, but I want to acknowledge Noreen Goldman and Paul DiMaggio in particular. To Noreen: You taught me important principles of good research and provided much-needed perspective that dissertations are hard, but we are all equipped to complete them successfully. To Paul: I am grateful for your kindness, energy, enthusiasm, and insightful feedback. I learned so much from you both.

To my wonderful dissertation support group, Beth Sully and Lauren Gaydosh: Thank you for your amazing encouragement, feedback, and friendship over the years. You provided guidance, wisdom, and support to help me persevere through challenging times. Thank you for epic meals together and animated discussions of things both serious and completely silly.

To many other friends and colleagues in sociology, OPR, JDP, and FWWS, who are too many to name in their entirety: Thank you for inspiring me and providing unwavering support

and kindness, especially to Ed Berchick, Kristin Bietsch, Laura Blue, Dennis Feehan, Sarah James, Zitsi Mirakhur, and Kyla Thomas.

To the administrative, library, computing, research, and statistical support staff at OPR who made my experience at Princeton a wonderful place to learn and grow, I am grateful to Wayne Appleton, Elana Broch, Nancy Cannuli, Mary Lou Delaney, Dawn Koffman, Lynne Johnson, Regina Leidy, Joyce Lopuh, Steven Mars, Tracy Merone, Judie Miller, Robin Pispecky, Diana Sacke, Magaly Sanchez, and Val Smith. Thank you for making OPR such a warm, inviting, and intellectually stimulating place to be. I am also thankful to Amanda Rowe, Donna Defrancisco, and Cindy Gibson in the sociology department for excellent support.

To the funding sources that made this dissertation possible, I am thankful to the Princeton Department of Sociology, the Office of Population Research, the National Science Foundation Doctoral Dissertation Research Improvement Grant program, Time-sharing Experiments for the Social Sciences, the Fellowship of Woodrow Wilson Scholars, the Princeton University Harold W. Dodds Honorific Fellowship, and Mathematica Policy Research. I am also grateful to Martha Bleeker at Mathematica Policy Research for fantastic guidance during my fellowship.

To my family: Thank you for all of your love and support. To my mom, Terri Adams, for believing in me, always encouraging me to pursue the best education possible, and for modeling your remarkable work ethic. To my sister, Katie Ishizuka: Thank you for your incredible thoughtfulness and kindness, and for your wonderful sense of humor. To my brother, Andrew Ishizuka: Thank you for your generosity, for discussions about the challenges of grad school, and for inspiring me to work harder. With all of you, our memories together and shared understandings are a source of joy.

To the best in-laws I could ask for – Anita, R.C., and Staci Chant: Thank you for making me a part of the family. To Anita: I am grateful for your humor, contagious laughter, and relentless enthusiasm. To R.C.: Thank you for your kindness and for showing me that the way to develop good habits is not by thinking about them, but simply by doing them. To Staci: Thank you for many great laughs and for helping me get into grad school by teaching me how to do long division again for the GRE.

To Paige Chant: Thank you for inspiring me to strive always to be better as a researcher, person, and partner. You continually show me how to handle challenges in life with good humor and tremendous grace. Thank you for believing in my work when at times I did not, and for celebrating small victories with me and supporting me in difficult times. Thank you for building a magical life together with me. I love you always.

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## **Introduction**

Parenthood plays a critical role in both reproducing socioeconomic inequalities across generations and exacerbating gender inequalities in the family and in the labor market. As a result, scholars and policymakers have sought to understand how, why, and under what conditions parenthood matters for children's and adults' wellbeing.

Parenthood and parenting are hypothesized to matter for multiple interrelated reasons. First, the quantity and quality of interactions between parents and children are associated with a wide range of child outcomes and serve as a key mechanism through which inequalities are passed on from parents to children. Advantaged and disadvantaged families differ in their parenting behaviors, including time spent with children (Guryan, Hurst, and Kearney 2008; Kalil, Ryan, and Corey 2012), verbal responsiveness and words spoken with children (Bradley et al. 2001; Hart and Risley 1995), and involvement in children's schooling (Bodovski and Farkas 2008). These differences, in turn, are hypothesized to be one of the primary causes of the intergenerational transmission of inequality (Heckman 2006; Lareau 2015; Waldfogel and Washbrook 2011).

While the type of parenting children experience appears to be important for child outcomes, parent-child interactions are not limited to their effects on children; they also have consequences for gender inequality among adults. In spite of increasing similarities in men and women's labor market behavior (Goldin 2014), the experience of parenthood continues to be deeply divided by gender, with women assuming a disproportionate share of parenting responsibilities (Raley, Bianchi, and Wang 2012). While fathers in the United States have increased the amount of time they spend with children since the 1960s, mothers in heterosexual married couples continue to spend approximately twice as much time with children as fathers

(Sayer et al. 2004). Since the vast majority of single parent households are also headed by mothers (Livingston 2013), the important unpaid labor of raising children in society is still performed disproportionately by women (Budig and England 2001).

These persistent gender inequalities in the parenting are hypothesized to spill over into the labor market (Becker 1985), where parenthood has different consequences for men's and women's labor market outcomes (Budig and England 2001; Killewald 2013; Waldfogel 1997). In part because parenthood increases inequality in unpaid labor within couples (Parrott 2014; Sanchez and Thomson 1997), parenthood negatively impacts women's labor market outcomes much more than it impacts men's (Becker 1985; Budig and England 2001; Cha 2010; Lundberg and Rose 2002). While men experience a fatherhood wage premium, women experience a motherhood wage penalty (Killewald 2013; Waldfogel 1997). Because gender stereotypes arise in part from observers' observations of what men and women typically do (Eagly and Steffen 1984; Ridgeway 2011), women's primary responsibility for parenting is hypothesized to shape the content of stereotypes and therefore the assumptions employers make about mothers in the workplace (Correll, Benard, and Paik 2007; Ridgeway and Correll 2004). Gender inequalities in parenting, then, are closely linked with gender inequalities in the labor market.

Parenthood thus is both a context and status that has important inequality-related consequences for multiple parties and relationships. First, parents have effects on children through their behaviors, and parenting differences between more- and less-educated families contribute to inequalities in children's outcomes (McLanahan 2004). Second, parenting both reflects and generates gender inequality among adults. The division of parenting responsibilities remains unequally distributed between mothers and fathers, and these inequalities themselves are thought to produce stereotypes about mothers and fathers. Gender inequalities in the family thus

affect gender inequalities in the labor market, while gender inequalities in the labor market increase the benefits of traditional gender specialization within couples, thereby potentially reinforcing gender inequalities in the family (Becker 1985).

Three important empirical patterns related to parenthood and inequality in the United States motivate this dissertation: (1) differences in the parenting behaviors of more- and less-educated parents, (2) differences in the parenting behaviors of mothers and fathers, (3) differences in the motherhood wage penalty experienced by low- and high-skilled women. While each of these patterns have been well documented by researchers, explaining how and why they occur has been challenging with existing data. For all of these empirical patterns, explanations center on the relative contributions that culture and constraints make in driving inequalities in the family and in the labor market. This dissertation aims to evaluate these explanations using two, large-scale experiments.

Theories of the causes of education differences in parenting behaviors have long been divided between explanations that emphasize cultural differences between more- and less-educated parents and those that emphasize differences in resource constraints (Sherman and Harris 2012). Cultural theories contend that more- and less-educated parents differ in their views about what “good” parenting means, and that this in turn leads them to raise their children in very different ways (Calarco 2014; Lareau 2003). Constraint theories, in contrast, argue that more- and less-educated parents have very similar views about what good parenting entails, but they lack the resources necessary to enact these more time, money, and labor intensive parenting approaches (Chen and Phillips 2004; Bennett, Lutz, and Jayaram 2012). In both accounts, views about the appropriateness of different types of parenting behaviors are fundamental to the proposed causal mechanisms linking parental education and parenting behaviors. Despite the

importance of parenting attitudes in both theories, however, existing research has produced conflicting evidence and has been unable to provide a direct test with nationally representative data to support either perspective.

Culture and constraint-based explanations not only imply very different causal mechanisms underlying differences in parenting between more- and less-educated parents, but they also suggest potentially different approaches to supporting parental investments in children. Understanding the parenting views of more- and less-educated parents is important from a policy standpoint because billions of dollars are spent annually on home visiting and early childhood programs that have a parenting component (Daro and Dodge 2010; Kahn and Moore 2010). These interventions tend to be very expensive and have generally demonstrated only modest positive impacts (Kalil 2015). Programs that aim to support parental investments in children may implicitly make assumptions about parenting attitudes. The Administration for Children and Families, for instance, lists “disseminating information about good parenting practices” and “teaching parenting skills” as key activities of Responsible Fatherhood parenting programs.<sup>1</sup> Understanding parents’ views about good parenting, then, could be important for the design of these programs.

To address the questions posed in the first and second empirical chapters, I conduct an original factorial vignette survey experiment with a large, nationally representative sample of parents. The study takes advantage of the benefits of experimental design for causal inference and the strengths of random sampling from theoretically-relevant populations for descriptive inference (Mutz 2011). Under the design, respondents are randomly assigned to evaluate vignettes describing either more- or less intensive parenting behaviors. In addition to

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<sup>1</sup> <http://www.acf.hhs.gov/programs/ofa/programs/healthy-marriage/responsible-fatherhood>. Accessed June 20, 2016.

manipulating descriptions of parenting behaviors, I also randomize the parenting situations and the gender of the parent and child in each vignette. The study thus provides a direct assessment of how parenting attitudes vary by education across a range of situations.

The first empirical chapter tests the assumptions of cultural and constraint explanations of education differences in parenting. Results support the predictions of the constraint perspective, with more- and less-educated parents showing remarkably similar views about what good parenting entails. Both groups consistently evaluate more intensive parenting behaviors more positively than less intensive parenting behaviors, and these differences are very large in magnitude. Findings suggest that differences in more- and less-educated parents' views about good parenting are unlikely to be the primary cause of differences in parenting behaviors.

Culture and constraints also represent a theoretical divide in causal accounts of inequalities in mothers' and fathers' parenting responsibilities. A common explanation for why women are more involved as parents than men is that there are different cultural norms for mothers' and fathers' obligations as parents. While women are said to face cultural expectations to engage in "intensive mothering" (Hays 1996), direct parental involvement is not seen as central to the cultural model of fatherhood (Townsend 2002). However, other researchers argue that most young adults now hold gender egalitarian ideals of shared parenting and paid work (Gerson 2010; Pedulla and Thébaud 2015). In these accounts, gender inequalities in parenting do not reflect different cultural expectations for mothers' and fathers' parenting. Instead, different constraints faced by men and women, such as the gender wage gap or differences in the availability of parental leave for mothers and fathers, could lead mothers to specialize more in childrearing than fathers. As with prior research on education differences in parenting behaviors, studies relating to gender and parenting suffer from important data limitations and have produced

conflicting evidence regarding how gender shapes evaluation standards for mothers' and fathers' parenting.

Different evaluation standards are central to cultural accounts of gender differences in parenting behaviors. The second empirical chapter assesses whether men and women are evaluated differently when they engage in both more- and less-intensive parenting behaviors. In addition, I consider whether male and female respondents have different parenting views. The study allows me to assess whether the same behaviors are anchored to different evaluation categories. In other words, I ask: Does "good" fathering in a given situation mean the same thing as "good" mothering?

Results from this chapter fail to support the cultural perspective's claim that mothers and fathers are subject to different standards that define what it means to be a good parent. Instead, mothers and fathers are both evaluated positively for intensive parenting behaviors, and mothers and fathers who fail to do intensive parenting are penalized similarly. Additionally, I find that male and female respondents have very similar views. As with the first empirical chapter, results are inconsistent with the claim that cultural differences – in this case, different evaluation standards for mothers and fathers – are the primary cause of differences in parenting behavior. The fact that male and female respondents have similar views further suggests that behavior differences are unlikely to be caused by differences in parenting attitudes.

While the first empirical chapter focuses on education differences in parenting, and the second chapter examines gender differences in parenting, the final empirical chapter implicitly considers how both education and gender jointly shape the effects of parenthood. Although we know that parenthood has different consequences for men and women's wages, motherhood in particular does not appear to affect all women's wages equally. Survey data show tremendous

variation by skill in the effects of children on women's wages, variably finding that the motherhood wage penalty is strongest for high-skilled women (Wilde, Batchelder, and Ellwood 2010), middle-wage women (Killewald and Bearak 2014), high school graduates (Anderson, Binder, and Krause 2002), women without college degrees (Amuedo-Dorantes and Kimmel 2005), and low-wage women (Budig and Hodges 2014).

A number of explanations have been proposed for why parenthood has gendered wage consequences. First, although men typically maintain or increase their work hours when they become fathers (Lundberg and Rose 2002), mothers tend to accumulate less work experience by taking some time out of the labor force or moving into part-time jobs that pay lower wages (Budig and England 2001). Second, because of the well-documented gender inequalities in parenting responsibilities (Sayer et al. 2004) that are the focus of the second empirical chapter, mothers are hypothesized to be less productive than they were before parenthood because raising children takes considerable energy, and women most often assume primary responsibility for childrearing (Becker 1985). A third explanation, which is also rooted in gender differences in parenting responsibilities, is that mothers trade lower wages for jobs that make it easier to maintain family responsibilities (Becker 1985; Goldin 2014). Finally, labor market discrimination against mothers has also been proposed as an explanation for mothers' persistent wage disadvantage (Benard and Correll 2010; Correll, Benard, and Paik 2007; Cuddy, Fiske, and Glick 2004).

Survey data provide partial support for work experience and occupation-based explanations. Regression analyses show that some of the motherhood wage penalty can be accounted for by time out of the labor force, movements into part-time work, and changes in occupational characteristics (Anderson et al. 2002; Budig and England 2001). However,

statistical analyses that take into account a wide variety of measurable factors still estimate a large wage penalty that cannot be explained statistically (Andersen et al. 2002; Waldfogel 1997). These studies have raised the question of how to interpret this large “unexplained” portion of the motherhood wage penalty. While studies have produced strikingly different conclusions about which mothers face the highest costs, research generally finds that the penalty cannot be fully explained by factors measured by survey researchers.

But what accounts for this variation in the “unexplained” portion of the motherhood wage penalty? Causal inferences are challenging because the unexplained component of the penalty is consistent with multiple explanations. For example, effort-based explanations have been proposed as one reason why mothers have lower wages relative to childless women. Because raising children requires significant energy, and women still do most of this labor, mothers are hypothesized to be less productive at work than fathers (Becker 1985). Although effort-based explanations of the penalty have been the focus of theoretical work, empirical evidence supporting this theory appears to be weak (Andersen et al. 2002; Bielby and Bielby 2002). Alternatively, the portion of the motherhood penalty that cannot be explained could reflect discrimination against mothers in the labor market (Correll et al. 2007). Experimental studies suggest that discrimination could be an important contributor to mothers’ persistent wage disadvantage (Benard and Correll 2010; Correll et al. 2007; Cuddy, Fiske, and Glick 2004).

But could discrimination account for differences in the motherhood wage penalty faced by low- and high-skilled women? And does discrimination affect high- and low-skilled mothers equally in different occupations? While the first and second empirical chapters assess the relative contributions of culture and constraints, the third chapter considers the possibility of culture *as* a constraint. I test the idea that a lack of fit between cultural beliefs about motherhood

and occupational role schemas can serve effectively to constrain women's labor market opportunities.

The question of how motherhood status affects the labor market opportunities of low- and high-skilled women is important not only for theory, but also for policy. Obtaining causal estimates of discrimination by motherhood status in low- and high-skilled jobs matters for assessing an important assumption of welfare reform: that low-skilled mothers do not face significant employment barriers (Corcoran et al. 2000). Additionally, although the economic wellbeing of low-skilled women with children is an important focus of social policy, prior experimental studies of labor market discrimination by motherhood status focuses exclusively on a very narrow range of high-skilled, time-intensive professional occupations (Correll et al. 2007). As a result, we lack an understanding of how the costs of motherhood may differ for women with different resources, and more generally the conditions under which motherhood status is more or less disadvantaging.

Theories of discrimination hypothesize that the time commitments required to be a good mother are perceived as being incompatible with the time commitments required to be an ideal worker (Correll et al. 2007). But while the cultural schema of the "ideal worker" is frequently discussed in singular terms as "someone who starts to work in early adulthood and works full-time, full force, for forty years straight, taking no time off for childbearing, childrearing, or really anything else" (Williams 2003:1), studies have questioned whether the definition of the "ideal worker" is really the same across occupations (Gorman 2005; Turco 2010). While cultural beliefs about mothers may be widely shared, schemas describing the characteristics associated with successful job performance are likely to depend to a much greater extent upon the specific demands of occupations (Gorman 2005). That is, the perceived "fit" between the occupational

role and stereotypes may matter (Heilman and Eagly 2008). The study thus aims to improve the alignment between theory, which predicts heterogeneous treatment effects across occupations, and empirical evidence, which focuses exclusively on high-skilled, time-intensive professional occupations.

To examine how the motherhood penalty may vary for women in different low- and high-skilled occupations, in the third empirical chapter I conduct an audit study in which I submit pairs of fictitious resumes and cover letters to apply to actual job openings in 2 low-skilled and 2 high-skilled occupations. Within each applicant pair, I experimentally manipulate signals of motherhood status, and measure employers' callback rates. Audit studies present compelling causal estimates of discrimination that would be difficult to study using survey methods. Surveys of employers, for example, show that employers express a willingness to hire mothers who receive Temporary Assistance for Needy Families (TANF) (Holzer 1999). But since discrimination is not a socially desirable behavior, employers may be unwilling to disclose that they would discriminate against such mothers. Audit studies combine the strengths of causal inference with the external validity of observing the behavior of actual employers in real labor markets.

I find evidence supporting the notion that cultural beliefs about motherhood do constrain women's labor market opportunities, but that this effect depends on the occupational context. While mothers receive lower callback rates overall compared with childless women, evidence of discrimination against mothers is present only in marketing manager positions. These findings support the claim that discrimination may be a product of the perceived fit between stereotypes and occupational role schemas (Heilman and Eagly 2008). In this sense, culture does appear to be a constraint for mothers in marketing manager jobs, an occupation that is particularly

inflexible and time intensive. But evidence suggests that the disadvantages associated with motherhood are contingent on features of occupations.

This dissertation suggests that the mechanisms linking parenthood and inequality are a complex combination of culture and constraints. But together, the findings raise a number of important questions about *how* culture and constraints matter. If differences in constraints rather than cultural beliefs about good parenting drive education differences in parenting behavior, what constraints matter and why? Would increasing or decreasing parents' constraints bring about differences in the quantity or quality of their interactions with children? Similarly, why does similar support for intensive mothering and fathering among parents fail to translate into gender equality in parenting within couples? What role do gendered constraints such as the gender wage gap and differences in the availability maternity and paternity leave play in shaping couples' paid work and parenting arrangements? What specific factors explain differences in the effects of motherhood across occupations? While the evidence presented in this dissertation is consistent with the idea that discrimination by motherhood status should be most likely to occur in time-intensive, inflexible occupations, such as in marketing manager jobs, the explanations presented are necessarily speculative given the data. This dissertation aims not only to advance our understanding of important scientific and policy questions, but also to identify key directions for future research.

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## Chapter 1

### **Education Differences in Parenting Behaviors: Culture or Constraints?<sup>2</sup>**

Chapter Summary: Parenting behaviors both strongly predict children's outcomes and differ substantially by education. While it is well established that more- and less-educated parents behave differently, scholars and policymakers have reached surprisingly little consensus about why. Culture- and constraint-based explanations for these behavioral differences each imply distinct predictions about parenting *attitudes*. Cultural theories argue that education differences in attitudes about “good” parenting underlie differences in behavior. In contrast, constraint theories contend that differences in behavior are due primarily to differences in resources – not culture – and that more- and less-educated parents have similar parenting attitudes. Using an original vignette survey experiment conducted with a nationally representative sample of parents, I test the attitudinal hypotheses behind these theories, asking whether attitudes about good parenting vary by education. Consistent with the predictions of the constraint perspective, I find that more- and less-educated parents hold very similar views about parenting quality across a wide range of situations. These results suggest that education differences in parenting behavior are unlikely to be driven primarily by culture.

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<sup>2</sup> A version of this chapter was presented at the 2015 Annual Meeting of the Population Association of America in San Diego.

## Introduction

Parenting behaviors are strong predictors of a wide range of child outcomes, including academic achievement and educational attainment (Bodovski and Farkas 2008; Hamilton 2016; Heckman 2006), socioemotional skills (Kochanska 1997; Laible and Thompson 2002), verbal abilities (Hart and Risley 1995), externalizing behaviors (Gershoff et al. 2012), and social and psychological development (Criss, Shaw, and Ingoldsby 2003; Steinberg et al. 1994). More involved parenting, in sum, is strongly associated with child wellbeing. Because these behaviors also differ substantially by socioeconomic status, parenting is theorized to play an important role in reproducing inequalities across generations (Lareau 2015; McLanahan 2004). Indeed, parenting behaviors appear to be critical mechanisms explaining the relationship between parents' socioeconomic status and children's academic achievement (Heckman 2006; Waldfogel and Washbrook 2011).

Children in socioeconomically advantaged and disadvantaged families experience parenting behaviors that are both quantitatively and qualitatively different. More-educated parents not only spend more time with their children than less-educated parents (England and Srivastava 2013; Guryan, Hurst, and Kearney 2008; Sayer, Bianchi, and Robinson 2004; McLanahan 2004), but they also change *how* they spend that time across developmental stages more than less educated parents (Kalil, Ryan, and Corey 2012). Highly-educated parents are also more likely to schedule their children in extracurricular activities than less-educated parents (Lareau and Weininger 2008; Weininger, Lareau, and Conley 2015). Furthermore, parents of higher socioeconomic status speak more often with their children, use a wider range of vocabulary, and demonstrate greater verbal responsiveness with their children than parents of lower socioeconomic status (Bradley et al. 2001; Hart and Risley 1995). Finally, within

institutional settings such as schools or medical facilities, more educated parents are more active, assertive, and involved in interactions with professionals (Calarco 2014; Lareau 2003; Lareau and Horvat 1999; Roksa and Potter 2011).

Although socioeconomic status differences in parenting behaviors are well documented, scholars and policymakers have reached surprisingly little consensus about what causes these disparities. Existing explanations are divided between cultural and constraint perspectives (Sherman and Harris 2012). Fundamental to each of these perspectives are claims about parenting *attitudes*. Cultural explanations posit that differences in behaviors reflect differences in parents' views about what constitutes "good parenting." Lareau (2003), for example, argues that middle class and poor and working class parents have different "cultural logics of childrearing" that lead them to raise their children in different ways. Constraint explanations, in contrast, contend that poor and working class parents conceive of good parenting in similar ways as middle class parents, but lack the resources necessary to enact them (Bennett, Lutz, and Jayaram 2012; Chin and Phillips 2004; Hays 1996).

Assessing whether differences in parenting behaviors are due primarily to differences in culture or constraints is critical for theories of intergenerational mobility and social stratification, as well as for social policies designed to reduce the transmission of inequality between parents and children. As Kalil (2015) asserts, many interventions designed to support effective parenting are based on an "informational model" that assumes that disadvantaged parents either do not know what "good" parenting looks like or fail to appreciate how important more involved parenting is for their children's health and development. The Administration for Children and Families, for example, lists "disseminating information about good parenting practices" and

“teaching parenting skills” as key activities of Responsible Fatherhood parenting programs.<sup>3</sup>

Most prior parenting interventions are costly and, when impacts have been positive, typically demonstrate very modest effect sizes (Love et al. 2005; Olds, Henderson, and Kitzman 1994; St. Pierre et al. 2003). If parenting differences are due primarily to differences in resources rather than differences in how parents conceive of good parenting, this finding would suggest a different approach to supporting parental investments in children.

Empirical research has produced evidence supporting the claims of both culture- and constraint-based explanations. While some studies suggest that parents differ by socioeconomic status in their views about what “good” parenting looks like (England and Srivastava 2013; Lareau 2003; Calarco 2014; Weininger, Lareau, and Conley 2015), other studies show that economically advantaged and disadvantaged parents are similarly supportive of intensive, child-centered parenting approaches (Bennett et al. 2012; Chin and Phillips 2004; Edin and Nelson 2013; Hays 1996; Waller 2010). However, prior research has been unable to provide definitive evidence about how parenting attitudes vary by socioeconomic status because of data limitations, including the use of small, non-random samples, a lack of direct measures of parenting attitudes, and measuring attitudes about only one parenting behavior or domain.

In this study, I use data from an original survey experiment conducted on a large, nationally representative sample of parents. I present respondents with vignettes describing different parenting approaches, and ask them to evaluate the parenting behavior described. The study is designed to provide a direct and comprehensive test of the assumptions of culture- and constraint-based causal explanations of education differences in parenting behavior across a range of situations.

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<sup>3</sup> <http://www.acf.hhs.gov/programs/ofa/programs/healthy-marriage/responsible-fatherhood>. Accessed June 20, 2016.

## **Theory and Prior Research: The Cultural Perspective**

The cultural perspective argues that social class strongly influences parenting values, beliefs, and conceptions of what constitutes good parenting. Early research in this tradition focused on how educational and occupational experiences shaped middle class and working class parental values for children, defined by Kohn (1963:471) as “conceptions of what characteristics are desirable in children.” According to this research, the characteristics parents view as desirable in their children are a largely a product of their experiences in the workplace. Because middle class jobs tend to be more complex, less routinized, and involve less supervision than working class jobs, middle class parents are hypothesized to generalize the notion that self-direction is important to cultivate in children, while working class parents instead come to view obedience and conformity to external authority in their children as more important (Kohn 1959a).

A number of earlier studies supported the claim that middle class and working class parents value different characteristics in their children (Kohn 1959a; Kohn 1959b; Kohn and Schooler 1969; Luster, Rhoades, and Haas 1989; Morgan, Alwin, and Griffin 1979; Pearlin and Kohn 1966; Wright and Wright 1976). While these studies document social class differences in parental values, an important question is whether these values correspond to actual parenting behaviors. Kohn’s (1959a) model hypothesized that values should lead to specific parenting behaviors, but evidence is mixed.

Kohn (1959b), for example, shows that working class parents punish their children based more on the immediate consequences of their actions (emphasizing values of respectability), while middle class parents are more likely to punish based on their interpretation of children’s intentions (emphasizing the internalization of behavioral standards). In a replication and

extension of Kohn's (1959a) theoretical model, Luster, Rhoades, and Haas (1989) demonstrate that parental values differ by social class and predict parenting behaviors as hypothesized. However, they also provide evidence that beliefs about effective and appropriate childrearing practices such as responsiveness, affection, discipline, and talking to and reading to children predict parenting behaviors. In other words, Luster et al. (1989) describe a cause of social class differences in parenting behaviors that are more proximate than values: beliefs about effective and appropriate parenting practices.

More recent research argues that values may not clearly predict parenting behavior. While noting that middle class and working class parents differ in values of self-direction and conformity in children, Weininger and Lareau (2009) show that middle class parents often exercise significant control of children, while working class parents provide children with substantial autonomy in some areas of daily life. Perhaps because values are abstract as the "ends" toward which behavior is oriented (Small, Harding, and Lamont 2010) and may have only a loose connection to behavior (Weininger and Lareau 2009), more recent research focuses on more concrete and proximate cultural factors hypothesized to cause social class differences in parenting.

An influential account of the causes of class differences in parenting comes from an important ethnographic study. Lareau (2003) argues that parents of different social classes have different "cultural logics of childrearing." According to Lareau, while poor and working class parents view providing for children's basic needs as an accomplishment, middle class parents see the cultivation of children's talents and interests as essential to their responsibilities as parents. Referring to poor and working class parents, Lareau (2003:3) states:

But unlike middle-class parents, these adults do not consider the concerted development of children, particularly through organized leisure activities, an

essential aspect of good parenting...For them, the crucial responsibilities of parenthood do not lie in eliciting their children's feelings, opinions, and thoughts. Rather, they see a clear boundary between adults and children.

In other words, Lareau (2003) claims that middle class and poor and working class parents have fundamentally different views about what "good" parenting means.

Lareau posits that middle class parents prefer a more intensive *concerted cultivation* approach, whereas poor and working class parents prefer a less intensive *accomplishment of natural growth* approach. Table 1.1 contrasts the behaviors characteristic of concerted cultivation and natural growth parenting styles across the three parenting domains described by Lareau (2003).

Table 1.1: Vignette Content by Parenting Approach and Domain

|                                | Concerted Cultivation     | Natural Growth              |
|--------------------------------|---------------------------|-----------------------------|
| Organization of Leisure        | Structured, More Involved | Unstructured, Less Involved |
| Language Use                   | Reasoning, Negotiation    | Directives, No Negotiation  |
| Interactions with Institutions | Active, Interventionist   | Passive, Deferential        |

In Lareau's (2003) description of concerted cultivation, parents facilitate children's participation in structured extracurricular activities organized by adults. Parents also encourage the development of children's talents by participating in informal activities with children at home. In the language use domain, concerted cultivation entails an emphasis on reasoning and negotiation with children. Parents ask questions to elicit children's thoughts and feelings, encouraging them to elaborate and provide reasons for their opinions. Parents respond to child misbehavior with discussions, explaining why they are asking children to do something and allowing negotiation. Lastly, within institutional settings, parents treat children as legitimate participants in interactions with professionals, encouraging children's sense of individual importance and their right to express their thoughts to adults. Parents take an active role by

closely monitoring children's lives and pressing institutions to recognize their individualized needs.

In the accomplishment of natural growth, parents give children more control over their leisure activities. They set boundaries to ensure children's safety, but allow children the flexibility to play on their own or with friends. Parents tend to be relatively uninvolved in monitoring or participating in children's leisure activities, and generally decline requests to assist or play with children. In the language use domain, parents give children clear directives with limited room for negotiation, expecting prompt compliance. Parents are brief and direct when speaking with children, and do not typically encourage children to elaborate on topics. Within institutions, parents tend to be respectful of professionals' expertise, taking a deferential rather than demanding approach in determining what is best for children.

Differentiating between the strategies individuals possess and view as most appropriate (Swidler 1986) and the ways individuals interpret situations (DiMaggio 1997), Calarco (2014) further specifies the process through which culture influences parenting. Calarco (2014) argues that middle class and working class parents have different logics of action – understandings of the kinds of skills and orientations that are appropriate – in schooling contexts. These different understandings of appropriate classroom behavior then lead parents to adopt different strategies of action when interacting with teachers. In educational situations, Calarco (2014) argues that working class parents view deference to teachers' expert judgment as appropriate, while middle class parents view negotiation and requests of teachers as best. In both Calarco (2014) and Lareau's (2003) accounts, beliefs about what constitutes "good" parenting differ by social class and are important for understanding differences in parenting behavior.

Empirical support for the claim that parents differ by socioeconomic status in their views about good parenting comes from both qualitative and quantitative studies. In her in-depth ethnographic study of 12 Midwestern families, Lareau (2003) asks poor and working class parents to react to a short vignette about a child with a busy schedule of extracurricular activities. She finds that poor and working class parents expressed concerns about the child being exhausted from participating in so many activities. These attitudes aligned with social class differences in children's extracurricular activity participation. Edin and Kefalas (2005:166) similarly argue that because of economic hardship, poor mothers "adopt an approach to childrearing that values survival – not achievement." Their qualitative data show that poor mothers view good parenting as involving love, teaching children the difference between right and wrong, and protecting them from neighborhood and peer influences. Like Lareau (2003), Edin and Kefalas (2005) suggest that poor mothers view fulfilling children's basic needs as an important accomplishment.

Focusing on views about schooling, Calarco (2014) asks 21 middle class and working class parents in a Northeastern town to respond to vignettes about children's educational experiences. She finds that middle and working class parents differed in the parenting strategies they recommended in ways that aligned with social class differences in behaviors. For example, when presented with a vignette describing a child expressing boredom about math class, middle class parents recommended contacting the teacher to request additional work or moving the child to a higher math class, while working class parents advised deferring to the teacher's judgment and telling the child to stay focused.

While previous qualitative studies with small, non-random samples provide direct evidence supporting the predictions of the cultural perspective, quantitative studies with large,

nationally representative samples provide indirect evidence. According to these studies, education differences in parenting behaviors that persist after statistically controlling for measures of resource constraints can be interpreted as evidence of differences in cultural orientations or conceptions of good parenting.

For example, England and Srivastava (2013) show that maternal education is positively associated with time spent with children after controlling for family income. They interpret this finding as evidence of education differences in “cultural conceptions of appropriate parenting” (England and Srivastava 2013:984). Similarly, Weininger et al. (2015) examine how children’s time spent in extracurricular activities varies by maternal education. Controlling for measurable constraints including income, work schedules, and neighborhood characteristics, they find that maternal education remains positively associated with children’s organized activity time. Weininger et al. (2015) argue that this result is consistent with education differences in “cultural orientations” toward parenting.

Although the findings from these studies are consistent with social class differences in cultural conceptions of appropriate parenting, because attitudes are unmeasured in these studies, the findings are also consistent with constraints that are not measured. For example, a persistent association between education and parenting behaviors could reflect unmeasured resources, such as social networks or information, rather than different cultural models of good parenting. Therefore, although existing quantitative studies take advantage of large, random samples, they provide only indirect support for the cultural perspective.

A key proposition of the cultural perspective is that differences in parenting behaviors reflect differences in cultural conceptions of good parenting. In other words, more educated parents engage in concerted cultivation behaviors because they believe that parenting style is a

better approach than the less intensive natural growth style. In contrast, less educated parents engage in natural growth behaviors because they view that parenting style as preferable over concerted cultivation. A testable implication of these claims is that when presented with concerted cultivation and natural growth behaviors, more educated parents will evaluate concerted cultivation most positively, while less educated parents will evaluate natural growth most positively. Furthermore, these patterns should be consistent across a wide range of situations.

### **Theory and Prior Research: The Constraint Perspective**

The constraint perspective rejects the cultural perspective's claim that differences in parenting behaviors are caused by different cultural models of good parenting. Instead, the constraint perspective hypothesizes that differences in the resources or constraints that parents of different social classes face interfere with their ability to engage in the kinds of behaviors they view most positively. The challenges of unstable and low incomes are thought to adversely impact parent-child interactions through the significant psychological consequences of economic stress (Conger, Conger, and Martin 2010; Gennetian and Shafir 2015). Central to this account is the claim that more and less advantaged parents share similar views about what good parenting looks like.

Support for the assumptions of the constraint perspective comes primarily from qualitative studies. In their ethnographic study of 32 children's organized activity participation during summer vacation, Chin and Phillips (2004) argue that social class differences in children's activities do not stem from differences in parents' views about good parenting, but rather from differences in their resources, including income, job flexibility, knowledge about

how to develop children's talents, and information about how to access summer programs. Similarly, in a study of 51 parents in a Northeastern city, Bennett et al. (2012) find that middle class and working class parents express similar levels of support for a vignette describing a child participating in multiple organized activities. These researchers argue that differences in income and community organizations – not cultural conceptions of appropriate parenting – explain the social class gap in children's participation.

Additional support for the constraint perspective comes from qualitative studies that focus primarily on motherhood or fatherhood. Hays (1996), for example, describes “intensive mothering” as a powerful ideology that prescribes maternal devotion to children. Importantly, her characterization of intensive mothering as “child-centered, expert-guided, emotionally absorbing, labor-intensive, and financially expensive” is very similar to Lareau's (2003) description of concerted cultivation, the middle class parenting style. Hays (1996:94-95) notes that while middle class mothers were more likely than poor and working class mothers to engage in intensive mothering *behaviors*, both groups often had the same ideas about good parenting. Similarly, two recent qualitative studies find that low-income fathers have embraced middle class fathering ideals that emphasize love, communication, emotional involvement, and quality time (Edin and Nelson 2013; Waller 2010).

Together, these studies provide evidence that more- and less-educated parents may have very similar views about what constitutes good parenting. If the constraint perspective is correct, both more- and less-educated parents will evaluate concerted cultivation behaviors significantly more favorably than natural growth behaviors across a range of situations. The cultural and constraint perspectives align in hypothesizing that more educated parents will view concerted

cultivation more favorably than natural growth, but diverge in their predictions about less educated parents.

### **Study Importance and Contributions**

Previous studies provide important insights and generate clear, testable hypotheses about how parenting attitudes should be associated with education and other measures of socioeconomic status. However, these studies have produced conflicting evidence supporting both the cultural and constraint perspectives. Understanding how parenting attitudes vary by education is critical for advancing scholarship on the mechanisms through which family background is translated into different parental investments in children. Although parenting attitudes are central to explanations of the causes of education differences in parenting behavior, the question of whether more- and less-educated parents differ in their views about good parenting remains unresolved. Addressing this question is important because different findings imply fundamentally different processes through which inequalities are produced. Education differences in parenting attitudes would suggest that increasing parents' resources or removing their constraints would not dramatically change their parenting behaviors. In contrast, similar parenting attitudes might suggest that changing parents' resources or constraints could have a significant impact on their parenting.

This important theoretical question remains unresolved for three reasons. First, although prior quantitative studies use large, nationally representative surveys, they do not measure parenting attitudes directly. Instead, they infer education differences in parenting attitudes from a persistent association between education and parenting behaviors after controlling for measures of constraints, such as income or work schedules (England and Srivastava 2013; Weininger et al.

2015). Although these findings are consistent with differences in attitudes, they may also be due to constraints that are unmeasured. Second, while prior qualitative studies include more direct measures of parenting attitudes, they are based on small, non-random samples that are not designed to make valid inferences about patterns in the population. Finally, although Lareau (2003) contends that cultural conceptions of appropriate parenting differ by social class in coherent ways across three different parenting domains, most studies testing her claims examine attitudes about only one parenting behavior or domain, such as extracurricular activity participation (Bennett et al. 2012; Chin and Phillips 2004) or schooling (Calarco 2014). Thus prior research has been unable to comprehensively test the attitudinal assumptions of the cultural and constraint perspectives.

This study advances research on the causes of education differences in parenting behavior using an original vignette survey experiment conducted with a large, nationally representative sample of parents. Rather than inferring parenting attitudes from residual associations between education and parenting behaviors, I directly measure parenting attitudes and how they vary by education and other indicators of socioeconomic status. The use of a nationally representative sample of parents enables valid inferences about parenting attitudes in the population. Finally, the study design produces a clear and comprehensive test of more- and less-educated parents' relative support for specific, concrete parenting behaviors across a range of parenting domains and situations.

## **Hypotheses**

Table 1.2 summarizes the predictions of each perspective. The cultural perspective predicts that more-educated parents will evaluate concerted cultivation more positively than

natural growth, while less-educated respondents will evaluate natural growth more positively than concerted cultivation. In contrast, the constraint perspective predicts that parenting attitudes will be similar for more- and less-educated parents, with both viewing concerted cultivation more positively than natural growth.

Table 1.2: Cultural and Constraint Perspective Hypotheses

|                        | Less-Educated         | More-Educated         |
|------------------------|-----------------------|-----------------------|
| Cultural Perspective   | Natural Growth        | Concerted Cultivation |
| Constraint Perspective | Concerted Cultivation | Concerted Cultivation |

## Research Design

This experiment tests whether more- and less-educated parents differ in their evaluations of concerted cultivation and natural growth parenting. While there are multiple potential approaches to addressing this question, the factorial vignette experimental design used in this study has unique advantages (Alexander and Becker 1978; Auspurg and Hinz 2014). First, random assignment enables clear comparisons of respondents' views about concerted cultivation and natural growth behaviors. Holding aspects of each parenting situation constant, I experimentally manipulate the parenting style described. This allows me to estimate more- and less-educated respondents' relative approval of different behaviors within the same situations. Second, a full factorial design efficiently enables tests of whether attitudes depend on multiple factors (Auspurg and Hinz 2014), including the situation, parenting style, and the gender of the parent and child described in vignettes. Third, rather than asking respondents about abstract concepts such as values of self-direction and conformity to external authority, vignettes enable measurement of attitudes about specific, concrete behaviors.

Fourth, an important concern in measuring attitudes is that respondents could become aware of the goals of the study and respond in ways they believe are socially acceptable. But by having each respondent evaluate the behavior of only one parent using a between-subjects experimental design, I reduce the likelihood that respondents will become aware of the purpose of the study compared to if each respondent were evaluating multiple behaviors. This design reduces the likelihood that respondents will be aware that other respondents are evaluating different parenting behaviors. More generally, the use of vignettes is a valid and reliable approach to measuring attitudes that significantly reduces the risk of social desirability bias (Alexander and Becker 1978; Auspurg and Hinz 2014; Auspurg et al. 2014; Mutz 2011).

### **Data: Subjects and Context**

Because cultural and constraint explanations make important claims about the views of more- and less-educated parents, it is important that the sample be representative of parents with minor children. The data come from a survey experiment supported by a grant from Time-sharing Experiments for the Social Sciences (TESS), an NSF-funded initiative for conducting population-based survey experiments.<sup>4</sup> Data were collected from a nationally representative sample of 3,642 parents with children under 18 years of age by the survey research company GfK. To ensure sufficient statistical power to examine the attitudes of poor parents separately, the data contain an oversample of parents below 100 percent of the federal poverty level.

The GfK sample is generated through a combination of random digit dialing and address-based sampling. Prior to 2009, GfK respondents were recruited using random digit dialing. Since 2009, subject recruitment has been done exclusively through address-based sampling. Recruited

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<sup>4</sup> Data collected by Time-sharing Experiments for the Social Sciences, NSF Grant 0818839, Jeremy Freese and James Druckman, Principal Investigators.

panel members who do not already have computers or Internet access are provided with both by GfK. Therefore, while these surveys were administered online, the sample, with weights, is representative of the U.S. population of parents with children under 18. GfK panel members with children under 18 years of age were eligible to participate in the study. Subjects were contacted by GfK via email and invited to participate in the study in September 2015.

The response rate for this survey was 49.3 percent, which is similar to other surveys fielded by GfK. Additionally, because sampling for this study is based on previously collected demographic profile information, GfK is able to identify how survey non-participation is related to these factors and to incorporate these variables into weights used in this study. Table 1.3 shows that unweighted descriptive statistics in the GfK sample are very similar to those of parents in the 2013 American Community Survey.

Table 1.3: Unweighted Descriptive Statistics  
GfK (2015) and American Community Survey (2013) Data

| Variables                               | TESS        | ACS         |
|-----------------------------------------|-------------|-------------|
| <i>Educational Attainment</i>           |             |             |
| College Graduate +                      | 33.6%       | 36.2%       |
| <i>Respondent Gender</i>                |             |             |
| Female                                  | 60.6%       | 55.3%       |
| <i>Race and Ethnicity</i>               |             |             |
| Non-Hispanic White                      | 69.1%       | 65.7%       |
| Non-Hispanic Black                      | 9.7%        | 8.6%        |
| Hispanic                                | 14.3%       | 16.7%       |
| Non-Hispanic Other                      | 7.0%        | 9.1%        |
| <i>Marriage and Relationship Status</i> |             |             |
| Married                                 | 74.4%       | 80.9%       |
| <i>Employment</i>                       |             |             |
| Working                                 | 71.0%       | 77.0%       |
| Unemployed                              | 6.0%        | 4.8%        |
| Not in the Labor Force                  | 23.0%       | 18.2%       |
| <i>Household Income</i>                 |             |             |
| Low-income                              | 38.1%       | 31.6%       |
| Annual Income (thousands)               | 75.4 (59.9) | 75.0 (95.9) |
| <i>Household Composition</i>            |             |             |
| Number of Children                      | 1.8 (1.0)   | 1.9 (1.0)   |
| <i>N</i>                                | 3,642       | 576,634     |

## Randomization

To increase balance across experimental conditions and improve efficiency, block randomization was used in this study. Although block random assignment occurred prior to survey invitation, simulations showed that blocking produced better balance across experimental conditions than simple random assignment, even taking into account substantial non-participation. Given the importance of separate analyses for college graduate and non-college

graduate respondents, as well as analyses for men and women, I blocked on combined factors of respondent education and gender.<sup>5</sup>

I randomly assign respondents to 1 of 6 different situations involving a parent and a child. Within each situation, I randomly assign some respondents to read a concerted cultivation parenting behavior, and others to read a natural growth behavior. In addition, because approval of different parenting styles may depend on whether the parent in question is a mother or a father, and whether the child is a son or a daughter, I also randomly assign a vignette parent and child gender. Table 1.4 shows that experimental factors are balanced for college graduate and non-college graduate respondents.

Table 1.4: Experimental Condition Balance Tests by Education  
College Graduates and Non-College Graduates

|                               | Non-College<br>Graduates | College<br>Graduates | p-value |
|-------------------------------|--------------------------|----------------------|---------|
| <i>Vignette Parent Gender</i> |                          |                      |         |
| Vignette Mother               | 0.497                    | 0.478                | 0.29    |
| <i>Vignette Child Gender</i>  |                          |                      |         |
| Vignette Daughter             | 0.496                    | 0.496                | 0.98    |
| <i>Parenting Style</i>        |                          |                      |         |
| Natural Growth                | 0.485                    | 0.453                | 0.07    |
| <i>Parenting Situation</i>    |                          |                      |         |
| Vignette 1                    | 0.177                    | 0.178                | 0.96    |
| Vignette 2                    | 0.171                    | 0.172                | 0.95    |
| Vignette 3                    | 0.160                    | 0.181                | 0.12    |
| Vignette 4                    | 0.179                    | 0.159                | 0.13    |
| Vignette 5                    | 0.155                    | 0.166                | 0.38    |
| Vignette 6                    | 0.158                    | 0.145                | 0.31    |
| <i>N</i>                      | 2,418                    | 1,224                |         |

Notes: \*\*\*p<0.001, \*\* p<0.01, \*p<0.05 (two-tailed tests). P-values report tests of differences in proportions between college graduates and non-college graduates.

<sup>5</sup> Blocks include female college graduates, male college graduates, female non-college graduates, and male non-college graduates.

## **Constructing Vignettes**

The vignettes were written with the following objectives: preventing respondent awareness of the research goals, ensuring comprehension, and providing enough context to enable meaningful responses (Mutz 2011). In addition, all of the parenting situations were written with a similar word counts, and concerted cultivation and natural growth descriptions are also balanced on word counts. Vignettes were designed to be simple, descriptive, and concrete. Concerted cultivation and natural growth behaviors were written to reflect the key features of each parenting style.

## **Parenting Situations**

To assess the coherence of attitudes, I created parenting situations to cover the three domains described by Lareau (2003): the organization of children's leisure activities, language use, and interactions with institutions. The organization of children's leisure refers to children's involvement in formal and informal activities. Language use relates to parents' verbal interactions with children. Lastly, interactions with institutions refers to how families relate to institutions such as schools or medical establishments.

Based on descriptions from Lareau's (2003) study, I chose situations that commonly occur in middle class as well as poor and working class families. Each situation is designed to elicit a response that allows me to test whether more- and less-educated parents differ in how they view different parenting behaviors. Since respondents evaluate *other* parents, they are not subject to constraints, and we can directly observe their parenting attitudes. Directions to respondents, randomization, and all 6 of the parenting situations and behaviors used in this study are listed in Appendix 1A.

Because the parenting situations in the vignettes are an important part of the context in which respondents are expressing their attitudes, it is important to describe the logic and content of each situation. For the organization of leisure domain, situations were constructed to elicit attitudes about both the formal and informal aspects of children's leisure activities. For the language use domain, the situations attempt to capture views about encouraging children to express themselves verbally, along with respondents' attitudes about the use of reasoning and negotiation versus directives. Finally, the interactions with institutions domain focuses on two different types of interactions: those involving medical professionals and those involving educators.

### **Parenting Behaviors: Concerted Cultivation and Natural Growth**

Cultural and constraint explanations make claims not only about whether more- and less-educated parents differ in their views about different parenting styles, but also about what characterize those parenting styles. Although researchers differ in the labels they apply to parenting styles, studies of social class and parenting generally identify parenting styles similar to Lareau's (2003) description of concerted cultivation and natural growth. As Hays (1996) and Lareau (2003) argue, parenting experts have reached broad consensus in advising intensive, child-centered parenting approaches.<sup>6</sup> Natural growth, in contrast, is said to be a less intensive parenting style that was dominant in a prior era. Because debates about parenting attitudes center

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<sup>6</sup> Lareau (2003: 4) states: "Parenting guidelines typically stress the importance of reasoning with children and teaching them to solve problems through negotiation rather than with physical force. Because these guidelines are so generally accepted, and because they focus on a set of practices concerning how parents should raise children, they form a dominant set of cultural repertoires about how children should be raised."

on concerted cultivation and natural growth parenting behaviors, I designed vignettes to align with these approaches.

Respondents thus read a description of either a *concerted cultivation* or a *natural growth* behavior in response to a randomly assigned situation. To evaluate whether concerted cultivation and natural growth vignettes (1) reflect different content, and (2) effectively capture key features of each parenting style, I conducted pretests using a different sample of parent respondents from Amazon Mechanical Turk. In the pretest, respondents read vignettes describing either concerted cultivation or natural growth behaviors. For each vignette, respondents were provided with a series of statements (4 per vignette) related to the content of each parenting approach in that situation. For example, for one of the vignettes related to children's leisure activities, 2 of the statements are: "The parent suggests that the child do extracurricular sports and music activities" and "The parent sets boundaries and lets the child play with friends."

For each statement, respondents indicated whether they agreed, disagreed, or there was not enough information provided in the vignette. For all 6 of the situations, differences in the proportion agreeing with each statement for concerted cultivation and natural growth vignettes are very large in magnitude and statistically significant at the  $p < 0.001$  level (see Appendix 1B, Table 1B1). This pretest demonstrates that each concerted cultivation and natural growth vignette reflects different content that effectively captures each parenting style.

### **Vignette Parent and Child Gender**

Previous studies suggest that individuals may have different attitudes about mothers' and fathers' parenting (Hays 1996; Townsend 2002). In addition, researchers have argued that differences in the ways parents interact with sons and daughters are driven by preferences

(Bertrand and Pan 2013; Lundberg, McLanahan, and Rose 2007). Because evaluations of concerted cultivation and natural growth may depend on these factors, I experimentally manipulate the gender of the parent and child described in each vignette. For child gender, I mention whether the child is a son or a daughter, and use gender-consistent pronouns thereafter.

To manipulate the gender of the parent, I use first names followed by gender-consistent pronouns. I use first names for parents rather than explicitly describing the parent as a “mother” or a “father” to provide a less obtrusive signal of parent gender. As an additional measure to avoid making the research goals salient, each respondent is randomly assigned to evaluate the parenting behavior of either a mother or a father – not both. To ensure that results for the gender of the vignette parent are not driven by factors unique to a specific pair of male and female names, I use 6 different first names to signal each gender (male and female names listed in Appendix 1A). Names are randomized across vignettes, and the names used for concerted cultivation vignettes are the same as the names used for natural growth vignettes.

To ensure that parent names effectively signal gender without manipulating extraneous factors that could also influence parenting evaluations, such as race and ethnicity or social class, I pretested names using a different sample of parent respondents from Amazon Mechanical Turk. The names included in the pretest were selected from the Social Security Administration list of the 200 most popular male and female names from birth cohorts represented among parents with children under 18 in the 2013 American Community Survey (ACS): 1960s, 1970s, and 1980s. Table 1B2 in Appendix 1B shows that these birth cohorts represent more than 90 percent of parents with children under 18 years of age based on analyses from 2013 ACS. After pretesting, I selected first names that were difficult for respondents to categorize by race and ethnicity and social class, but which were unambiguously classified as male or female.

## **Outcome Measure: Parenting Evaluations**

After reading a vignette about how a parent behaved in a given situation, respondents are asked to evaluate that parent's behavior on an ordinal scale:

What do you think of [name]'s parenting in this situation? Would you say it is excellent, very good, good, OK, not very good, or poor?

The outcome variable indicates how positively respondents view a specific parenting behavior, facilitating estimates of more- and less-educated respondents' relative support for concerted cultivation and natural growth parenting styles. This evaluation question was modeled after one used in the Fragile Families and Child Wellbeing Study that asks mothers and fathers to evaluate their own parenting.<sup>7</sup> I specify "in this situation" because open-ended pretests revealed that some respondents were reluctant to provide evaluations without this qualifier.

## **Statistical Analyses**

Quantitative studies describing education differences in parenting behaviors using nationally representative surveys emphasize distinctions between parents with a college degree and those with less education (England and Srivastava 2013; Guryan et al. 2008; Kalil et al. 2012; Roksa and Potter 2011; Weininger et al. 2015). Because of these consistent education differences in behavior, and since education is a stable indicator of long-term socioeconomic status, I focus in the analyses on evaluating differences between college graduates and non-college graduates. However, I also assess whether results are robust to alternative measures.

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<sup>7</sup> The question asked of mothers in the Fragile Families and Child Wellbeing Study is: "Please think about how you feel about yourself as a mother to (CHILD). Would you say you are an excellent mother, a very good mother, a good mother, or not a very good mother?" The question for fathers is parallel.

In the first set of analyses, I assess whether the distribution of concerted cultivation and natural growth parenting evaluations are statistically independent of respondent education using  $\chi^2$  tests. In addition, I examine whether the proportion of respondents that evaluate each parenting style very positively (rating it as “excellent” or “very good”) differs by education.

Next, to assess more- and less-educated respondents’ views about concerted cultivation and natural growth parenting in each situation, I run ordered logit models separately for college graduates and non-college graduates. These analyses are important because they allow me to quantify the degree to which parenting styles affect respondents’ likelihood of rating a given parenting behavior in a higher versus a lower evaluation category within each of the 6 situations. I regress evaluations on an indicator for whether the vignette describes a concerted cultivation behavior, with natural growth serving as the reference category.

Because parent and child gender are hypothesized to influence approval of specific parenting behaviors, I adjust for the gender of the parent and child described in each vignette. Additionally, since respondent gender and race and ethnicity may be associated with both education (DiPrete and Buchmann 2006; Kao and Thompson 2003) and parenting attitudes (Hays 1996; Lareau and Horvat 1999; Townsend 2002), I control for respondent gender and race and ethnicity.<sup>8</sup> Because block randomization was done by gender and education, separate analyses for college graduates and non-college graduates take blocking into account by adjusting for respondent gender. In addition to individual analyses for each situation, I assess overall support for concerted cultivation versus natural growth by pooling across situations. In pooled models, I include parenting situation fixed effects to adjust for baseline differences in ratings levels across situations.

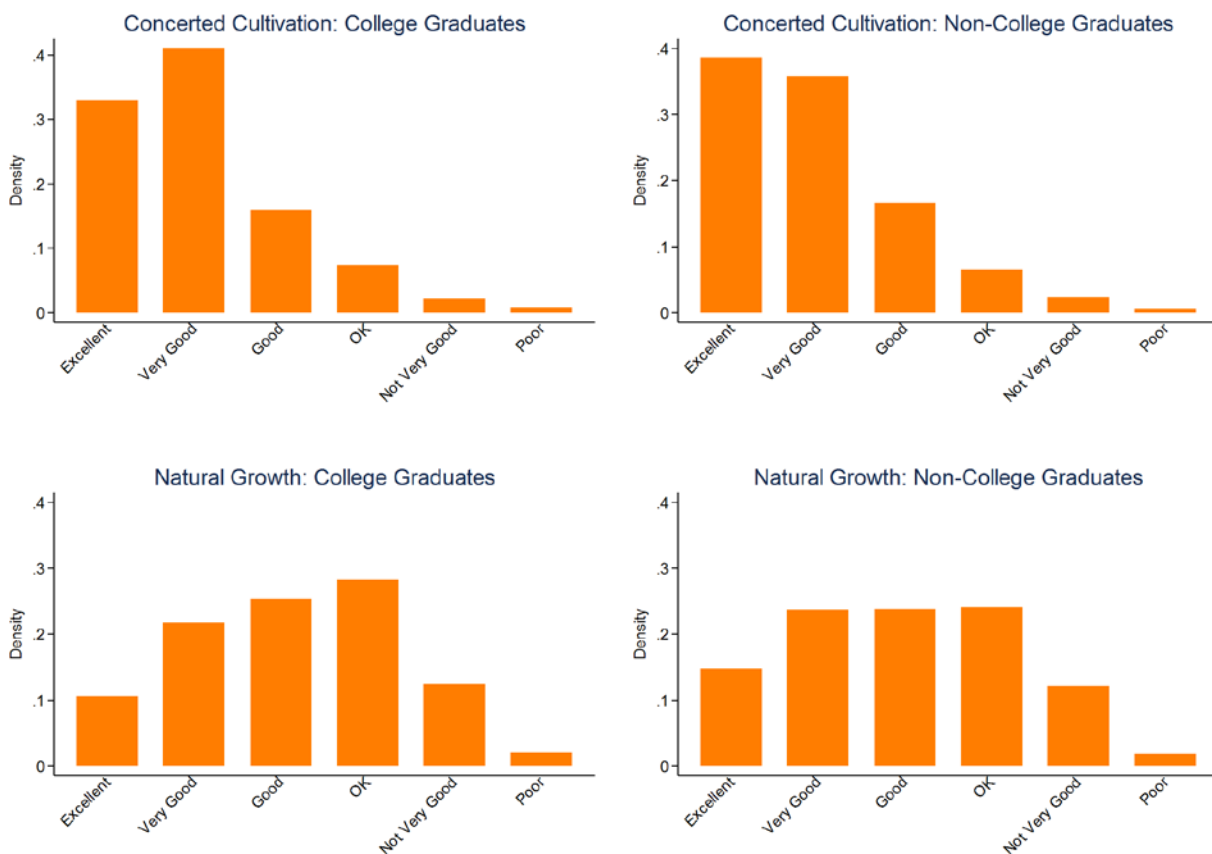
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<sup>8</sup> For race and ethnicity, I include indicators for non-Hispanic black, Hispanic, Asian, and other race and ethnicity, with non-Hispanic white respondents serving as the reference category.

## Results: Parenting Behavior Evaluations

Figure 1.1 shows the distribution of ratings by parenting approach and respondent education, pooling across all 6 situations. Overall, for college graduates and non-college graduates, concerted cultivation behaviors are evaluated much more positively than natural growth behaviors. The vast majority of college graduates (75 percent) and non-college graduates (75 percent) rate concerted cultivation as either “very good” or “excellent.” Additionally, a  $\chi^2$  test fails to reject the null hypothesis that concerted cultivation evaluations are independent of education. Thus college graduates and non-college graduates clearly both strongly approve of concerted cultivation.

Figure 1.1: Parenting Evaluation Distributions by Parenting Style and Education  
College Graduates and Non-College Graduates

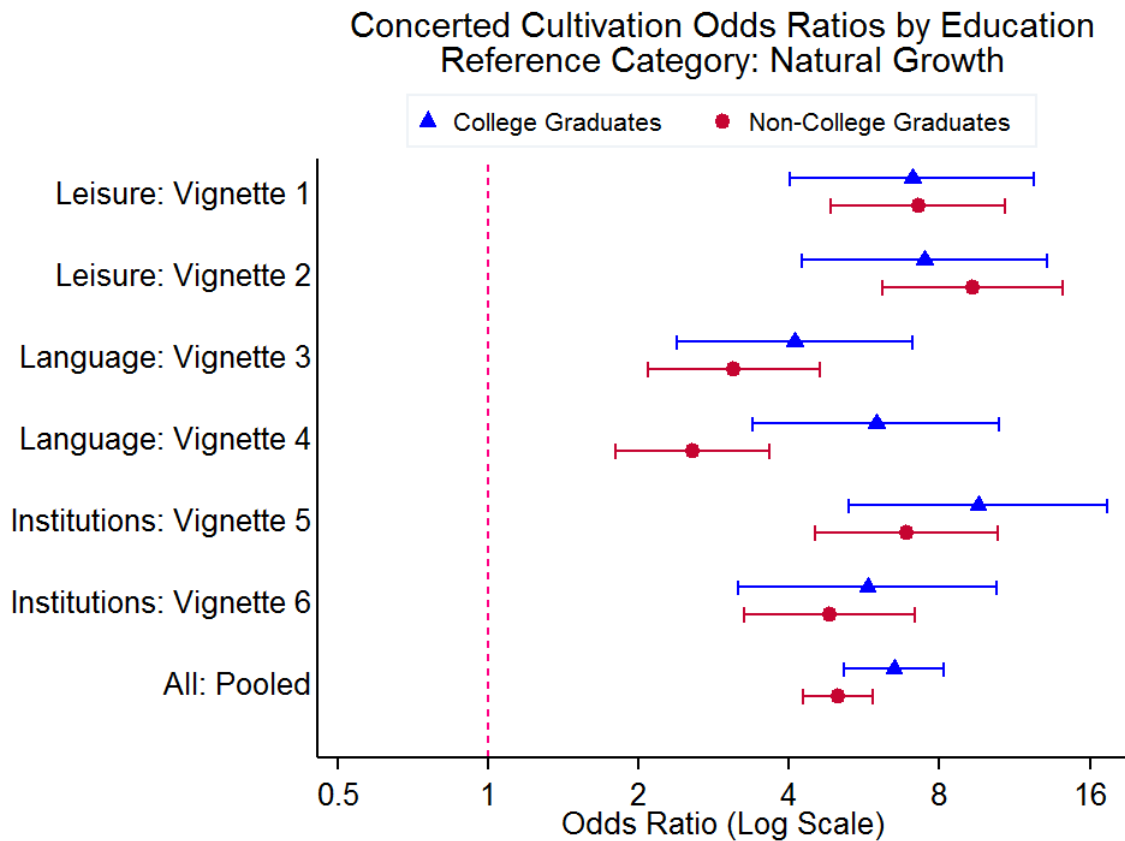


In contrast to concerted cultivation, only 32 percent of college graduates, and 38 percent of non-college graduates, view natural growth as either “very good” or “excellent.” A  $\chi^2$  test fails to reject the null hypothesis that natural growth evaluations are independent of education. These results do not support the claim that more- and less-educated parents have fundamentally different views of what good parenting means. Instead, the results align with the predictions of the constraint perspective, which posits that more- and less-educated parents both view concerted cultivation significantly more positively than natural growth.

While these findings provide strong evidence that more- and less-educated respondents view concerted cultivation much more positively than natural growth, overall evaluation patterns may conceal differences in respondents’ attitudes in specific parenting situations or domains. Next, I examine views of college graduates and non-college graduates separately in each of the 6 situations in the study. These analyses assess the coherence of parenting attitudes.

Figure 1.2 presents odds ratios for concerted cultivation behaviors for each of the 6 situations and pooling across them. Similar to the descriptive results presented in Figure 1.1, for each of the 6 situations, both college graduates and non-college graduates evaluate concerted cultivation much more positively than natural growth. Although the size of the estimates varies across situations, the odds ratios are all large in magnitude and statistically significant. Across all parenting domains and situations, these findings are consistent with the predictions of the constraint perspective.

Figure 1.2: Concerted Cultivation Odds Ratios by Education  
Models Run Separately by Vignette and Pooled across Vignettes  
College Graduates vs. Non-College Graduates



Among college graduates, odds ratios indicating more positive evaluations of concerted cultivation relative to natural growth range from a low of approximately 4 to a high of more than 9 in individual situations. Pooling across situations among college graduates, the odds of placing a concerted cultivation relative to a natural growth behavior in a higher versus a lower ratings category are approximately 6.5 times as high. These tests demonstrate a clear and consistent pattern that college graduates evaluate more intensive concerted cultivation behaviors more positively than the less intensive natural growth behaviors.

For non-college graduates, there appears to be more variation across situations, but concerted cultivation again is consistently rated more positively than natural growth across all 6

situations. Odds ratios indicating a preference for concerted cultivation range from a low of around 2.5 to a high of more than 9.5. Pooling across situations, the odds of non-college graduates placing a behavior in a higher versus a lower ratings category are more than 5 times as high when the behavior is concerted cultivation compared to when it is natural growth. In sum, across situations both college graduates and non-college graduates consistently evaluate concerted cultivation more positively than natural growth.

Results are not sensitive to the way education is measured in this study, and findings are robust to other indicators of socioeconomic status. Restricting the sample to respondents with a high school degree or less, low-income respondents (< 200 % of the federal poverty level), or poor respondents (< 100 % of the federal poverty level) demonstrates the same consistent pattern across all six situations for concerted cultivation relative to natural growth (see Tables 1.5 – 1.7). In sum, while the cultural perspective predicts that respondents of lower socioeconomic status will view natural growth parenting more favorably than concerted cultivation, respondents with lower levels of education and income consistently rate concerted cultivation more positively.

Table 1.5: High School Graduates or Less Sample  
Ordered Logit Models: Concerted Cultivation Parameter Estimates

| Vignette | Concerted Cultivation | N   |
|----------|-----------------------|-----|
| 1        | 6.734 (2.16)***       | 164 |
| 2        | 18.109 (7.43)***      | 131 |
| 3        | 1.981 (0.69)*         | 126 |
| 4        | 2.194 (0.67)*         | 148 |
| 5        | 6.417 (2.21)***       | 138 |
| 6        | 3.879 (1.31)***       | 129 |
| Pooled   | 4.637 (0.63)***       | 836 |

Notes: \*\*\* p<0.001, \*\* p<0.01, \* p<0.05  
(two-tailed tests). Standard errors in  
parentheses. Natural growth parenting is the  
reference category.

Table 1.6: Low-Income Parents (< 200% of Federal Poverty Level) Sample  
Ordered Logit Models: Concerted Cultivation Parameter Estimates

| Vignette | Concerted Cultivation | N    |
|----------|-----------------------|------|
| 1        | 7.558 (1.92)***       | 264  |
| 2        | 11.603 (3.33)***      | 232  |
| 3        | 2.778 (0.72)***       | 226  |
| 4        | 2.364 (0.55)***       | 251  |
| 5        | 6.043 (1.69)***       | 205  |
| 6        | 3.981 (1.06)***       | 205  |
| Pooled   | 4.707 (0.49)***       | 1383 |

Notes: \*\*\* p<0.001, \*\* p<0.01, \* p<0.05  
(two-tailed tests). Standard errors in  
parentheses. Natural growth parenting is the  
reference category.

Table 1.7: Poor Parents (< 100% of Federal Poverty Level) Sample  
Ordered Logit Models: Concerted Cultivation Parameter Estimates

| Vignette | Concerted Cultivation | N   |
|----------|-----------------------|-----|
| 1        | 7.607 (2.59)***       | 153 |
| 2        | 17.273 (6.97)***      | 133 |
| 3        | 2.304 (0.77)*         | 135 |
| 4        | 1.983 (0.59)*         | 152 |
| 5        | 6.743 (2.53)***       | 117 |
| 6        | 2.605 (0.92)**        | 108 |
| Pooled   | 4.367 (0.60)***       | 798 |

Notes: \*\*\* p<0.001, \*\* p<0.01, \* p<0.05  
(two-tailed tests). Standard errors in  
parentheses. Natural growth parenting is the  
reference category.

## **Study Limitations and Potential Threats to Validity**

One issue in addressing this research question is social desirability bias. Perhaps less-educated respondents prefer natural growth, but simply report that they prefer concerted cultivation because it is more socially acceptable. While this is a concern, there are features of the research design that protect against this risk. Additionally, findings from prior research suggest that social desirability bias is unlikely to explain the results observed in this study.

First, if respondents were motivated to provide socially desirable responses, we would also expect to see this reflected in surveys with self-reported parenting behaviors – perhaps more strongly so since the focus in such surveys is on respondents' *own* parenting. However, studies based on analyses of nationally representative survey data consistently show large education differences in self-reported parenting behaviors (Bodovski and Farkas 2008; Cheadle 2009; Cheadle and Amato 2010; Lareau and Weininger 2008; Roksa and Potter 2011; Weininger et al. 2015). Second, although in-person interviews should be more susceptible to social desirability bias than anonymous Internet-based surveys (Kreuter, Presser, and Tourangeau 2008), Calarco's (2014) in-person interviews show that middle class and working class parents recommend different parenting strategies when presented with open-ended situations in vignettes.

There are important limitations to this study that should be addressed in future research. First, in order to maintain consistency with prior research, which largely focuses on parents of elementary school aged children, I focus on evaluations of parenting behaviors involving children between the ages of 8 to 10 years. The parenting views of college graduates and non-college graduates may differ in situations involving either younger or older children. Given the importance of early family environments in affecting children's long-term educational outcomes

(Heckman 2006), future research should make efforts to understand how parents of different social classes view good parenting when younger children are involved.

Second, because of limitations on the number of items that can be included in the survey, I can only assess parenting attitudes in 6 different situations. The consistency of attitudes across all of these situations suggests that the patterns are highly robust, but preferences for concerted cultivation versus natural growth could differ in other situations not included in this study. Lastly, I am only able to test the *attitudinal assumptions* of the cultural and constraint perspectives. Although the results are consistent with what we would expect if constraints rather than culture underlie education differences in parenting behavior, in this study I am not able to test whether altering parents' constraints – such as income or work schedules – would produce corresponding changes in their behaviors.

Third, an alternative explanation for the findings described here is that respondents' attitudes about good parenting in an abstract sense differ from their preferences for the kind of parenting they view as being best with their own children. For example, Mickelson (1990) shows that while black students express very positive abstract attitudes about education, their concrete attitudes relating to the perceived benefits of education for them specifically are less positive and more consistent with their lower levels of academic achievement. In the context of this study, it is possible then that less educated respondents view concerted cultivation positively in the abstract, but would not view it as being positive for their own children.

While possible, I believe this is unlikely to be driving the results for 2 reasons. First, the parenting behaviors in the vignettes are concrete in the sense of describing very specific behavioral responses by parents in discrete situations. Therefore, unlike abstract parenting attitudes about the importance of self-direction or conformity to external authority in children, I

measure respondents' views about specific concerted cultivation and natural growth parenting behaviors. Second, although some qualitative studies using vignettes show that high- and low-SES parents demonstrate similar approval for intensive parenting behaviors described in vignettes (Bennett et al. 2012; Chin and Phillips 2004), other studies show that parents differ by social class in their responses to vignettes in ways that align with their parenting behaviors (Calarco 2014; Lareau 2003). These latter studies suggest that attitudes about parenting described in vignettes do capture something concrete about respondents' preferences for parenting with their own children.

Finally, by describing only two parenting styles, the study is limited to assessing views about concerted cultivation and natural growth behaviors. As Hamilton (2016) notes, parenting approaches may vary within social classes, and may not fit cleanly into only two categories. Still, results from this study suggest that there is a substantial degree of consensus that concerted cultivation is preferable to natural growth among both more- and less-educated parents. Subsequent research should analyze the open-ended questions asked in this study, which do not constrain response options to only two parenting styles. These questions could not only illuminate different parenting styles besides concerted cultivation and natural growth, but they could also provide unique insights into parents' cultural toolkits (Swidler 1986).

## **Discussion and Conclusion**

50 years ago, the Coleman Report (Coleman et al. 1966) argued that families – not schools – were the primary drivers of socioeconomic inequalities in children's academic achievement. More recent research reaches a similar conclusion. Test score gaps between children from high- and low-income families are substantial when children enter kindergarten,

and they remain largely stable as children progress through school (Heckman 2011; Reardon 2011). Furthermore, gaps in children's academic achievement appear to grow more during the summer months, when family and community influences predominate compared to during the school year (Alexander, Entwisle, and Olson 2007; Downey, von Hippel, and Broh 2004; Downey and Condron 2016). Quasi-experimental studies of adoptee outcomes provide additional compelling evidence that family environments exert tremendous influence on children's academic and health outcomes, and that these effects operate primarily through parental education rather than through factors such as income or neighborhood characteristics (Sacerdote 2007). Given the strong links between parenting behaviors, socioeconomic status, and children's outcomes, scholars and policymakers emphasize differences in parenting as playing a critical role in explaining inequalities in children's outcomes (Kalil 2015; Waldfogel and Washbrook 2011).

To improve our understanding of the causes of education differences in parenting behaviors, I conducted an original survey experiment with a nationally representative sample of parents. The study comprehensively tested the attitudinal assumptions of cultural and constraint explanations of education differences in parenting behavior. I evaluated whether attitudes about “good” parenting differ by education across 6 different situations using an experimental design.

The attitudes of more- and less-educated parents strongly support the predictions of the constraint perspective. Comparing evaluations of concerted cultivation and natural growth behaviors, I find that both college graduates and non-college graduates view concerted cultivation significantly more positively than natural growth. These differences are very large in magnitude across all 6 situations. Because respondents are randomly assigned to parenting situations and descriptions of either concerted cultivation or natural growth behaviors, the design

provides a clear test of college graduates' and non-college graduates' relative preferences for each parenting style.

While the distinction between culture and constraints has been the focus of theories of social class differences in parenting behaviors (Sherman and Harris 2012), the distinction may not be straightforward. Early research on social class and parental values questioned this distinction by arguing that occupational structure was a cause of social class differences in parental values for children, which in turn were hypothesized to affect parenting behavior (Kohn 1959a). Still, whether parenting attitudes are hypothesized to arise from increasing competition in college admissions (Ramey and Ramey 2009), economic uncertainty (Lareau 2003), occupational experiences (Kohn 1959a), or status positions associated with education and occupation (Calarco 2014), the cultural and constraint perspectives diverge substantially in their predictions about how attitudes vary by education.

Empirical tests of the foundations of theories of cultural and constraint explanations have important consequences for our understanding of the process through which inequalities arise. While cultural and constraint theorists both recognize that parenting behaviors differ substantially by education, prior research has been unable to provide definitive evidence supporting the assumptions of either perspective because of data limitations. I argue that rather than possessing distinctive cultural conceptions of good parenting, socioeconomically advantaged and disadvantaged parents conceive of good parenting very similarly. However, less educated parents possess fewer resources and face more stressors in their lives, making it difficult to enact the kind of parenting they view most positively. While concerted cultivation may have been a normative standard restricted to middle class parents in the past, results from

this study suggest that intensive parenting norms have diffused much more broadly throughout the population.

An important question for future research is *how* resource constraints limit the ability of economically disadvantaged families to engage in more intensive parenting practices. Recent randomized interventions that have attempted to address the behavioral barriers to parental investments in children provide some potentially important insights. One intervention used three behavioral tools (text message reminders, goal-setting, and social rewards), significantly increasing the amount of time parents spent reading with their children (Mayer et al. 2015). Importantly, the large effects of the intervention were not accounted for by the information component of the program, and surveys showed that treatment and control group parents held similar attitudes about parents' responsibility to read with children (Mayer et al. 2015). These findings are consistent with the idea that providing information may not be an effective strategy to supporting at least some types of parental investments in children.

Another recent intervention used frequent text message reminders to target the behavioral barriers to parental involvement in home literacy activities among families with preschool-aged children (York and Loeb 2014). Because the program combined multiple components, the precise mechanisms of the intervention are unknown. But the program had positive effects on both parental home literacy activities and school involvement, and translated into significant literacy gains for children. Because low and unstable family incomes may increase stress, limit attention, and therefore reduce parental engagement (Gennetian and Shafir 2015), one interpretation for the effects of the intervention is that text messages may provide support by reducing distractions and reminding parents to engage with children.

Findings from these recent interventions, combined with the results of the survey experiment described here, suggest that differences in views about good parenting are unlikely to account for why disadvantaged parents engage in less intensive parenting practices. Instead, an alternative explanation is that disadvantaged parents face more stressors and experience greater cognitive and emotional demands on their attention, making it challenging to engage and invest more in children (Gennetian and Shafir 2015). Interventions premised on the idea that economically disadvantaged parents have different notions of what good parenting means are unlikely to be effective at supporting beneficial parenting practices. Different assumptions about the causes of differences in parenting behaviors have important consequences not only for theory, but also for the design and efficacy of parenting interventions.

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## Appendix 1A: Stimuli and Experimental Manipulations

### Directions to Respondents

We're interested in how people think about what it means to be a good parent.

We'll describe some parenting situations on the pages that follow. Each description involves a **parent with a child between the ages of 8 and 10**. There will be 2 situations.

For the first situation, we'll ask you to describe how you would advise the parent to respond in the situation.

For the second situation, we'll describe how a parent behaved, and will ask you what you think of that behavior and why. Please read each description carefully and be as thorough as possible in your responses.

All records from this task will be kept completely confidential. Your responses will be kept anonymous.

Thank you for your participation. Your answers are extremely important to us.

# Vignettes by Parenting Approach and Domain Word Count in Parentheses

Many of the vignettes are adapted from descriptions and examples provided in Lareau's (2003) *Unequal Childhoods*. Vignette 6 is adapted from Calarco (2014). Vignettes presented include sample parent names and sample child gender manipulations. Vignette parent gender is a between-subject manipulation. For each respondent, child gender is randomly assigned for each vignette. The name each vignette is associated with is randomized, and the same pool of names is used for concerted cultivation and natural growth vignettes.

## Vignette 1: Parents' Role in Facilitating Children's Activities

| Vignette Situation 1                                                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------|
| Summer has ended, and the school year has just started again. Michael's daughter complains that she's been feeling bored after school. (21) |

| Concerted Cultivation (CC) Response                                                                                                                          | Natural Growth (NG) Response                                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Michael says: "How about we look into different activities for you to do after school? What about signing up for a sports team or doing music lessons?" (27) | Michael says: "How about you go outside and play with your friends? You can go play as long as you're being careful and are home before dinner." (27) |

## Vignette 2: Parents' Involvement in Children's Informal Play

| Vignette Situation 2                                                                                                                     |
|------------------------------------------------------------------------------------------------------------------------------------------|
| While Kim is busy getting things ready for her son's first day of school tomorrow, her son asks if she will draw pictures with him. (25) |

| Concerted Cultivation Response                                                                                       | Natural Growth Response                                                                                                               |
|----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Kim sits down to draw with her son. Then Kim says: "You're so creative! Should we sign you up for art lessons?" (22) | Kim tells her son she's busy right now. Then Kim says: "How about you work on some drawings and I'll try to look at them later?" (26) |

## Vignette 3: Parents' Role in Children's Verbal Skill Development

| Vignette Situation 3                                                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------|
| While Brandon and his son are eating dinner, Brandon's son says excitedly: "Guess what? I just saw a cool TV show about sea creatures!" (24) |

| Concerted Cultivation Response                                                                                                                           | Natural Growth Response                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Brandon asks his son what he likes so much about the show. Then Brandon asks his son to explain what he learned about sea creatures in the episode. (28) | Brandon listens quietly while his son says how much he likes the show. Then Brandon says he also liked sea creatures when he was a kid. (26) |

Vignette 4: Parents' Role in Children's Verbal Interaction Skills with Adults

| Vignette Situation 4                                                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| It's late on a school night, and Angela repeatedly tells her daughter it's bedtime. Angela's daughter yells: "I hate your rules! They're so unfair!" (24) |

| Concerted Cultivation Response                                                                                                          | Natural Growth Response                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Angela says: "We can talk about why you think the rules are unfair, but first we need to have a conversation about your behavior." (24) | Angela says: "A rule is a rule whether you like it or not. We're not having a conversation about this." (20) |

Vignette 5: Parents' Teaching Children Interactions Styles in Institutions

| Vignette Situation 5                                                                                                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------|
| When David's son is diagnosed with asthma, the doctor says that medication might help. David's son says: "I don't want to take medicine." (23) |

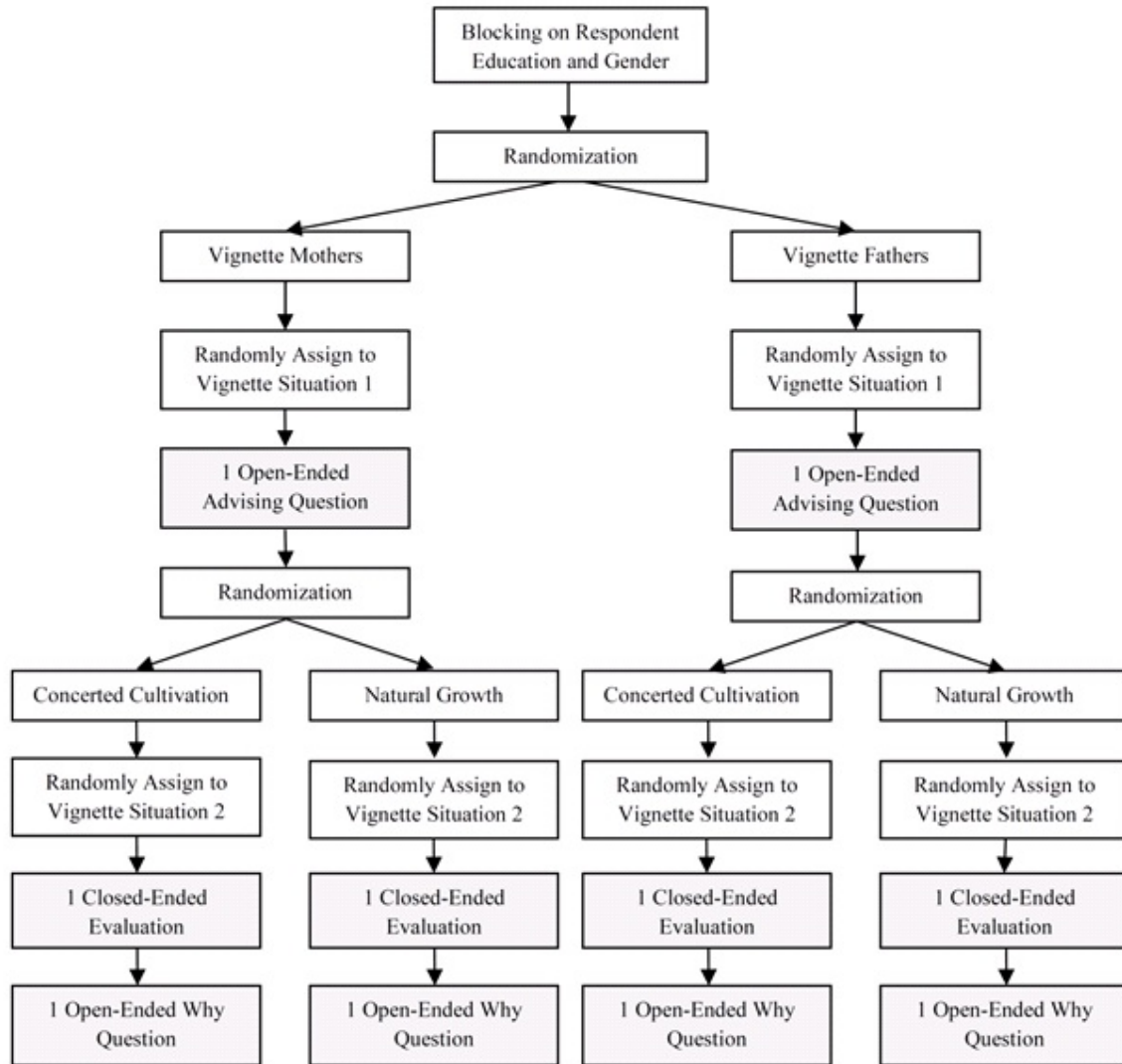
| Concerted Cultivation Response                                                                                                                | Natural Growth Response                                                                                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| David says: "Let's talk about the medicine with the doctor. You can ask any questions you have and learn how the medicine can help you." (25) | David says: "Well you're going to have to take it anyway. You need to listen to what the doctor says and take the medicine." (24) |

Vignette 6: Parents' Willingness to Intervene on Children's Behalf

| Vignette Situation 6                                                                                 |
|------------------------------------------------------------------------------------------------------|
| Alicia's daughter comes home from school one day and says she is often bored in her math class. (18) |

| Concerted Cultivation Response                                                                                              | Natural Growth Response                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Alicia says: "Let's talk to your teacher to see if you can get additional work or be switched to a harder math class." (23) | Alicia says: "You need to try to stay focused and do the work you're assigned. Your teacher knows what's best for you." (22) |

Figure 1A1: Randomization and Survey Flow



*Note:* Randomization occurs within education (college graduate vs. not) and gender (male vs. female) blocks. There are 6 situations, but each respondent only reads 2 vignette situations. For the first situation, I randomly assign each respondent to 1 of the 6 vignette situations. For the second vignette situation, I randomly select a vignette from a different parenting domain. For example, if the first vignette situation involves language use, the second vignette would be randomly selected from either the organization of children's leisure or interactions with institutions. This minimizes potential order effects. After a respondent is randomly assigned to a specific vignette, child gender is randomly assigned.

Table 1A1: Experimental Manipulations of Parent Gender  
Male and Female First Names

| Male Names | Female Names |
|------------|--------------|
| Michael    | Michelle     |
| Kevin      | Kim          |
| Brandon    | Nicole       |
| Anthony    | Angela       |
| David      | Vanessa      |
| Russell    | Alicia       |

*Note:* Within each gender of parent condition, the order in which names appear, and the vignette each name is associated with, are randomly varied.

## Appendix 1B

Table 1B1: Content Validity Pretest: Amazon Mechanical Turk Parent Sample (N = 30)

*Respondents were presented with either concerted cultivation (CC) vignettes or natural growth (NG) vignettes. Respondents read a series of statements about the parent in each vignette. Respondents could agree, disagree, or state there was not enough information to say based on the description. The values in each cell show the percent of respondents who agreed with each statement by parenting approach. Differences between values for concerted cultivation and natural growth vignettes for all statements are statistically significant at the  $p < 0.001$  level.*

| Vignette | Statement                                                                              | CC  | NG  |
|----------|----------------------------------------------------------------------------------------|-----|-----|
| 1        | The parent encourages the child to spend time playing with friends.                    | 8   | 100 |
|          | The parent suggests that the child do extracurricular sports and music activities.     | 100 | 31  |
|          | The parent sets boundaries and lets the child play with friends.                       | 17  | 88  |
|          | The parent makes an effort to help the child develop athletic and artistic talents.    | 92  | 44  |
| 2        | The parent makes time to draw with the child, even when busy.                          | 82  | 13  |
|          | The parent declines the child's request to participate directly in the activity.       | 0   | 87  |
|          | The parent suggests the child develop his/her talents through lessons.                 | 82  | 17  |
|          | The parent suggests that the child work on drawings on her/his own.                    | 12  | 91  |
| 3        | The parent asks the child to explain what he or she likes about the television show.   | 80  | 0   |
|          | The parent actively asks questions to try to get the child to share opinions.          | 100 | 12  |
|          | The parent asks the child for details when the child mentions something.               | 93  | 8   |
|          | The parent asks the child to provide reasons and to elaborate.                         | 80  | 8   |
| 4        | The parent is willing to have a conversation about the rules with the child.           | 94  | 0   |
|          | The parent tries to talk things out with the child.                                    | 82  | 9   |
|          | The parent responds to misbehavior by having discussions with the child.               | 100 | 4   |
|          | The parent demands that the child obey without having a conversation.                  | 12  | 87  |
| 5        | The parent treats the child like an important participant at the appointment.          | 100 | 26  |
|          | The parent expects the child to do what the doctor says without questions.             | 0   | 84  |
|          | The parent encourages the child to share concerns at the appointment.                  | 100 | 11  |
|          | The parent encourages the child to ask questions of the doctor.                        | 95  | 11  |
| 6        | The parent suggests getting directly involved in the child's classroom experiences.    | 88  | 9   |
|          | The parent leaves it up to the teacher to decide what's best for the child's learning. | 12  | 91  |
|          | The parent tries to advocate for the child by suggesting contacting the teacher.       | 88  | 9   |
|          | The parent recommends talking to the teacher to address the child's boredom.           | 100 | 0   |

Table 1B2: Distribution of Birth Cohort Decades by Gender  
American Community Survey (2013)

| Birth Cohort Decade | % Distribution |         |
|---------------------|----------------|---------|
|                     | Mothers        | Fathers |
| 1950                | 3.9            | 8.3     |
| 1960                | 25.8           | 32.7    |
| 1970                | 43.1           | 41.6    |
| 1980                | 25.1           | 16.8    |
| 1990                | 2.2            | 0.8     |

## Chapter 2

### **Intensive Mothering or Intensive Parenting? How Gender Shapes Parenting Attitudes<sup>9</sup>**

Chapter Summary: Women's disproportionate responsibility for parenting is one of the primary explanations offered for the persistence of the gender wage gap. While gender differences in parenting are well-documented, what causes them is less clear. Cultural explanations argue that social norms cause gender differences in behavior – either through cultural expectations of intensive mothering or through different parenting preferences held by men and women. However, studies testing the assumptions of these explanations have produced conflicting results. Using data from an original vignette survey experiment conducted with a nationally representative sample of parents, this study examines attitudes related to mothers' and fathers' parenting. Results demonstrate that parents hold gender-neutral views about good parenting: they expect both mothers and fathers to perform intensive parenting behaviors, and they penalize both mothers and fathers when they deviate from this ideal. Additionally, male and female respondents have very similar views. These norms of intensive mothering *and* fathering imply that different cultural expectations of mothers and fathers are unlikely to be the primary cause of differences in the types of parenting behaviors mothers and fathers perform.

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<sup>9</sup> A version of this chapter was presented at the 2016 Annual Meeting of the Population Association of America in Washington D.C.

## Introduction

The convergence of the roles of men and women in the labor market and in the family is one of the most dramatic social changes to occur in the United States in the past century (Goldin 2014). The gender gap in labor force participation rates, hours of paid work, and earnings have all narrowed substantially (Goldin 2006). But in spite of progress toward gender equality in the labor market, the gender wage gap persists even among recent birth cohorts (Blau and Kahn 2016). Although these inequalities are relatively small at labor market entry, they increase dramatically as men and women transition to parenthood (Goldin 2014). Parenthood thus exacerbates gender inequality by negatively impacting women's – but not men's – labor supply and wages (Cha 2010; Killewald 2013; Waldfogel 1997).

Men and women's parenting responsibilities remain unequal. While men have increased the amount of time they spend with children since the 1960s (McLanahan 2004; Sayer, Bianchi, and Robinson 2004), men continue to spend only about half as much time as women (Raley, Bianchi, and Wang 2012; Sayer et al. 2004). Mothers also appear to be much more involved in facilitating children's leisure activities than fathers (Lareau and Weininger 2008). While women continue to assume a much greater share of parenting responsibilities than men, the majority of both mothers and fathers view themselves as either “very good” or “excellent” parents (Parker and Wang 2013).

These gender differences in parenting are hypothesized to have important consequences in the labor market. Women's disproportionate responsibility for parenting is one of the primary explanations offered for the motherhood wage penalty and the persistence of the gender wage gap (Becker 1985; Blau and Kahn 2016; England 2005; Hochschild 1989). Because caring for children is energy intensive work, and mothers are most often the primary parent within

heterosexual couples, Becker (1985) posits that parenthood has two effects: (1) it makes women less productive than men at work and (2) it leads women to choose jobs that pay less but are more compatible with family demands.<sup>10</sup> Gender differences in parenting are also hypothesized to underlie discrimination against mothers – but not fathers – because of the perceived incompatibility between the time commitments required to be a good mother and those required to be an “ideal worker” (Correll, Benard, and Paik 2007; Turco 2010). Because gendered stereotypes about parenthood are hypothesized to disadvantage mothers more than fathers in the labor market, the glass ceiling is said to be caused in part by the “maternal wall” (Williams 2001).

While gender differences in parenting are well-documented, what causes them is less clear. Understanding the source of these differences is important for theories of how and why parenthood contributes to gender inequality both at home and in the workplace. One common explanation for gender differences in parenting relates to cultural expectations of mothers’ and fathers’ parenting. While direct parental involvement is not viewed as an essential element of the cultural model of good fatherhood (Townsend 2002), women are hypothesized to face cultural expectations of “intensive mothering” (Hays 1996). Cultural schemas prescribing that women devote themselves to caring for children are hypothesized to be cognitively and emotionally powerful forces (Blair-Loy 2001; Stone 2007). This perspective implies different attitudes about mothers’ and fathers’ parenting.

Although this cultural perspective assumes that parents have different expectations for mothers’ and fathers’ parenting, empirical research has produced conflicting evidence. Recent

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<sup>10</sup> Becker (1985:S43) states: “The earnings of women are adversely affected by household responsibilities even when they want to participate in the labor force as many hours as men, because they become tired, must stay home to tend to sick children or other emergencies, and are less able to work odd hours or take jobs requiring much travel.”

studies suggest that gender egalitarian ideals of shared parenting and paid work have become widespread (Gerson 2010; Jacobs and Gerson 2016; Pedulla and Thébaud 2015). Expectations of active involvement by both mothers and fathers do not appear to be limited to middle class parents, but extend also to low-income parents (Edin and Nelson 2013; Waller 2010). These recent studies contend that individuals hold *similar* views about mothers' and fathers' parenting, arguing that constraints such as the gender wage gap lead couples to fall back on traditional gender specialization in spite of ideals of equal involvement in parenting and paid work.

Using data from an original factorial vignette survey experiment conducted with a large, nationally representative sample of parents, I address a question that is fundamental to theories of the causes of gender differences in parenting behaviors: Do parents have different evaluation standards for what constitutes “good” parenting for mothers and fathers? In addition, I examine whether male and female respondents have different views about parenting.

These questions have important consequences for our understanding of the mechanisms underlying gender differences in parenting. Prior studies have been unable to definitively address these questions because of data limitations, including the use of small, non-random samples, the absence of comparisons of attitudes about mothers and fathers, and a focus on more general or abstract attitudes about employment or the division of labor. The experimental design in this study provides a clear, causal test of whether, and if so, under what conditions, gender affects evaluations of different types of parenting behaviors. The research design covers multiple parenting situations and behaviors, and enables me to describe prevailing cultural norms about the meaning of good mothering and good fathering among parents in the United States.

## **Theory and Prior Research: The Cultural Perspective**

A key premise of the cultural perspective is the claim that mothers and fathers face different standards that define what it means to be a “good” parent (Hays 1996; Townsend 2002). Mothers are hypothesized to take a more active parental role than fathers, in part, because cultural norms anchor the meaning of “good” parenting to significantly greater involvement from mothers.

What social psychological processes could produce different standards for mothers’ and fathers’ parenting? Two distinct but related mechanisms are hypothesized to produce different evaluation standards: the shifting standards stereotype model and the backlash model of stereotype maintenance. Both mechanisms are rooted in widespread beliefs about how status groups – in this case, men and women – either do behave (descriptive stereotypes) or should behave (prescriptive stereotypes) as parents.

In the shifting standards model, stereotypes act as a background context in which to evaluate an individual’s performance compared to the performance of a reference group on stereotype-relevant dimensions. Lab experiments with undergraduate students provide evidence that gender stereotypes produce different standards related to mothers’ and fathers’ parenting. Kobrynowicz and Biernat (1997), for example, show that respondents describe “very good” mothers as engaging in certain parenting behaviors more often than “very good” fathers. Similarly, after reading short descriptions of either a stay-at-home or an employed mother or father, respondents estimate that mothers engage in more parenting behaviors than fathers in each employment situation (Bridges, Etaugh, and Barnes-Farrell 2002).

A second social psychological mechanism that could produce different evaluations of mothers and fathers for the same behaviors involves “backlash effects” for counterstereotypical

behavior. When women do intensive mothering, they are behaving in ways consistent with stereotypes. But if women violate normative expectations by *not* engaging in intensive mothering, evaluators should penalize them especially harshly (Rudman and Fairchild 2004). If intensive parenting behaviors are not normative for fathers, they too may be penalized for violating prescriptive stereotypes in theory. However, there is also evidence that the range of acceptable parenting behaviors is significantly wider for men than for women (Collett, Vercel, and Boykin 2015; Gerson 1993).

While lab experiments provide causal evidence of the social psychological mechanisms that could lead to different evaluation standards for mothers and fathers, undergraduate students are not the theoretically-relevant population to consider. Qualitative studies, in contrast, provide evidence suggesting that the meaning of good mothering may differ from that of good fathering among samples of actual parents.

Interviews with mothers suggest that mothers face cultural expectations of intensive parenting. Hays (1996:8) describes a coherent “ideology of intensive mothering”, a prescriptive parenting model that is “child-centered, expert-guided, emotionally absorbing, labor intensive, and financially expensive.” In Blair-Loy’s (2001) study of female marketing executives, she argues that cultural schemas prescribing maternal devotion to children are cognitively, emotionally, and normatively powerful forces in women’s lives. Defining devotion schemas as “gripping cultural models that orient us toward where we devote our time, energy, and passion,” Blair-Loy (2001:689) identifies the family devotion schema as one that places primary responsibility for childrearing on women and prescribes a model of intensive motherhood. While these studies do not speak to what is expected of fathers, they suggest that there are strong expectations that women engage in especially time and labor intensive parenting behaviors.

Qualitative interviews with men imply that fathers either face lower expectations of parental involvement than mothers, or that men hold different parenting preferences themselves. Townsend's (2002) interviews with men who graduated high school in the early 1970s identified material provision as the most important element of the cultural model of fatherhood. Townsend (2002:104) argues that men and women are subject to different evaluation standards: "Men still see being involved in the daily routines of their children as optional. They may be involved, but this is not constitutive of their fatherhood in the way that such involvement is constitutive of motherhood." Interviews with physician fathers suggest that they engage in different types of parenting behaviors than mothers. Physician fathers view involvement in "public" fatherhood through attending events such as children's sports games as an important part of fatherhood, but still expect their spouses to take responsibility for the daily care of children (Shows and Gerstel 2009). Collett et al.'s (2015) analysis of qualitative interviews with fathers suggests that the standards of good fathering are both more variable and less specific than the standards of good mothering. This lack of specificity in the standards of "new fatherhood" allows men to be relatively uninvolved without experiencing a discrepancy between their role-relevant behavior and their identity as fathers.

Providing a more direct comparison of attitudes about mothers and fathers in the same study, Deutsch and Saxon (1998) analyzed interviews of mothers and fathers in dual-earner couples for themes related to praise and criticism received by others. Mothers reported receiving more criticism than fathers for too little involvement at home, while fathers reported receiving more praise than mothers for parental involvement. Together, findings from these qualitative studies with parents support the claim that baseline evaluation standards for "good" parenting may be higher for mothers than for fathers.

While these preceding studies suggest different standards for mothers and fathers, recent qualitative and experimental studies suggest the emergence of egalitarian norms prescribing that fathers should be just as involved as mothers. Gerson's (2010) qualitative study of young adults showed that the vast majority of men and women expressed ideals of wanting to share paid work and parenting equally with a partner. Nationally representative data demonstrate that most young men and women share this ideal (Pedulla and Thébaud 2015). Recent research also shows similar support for mothers' and fathers' employment (Jacobs and Gerson 2016). Although these studies do not focus on parenting specifically, they provide evidence of gender egalitarian norms related to how mothers and fathers spend their time.

Qualitative studies focusing on the meaning of fatherhood indicate that norms about father involvement may have evolved. While Townsend (2002) argued that men and women face different parenting standards, his interviews with men from cohorts born in the 1950s suggested that cultural expectations of fathers were in the process of changing. Coltrane (1997) similarly described emerging ideals by fathers of direct involvement as caregivers. Recent research with low-income or working class fathers describes changing cultural expectations associated with "new fatherhood." "Being there" and emotional involvement appear to be increasingly important in defining to what it means to be a good father (Edin and Nelson 2013; Waller 2010). Additionally, qualitative interviews with working class EMT fathers suggest that they view being involved in both the public and the routine tasks of fatherhood as important (Shows and Gerstel 2009). To summarize prior qualitative and experimental studies, evidence of cultural norms about parenting is divided between studies documenting higher evaluation standards for mothers than for fathers, and those finding gender egalitarian expectations of involvement for both mothers and fathers.

## **Study Importance and Contributions**

This study attempts to advance our understanding of how and when gender affects parenting attitudes using an original factorial vignette survey experiment conducted with a large, nationally representative sample of parents. Different findings related to gender and parenting attitudes are important because they imply different mechanisms at work in sustaining gender inequality, and consequently different approaches to promoting equality. Previous studies provide important insights and generate clear, testable hypotheses regarding how mothers and fathers are evaluated for more- and less-intensive parenting behaviors. However, prior research has produced conflicting empirical evidence and suffers from important limitations.

First, while prior qualitative studies directly measure parents' views about mothers' or fathers' parenting (Hays 1996; Townsend 2002; Edin and Nelson 2013; Waller 2010), studies based on small, non-random samples are not designed to make descriptive inferences about patterns in the population. Additionally, these studies do not directly compare attitudes about mothers' and fathers' parenting. As Jacobs and Gerson (2016) show, not having a direct comparison of attitudes about mothers and fathers can produce misleading inferences. Second, while quantitative studies using large, nationally representative samples provide important insights, they do not examine attitudes about parenting specifically. These studies focus instead on views about mothers' and fathers' employment (Jacobs and Gerson 2016), or men and women's work and family preferences more generally (Pedulla and Thébaud 2015). Finally, while lab experiments measure attitudes about mothers' and fathers' parenting using experimental designs (Kobrynowicz and Biernat 1997; Rudman and Fairchild 2004), they rely on convenience samples of undergraduate students rather than actual parents. As a result of these

limitations, it is difficult to adjudicate between conflicting findings from prior research and to draw clear conclusions about how gender shapes parenting evaluations.

The research design in this study produces a clear experimental test of how gender affects parenting evaluations by manipulating parent gender within the context of descriptions of concrete parenting situations and behaviors. Rather than measuring views about mothers' or fathers' parenting only, I measure and directly compare views about both mothers and fathers in the same study. The use of a large, nationally representative sample of parents enables valid inferences about parenting attitudes in the population and how they vary by gender. The study also covers multiple parenting domains and situations, providing a comprehensive and robust test of the coherence of parenting evaluations.

### **Measuring How Gender Affects Parenting Attitudes**

The primary objective of the study is to assess whether respondents have different evaluation standards for mothers' and fathers' parenting. To address this question, there are at least three different possible approaches. First, we could simply ask parents directly if they have different expectations for mothers' and fathers' parenting. But explicit questions of this nature would make respondents aware of the goal of the study, which could lead them to respond in socially desirable ways that minimize gender differences (Mutz 2011). Auspurg et al. (2014), for example, show that direct questions about equal pay for men and women show less evidence of gender bias relative to vignette survey experiments.

A second approach could involve asking some respondents questions about mothers' parenting, and other respondents questions about fathers' parenting. We could then compare responses about how important it is for mothers and fathers to do certain behaviors, such as

scheduling children in extracurricular activities, eliciting children's opinions, or involving themselves in children's schooling. Although this strategy would elicit attitudes about more concrete behaviors, by explicitly asking respondents about "mothers" and "fathers," it is also susceptible to social desirability bias (Auspurg et al. 2014).

Finally, to assess whether parents have different evaluation standards for mothers' and fathers' parenting, I believe that an experimental approach that more subtly manipulates parent gender in the context of concrete descriptions of parenting situations and behaviors is ideal in this case. There are important advantages to using the experimental vignette research design used in this study. First, because the gender of the vignette parent is randomly assigned, I am able to estimate the causal effect of parent gender on evaluations. Second, by manipulating parents' first names, I signal gender in a clear but less obtrusive way than describing the parent as a "mother" or a "father." Third, by placing the parent gender signal in the context of a description of a parenting situation, parenting behavior, and a signal of child gender, I avoid drawing too much attention to any one signal (Mutz 2011). Fourth, I use a between-subject experimental design in which each respondent only evaluates the parenting of one parent. Therefore, I minimize the risk of respondents becoming aware that other respondents are evaluating parents with different characteristics. Fifth, by describing concrete rather than abstract situations and behaviors, I am able to assess whether respondents anchor the same behaviors to different types of evaluations for mothers and fathers. Finally, the factorial experimental design enables causal inferences about the impact of multiple treatments simultaneously (Auspurg and Hinz 2014).

## Hypotheses

If there are different evaluation standards for mothers' and fathers' parenting, mothers should be evaluated more negatively than fathers for both parenting styles for two reasons. First, if the standards that define what it means to be a "good" parent differ for men and women, it should be more difficult for mothers to exceed a high standard, and easier for fathers to exceed a low standard (Biernat and Kobrynowicz 1997). Second, if mothers who do non-intensive parenting violate prescriptive norms of intensive mothering, respondents should sanction them accordingly (Rudman and Fairchild 2004). Although the mechanisms differ, both social psychological processes should lead to fathers being evaluated more positively than mothers if there are different cultural norms for mothers' and fathers' parenting.

Hypothesis: Mothers will be evaluated more negatively than fathers for both intensive and non-intensive parenting behaviors

In contrast, if respondents have gender egalitarian ideals of shared parenting, we should see no differences in how mothers and fathers are evaluated. Instead, both mothers and fathers should be evaluated positively when they do intensive parenting, and penalized when they do non-intensive parenting.

Parenting attitudes may depend not only on the gender of the parent being evaluated, but also on the gender of the evaluator. Hays (1996), for example, argues that men have not internalized the same logic of intensive parenting that women have, and Townsend (2002) suggests that men view their involvement with children as being optional. Because I experimentally manipulate the gender of the parent described in the vignette and am able to examine male and female respondents' views separately, the design enables me to differentiate between multiple ways that gender may affect parenting evaluations.

## **Data: Subjects and Context**

The data used in this study come from an original survey experiment supported by a grant from Time-sharing Experiments for the Social Sciences (TESS), an NSF-funded initiative for conducting population-based survey experiments.<sup>11</sup> Data were collected from a nationally representative sample of 3,642 parents with children under 18 by the survey research company GfK. The data contain an oversample of parents below 100 percent of the federal poverty level.

This subject pool was selected for two reasons. First, because the study is motivated by the goal of understanding how parents' views about mothers' and fathers' parenting are translated into gender differences in behavior, parents are the theoretically-relevant population because they enact the parenting behavior differences we observe. Although third parties, such as grandparents or friends, may have different views about good mothering and good fathering, parents are the actors that are, of course, most proximate. Second, since the goal is to generalize to make inferences about the evaluation standards of parents in the United States, it is important that the study be conducted with a large, nationally representative sample of parents.

Subjects were eligible to participate in the study if they were existing GfK panel members who indicated on a recent survey that they were parents of children under 18 years of age. Participants were contacted by GfK via email in September 2015 based on those criteria and were invited to participate in the survey. GfK panel members are recruited through a combination of random digit dialing and address-based sampling methods. Prior to 2009, GfK panel respondents were recruited using random digit dialing. After 2009, sample recruitment has been done exclusively through address-based sampling. Panel members who do not already have a computer or Internet access are provided with both by GfK. Therefore, while the survey is

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<sup>11</sup> Data collected by Time-sharing Experiments for the Social Sciences, NSF Grant 0818839, Jeremy Freese and James Druckman, Principal Investigators.

administered online, the weighted sample is representative of the U.S. population of parents with children under 18 years of age.

The response rate for this survey was 49.3 percent, which is similar to that of other surveys fielded by GfK. Additionally, because sampling for this study is based on demographic and economic profile variables, GfK is able to identify how survey non-participation is related to these characteristics and to incorporate them into the weights used in this study. Unweighted descriptive statistics presented in Table 2.1 show that the composition of the sample is similar to that of parents in the 2013 American Community Survey (ACS).

Table 2.1: Unweighted Descriptive Statistics  
TESS (2015) and American Community Survey (2013) Data

| Variables                               | TESS        | ACS         |
|-----------------------------------------|-------------|-------------|
| <i>Educational Attainment</i>           |             |             |
| College Graduate +                      | 33.6%       | 36.2%       |
| <i>Respondent Gender</i>                |             |             |
| Female                                  | 60.6%       | 55.3%       |
| <i>Race and Ethnicity</i>               |             |             |
| Non-Hispanic White                      | 69.1%       | 65.7%       |
| Non-Hispanic Black                      | 9.7%        | 8.6%        |
| Hispanic                                | 14.3%       | 16.7%       |
| Non-Hispanic Other                      | 7.0%        | 9.1%        |
| <i>Marriage and Relationship Status</i> |             |             |
| Married                                 | 74.4%       | 80.9%       |
| <i>Employment</i>                       |             |             |
| Working                                 | 71.0%       | 77.0%       |
| Unemployed                              | 6.0%        | 4.8%        |
| Not in the Labor Force                  | 23.0%       | 18.2%       |
| <i>Household Income</i>                 |             |             |
| Low-income                              | 38.1%       | 31.6%       |
| Annual Income (thousands)               | 75.4 (59.9) | 75.0 (95.9) |
| <i>Household Composition</i>            |             |             |
| Number of Children                      | 1.8 (1.0)   | 1.9 (1.0)   |
| <i>N</i>                                | 3,642       | 576,634     |

## **Randomization Procedure**

To increase efficiency and balance across experimental conditions, block randomization was used with blocks jointly defined by respondent education (college graduate vs. less than college graduate) and gender (male vs. female). Random assignment occurred within blocks prior to survey invitation. Because there is survey non-participation among subjects invited to participate in the study, there is also random imbalance across treatment conditions. Blocking was done in order to improve the efficiency of the estimates, and simulations conducted prior to data collection showed that blocking with substantial random non-participation outperformed simple random assignment in generating balance across experimental conditions.

In this study, I experimentally manipulate 4 factors that are theorized to influence parenting evaluations. First, because view about how parents should behave may depend on the situation, I randomly assign respondents to 1 of 6 situations. Second, within each situation, I experimentally manipulate whether respondents read an intensive or non-intensive parenting behavior specific to that situation. Together with the manipulation of the vignette parent gender, this allows me to assess how mothers and fathers are evaluated for both more- and less-intensive parenting behaviors. Finally, since researchers have hypothesized that preferences explain why parents sometimes interact differently with sons and daughters (Bertrand and Pan 2013), I also randomly assign respondents to read about a situation involving either a son or a daughter. Table 2.2 shows that random assignment was effective in producing balance between vignette mother and father conditions in parenting style, vignette child gender, and in 5 of the 6 parenting situations.

Table 2.2: Experimental Condition Balance Tests by Vignette Parent Gender  
Vignette Mothers and Vignette Fathers

| Variable               | Vignette Mother | Vignette Father | p-value |
|------------------------|-----------------|-----------------|---------|
| <i>Parenting Style</i> |                 |                 |         |
| Intensive Parenting    | 0.53            | 0.52            | 0.82    |
| <i>Child Gender</i>    |                 |                 |         |
| Vignette Daughter      | 0.49            | 0.50            | 0.70    |
| <i>Vignette</i>        |                 |                 |         |
| Vignette 1             | 0.19            | 0.17            | 0.21    |
| Vignette 2             | 0.17            | 0.17            | 0.66    |
| Vignette 3             | 0.15            | 0.18            | 0.03*   |
| Vignette 4             | 0.17            | 0.17            | 0.94    |
| Vignette 5             | 0.17            | 0.15            | 0.17    |
| Vignette 6             | 0.16            | 0.16            | 0.95    |
| N                      | 1,734           | 1,800           |         |

Notes: \*\*\*p<0.001, \*\* p<0.01, \*p<0.05 (two-tailed tests). P-values report tests of differences in proportions between vignette mothers and vignette fathers.

## Parenting Situations

I designed 6 situations involving a parent with a child between the ages of 8 and 10. I constructed situations that Lareau (2003) describes as being common to families of different social classes in her ethnographic study. To assess the coherence of parenting evaluations, the situations cover three domains described by Lareau (2003): the organization of children's leisure, language use, and interactions between families and institutions. The organization of children's leisure refers to the formal and informal activities that children participate in, along with parents' participation in those activities. Language use relates to parents' verbal interactions with children. Finally, interactions with institutions refers to how families relate to institutions such as schools or medical establishments. All of the situations and behaviors used in this study are listed in Appendix 2A.

## Parenting Style

I created descriptions of parenting behaviors within each situation to reflect more- and less-intensive parenting styles described by Lareau (2003) and Hays (1996). Descriptions of parenting styles differ in whether they emphasize social class or gender divisions, but they align closely in how they characterize intensive parenting (Stone 2007). Focusing on social class, Lareau (2003) argues that middle class parents prefer a more intensive *concerted cultivation* parenting style, whereas poor and working class parents prefer a less intensive *accomplishment of natural growth* parenting style. Focusing on gender rather than social class, Hays' (1996:8) conceptualization of "intensive mothering" describes a parenting style that is "child-centered, expert-guided, emotionally absorbing, labor intensive, and financially expensive," a description very similar to Lareau's (2003) concerted cultivation parenting style.

In Lareau's (2003) description of concerted cultivation, parents facilitate children's participation in organized extracurricular activities and participate in informal activities with children at home. Parents emphasize reasoning and negotiation with children and encourage children to express themselves verbally. Within institutional settings, parents closely monitor children's lives and press institutions to recognize children's individualized needs. Because concerted cultivation closely matches Hays' (1996) description of intensive mothering, I refer to vignettes reflecting this parenting style as "intensive parenting."

In the accomplishment of natural growth, parents allow children to play on their own and remain relatively uninvolved in children's activities. Parents give children clear directives with limited room for negotiation and tend to be brief and direct when speaking with children. Finally, within institutions, parents take a deferential approach and are respectful of professionals' expertise. Because this approach is less demanding than concerted cultivation, I refer to vignettes

describing this style as “non-intensive parenting.” Table 2.3 contrasts concerted cultivation (intensive parenting) and natural growth parenting (non-intensive parenting) styles across the three domains characterized by Lareau (2003).

Table 2.3: Parenting Behavior Content by Parenting Style and Domain

|                                | Intensive Parenting<br>(Concerted Cultivation) | Non-Intensive Parenting<br>(Natural Growth) |
|--------------------------------|------------------------------------------------|---------------------------------------------|
| Organization of Leisure        | Structured, More Involved                      | Unstructured, Less Involved                 |
| Language Use                   | Reasoning, Negotiation                         | Directives, No Negotiation                  |
| Interactions with Institutions | Active, Interventionist                        | Passive, Deferential                        |

To assess whether the descriptions of intensive and non-intensive parenting in the vignettes reflect the content they were designed to reflect, I conducted pretests using a different sample of parent respondents from Amazon Mechanical Turk (see Appendix 2B). The objective was to evaluate whether the descriptions of parenting behaviors (1) reflect different content, and (2) effectively capture key features of each parenting style. In the pretest, I provided respondents with descriptions of either intensive or non-intensive parenting behaviors. For each vignette, I provided respondents with a series of statements (4 statements specific to each situation) related to the content of each parenting approach. For each statement, respondents indicated whether they agreed, disagreed, or there was not enough information provided in the description to say. For all 6 of the situations, differences in the proportion agreeing with each statement for intensive and non-intensive parenting descriptions are large in magnitude and statistically significant at the  $p < 0.001$  level.

Vignettes were designed with attention to multiple objectives: preventing respondents’ awareness of the research goals, ensuring respondent comprehension, and providing enough context to enable meaningful responses (Mutz 2011). In addition, each parenting situation and

behavior are written with simple, descriptive language and are balanced on word count.

Descriptions of parenting behaviors were constructed to capture key features of each style.

### **Parent and Child Gender**

To signal child gender, I mention whether the child is a son or a daughter, and use gender-consistent pronouns thereafter. To manipulate parent gender, I use first names rather than explicitly describing the parent as a “mother” or “father” to provide a less obtrusive signal and to minimize the likelihood that respondents will be aware that parent gender is being manipulated in the study. As an additional measure to avoid making respondents aware that parent gender is being manipulated, each respondent is randomly assigned to evaluate a vignette about either a mother or a father – not both. To enable an assessment of whether results are sensitive to the particular name used to signal parent gender, I randomly assign respondents to 1 of 6 different names within each parent gender condition (see Appendix 2A). Parent names are randomized across situations, and the same names are used for intensive and non-intensive parenting behavior descriptions.

To ensure that parent names effectively signal gender without manipulating extraneous factors that could also influence parenting evaluations, such as race and ethnicity or social class, I pretested names using a different sample of parent respondents from Amazon Mechanical Turk. The sample of names included in the pretest was selected from the Social Security Administration list of the 200 most popular male and female names from birth cohorts represented among parents with children under 18 in the 2013 American Community Survey (ACS): 1960s, 1970s, and 1980s. These cohorts represent more than 90 percent of parents with children under 18 years of age based on analyses from 2013 ACS (see Appendix 2B). After

pretesting, I selected first names that were difficult for respondents to categorize by race and ethnicity and social class, but which were unambiguously classified as male or female. Pretests show that the parent names selected for the study clearly signal gender.

## **Outcome Measure**

To capture how parents evaluate specific parenting behaviors described in vignettes, respondents are asked to place the parent's behavior on an ordinal scale:

What do you think of [name]'s parenting in this situation? Would you say it is excellent, very good, good, OK, not very good, or poor?

This measure is intended to capture respondents' level of approval of specific parenting behaviors in each situation. Comparison of evaluations for mothers and fathers within vignettes allow me to test whether respondents tie specific behaviors to different evaluations for mothers and fathers. The question is modeled after one used in the Fragile Families and Child Wellbeing Study that asks mothers and fathers to evaluate their own parenting.<sup>12</sup> As discussed in chapter 1, I specify "in this situation" since open-ended pretests revealed that some respondents were reluctant to provide parenting evaluations without this qualifier.

## **Statistical Analyses**

First, I examine whether the distribution of intensive and non-intensive parenting behavior evaluations are statistically independent of the gender of the parent described in the vignette using  $\chi^2$  tests. Second, I test whether the proportion of respondents evaluating each

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<sup>12</sup> The question in the Fragile Families and Child Wellbeing Study is: "Please think about how you feel about yourself as a mother to (CHILD). Would you say you are an excellent mother, a very good mother, a good mother, or not a very good mother?"

parenting behavior as either “excellent” or “very good” differs when the vignette describes a mother relative to a father.

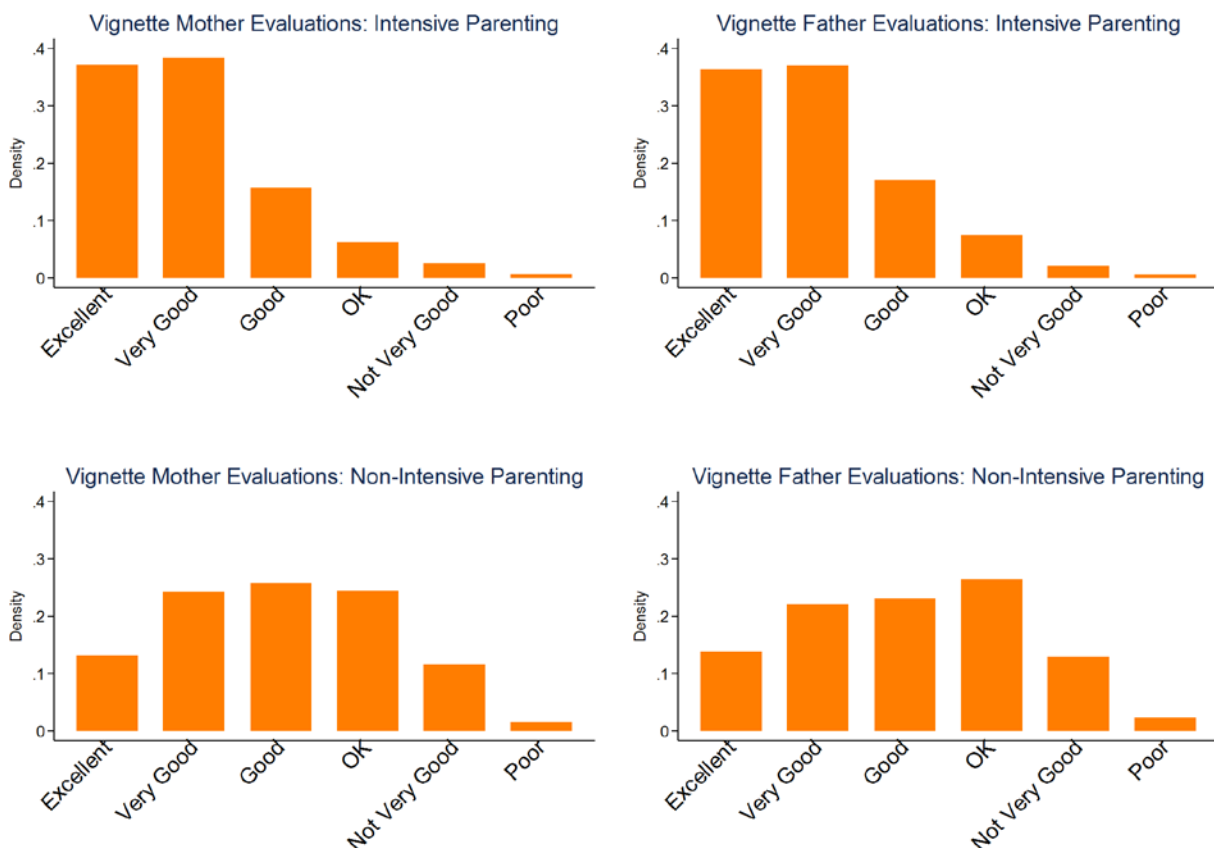
Next, to assess whether and how much the gender of the vignette parent affects respondents’ likelihood of placing a parenting behavior in a higher versus a lower evaluation category, I run ordered logit models. Because different evaluation standards for mothers and fathers may exist only in certain types of parenting situations, I run analyses separately for each parenting description as well as pooling across them. I regress evaluations on an indicator for whether the vignette describes a mother, with fathers serving as the reference category. This approach produces an estimate of the causal effect of the gender of the vignette parent on parenting evaluations for each of the 12 parenting descriptions (6 situations, 2 parenting styles). To differentiate between evaluation processes related to the gender of respondent and the gender of the parent in the vignette, I run analyses separately for male and female respondents. In these analyses, I also adjust for respondent education because of the block randomization by education and gender. Analyses also include an indicator for the gender of the child in the vignette. In pooled models, I include parenting situation fixed effects to adjust for baseline differences in ratings levels in each situation.

## **Results**

Figure 2.1 plots evaluations by parenting style (intensive and non-intensive) and the gender of the vignette parent (mothers and fathers) in the full sample. The figure combines parenting evaluations across all 6 situations. Focusing on intensive parenting descriptions, two patterns are immediately apparent. First, respondents evaluate the parenting of mothers and fathers similarly. Second, both mothers and fathers are viewed very positively when they engage

in intensive parenting behaviors. When mothers do intensive parenting, 75 percent of respondents view the parenting as either “very good” or “excellent.” A similar share of respondents – 73 percent – view fathers’ intensive parenting as either “very good” or “excellent.” These proportions are not statistically different based on a test of equality of proportions ( $p = 0.81$ ), and a  $\chi^2$  test fails to reject the null hypothesis that evaluations of intensive parenting are statistically independent of the gender of the vignette parent ( $p = 0.74$ ). In sum, respondents appear to strongly approve of both mothers and fathers who engage in intensive parenting behaviors.

Figure 2.1: Parenting Evaluation Distributions by Parenting Style and Vignette Parent Gender



Mothers and fathers who do non-intensive parenting are viewed much less positively than those who do intensive parenting. Only 37 percent of respondents view non-intensive parenting by mothers as being “very good” or “excellent.” Similarly, 36 percent of respondents rate non-intensive parenting by fathers as “very good” or “excellent.” These proportions are neither substantively nor statistically different ( $p = 0.66$ ), and a  $\chi^2$  test fails to reject the null hypothesis that the non-intensive parenting evaluations are independent of vignette parent gender ( $p = 0.37$ ).

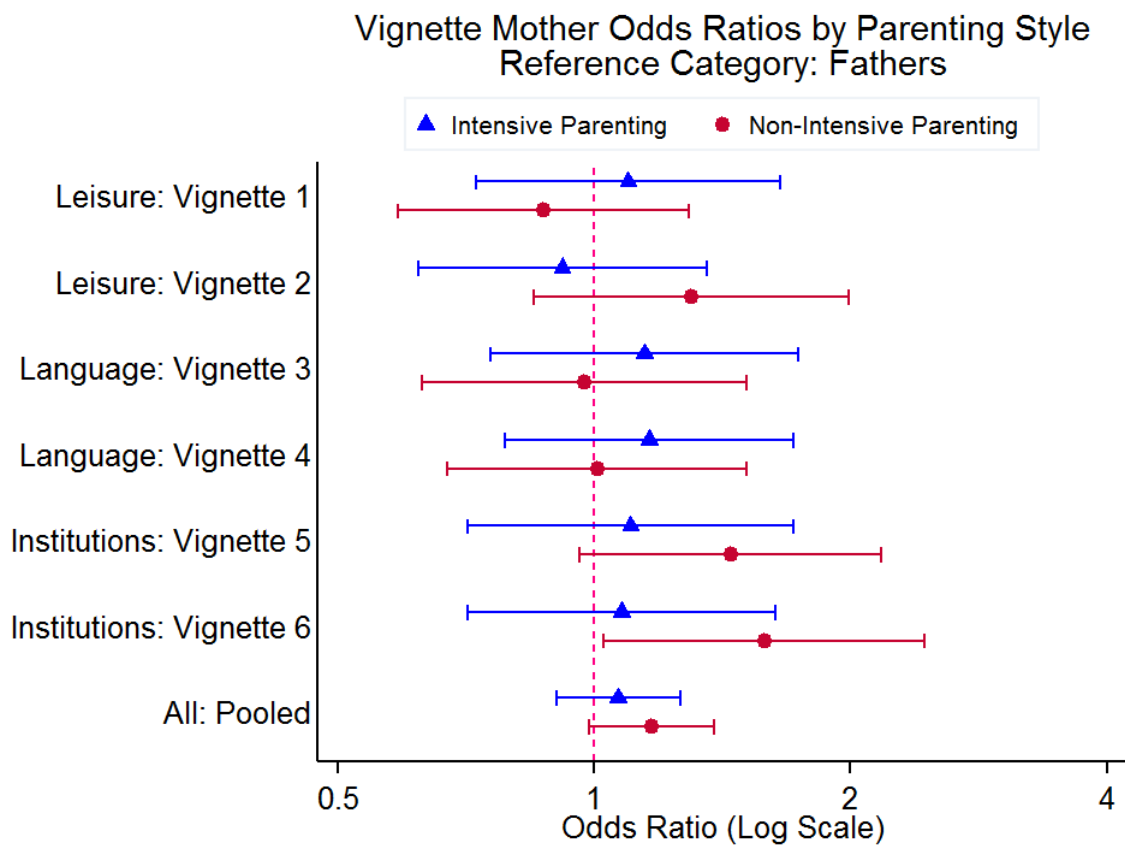
While the gender of the vignette parent does not appear to affect parenting evaluations, respondents clearly differentiate between intensive and non-intensive parenting behaviors. The proportion of respondents rating vignette mothers as either “very good” or “excellent” differs substantially when comparing intensive parenting and non-intensive parenting behaviors ( $p < 0.0001$  for vignette mothers,  $p < 0.0001$  for fathers).  $\chi^2$  tests for vignette mothers and fathers separately result in a rejection of the null hypothesis that evaluations are statistically independent of parenting style ( $p < 0.001$  for vignette mothers,  $p < 0.001$  for fathers). Thus both mothers and fathers are viewed much more positively for doing intensive parenting than non-intensive parenting.

The preceding analyses described how respondents view mothers’ and fathers’ parenting across all of the situations included in the study combined. However, pooling across situations could conceal important variation in how gender shapes evaluations of parents in certain situations, but not others. Next, I examine whether gender affects how parents are evaluated within each situation and parenting style.

Figure 2.2 presents odds ratios describing the effect of a vignette describing a mother, with fathers serving as the reference category. Odds ratios above 1 indicate that mothers are evaluated more positively than fathers for a given behavior, while odds ratios below 1 indicate

that fathers are evaluated more positively. Mothers and fathers are viewed similarly when they perform intensive parenting behaviors. For all 6 of the intensive parenting descriptions and pooling across them, none of the odds ratios are statistically different from 1. Results for non-intensive parenting display a similar pattern. For only 1 of the 6 non-intensive parenting descriptions is the odds ratio for vignette mothers statistically different from 1. For the non-intensive parenting behavior described in the sixth vignette, which relates to interactions between families and schools, mothers appear to be evaluated more positively than fathers. However, for 11 of the 12 parenting descriptions, evaluations of mothers and fathers are not statistically different. Because of the large number of parameter estimates, it is possible that the sole statistical difference is due to chance. In sum, mothers and fathers appear to be evaluated very similarly for both intensive and non-intensive parenting behaviors. These experimental estimates suggest that evaluation standards are similar for mothers and fathers for a wide range of parenting behaviors.

Figure 2.2: Odds Ratios by Vignette Parent Gender and Parenting Style  
Individual Vignettes and Pooled Models



Finally, since parenting style, vignette parent gender, and vignette child gender may jointly affect parenting attitudes, I created indicators for combinations of these variables to assess their combined effects. I regressed evaluations on indicators for combinations of parenting style, vignette parent gender, and vignette child gender. This approach produces an estimate of how these factors together affect how parents are evaluated and provides a comparison of the relative magnitude of different factors. I run models separately for each situation and pooled across all situations. The pooled models include parenting situation fixed effects.

Table 2.4 shows odds ratios for each situation, with the reference category being mothers with daughters who are described as performing non-intensive parenting. Consistent with the

previous results, the dominant factor affecting evaluations is parenting style. Intensive mothering and fathering is rated significantly more positively than non-intensive mothering and fathering across all 6 situations, regardless of whether the child involved is a son or a daughter. Figure 2.3 plots odds ratios for each variable combination pooling across all 6 situations.

Since men and women may have different views about mothers' and fathers' parenting that are obscured in the full sample, I run separate analyses for male and female respondents. Results presented in Tables 2.5 and 2.6 show that men and women have very similar parenting attitudes. Across situations, men and women both rate intensive parenting more positively than non-intensive parenting, regardless of the gender of the vignette parent or vignette child. In the full sample and separately for male and female respondents, there are clear and consistent norms that both mothers and fathers should engage in intensive parenting, and mothers and fathers who fail to do live up to those standards are penalized.

Figure 2.3: Odds Ratios by Parenting Style and Vignette Parent and Child Gender Factors  
Pooling across Parenting Situations

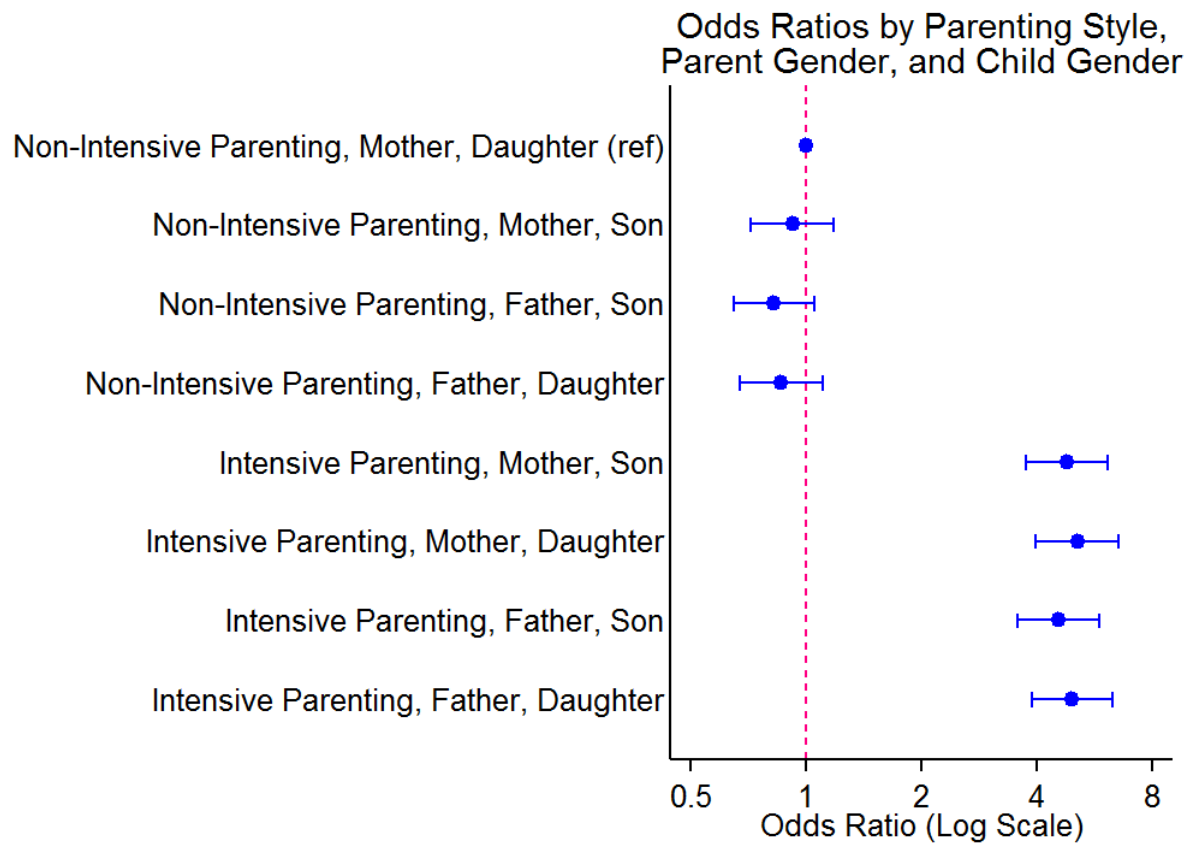


Table 2.4: Parenting Style by Vignette Parent Gender by Vignette Child Gender Factors  
Full Sample: Models Run Separately by Vignette and Pooled across Vignettes

| Variables                                      | (1)<br>Vignette 1 | (2)<br>Vignette 2 | (3)<br>Vignette 3 | (4)<br>Vignette 4 | (5)<br>Vignette 5 | (6)<br>Vignette 6 | (7)<br>All Vignettes |
|------------------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|----------------------|
| <i>Parenting Style x Parent x Child Gender</i> |                   |                   |                   |                   |                   |                   |                      |
| Non-intensive, Mother, Daughter                | -                 | -                 | -                 | -                 | -                 | -                 | -                    |
| Non-intensive, Mother, Son                     | 0.98 (0.3)        | 0.98 (0.3)        | 0.86 (0.3)        | 1.33 (0.4)        | 0.71 (0.2)        | 0.79 (0.3)        | 0.92 (0.1)           |
| Non-intensive, Father, Daughter                | 1.06 (0.3)        | 1.06 (0.3)        | 1.07 (0.4)        | 1.45 (0.4)        | 0.61 (0.2)        | 0.51 (0.2)*       | 0.86 (0.1)           |
| Non-intensive, Father, Son                     | 1.13 (0.3)        | 1.13 (0.3)        | 0.85 (0.3)        | 1.01 (0.3)        | 0.59 (0.2)        | 0.63 (0.2)        | 0.83 (0.1)           |
| Intensive, Mother, Daughter                    | 7.13 (2.1)***     | 7.13 (2.1)***     | 3.05 (1.0)***     | 3.67 (1.1)***     | 5.03 (1.5)***     | 5.76 (1.9)***     | 5.10 (0.7)***        |
| Intensive, Mother, Son                         | 8.05 (2.5)***     | 8.05 (2.5)***     | 3.80 (1.3)***     | 4.59 (1.4)***     | 6.14 (1.9)***     | 2.43 (0.7)**      | 4.79 (0.6)***        |
| Intensive, Father, Daughter                    | 7.23 (2.2)***     | 7.23 (2.2)***     | 2.95 (1.0)***     | 3.99 (1.1)***     | 5.77 (1.9)***     | 4.11 (1.3)***     | 4.95 (0.6)***        |
| Intensive, Father, Son                         | 6.92 (2.3)***     | 6.92 (2.3)***     | 3.03 (1.0)***     | 3.35 (1.0)***     | 5.37 (1.6)***     | 3.21 (1.0)***     | 4.56 (0.6)***        |
| Observations                                   | 626               | 626               | 591               | 605               | 560               | 549               | 3,531                |

Notes: \*\*\* p<0.001, \*\* p<0.01, \* p<0.05 (two-tailed tests). Standard errors in parentheses.

Table 2.5: Parenting Style by Vignette Parent Gender by Vignette Child Gender Factors  
Male Respondents Only: Models Run Separately by Vignette and Pooled across Vignettes

| Variables                                      | (1)<br>Vignette 1 | (2)<br>Vignette 2 | (3)<br>Vignette 3 | (4)<br>Vignette 4 | (5)<br>Vignette 5 | (6)<br>Vignette 6 | (7)<br>All Vignettes |
|------------------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|----------------------|
| <i>Parenting Style x Parent x Child Gender</i> |                   |                   |                   |                   |                   |                   |                      |
| Non-intensive, Mother, Daughter                | -                 | -                 | -                 | -                 | -                 | -                 | -                    |
| Non-intensive, Mother, Son                     | 1.12 (0.5)        | 1.48 (0.7)        | 1.02 (0.6)        | 0.96 (0.5)        | 0.75 (0.4)        | 1.40 (0.7)        | 1.06 (0.2)           |
| Non-intensive, Father, Daughter                | 1.52 (0.7)        | 1.1 (0.6)         | 1.30 (0.7)        | 1.21 (0.6)        | 0.33 (0.2)*       | 0.76 (0.4)        | 0.94 (0.2)           |
| Non-intensive, Father, Son                     | 0.61 (0.3)        | 0.64 (0.4)        | 1.58 (0.8)        | 0.57 (0.3)        | 0.27 (0.1)**      | 0.65 (0.3)        | 0.61 (0.1)*          |
| Intensive, Mother, Daughter                    | 4.12 (1.9)**      | 14.18 (7.2)***    | 2.85 (1.5)*       | 2.85 (1.4)*       | 4.92 (2.4)**      | 10.42 (5.6)***    | 5.04 (1.0)***        |
| Intensive, Mother, Son                         | 4.76 (2.4)**      | 6.86 (3.4)***     | 3.52 (1.8)*       | 4.56 (2.2)**      | 3.25 (1.5)**      | 2.61 (1.3)*       | 3.83 (0.8)***        |
| Intensive, Father, Daughter                    | 3.21 (1.4)**      | 10.86 (5.4)***    | 3.38 (1.8)*       | 4.99 (2.3)***     | 3.55 (1.9)*       | 5.78 (2.8)***     | 4.52 (0.9)***        |
| Intensive, Father, Son                         | 4.96 (2.6)**      | 7.38 (3.5)***     | 2.98 (1.4)*       | 3.46 (1.6)**      | 2.31 (1.1)        | 4.83 (2.4)**      | 3.76 (0.7)***        |
| Observations                                   | 250               | 243               | 228               | 228               | 214               | 227               | 1390                 |

Notes: \*\*\* p<0.001, \*\* p<0.01, \* p<0.05 (two-tailed tests). Standard errors in parentheses.

Table 2.6: Parenting Style by Vignette Parent Gender by Vignette Child Gender Factors  
Female Respondents Only: Models Run Separately by Vignette and Pooled across Vignettes

| Variables                                      | (1)<br>Vignette 1 | (2)<br>Vignette 2 | (3)<br>Vignette 3 | (4)<br>Vignette 4 | (5)<br>Vignette 5 | (6)<br>Vignette 6 | (7)<br>All Vignettes |
|------------------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|----------------------|
| <i>Parenting Style x Parent x Child Gender</i> |                   |                   |                   |                   |                   |                   |                      |
| Non-intensive, Mother, Daughter                | -                 | -                 | -                 | -                 | -                 | -                 | -                    |
| Non-intensive, Mother, Son                     | 0.83 (0.3)        | 0.78 (0.3)        | 0.77 (0.3)        | 1.56 (0.6)        | 0.71 (0.3)        | 0.59 (0.2)        | 0.84 (0.1)           |
| Non-intensive, Father, Daughter                | 0.89 (0.3)        | 0.58 (0.2)        | 0.92 (0.4)        | 1.66 (0.7)        | 0.91 (0.4)        | 0.43 (0.2)*       | 0.82 (0.1)           |
| Non-intensive, Father, Son                     | 1.70 (0.6)        | 0.89 (0.4)        | 0.61 (0.3)        | 1.23 (0.5)        | 1.03 (0.4)        | 0.60 (0.2)        | 0.96 (0.2)           |
| Intensive, Mother, Daughter                    | 11.06 (4.3)***    | 6.19 (2.9)***     | 3.16 (1.4)**      | 4.25 (1.6)***     | 5.66 (2.2)***     | 4.38 (1.8)***     | 5.25 (0.9)***        |
| Intensive, Mother, Son                         | 11.50 (4.6)***    | 6.13 (2.5)***     | 3.96 (1.7)**      | 4.85 (1.9)***     | 10.65 (4.5)***    | 2.57 (1.0)*       | 5.65 (0.9)***        |
| Intensive, Father, Daughter                    | 14.84 (6.2)***    | 7.35 (3.0)***     | 2.69 (1.1)*       | 3.56 (1.3)***     | 8.55 (3.5)***     | 4.06 (1.7)***     | 5.48 (0.9)***        |
| Intensive, Father, Son                         | 9.21 (4.0)***     | 8.79 (3.6)***     | 3.12 (1.4)**      | 3.38 (1.3)**      | 9.78 (3.9)***     | 2.84 (1.2)*       | 5.41 (0.9)***        |
| Observations                                   | 376               | 357               | 363               | 377               | 346               | 322               | 2141                 |

Notes: \*\*\* p<0.001, \*\* p<0.01, \* p<0.05 (two-tailed tests). Standard errors in parentheses.

## Discussion and Conclusion

Differences in evaluation standards are fundamental to explanations of gender differences in parenting behaviors. Consistently across a range of parenting situations and domains and using an experimental design, I find no evidence that parents have different standards for evaluating mothers' and fathers' parenting behavior. There do appear to be coherent cultural norms that women should engage in intensive mothering – mothers who perform intensive parenting are evaluated positively, and mothers who fail to do so are clearly penalized. However, results also show that there are equally strong cultural expectations of intensive fathering. Additionally, men and women have very similar views about what constitutes good parenting. This study adds to a growing body of research suggesting that stalled progress toward gender equality in work and family life may not be driven by individuals' preferences or ideals. Consistent with recent studies showing that men and women hold gender egalitarian ideals related to shared parenting and paid work (Gerson 2010; Jacobs and Gerson 2016; Pedulla and Thébaud 2015), I find that intensive parenting behaviors are now a normative expectation for both mothers and fathers.

Methodological and sample composition factors could explain different findings between this study and previous qualitative and lab experimental studies showing different standards for mothers' and fathers' parenting. Qualitative studies finding evidence of different expectations for mothers and fathers come from interviews with mothers conducted in the 1990s (Hays 1996), or with fathers born in the 1950s (Townsend 2002). Since the data from this study were collected in 2015 on a nationally representative sample of parents, these findings could reflect a broad diffusion of gender egalitarian parenting norms over time or across birth cohorts. While laboratory experiments are well-suited to making causal inferences, prior studies showing different parenting standards for mothers and fathers were conducted on samples of

undergraduate students – not parents (Kobrynowicz and Biernat 1997; Rudman and Fairchild 2004).

Different cultural models of motherhood and fatherhood have become dominant in different historical periods (Coltrane 1997; Hays 1996; Pleck 1987). Historical ideals based on a specialized division of labor assumed that mothers should be primarily responsible for caring for children (Hays 1996), while direct involvement was considered optional for fathers (Pleck 1987; Townsend 2002). Findings from this study indicate that parents no longer assume that only mothers should care for children. Instead, parents appear to hold strong expectations that both mothers and fathers should engage in intensive parenting.

Similar standards for mothers' and fathers' parenting fail to translate into gender equality in parenting. So why do parents' ideals fall short of their ability to realize them? Existing explanations for why couples struggle to enact egalitarian ideals emphasize constraints such as inflexible jobs and a lack of affordable, high-quality child care. In principle, though, these factors should affect men and women similarly.

Why, then, does parenthood lead to more traditional gender specialization within couples? One potential explanation relates to an important gendered constraint: the persistence of the gender wage gap (Goldin 2014; Blau and Kahn 2016). Although there is an increasing resemblance in earnings and education within couples (Schwartz and Mare 2005; Schwartz 2010), women in most heterosexual married couples earn less than men (Bertrand, Kamenica, and Pan 2015). If couples prefer parental care over paid child care (Gerson 2010; Hays 1996; Townsend 2002), women's lower average earnings, even if these differences are small, could lead couples to move toward traditional gender specialization in paid and unpaid work in spite of holding egalitarian ideals.

Theoretically, an important component of Becker's (1985) specialization model is the idea that investments in specific types of human capital, such as paid work or child care, serve to further increase the benefits of specialization within couples. The fact that time spent out of the labor force and part-time work experience explain a portion of the motherhood wage penalty (Budig and England 2001) suggests that gender differences in early time investments in children could serve to reinforce specialization by increasing fathers' relative advantage in earnings potential within couples.

Recent quasi-experimental evidence suggests that men's early involvement in parenting could have significant longer-term consequences for gender specialization within families. A recent analysis of the impacts of a paternity leave policy change in Quebec provides evidence that the policy led to a reduction in gender specialization within couples with children. Compared with couples not exposed to the policy change, a policy promoting fathers' leave taking caused couples to move toward a dual-earner, dual-caregiver model (Patnaik 2016). More generally, differences in parental leave opportunities available to men and women may also influence gender specialization within couples (Blau and Kahn 2013; Hook 2006).

Another interpretation of the findings presented in this study is that gender differences in evaluations standards do not appear when considering parenting behaviors in discrete situations described in these vignettes, but instead may manifest in evaluations of the frequency of mothers' and fathers' parenting behaviors. That is, parents may view a particular intensive parenting behavior positively for both mothers and fathers in a given situation, but they may still expect "good" mothers to engage in those parenting behaviors more often than "good" fathers. Although this study is not designed to evaluate this hypothesis, future research could address this question using observational data on mothers' and fathers' self-evaluations and measures of the

how often they engage in different parenting behaviors. Such a study could assess whether the relationship between parenting behaviors and self-evaluations differs by gender.

Another possibility for the discrepancy between egalitarian ideals and actual sharing of child care within couples relates to the distinction between concrete and abstract attitudes (Mickelson 1990). Although the vignettes used in this study assess respondents' attitudes about mothers and fathers performing very specific parenting behaviors, it is possible that couples are more supportive of mothers' and fathers' equal parenting in others, but less supportive of equal sharing for themselves personally. In a qualitative study of couples with children, for example, Deutsch (1999) finds that most couples support equal sharing of parenting responsibilities, but also feel pulled emotionally in their own particular situations by competing cultural ideals that tie masculinity more to paid work and femininity more to caregiving.

Indeed, although support for mothers' and fathers' employment have largely converged, there does appear to be slightly more support for fathers' involvement in paid work than mothers' (Jacobs and Gerson 2016). These small differences that anchor fatherhood more to paid work could contribute to differences in mothers' and fathers' exposure to the kinds of parenting situations described in this study. The fact that men – but not women – are penalized for part-time work experience suggests that gender continues to shape expectations of full-time labor market involvement (Pedulla 2016). To improve our understanding of why parents fall back on traditional gender specialization in spite of gender egalitarian ideals, future research should systematically test what factors promote or constrain couples from realizing the kinds of work-family arrangements to which they aspire.

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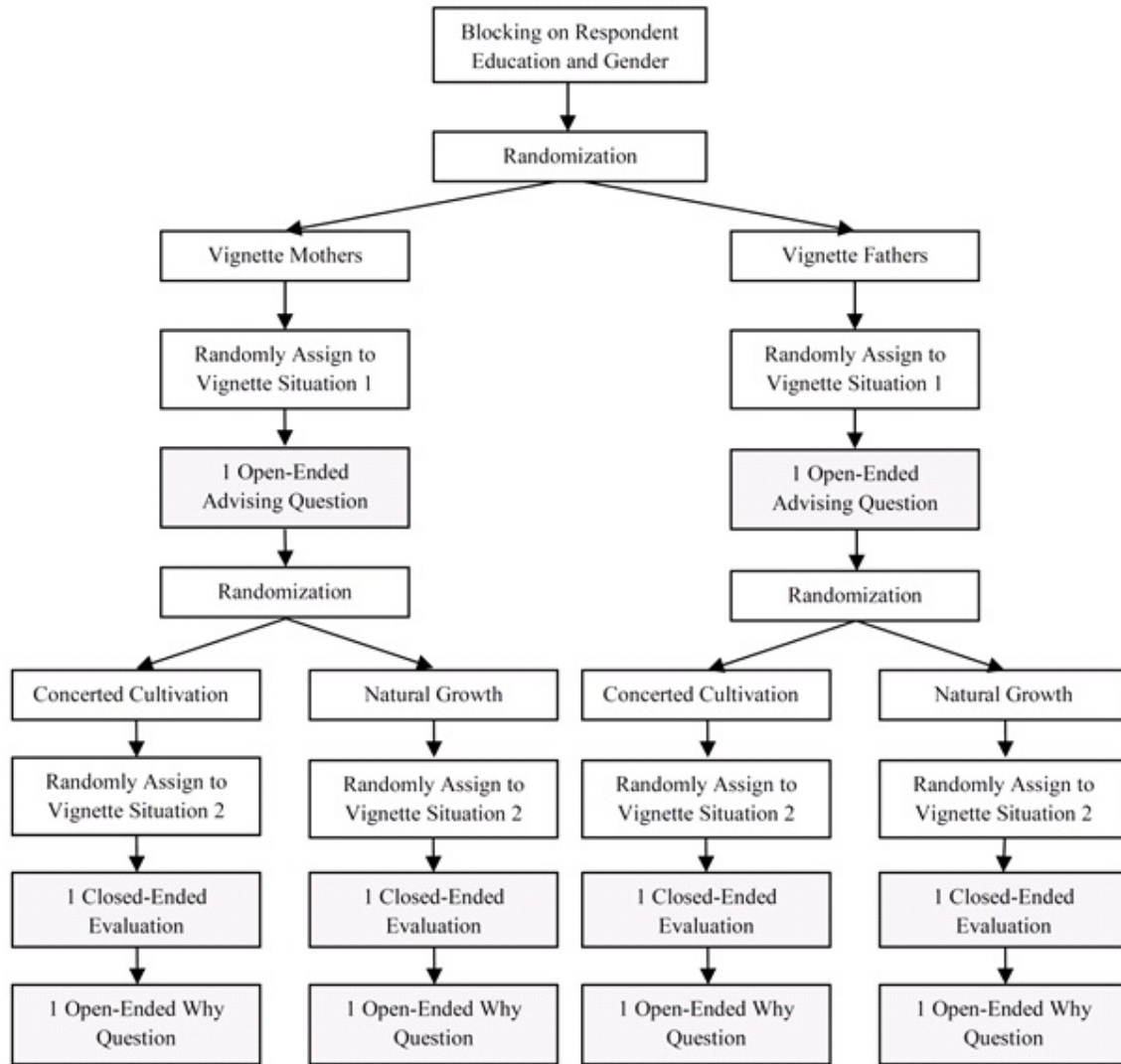
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## Appendix 2A: Stimuli and Experimental Manipulations

Figure 2A1: Randomization and Survey Flow



*Note:* Randomization occurs within education (college graduate vs. not) and gender (male vs. female) blocks. There are 6 vignette situations, but each respondent only reads 2 vignette situations. For the first vignette situation, I randomly assign each respondent to 1 of the 6 vignette situations. For the second vignette situation, I randomly select a vignette from a different parenting domain. For example, if the first vignette situation involves language use, the second vignette would be randomly selected from either the organization of children's leisure or interactions with institutions. This minimizes potential order effects. After a respondent is randomly assigned to a specific vignette, child gender is randomly assigned.

## Directions to Respondents

We're interested in how people think about what it means to be a good parent.

We'll describe some parenting situations on the pages that follow. Each description involves a **parent with a child between the ages of 8 and 10**. There will be 2 situations.

For the first situation, we'll ask you to describe how you would advise the parent to respond in the situation.

For the second situation, we'll describe how a parent behaved, and will ask you what you think of that behavior and why. Please read each description carefully and be as thorough as possible in your responses.

All records from this task will be kept completely confidential. Your responses will be kept anonymous.

Thank you for your participation. Your answers are extremely important to us.

### Vignettes by Parenting Approach and Domain Word Count in Parentheses

Many of the vignettes are adapted from descriptions and examples provided in Lareau's (2003) *Unequal Childhoods*. Vignette 6 is adapted from Calarco (2014). Vignettes presented include sample parent names and sample child gender manipulations.

#### Vignette 1: Parents' Role in Facilitating Children's Activities

| Vignette Situation 1                                                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------|
| Summer has ended, and the school year has just started again. Michael's daughter complains that she's been feeling bored after school. (21) |

| Intensive Parenting Response                                                                                                                                 | Non-Intensive Parenting Response                                                                                                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Michael says: "How about we look into different activities for you to do after school? What about signing up for a sports team or doing music lessons?" (27) | Michael says: "How about you go outside and play with your friends? You can go play as long as you're being careful and are home before dinner." (27) |

#### Vignette 2: Parents' Involvement in Children's Informal Play

| Vignette Situation 2                                                                                                                     |
|------------------------------------------------------------------------------------------------------------------------------------------|
| While Kim is busy getting things ready for her son's first day of school tomorrow, her son asks if she will draw pictures with him. (25) |

| Intensive Parenting Response                                                                                         | Non-Intensive Parenting Response                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Kim sits down to draw with her son. Then Kim says: "You're so creative! Should we sign you up for art lessons?" (22) | Kim tells her son she's busy right now. Then Kim says: "How about you work on some drawings and I'll try to look at them later?" (26) |

#### Vignette 3: Parents' Role in Children's Verbal Skill Development

| Vignette Situation 3                                                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------|
| While Brandon and his son are eating dinner, Brandon's son says excitedly: "Guess what? I just saw a cool TV show about sea creatures!" (24) |

| Intensive Parenting Response                                                                                                                             | Non-Intensive Parenting Response                                                                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Brandon asks his son what he likes so much about the show. Then Brandon asks his son to explain what he learned about sea creatures in the episode. (28) | Brandon listens quietly while his son says how much he likes the show. Then Brandon says he also liked sea creatures when he was a kid. (26) |

Vignette 4: Parents' Role in Children's Verbal Interaction Skills with Adults

| Vignette Situation 4                                                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| It's late on a school night, and Angela repeatedly tells her daughter it's bedtime. Angela's daughter yells: "I hate your rules! They're so unfair!" (24) |

| Intensive Parenting Response                                                                                                            | Non-Intensive Parenting Response                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Angela says: "We can talk about why you think the rules are unfair, but first we need to have a conversation about your behavior." (24) | Angela says: "A rule is a rule whether you like it or not. We're not having a conversation about this." (20) |

Vignette 5: Parents' Teaching Children Interactions Styles in Institutions

| Vignette Situation 5                                                                                                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------|
| When David's son is diagnosed with asthma, the doctor says that medication might help. David's son says: "I don't want to take medicine." (23) |

| Intensive Parenting Response                                                                                                                  | Non-Intensive Parenting Response                                                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| David says: "Let's talk about the medicine with the doctor. You can ask any questions you have and learn how the medicine can help you." (25) | David says: "Well you're going to have to take it anyway. You need to listen to what the doctor says and take the medicine." (24) |

Vignette 6: Parents' Willingness to Intervene on Children's Behalf

| Vignette Situation 6                                                                                 |
|------------------------------------------------------------------------------------------------------|
| Alicia's daughter comes home from school one day and says she is often bored in her math class. (18) |

| Intensive Parenting Response                                                                                                | Non-Intensive Parenting Response                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Alicia says: "Let's talk to your teacher to see if you can get additional work or be switched to a harder math class." (23) | Alicia says: "You need to try to stay focused and do the work you're assigned. Your teacher knows what's best for you." (22) |

Table 2A1: Outcome Variables

| Vignette Type                                                            | Question Type       | Question Text (Sample Manipulation in Brackets)                                                                                        |
|--------------------------------------------------------------------------|---------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| <i>Open-ended<br/>Vignette: Parenting<br/>Situation<br/>Description</i>  | <i>Open-ended</i>   | How would you advise [name] to respond in this situation?                                                                              |
| <i>Closed-ended<br/>Vignette: Parenting<br/>Behavior<br/>Description</i> | <i>Closed-ended</i> | What do you think of [name]'s parenting in this situation? Would you say it is excellent, very good, good, OK, not very good, or poor? |
|                                                                          | <i>Open-ended</i>   | What was it about [name]'s parenting that led you to rate it as [selected rating]?                                                     |

Table 2A2: Experimental Manipulations of Parent Gender  
Male and Female First Names

| Male Names | Female Names |
|------------|--------------|
| Michael    | Michelle     |
| Kevin      | Kim          |
| Brandon    | Nicole       |
| Anthony    | Angela       |
| David      | Vanessa      |
| Russell    | Alicia       |

*Note:* Within each gender of parent condition, the order in which names appear, and the vignette each name is associated with, are randomly varied.

## Appendix 2B

Table 2B1: Distribution of Birth Cohort Decades by Gender  
American Community Survey

| Birth Cohort Decade | % Distribution |         |
|---------------------|----------------|---------|
|                     | Mothers        | Fathers |
| 1950                | 3.9            | 8.3     |
| 1960                | 25.8           | 32.7    |
| 1970                | 43.1           | 41.6    |
| 1980                | 25.1           | 16.8    |
| 1990                | 2.2            | 0.8     |

Table 2B2: Content Validity Pretest: Amazon Mechanical Turk Parent Sample (N = 30)

*Respondents were presented with either intensive parenting (concerted cultivation: CC) vignettes or non-intensive parenting (natural growth: NG) vignettes. Respondents read a series of statements about the parent in each vignette. Respondents could agree, disagree, or state there was not enough information to say based on the description. The values in each cell show the percent of respondents who agreed with each statement by parenting approach. Differences between values for intensive parenting/concerted cultivation and non-intensive parenting/natural growth vignettes for all statements are statistically significant at the  $p < 0.001$  level.*

| Vignette | Statement                                                                              | CC  | NG  |
|----------|----------------------------------------------------------------------------------------|-----|-----|
| 1        | The parent encourages the child to spend time playing with friends.                    | 8   | 100 |
|          | The parent suggests that the child do extracurricular sports and music activities.     | 100 | 31  |
|          | The parent sets boundaries and lets the child play with friends.                       | 17  | 88  |
|          | The parent makes an effort to help the child develop athletic and artistic talents.    | 92  | 44  |
| 2        | The parent makes time to draw with the child, even when busy.                          | 82  | 13  |
|          | The parent declines the child's request to participate directly in the activity.       | 0   | 87  |
|          | The parent suggests the child develop his/her talents through lessons.                 | 82  | 17  |
|          | The parent suggests that the child work on drawings on her/his own.                    | 12  | 91  |
| 3        | The parent asks the child to explain what he or she likes about the television show.   | 80  | 0   |
|          | The parent actively asks questions to try to get the child to share opinions.          | 100 | 12  |
|          | The parent asks the child for details when the child mentions something.               | 93  | 8   |
|          | The parent asks the child to provide reasons and to elaborate.                         | 80  | 8   |
| 4        | The parent is willing to have a conversation about the rules with the child.           | 94  | 0   |
|          | The parent tries to talk things out with the child.                                    | 82  | 9   |
|          | The parent responds to misbehavior by having discussions with the child.               | 100 | 4   |
|          | The parent demands that the child obey without having a conversation.                  | 12  | 87  |
| 5        | The parent treats the child like an important participant at the appointment.          | 100 | 26  |
|          | The parent expects the child to do what the doctor says without questions.             | 0   | 84  |
|          | The parent encourages the child to share concerns at the appointment.                  | 100 | 11  |
|          | The parent encourages the child to ask questions of the doctor.                        | 95  | 11  |
| 6        | The parent suggests getting directly involved in the child's classroom experiences.    | 88  | 9   |
|          | The parent leaves it up to the teacher to decide what's best for the child's learning. | 12  | 91  |
|          | The parent tries to advocate for the child by suggesting contacting the teacher.       | 88  | 9   |
|          | The parent recommends talking to the teacher to address the child's boredom.           | 100 | 0   |

## Chapter 3

### **The Motherhood Penalty in Context: Assessing Discrimination in Low- and High-Skilled Occupations**

Chapter Summary: Mothers experience a large wage penalty that cannot be explained by a wide range of measurable factors. While there are multiple hypothesized explanations for this “unexplained” portion of the motherhood penalty, one mechanism proposed to account for this finding is employer discrimination. Yet while theories of discrimination and survey analyses suggest that discrimination against mothers is likely to differ across occupations, prior experimental evidence focuses exclusively on a narrow range of high-skilled professional occupations. In this study, I conduct a large-scale audit study in which I submit pairs of fictitious applications to actual job openings in both low- and high-skilled occupations. I experimentally manipulate signals of motherhood status and monitor callbacks from employers. Findings indicate that on average mothers receive callbacks approximately 20 percent less often than women without children, but these effects vary by occupation. The experiment extends prior research by evaluating the conditions under which motherhood is more or less disadvantaging, and assessing how the costs of motherhood vary for women with different resources.

## Introduction

Parenthood has very different consequences for men and women's labor market outcomes. While men receive a fatherhood wage premium (Killewald 2013; Lundberg and Rose 2002), women experience a substantial motherhood wage penalty (Anderson, Binder, and Krause 2002; Avellar and Smock 2003; Budig and England 2001; Waldfogel 1997). Over an important segment of men's and women's prime working years, parenthood amplifies gender inequalities in paid work. While the gender wage gap is relatively small when young adults enter the labor market in early adulthood, it increases dramatically as men and women become parents (Goldin 2014). Because of these gendered effects, parenthood plays a critical role in exacerbating inequalities between men and women in the labor market (Bertrand, Goldin, and Katz 2010; England 2005).

Social scientists have proposed a number of explanations for why parenthood negatively impacts women's – but not men's – labor market outcomes. First, while men typically maintain or increase their work hours when they become fathers (Lundberg and Rose 2002), mothers tend to accumulate less work experience by taking time out of the labor force or moving into part-time jobs that pay lower wages (Budig and England 2001). Second, because caring for children is effort intensive labor, women's disproportionate responsibility for parenting is hypothesized to make them less productive at work than fathers (Becker 1985). Also tied to gender differences in parenting, a third explanation is that mothers trade lower wages for jobs that make it easier to maintain family responsibilities (Becker 1985; Goldin 2014). Finally, discrimination against mothers has been proposed as another explanation for why mothers receive lower wages (Benard and Correll 2010; Correll, Benard, and Paik 2007; Cuddy, Fiske, and Glick 2004).

Survey data provide partial support for work experience and occupational explanations. Regression analyses show that some of the motherhood wage penalty can be explained by time spent out of the labor force, movements into part-time employment, and changes in occupational characteristics (Anderson et al. 2002; Budig and England 2001). However, even after adjusting for work experience, part-time employment, occupational changes, and the stable characteristics of women who have children using individual fixed effects, estimates of the wage penalty range from 3 – 4 percent for women with one child, and 5 – 12 percent for women with two or more children (Andersen et al. 2002; Waldfogel 1997). These studies have raised the question of how to interpret this “unexplained” portion of the motherhood wage penalty.

Theories posit that this unexplained component of the motherhood penalty may be caused by gender differences in parenting responsibilities, which could negatively impact mothers’ energy and work effort (Becker 1985), or by discrimination (Correll et al. 2007). While effort-based explanations of the penalty have been a focus of theoretical work, empirical evidence appears to be weak (Andersen et al. 2002; Bielby and Bielby 2002). In contrast, experimental studies suggest that discrimination may be an important contributor to mothers’ persistent wage disadvantage (Benard and Correll 2010; Correll et al. 2007; Cuddy, Fiske, and Glick 2004).

These explanations for the motherhood wage penalty are not mutually exclusive, of course, and may in fact be mutually reinforcing. Anticipating or experiencing discrimination might lead mothers to devote more time to caring for children, and such investments could further reinforce the benefits of specialization as mothers accumulate less work experience and job seniority over time (Becker 1985). Additionally, since mothers are more likely to work part-time or take time out of the labor market than women without children (Budig and England 2001), employers may engage in statistical discrimination (Aigner and Cain 1977; Correll and

Benard 2006) in a particular hiring or wage-setting decision because mothers on average are more likely to reduce work hours or spend time out of the labor market.

The fact that differences in work experience between groups may themselves be caused by discrimination has been noted in research on racial inequalities in the labor market (Neal and Johnson 1996; Tomaskovic-Devey, Thomas, and Johnson 2005). Survey analyses that control for work experience and evaluate whether part-time work, occupational factors, and work experience “explain” wage inequalities, then, could understate the importance of discrimination by adjusting for factors that themselves are products of differential treatment. These possibilities highlight how complex and consequential the effects of discrimination could be for mothers’ labor market outcomes.

But how pervasive is discrimination against mothers in the labor market? To date, existing evidence of discrimination against mothers from laboratory and field experiments considers only a very narrow range of high-skilled professional occupations (Benard and Correll 2010; Correll et al. 2007; Cuddy et al. 2004; Fuegan et al. 2004). While important, this narrow focus limits our understanding of the pervasiveness of discrimination, the conditions under which motherhood is more or less disadvantaging, and how the costs of motherhood may vary for women with different resources.

There are theoretical and empirical reasons to expect that discrimination against mothers may differ for women of different skill levels or in different occupations. The motherhood wage penalty does not appear to be the same for women of different skill or wage levels. Studies alternatively find that the steepest motherhood penalty is experienced by high-skilled women (Wilde, Batchelder, and Ellwood 2010), high school graduates (Andersen et al. 2002), middle-wage women (Killewald and Bearak 2014), low-skilled women (Budig and Hodges 2014), and

women without college degrees (Amuedo-Dorantes and Kimmel 2005). While estimates of which women face the steepest penalty vary substantially, these studies suggest that the effects of motherhood on women's labor market outcomes may not be the same for women with different resources.

There are important scientific and policy-related reasons to examine how labor market discrimination by motherhood status varies in low- and high-skilled occupations. From a scientific perspective, examining how occupational context either amplifies or mutes the effects of motherhood on women's hiring-related outcomes can improve our understanding of when and why motherhood disadvantages women in the labor market. From a policy perspective, by making welfare receipt conditional on employment, a key assumption of federal welfare reform legislation is that low-skilled mothers do not face substantial employment barriers (Corcoran et al. 2000). Whether employers discriminate against mothers in low-skilled jobs is also potentially important for policymakers since it could have important consequences for the economic wellbeing of children in low-income families, particularly in single parent households.

In this study, I estimate the effects of motherhood on women's hiring-related outcomes in both low- and high-skilled jobs. Replicating and extending Correll et al.'s (2007) experimental study of motherhood status and employment discrimination, I conduct a large-scale audit study in which I systematically vary the occupational context in which motherhood status is signaled, focusing on two low-skilled occupations (cashiers and retail sales associates) and two high-skilled occupations (marketing managers and accountants). By estimating the effects of motherhood status in occupations that differ in their skill requirements and time demands, this extension provides potentially important insights into the mechanisms underlying variation in the motherhood wage penalty.

## Theories of Discrimination

Explanations for why employers discriminate emphasize taste-based, statistical, and status-based mechanisms. To my knowledge, employers, coworkers, or customers “tastes” for discrimination have not been hypothesized to cause discrimination against mothers in the labor market. However, researchers have speculated that statistical discrimination, in which employers discriminate because of average differences in productivity, could underlie differential treatment of mothers (Blau and Kahn 2016).<sup>13</sup> Statistical discrimination, of course, could have the pernicious effect of reinforcing the average differences between mothers and childless women upon which such discrimination is hypothesized to be based (Ridgeway 2011).

Statistical and status-based explanations of discrimination overlap in hypothesizing that employer beliefs about differences in the characteristics of mothers and childless women are the mechanisms that produce discriminatory behavior. In statistical discrimination, differential treatment is hypothesized to be based on actual average differences in productivity between mothers and childless women. In contrast, status-based explanations contend that widely held cultural beliefs about mothers lead to discrimination – not actual differences in productivity. In practice, it is difficult to differentiate between these two explanations. In both accounts, mothers are hypothesized to face discrimination because of employers’ negative beliefs about mothers’ compared to women without children.

In status-based explanations, status characteristics bias evaluations when (a) individuals differ on the characteristic (b) the characteristic is considered to be task-relevant, and (c) cultural beliefs associate higher levels of status-worthiness and competence to members of one social

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<sup>13</sup> A variant of this statistical discrimination explanation focuses not on average differences in productivity between groups, but on group differences in the variance of productivity (see Neumark 2012).

category over another (Berger et al. 1977). Under these conditions, status characteristics should affect the expectations held by evaluators, such as employers, for the performance of different groups (Ridgeway and Correll 2004).

But a key proposition of status characteristics theory is that discrimination should be stronger when status characteristics such as motherhood are perceived as being more relevant to the task being evaluated (Ridgeway and Correll 2004; Turco 2010). Status characteristics theory not only identifies the conditions under which status characteristics bias evaluations, but also the relative strength of this bias in different contexts (Wagner and Berger 1982). In principle, there are two components that determine perceptions of how relevant motherhood status is to a given task: (1) cultural beliefs about the characteristics of mothers, and (2) the characteristics of specific occupations.

### **Cultural Beliefs about Motherhood**

Workers – whether men or women – who assume primary responsibility for the care of children are hypothesized to be at risk of discrimination because family obligations may be seen as interfering with successful job performance (Ridgeway and Correll 2004). But since mothers do twice as much child care as fathers on average (Raley, Bianchi, and Wang 2012), employers may make assumptions that parenthood will impact women's productivity more than it impacts men's. Becker's (1985) theoretical model on the benefits of specialization within families makes the same assumption that mothers are generally less productive than fathers because women are disproportionately responsible for caring for children. If employers believe that motherhood specifically requires a significant commitment of time and energy, they may discriminate against mothers, but not fathers. As descriptions of what mothers and fathers are like, stereotypes about

gender and parenthood may negatively impact mothers' hiring-related outcomes by shaping the assumptions and judgments employers make about them (Ridgeway 2011).

But what assumptions do employers and other individuals make about mothers? Ridgeway and Correll (2004) argue that motherhood is a status characteristic associated with widely-held cultural beliefs about lower levels of competence and commitment. Laboratory experiments and qualitative studies provide evidence that individuals do in fact hold stereotypes about mothers. Correll et al. (2007), for example, show that undergraduate students view mothers as both less competent and less committed to work than childless women, while Cuddy, Fiske, and Glick (2004) find that working women who become mothers are perceived as warmer but also less competent than childless women. Also related to commitment, Turco (2010) demonstrates that investors in the leveraged buyout industry view parenthood as increasing men's commitment to work while undermining that of women. Finally, in a study of female executives, Blair-Loy (2003) finds that mothers in professional occupations are perceived as being less committed to work than childless women. While these studies provide consistent evidence of negative stereotypes about mothers in the workplace, all of these studies focus on elite, high-skilled professional occupations.

Do employers hold the same stereotypes about low-skilled mothers? Although high-skilled mothers are more likely to be in the labor force than low-skilled mothers (Cha 2010), high-skilled mothers may be especially likely to have characteristics that are perceived by employers as interfering with paid work. Since college-educated women with children are more likely to be married and to have a high-earning partner than less-educated women (DiPrete and Buchmann 2006; Ellwood and Jencks 2004; Goldin 2014), employers may assume that high-skilled or higher-class mothers have less of a need for income and are more likely to eventually

quit their jobs (Rivera and Tilcsik Forthcoming; Turco 2010). Among mothers with MBAs from the University of Chicago, for example, those with high-earning spouses have labor force participation rates that are much lower than similar mothers with low-earning spouses. Evidence from nationally representative data also suggests that having a high-earning spouse increases the likelihood that mothers will quit their jobs, and this risk is stronger for mothers working in professional compared to in non-professional occupations (Cha 2010). Additionally, since college-educated mothers spend more time with children than less-educated mothers (Guryan, Hurst, and Kearney 2008; Kalil, Ryan, and Corey 2012; Sayer, Bianchi, and Robinson 2004), employers may assume that high-skilled women's intensive parenting style will be especially likely to interfere with their paid work duties.

While we have less evidence about how low-skilled mothers are perceived by employers, evidence suggests that there is some overlap with perceptions of high-skilled mothers. Qualitative data, for instance, show that employers in low-skilled jobs view mothers as having poor attendance at work because of competing family responsibilities (Kennelly 1999). A more recent qualitative study similarly describes supervisors of low-skilled nursing assistants expressing concerns about the absenteeism of mothers (Clawson and Gerstel 2014). On the other hand, if employers assume that low-skilled mothers are more likely to be single parents, they may view them as desperate for income and therefore reliable workers (Kennelly 1999). Rivera and Tilcsik (Forthcoming) show that even in a high-skilled occupation, interview respondents questioned higher-class women's commitment by assuming they would leave the labor force to "become a stay-at-home mom" or a "helicopter mom", while they viewed lower-class women as hard-working because they would have "mouths to feed." Overall, employers may view low-

skilled mothers through a lens of single parenthood, which may be perceived as simultaneously increasing and making problematic mothers' reliability as workers.

In sum, there appears to be evidence of both similarities and differences in cultural beliefs about low- and high-skilled mothers. Specifically, high-skilled mothers appear to be perceived as warmer but less competent and committed than women without children. Low-skilled mothers are viewed as having problematic attendance compared with childless women, but some employers may also view them as single parents and therefore as both more desperate and reliable. Beliefs about mothers should thus be disadvantaging to both low- and high-skilled mothers, but perhaps more likely to produce discrimination against high-skilled mothers.

### **Occupational Context and Motherhood**

The likelihood of discrimination against mothers should depend not only on the cultural beliefs employers hold about mothers, but also on the characteristics that are valued by employers in a given occupation. In other words, how motherhood affects women's employment outcomes should depend on the perceived fit between the demands of the job and how motherhood is perceived to affect women's abilities to meet those demands. Why should we expect occupational context to matter? Scholarship on discrimination points to the importance of the "ideal worker" as a cultural schema that specifies the characteristics of individuals who have been successful in the past in an occupation (Acker 1990; Correll et al. 2007; Turco 2010). The image of the ideal worker becomes implicitly associated with status groups when group membership is associated with perceived success or failure (Gorman 2005; Turco 2010; Williams 2001).

Much previous research describes the ideal worker in primarily singular terms – a fully-devoted male worker with no family responsibilities who works long hours continuously throughout adulthood (Acker 1990; Blair-Loy 2003; Williams 2001) – there are reasons to expect the image of the ideal worker should vary across occupations (Gorman 2005; Turco 2010). Given differences in time demands and flexibility, occupations are unlikely to be uniform in the degree to which they are perceived as incompatible with motherhood. In other words, motherhood status may be viewed as more or less problematic by employers in different occupations.

Theory provides some guidance in predicting which occupations are likely to be more or less discriminatory towards mothers. Ridgeway and Correll (2004:695) argue that discrimination should be especially likely in “high powered, ‘24/7’ jobs like business executive and high level professional” compared to less time intensive and more flexibly structured “9 to 5” jobs. Because these “24/7” jobs require the worker to be available at all times, intensive time demands should increase the perceived incompatibility between motherhood and successful job performance (Turco 2010). However, Ridgeway and Correll (2004) also suggest that employers in some working class occupations may also be likely to discriminate against mothers, especially in jobs that place strict scheduling demands on workers such as mandatory overtime. In general, the competing time demands of motherhood should be more likely to be perceived as incompatible with successful job performance in occupations that require long hours (Blair-Loy 2003).

But it is not simply the number of hours that should influence the perceived degree of fit between motherhood and job demands. The nature of the work activities and contexts should also matter by affecting how, when, and where work gets done, as well as whether workers are

easily interchangeable. Goldin (2014) hypothesizes that certain occupational features make it costly for employers to offer flexibility to employees: time pressure, contact with others, establishing and maintaining interpersonal relationships, structured versus unstructured work, and freedom to make decisions.

The average of these characteristics is positively associated with gender wage gaps in high-wage occupations (Goldin 2014). Higher time pressure implies less flexibility since workers have to be present at specific times. More contact with others also means less scheduling flexibility because coordination is required. Workers with more working relationships have less flexibility because they spend more time with other workers and clients at specific times. The more structured a job is for the worker, the less flexibility workers have over when and how work gets done because a specific worker is required to perform the work. Finally, more freedom to make decisions means, perhaps paradoxically, less flexibility since workers are less easily interchangeable. These indicators of inflexibility, in turn, should make it both more valuable to employers in an occupation that their employees work long hours in an occupation and correspondingly more difficult to do so with family responsibilities. Because these characteristics are hypothesized to signal the importance of working long hours and work force continuity (Blau and Kahn 2016), higher values may be associated with a higher likelihood of discrimination against mothers.

While occupational contexts with high levels of inflexibility and long work hours should disadvantage both low- and high-skilled mothers in principle, high-skilled occupations appear to be especially likely to have these characteristics. Next, I describe the relationship between occupational skill and indicators of time demands using data from the 2013 American Community Survey (ACS) and O\*Net, a data set of occupational characteristics produced by the

Bureau of Labor Statistics. After creating an average of each of the standardized O\*Net variables related to occupational inflexibility described above, I examine how this index relates to the educational requirements of occupations.

Table 3.1 shows that all but one of the O\*Net occupational inflexibility indicators is positively related to the educational requirements of occupations. Additionally, Figure 3.1 demonstrate a strong positive relationship between the average of these characteristics and the educational requirements of occupations. Analyses from the ACS further show a positive association between the education of workers in an occupation and the number of hours worked per year (see Figure 3.2). These relationships between education and occupational time demands and inflexibility suggest that, on average, we should expect for discrimination against mothers to be more likely in high-skilled jobs.

Table 3.1: O\*NET Occupational Inflexibility: Required Years of Education Coefficients

| O*NET Characteristics                                    | Education Coefficient |
|----------------------------------------------------------|-----------------------|
| Time Pressure                                            | -0.015 (0.012)        |
| Contact with Others                                      | 0.056 (0.012) ***     |
| Structured versus Unstructured Work                      | 0.213 (0.010) ***     |
| Establishing and Maintaining Interpersonal Relationships | 0.224 (0.010) ***     |
| Freedom to Make Decisions                                | 0.193 (0.011) ***     |
| Average of Characteristics                               | 0.134 (0.007) ***     |

Notes: \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ . Each O\*NET characteristic has been normalized to have a mean of 0 and a standard deviation of 1.

#### O\*NET Variables

*Time Pressure*: How often does this job require the worker to meet strict deadlines?

*Contact with Others*: How much does this job require the worker to be in contact with others (face-to-face, by telephone, or otherwise) in order to perform it?

*Establishing and Maintaining Interpersonal Relationships*: Developing constructive and cooperative working relationships with others, and maintaining them over time.

*Structured versus Unstructured Work*: To what extent is this job structured for the worker, rather than allowing the worker to determine tasks, priorities, and goals?

*Freedom to Make Decisions*: How much decision making freedom, without supervision, does the job offer?

Figure 3.1: Occupational Inflexibility Index by Occupational Education  
O\*Net Data

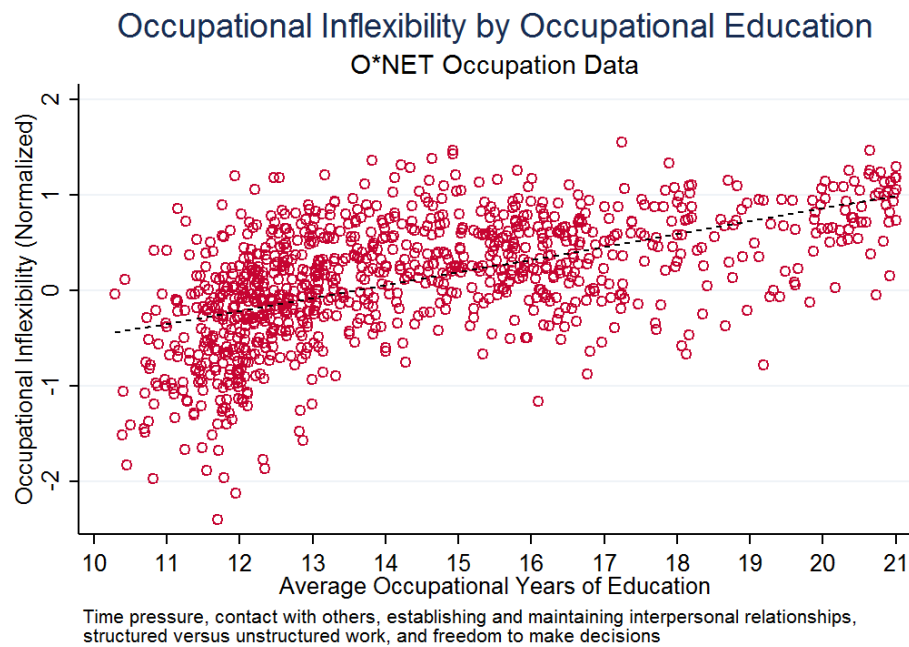
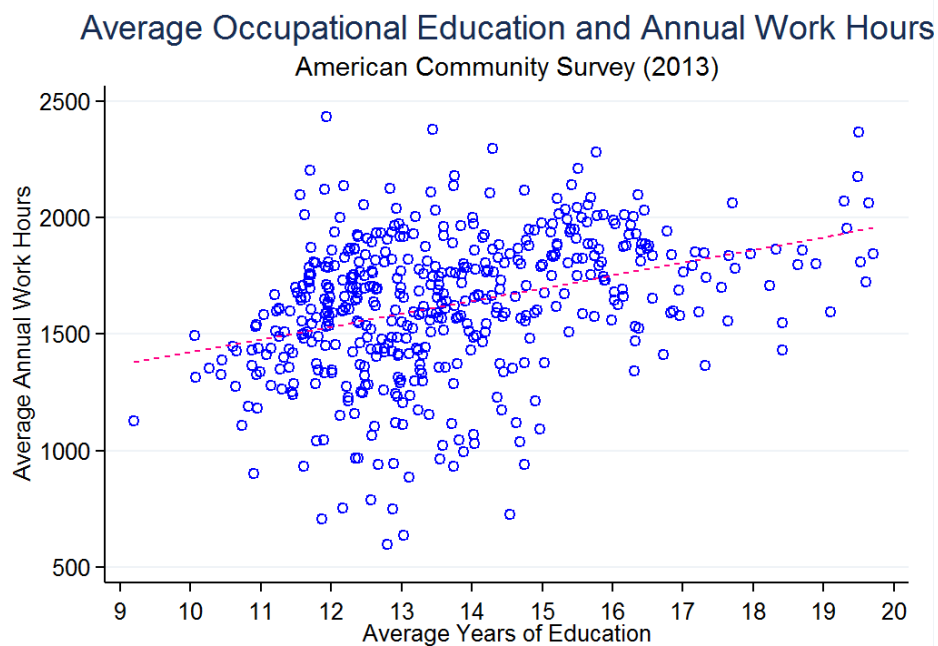


Figure 3.2: Average Years of Education and Annual Work Hours by Occupation  
American Community Survey (2013)



## **Study Motivation and Contributions**

Replicating prior experimental research by Correll et al. (2007) and extending the study of discrimination by motherhood status to other occupations that are both low- and high-skilled is important for multiple reasons. First, replication matters for evaluating the strength of evidence by assessing the consistency of findings across studies. Second, the study provides an indication of how pervasive discrimination by motherhood status is in different low- and high-skilled occupations. Third, by selecting occupations that vary in their work hours and flexibility, I aim to improve our understanding of when and why motherhood affects women's employment outcomes.

Prior research has been unable to address these important questions for multiple reasons. First, while regression-based approaches show that the unexplained portion of the motherhood wage penalty differs for women of different skill levels (Andersen et al. 2002; Budig and Hodges 2014; Killewald and Bearak 2014; Wilde et al. 2010), statistical analyses cannot provide evidence of discrimination. Second, although Turco's (2010) qualitative interviews provide critical insights about how discrimination depends on features of the occupational context, the study does not compare the effects of status characteristics in different occupations. Third, although discrimination theories focus on how context and task-relevance shape the effects of status characteristics such as motherhood, previous field experimental evidence of discrimination by motherhood status in real labor markets focuses exclusively on high-skilled business and marketing jobs (Correll et al. 2007). Laboratory experiments provide additional evidence suggesting employment discrimination against mothers, but this research both focuses on a very narrow range of high-skilled professional occupations and relies on undergraduate students rather than employers (Cuddy et al. 2004; Fuegan et al. 2004).

By conducting a large-scale correspondence test field experiment in which I systematically vary the occupational context in which motherhood status is signaled, I produce a direct causal estimate of how motherhood status affects callbacks by employers in different low- and high-skilled jobs. The study includes variation in occupations within and between skill levels to better understand why and under what conditions employers discriminate. I ask whether employers discriminate similarly by motherhood status in low- and high-skilled occupations, and in occupations that differ systematically in their time demands. I designed the study with attention to understanding *variation* in the effects of motherhood rather than only measuring average effects.

## **Research Design**

Because the design of the study is central to the inferences that can be drawn, including both the internal and external validity of results, I describe features of the research design in detail. First, I discuss criteria for selecting occupations and labor markets based on theory and observational data. Second, I provide evidence for the validity of correspondence tests to study discrimination in both low- and high-skilled jobs. Third, I describe the process of constructing the application materials for each occupation, including creating realistic resumes and signaling motherhood status. Finally, I explain the procedure for applying to job openings and monitoring and recording responses. The most important design details are presented in the main text, but other detailed necessary for replication are presented in the Appendix 3A. In addition, because the experiment involves deception, I also discuss the ethics of using a correspondence test method in this study in the Appendix 3B.

## Occupational Context

To understand how discrimination varies within and between skill levels, I select 2 low-skilled and 2 high-skilled occupations. For high-skilled occupations, my objective is to replicate Correll et al.'s (2007) experiment by applying to marketing manager jobs, but also to add a second high-skilled occupation that meets additional criteria described below. I apply for jobs in the following high-skilled occupations: marketing managers<sup>14</sup> and accountants.

Characteristics of the high- and low-skilled occupations included in the study are listed in Table 3.2. ACS data show that average hourly wages are similar for accountants (\$34) and marketing managers (\$36), and that both occupations have a median of 16 years of education. Compared to marketing managers, however, full-time employed<sup>15</sup> accountants work fewer hours per week (43.8 vs. 46.7) and per year (2,235 vs. 2,383). For marketing managers, standardized O\*Net inflexibility measures are well above average: time pressure (+0.78 s.d.), the degree to which the work is structured to the worker (+1.23), contact with others (+0.59), maintaining interpersonal relationships (+2.31), and freedom to make decisions (+0.58). Averaging across these 5 characteristics, marketing managers are more than a full standard deviation (+1.10) above average. In contrast, accounting jobs appear to be much more flexible (+0.23). These differences in occupational time demands should, in theory, make discrimination against mothers in marketing manager jobs more likely than in accounting jobs.

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<sup>14</sup> Advertising and promotions managers in the ACS occupational coding scheme

<sup>15</sup> Full-time is defined as working more than 35 hours per week.

Table 3.2: Occupational Characteristics  
American Community Survey (2013) and O\*Net

| Occupation (Size Rank)                    | Median Years of Education | Average Hourly Wages | Percent Female | Percent Non-white | Weekly Hours (FT, FY) | O*Net Index |
|-------------------------------------------|---------------------------|----------------------|----------------|-------------------|-----------------------|-------------|
| Low-skilled Occupations                   |                           |                      |                |                   |                       |             |
| Cashiers (5)                              | 12                        | 11.4                 | 76             | 41                | 41.0                  | -1.05       |
| Retail Salespersons (4)                   | 13                        | 16.9                 | 54             | 30                | 43.7                  | 0.22        |
| High-skilled Occupations                  |                           |                      |                |                   |                       |             |
| Accountants and Auditors (14)             | 16                        | 33.9                 | 61             | 25                | 43.8                  | 0.23        |
| Advertising and Promotions Managers (345) | 16                        | 35.9                 | 60             | 20                | 46.7                  | 1.03        |

For low-skilled jobs, I select occupations commonly held by women with a high school degree or less and by women who are welfare recipients. Using data from the 2013 ACS, I examined jobs that were most common for women ages 18 to 50 who received welfare in the previous year. Among the top 10 most common occupations for welfare recipients, I selected two occupations in which women are neither extremely underrepresented nor overrepresented: cashiers and retail salespersons. An estimated 14 percent of currently employed welfare recipients in the 2013 ACS, and 11 percent of women with a high school degree, work in these two occupations. These jobs thus capture a significant share of all jobs held by welfare recipients and low-skilled women.

The high- and low-skilled occupations in this study have important similarities and differences. Compared to the high-skilled jobs, mean hourly wages are significantly lower in retail salesperson (\$17) and cashier (\$11) jobs, and the median number of years of education is similar for retail salespersons (13) and cashiers (12). Full-time cashiers also work significantly fewer hours per week (41.0) and per year (2,092) compared to the two high-skilled jobs in the study. In contrast, full-time retail salespersons are very similar to accountants in the number of hours worked per week (43.7) and per year (2,227). Similarly, while cashiers have the lowest

occupational inflexibility (-1.05), retail salespersons (+0.22) and accountants (+0.23) have similar levels. By design, the study includes occupations that both differ and overlap in theoretically relevant characteristics within and between skill levels. Given differences in time demands and inflexibility, discrimination against mothers should be more likely in retail salesperson than in cashier positions.

For both low- and high-skilled jobs, I chose occupations that are neither female- nor male-dominated. The goal was to select occupations in which it is common for women to work (at least 50% female), but which are also not completely dominated by women. Percent female across occupations ranges from 54% to 76%. Occupations in which women are numerical tokens (< 15 percent) are theoretically important because women's underrepresentation could reflect gender discrimination (Kanter 1977; Turco 2010). However, women may also be underrepresented in certain occupations because they chose not to apply to those jobs for reasons unrelated to discrimination (England 2010). Women are unlikely to apply to jobs in certain occupational categories, including construction and extraction, installation, maintenance, and repair, and transportation and material moving (Pager and Pedulla 2015). Although discrimination may differ in occupations in which women are tokens, for increasing external validity I restrict occupations to those in which it is common for women to apply.

I also avoid occupations that almost exclusively employ women. This includes registered nurses (91% female), maids and housekeeping cleaners (89% female), secretaries and administrative assistants (96% female), and child care workers (94% female). While these occupations are important in their own right because many women work in these occupations, including them would complicate an evaluation of how occupational demands themselves influence discrimination by motherhood status, especially when the jobs involve care work.

When jobs are primarily defined in terms of care, women's roles as mothers may increase perceptions of their competence while being undermined by perceptions of lower commitment (Ridgeway and Correll 2004). Including such occupations would make a straightforward comparison of the effects of motherhood status in more and less time intensive occupations difficult. Therefore, I only select occupations that are neither highly female nor male dominated.

### Labor Market Context

I include job postings in 6 different labor markets that vary along theoretically-relevant dimensions: Boston, Chicago, Houston, Los Angeles, New York City, and Washington D.C. These cities are all very large in population and differ in both maternal labor force participation and unemployment rates. Table 3.3 lists the labor markets included in this study, along with their population size rank, unemployment rates, and levels of maternal labor force participation. Houston, Washington D.C., and Boston have low unemployment rates, and Los Angeles, New York, and Chicago have high unemployment rates. Labor markets also vary in maternal labor force participation rates: low (Los Angeles and Houston), medium (New York and Chicago), high (Washington D.C and Boston).

Table 3.3: Study City Metropolitan Areas by Characteristics  
Population Size Rank, Unemployment Rate, and Maternal Labor Force Participation Rate  
2013 American Community Survey

| Metropolitan Area | Size Rank | Maternal Labor Force Participation Rate | Unemployment Rate |
|-------------------|-----------|-----------------------------------------|-------------------|
| Houston           | 8         | 65.5 (low)                              | 6.5 (low)         |
| Los Angeles       | 2         | 66.8 (low)                              | 9.4 (high)        |
| New York          | 1         | 72.3 (medium)                           | 8.2 (high)        |
| Chicago           | 3         | 73.3 (medium)                           | 8.7 (high)        |
| Washington D.C.   | 5         | 76.0 (high)                             | 5.6 (low)         |
| Boston            | 10        | 76.9 (high)                             | 6.3 (low)         |

## **Correspondence Test Validity: Job Search Methods in Low- and High-Skilled Jobs**

There are two primary methods for identifying labor market discrimination in field experiments: in-person audit studies and correspondence tests. With in-person audit studies, matched pairs of testers trained by researchers are sent to apply for jobs in person. In correspondence tests, researchers send matched pairs of fictitious resumes and cover letters to employers by mail, fax, or email. Because low-skilled workers traditionally have applied for jobs in person by filling out a paper application or speaking directly with employers about job openings on site, prior studies of discrimination in low-wage labor markets have generally relied on audit methods (Pager 2003; Pager, Western, and Bonikowski 2009; Bendick, Jackson, and Reinoso 1994; Turner, Fix, and Stuyk 1991). While in-person audit studies have important strengths, practical challenges limit their scale and statistical power. While in-person audit studies have important advantages for studying the effects of race and ethnicity (Pager et al. 2009),<sup>16</sup> in-person audits are expensive and time consuming relative to correspondence test field experiments and pose unique methodological challenges because of the coordination required between testers and because researchers have less control over the treatment presented to employers (Pager 2007).

Changes in job search methods create new opportunities to study discrimination in the low-wage labor market. If low- and high-skilled individuals now rely on similar job search methods, including submitting applications online, this would support the external validity of correspondence test methods to study discrimination in both low- and high-skilled occupations. The Internet has changed how unemployed individuals search for jobs. Table 3.4 shows trends in

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<sup>16</sup> For example, Bertrand and Mullainathan (2004) use distinctively white and black names to signal race in a correspondence test. However, Fryer and Levitt (2004) show that distinctively black names are also strongly associated with lower socioeconomic status.

the share of unemployed adults ages 18 to 50 who used the Internet to search for jobs<sup>17</sup> using data from the Internet supplement of the Current Population Survey (CPS) over the period 1998 to 2012. While 46 percent of unemployed adults in 1998 used the Internet to search for work, that percentage had risen to almost 70 percent by 2012. Among unemployed women in 2012, Table 3.5 shows that college graduates and high school graduates used Internet job search methods at similar rates, and the use of these methods does not differ substantially by motherhood status. Thus, Internet job search methods have become much more common in recent years and appear to be widely used by childless women and mothers of different skill levels.

Table 3.4: Internet Job Search by Year  
All Unemployed Adults Ages 18 – 50  
Current Population Survey Internet Supplement: 1998, 2000, 2001, 2003, 2011, and 2012  
Whether Person Used Internet to Search for Jobs  
Data Are Weighted

|                     | 1998 | 2000 | 2001 | 2003 | 2011 | 2012 |
|---------------------|------|------|------|------|------|------|
| Internet Job Search | 46.3 | 52.2 | 58.4 | 66.1 | 70.5 | 69.0 |

Table 3.5: Internet Job Search by Parental Status and Education  
Unemployed Women Ages 18 – 50  
Current Population Survey Internet Supplement: 2012  
Whether Person Used Internet to Search for Jobs

|                 | < High School | High School | Some College | College Graduate + | All  |
|-----------------|---------------|-------------|--------------|--------------------|------|
| Childless Women | 57.0          | 70.4        | 75.3         | 77.5               | 72.7 |
| Mothers         | 55.3          | 66.0        | 76.7         | 68.6               | 68.6 |

Note: Data are weighted.

<sup>17</sup> The question is: “Do you use the Internet when conducting a job search (research listings, post a resume, and so on?)”

Because the CPS Internet job search question does not ask specifically whether respondents use the Internet to submit job applications, as researchers do in correspondence test studies, it is possible that low-skilled women use the Internet to search for job openings but still apply for jobs in person. Table 3.6 describes unemployed women's job search methods by education and motherhood status for all months in 2014 using the CPS basic monthly.<sup>18</sup>

Although there are some differences in job search methods by education and motherhood status, these differences are relatively small for the methods relevant to this study.<sup>19</sup> Furthermore, prior studies have successfully used correspondence tests to study discrimination in low-wage jobs, including cashier and home health aide jobs (Lahey 2008) and retail sales, cashier, janitor, and security guard positions (Neumark, Burn, and Button 2015). Together, these findings and prior studies suggest that correspondence tests can validly be used to assess discrimination by motherhood status in low- and high-skilled jobs.

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<sup>18</sup> As with the CPS Internet job search question, a limitation of the CPS basic monthly is that it collapses methods that would ideally be separated, such as "sending out resumes or filling out applications." These data, however, are the best available source for examining whether low- and high-skilled women use similar job search methods.

<sup>19</sup> This includes the following methods: contacting employers directly/interviewing, sending out resumes or filling out applications, placing or answering ads, and looking at ads.

Table 3.6: Percent Using Job Search Methods by Education and Parental Status  
Unemployed Women Ages 18 – 50  
Current Population Survey Basic Monthly: 2014

| Job Search Method                             | Childless Women |               | Mothers     |               |
|-----------------------------------------------|-----------------|---------------|-------------|---------------|
|                                               | High School     | College Grad+ | High School | College Grad+ |
| Contacted Employer Directly/Interview         | 48.1            | 50.9          | 43.8        | 45.8          |
| Contacted Public Employment Agency            | 16.8            | 17.1          | 18.9        | 16.5          |
| Contacted Private Employment Agency           | 6.2             | 12.9          | 6.0         | 12.7          |
| Contacted Friends or Relatives                | 21.3            | 26.4          | 22.5        | 25.8          |
| Contacted School/University Employment Center | 2.6             | 9.4           | 2.5         | 5.3           |
| Sent Out Resumes/Filled Out Application       | 57.0            | 62.5          | 57.4        | 59.7          |
| Checked Union/Professional Registers          | 1.7             | 5.6           | 1.7         | 4.5           |
| Placed or Answered Ads                        | 14.1            | 18.0          | 12.8        | 19.0          |
| Other Active                                  | 7.1             | 12.1          | 6.8         | 9.2           |
| Looked at Ads                                 | 30.4            | 29.2          | 29.7        | 30.1          |
| Attended Job Training Programs/Courses        | 1.0             | 2.7           | 1.5         | 2.0           |
| Other Passive                                 | 3.3             | 2.7           | 3.3         | 4.5           |
| Nothing                                       | 3.5             | 3.9           | 3.1         | 5.0           |

Note: Data are weighted.

## Hypotheses

The experiment is designed to assess whether employers discriminate similarly against mothers in different low- and high-skilled occupations. If motherhood is associated with widely held cultural beliefs about lower competence and commitment, I expect that discrimination against mothers will be evident in both low- and high-skilled occupations. However, because some occupations are more time intensive and less flexible than others, I hypothesize that discrimination will be strongest in more time-intensive occupations, such as marketing manager positions, compared with in less-time intensive occupations, such as cashier positions.

## **Identifying and Selecting Job Postings**

To select job postings, I rely on two large job posting websites that cover each of the labor markets in the study. These websites are used by millions of job seekers and employers each month in the United States. Additionally, these websites include a large number of job postings for both low- and high-skilled occupations.

To identify job postings on each website, I use specific search terms within each occupation included in the study. I impose a number of eligibility restrictions for job postings. First, I exclude postings that require the applicant call or apply in person. Second, I exclude jobs that request salary histories or salary requirements, specific skills not already included in both applicants' resumes, and jobs that are temporary, seasonal, or part-time. Third, I restrict job postings to those that can be applied to directly through the job search website or to an email address rather than through external websites. I exclude postings directing applicants to external websites because they may require answering questions that would be difficult to standardize across applicants within each pair. Finally, each employer can be included only once in the study.

## **Randomization**

I randomize multiple features of applicants within each pair. One applicant in each pair is randomly assigned to signal motherhood and one applicant is randomly assigned to not signal motherhood. Therefore, each employer receives an application from both a mother and a non-mother applicant. Additionally, for non-mothers, I randomly assign one of two different volunteer service signals. To avoid raising employer suspicions, applications are submitted one day apart. Since the application that is submitted first is likely to be called back at a higher rate, I

randomize whether the mother or the childless application is submitted first. Finally, because identical application materials cannot be submitted to a given employer, there are two resume and cover letter templates for each occupation. Tables 3.7 and 3.8 describe the balance across mother and childless applicants for each of the experimentally manipulated features that may independently affect callbacks.

Table 3.7: Balance across Experimental Conditions by Occupation  
Test of Equality of Proportions: Application Submission Order  
Mothers and Childless Women

|                   | First Application of Pair Submitted |         | p value |
|-------------------|-------------------------------------|---------|---------|
|                   | Childless Women                     | Mothers |         |
| <i>Occupation</i> |                                     |         |         |
| All               | 0.501                               | 0.499   | 0.95    |
| Cashier           | 0.462                               | 0.538   | 0.30    |
| Sales             | 0.481                               | 0.519   | 0.54    |
| Accounting        | 0.489                               | 0.511   | 0.72    |
| Marketing         | 0.550                               | 0.450   | 0.07    |

Notes: \*  $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$  (two-tailed tests).

Table 3.8: Balance across Experimental Conditions by Occupation  
Test of Equality of Proportions: Resume Version  
Mothers and Childless Women

|                   | Resume Version 1 (of 2 Versions) |         | p value |
|-------------------|----------------------------------|---------|---------|
|                   | Childless Women                  | Mothers |         |
| <i>Occupation</i> |                                  |         |         |
| All               | 0.503                            | 0.497   | 0.85    |
| Cashier           | 0.581                            | 0.419   | 0.03*   |
| Sales             | 0.435                            | 0.565   | 0.04*   |
| Accounting        | 0.489                            | 0.511   | 0.72    |
| Marketing         | 0.525                            | 0.475   | 0.37    |

Notes: \*  $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$  (two-tailed tests).

## **Constructing Resumes**

Because resumes are the primary stimuli to which employers are exposed, they are central to the inferences in this study. I aim to create resumes that are realistic for the jobs to which applicants are applying. To obtain a sample of realistic resumes for each occupation, I first download publicly available resumes from 2 large national job search and networking websites. For each job type, I identified relevant resumes by searching based on education, work experience, job title, and location. While resumes posted on these websites may not be representative of all job seekers within these occupations, they allow me to examine how actual workers portray their skills and experience to potential employers.

For each occupation, I create a pool of relevant titles, employers, and job descriptions. I then use these entries to construct work entries for 2 resumes for each occupation with skills that appear average for each occupation and matched in quality. Because retail salesperson and cashier work experience entries in resumes describe similar skills, I use the same resumes for both occupations. For low-skilled resumes, I use the same titles, employers, and job descriptions across cities, using work experience in chain stores that have locations in each city included in the experiment. For high-skilled resumes, titles and job descriptions are identical across cities within each occupation, but I add local employer names because there are very few employers in accounting and marketing that have offices in each of the 6 labor markets.

There are two different resumes for each occupation and city. As an additional measure to prevent employer awareness of the fictitious nature of the applications, each resume uses a different template, font, formatting, and section titles. Each applicant has around 7 years of full-time work experience after graduating from high school (low-skilled) or college (high-skilled) in 3 or 4 different positions. To ensure comparability of my estimates with those of Correll et al.

(2007), applicants have an implied age of approximately 29 years. Because low-skilled applicants in this study also have 7 years of continuous work experience after completing high school, they have an implied age of approximately 25 years.

### **Applicant Race and Ethnicity**

I focus on non-Hispanic white women for two reasons. First, including multiple race and ethnicity conditions, while potentially important theoretically, would significantly increase the number of job applications required. Second, patterns for applicants who are racial or ethnic minorities may present complex patterns of effects that make it difficult to assess how occupational context itself – rather than other confounding factors – affects callbacks. For example, especially in the low-wage labor market, employers may view black mothers – or black women in general – through a lens of especially negative stereotypes about welfare recipients (Gilens 2009), which in turn could amplify or mute the effects of motherhood status.

Alternatively, black mothers in low-wage jobs may be viewed by employers as single parents in need of income and therefore as reliable workers (Kennelly 1999), which could instead could produce higher callback rates for mothers relative to childless women. Employers might hold stereotypes about black mothers that either advantage or disadvantage mothers, and these stereotypes may also differ in low- and high-skilled occupations. As a result, interpreting how discrimination by motherhood status varies in different occupational contexts could be difficult. Therefore, I focus on non-Hispanic white women in this study to better isolate how occupational context itself shapes the effects of motherhood status.

To select first and last names for applicants, I use data on name patterns by race and ethnicity and gender to select names that signal that applicants are non-Hispanic white woman.

Appendix 3A describes the procedure used to select first and last names for applicants, as well as criteria for adding home addresses, zip codes, email addresses, phone numbers, educational credentials. These procedures are described in detail in Appendix 3A.

### **Signaling Motherhood Status**

I add signals of motherhood status to each resume and cover letter. In order to compare my estimates to those of Correll et al. (2007), I use similar signals in resumes. For mothers, I list service as either a fundraising committee chair or volunteer coordinator in the Parent Teacher Association (PTA) of a local public elementary school in either a “Service” or a “Relevant Activities” section. I select schools that are within close proximity to applicants’ home addresses within each city. In addition, I select schools that have a student composition is at least 20 percent non-Hispanic white and that receive a rating of at least 7 out of 10 on GreatSchools.org.

For childless women, like Correll et al. (2007) I list a service activity in resumes that is comparable in terms of time requirements, skills, job relevance, and service orientation. The volunteer position titles – fundraising committee chair and volunteer coordinator – are randomly assigned between mothers and childless women. I randomly vary different signals at local chapters of 2 different secular service organizations: a disaster support organization and a health fundraising organization. These organizations are unlikely to signal either parenthood or personal characteristics, such as political orientation or religiosity, that could otherwise make the comparison with PTA service ambiguous. Mothers and childless women are both listed as serving in volunteer organizations for one year. Because the childless applicants do not provide a signal that they *do not* have children, some employers may assume that these applicants also

have children. Therefore, estimates of the effects of motherhood status should be considered conservative.

Because applicants in this study have local home addresses and work histories, the signal of motherhood status in the cover letter differs from the signal used by Correll et al. (2007). In their study, both applicants had work experience from states outside of the city in which they applied for jobs. Their childless applicants mentioned recently moving to the area, while parent applicants added that they had moved with their family. I use a different signal in the cover letter that is designed to reinforce and draw attention to the motherhood status manipulations in the resumes. Applicants mention either taking an active service role through their volunteer work or being a leader in the community. Mothers add that they serve in the PTA of their children's school, while childless women note that they serve in the specific organization listed in their resume.

### **Submitting Job Applications and Recording Responses**

Once an eligible job opening is identified that meets all criteria, I submit resumes and cover letters electronically. Applications within each pair are submitted one day apart. As an addition measure to prevent employer suspicion that the resume pair is fictitious, I randomly assign different resume file name conventions within each pair. Both resumes are saved in Microsoft Word .doc format unless otherwise specified in the ad. Cover letters are pasted in the body of emails rather than as attachments unless otherwise requested. Job applications are submitted during standard business hours within each city's time zone.

## **Outcome Measure: Callbacks**

After submitting job applications, I monitor voicemail and email accounts for employer responses. Based on the email address or phone number contacted and information provided in the email or voicemail, I match employer responses to the correct treatment condition, job posting, and applicant. I define a callback as a request from the employer to interview or discuss either the position or the applicant's background further.

## **Statistical Methods**

To examine whether employers discriminate similarly by motherhood status in different occupations, I first conduct paired t-tests for differences in callback means between mothers and childless applicants. I run tests and models pooling across occupations and then separately for each occupation. Second, to adjust for potential imbalances in random assignment of experimentally manipulated factors that could independently influence callback rates, I run logistic regression models that take into account each of the randomly assigned factors in the experiment: motherhood status, the order in which applications were submitted, and the resume template used for each applicant. Since each employer receives 2 job applications, I cluster standard errors at the employer level.

In certain cases, employers remove job postings after the first applicant of a pair has submitted an application, but before the second application has been submitted. This occurred for 11 job postings (2% of job postings). I exclude these postings from the analysis because the employer was not exposed to both a mother and a childless applicant in these cases. However, results do not change with inclusion of these postings.

## Results

I submitted applications to 519 job openings across the 4 occupations included in this study. There is uncertainty in the estimates within individual occupations. However, in the full sample, callback rates for mothers and childless women are statistically different based on a paired t-test ( $p = 0.02$ ). Figure 3.3 plots callback rates in the full sample and within each occupation. To more directly compare the estimates from this study to those of Correll et al. (2007), I also plot the callback rates for mothers and childless women from their study. Overall in this study, childless women receive a positive response from employers 25.4 percent of the time, while the callback rate for mothers is 21.4 percent. In all of the occupations except for retail sales associates, the estimated callback proportion is lower for mothers than for childless women. There appears to be evidence of differences across occupations in the effect of motherhood status. The difference in callback rates between mothers and childless women is statistically significant in only one occupation: marketing managers.

Figure 3.3: Callback Rates by Motherhood Status and Occupation

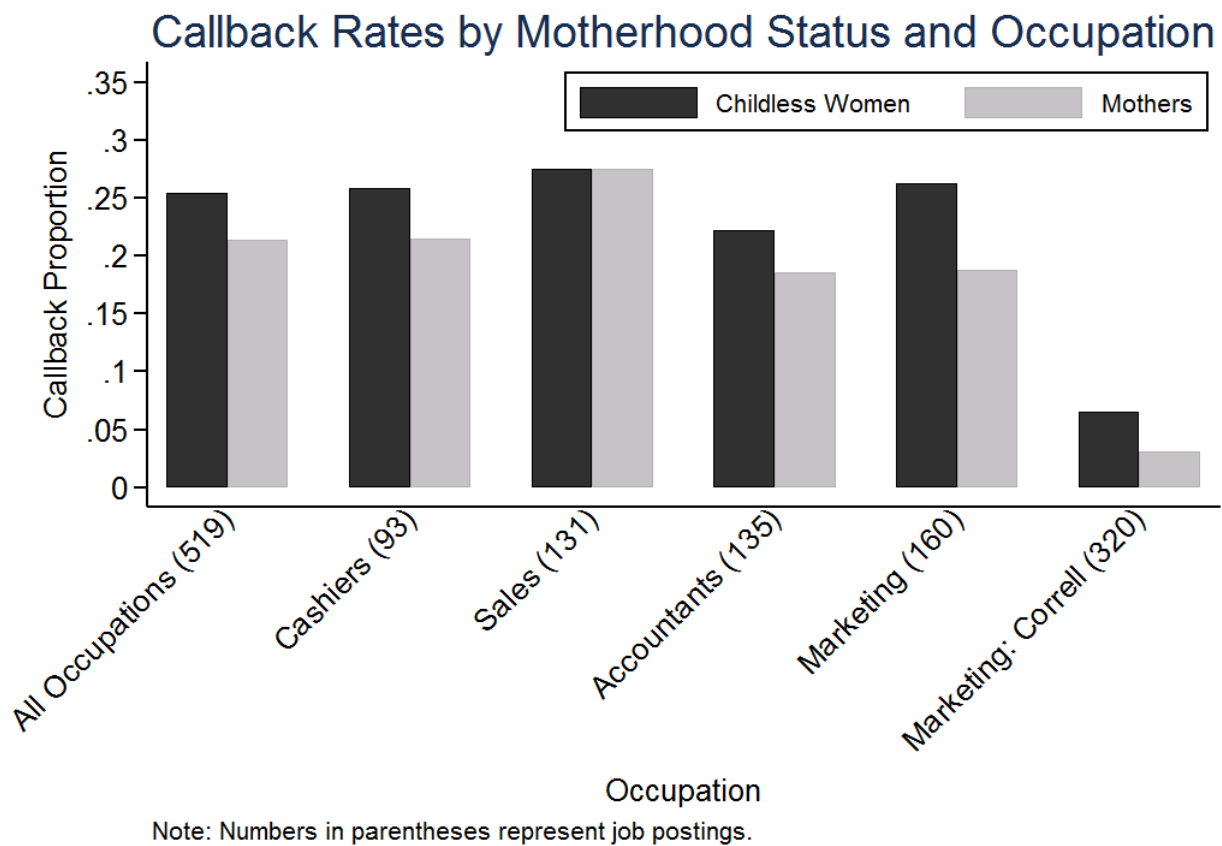
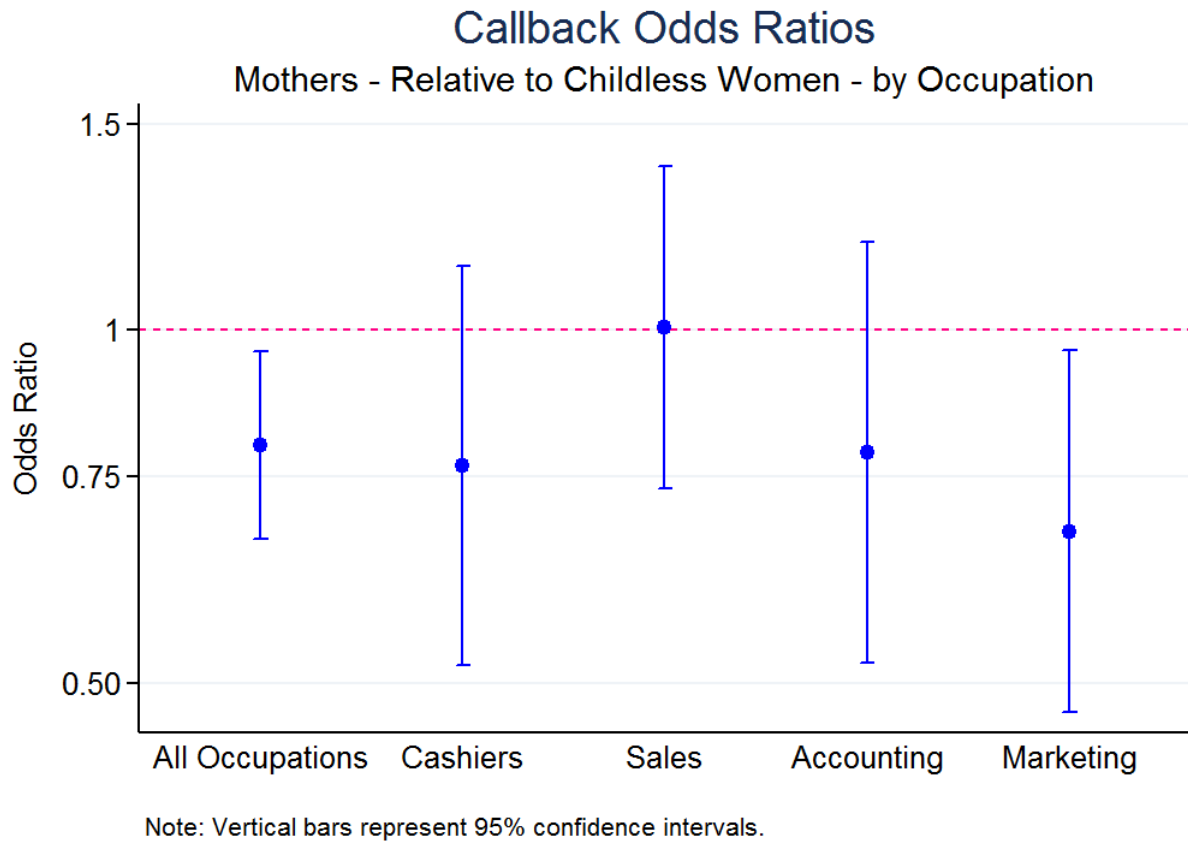


Figure 3.4 plots estimates of the effect of motherhood status on callbacks in the full sample and separately by occupation. This provides a standardized estimate of the relative effect of motherhood status in each occupation to more explicitly compare across occupations. In the full sample, mothers are called back at a rate that is 20 percent lower than for childless women ( $p = 0.02$ ). Although the estimates are imprecise given the sample size for each occupation, there appears to be evidence of differences in the effects of motherhood status across occupations.

Figure 3.4: Callback Odds Ratios  
Logistic Regression Models  
Motherhood Status by Occupation



Within the high-skilled occupations, mothers receive a positive response from employers 28% less often than childless women. However, there is also evidence that the consequences of motherhood status may not be the same in accounting and marketing manager jobs. Mothers are called back an estimated 21 percent less often in accounting jobs, but 33 percent less often in marketing manager jobs. However, I lack sufficient statistical power given the current sample size and callback rates to differentiate between these estimates. Given the data, these estimates suggest that mothers do receive lower callback rates in marketing manager positions, but not in accounting positions.

Comparing the effects of motherhood status in marketing manager jobs in this study to those of Correll et al. (2007), we see different effect sizes but similar substantive conclusions. Mothers received 52 percent fewer callbacks than childless women in Correll et al.'s (2007) study, but an estimated 33 percent fewer callbacks in this study. Despite very different overall callback rates between these studies, in both cases mothers receive significantly fewer callbacks than childless women in marketing manager positions. This replication of Correll et al.'s (2007) experiment and results therefore strengthens the evidence that discrimination against mothers occurs in this occupation.

Within the two low-skilled occupations combined, callback rates are an estimated 11% lower for mothers relative to childless women ( $p = 0.37$ ). However, these point estimates are not the same for retail salespersons and cashiers. Mothers receive callbacks 23 percent less often in cashier jobs and 1 percent more often in retail sales jobs. Neither estimate, however, is statistically significant. Comparing estimates of the effects of motherhood status across occupations, this study suggests that while discrimination against mothers appears to be strong the most time intensive and least flexible occupation included in the study – marketing manager positions – there is no evidence of discrimination in the other occupations.

## **Discussion and Conclusion**

Analyses of federally filed employment discrimination cases suggest that motherhood continues to be an important source of bias in the labor market. Decisions in cases involving family responsibilities discrimination in the past decade (2006-2015) increased by more than 250% compared to over the previous decade (1996-2005), with this pattern occurring during a period when the number of employment discrimination cases in federal court actually declined

(Calvert 2016). Moreover, plaintiffs are successful in these cases at much higher rates than in other types of employment discrimination cases, and mothers in particular are the most successful plaintiffs in family responsibilities discrimination cases (Calvert 2016). Legal scholars have argued that family responsibilities discrimination is not limited to professional occupations, but is also important in some working class jobs, particularly when mandatory overtime and inflexible schedules are important (Williams 2006).

Although the estimates are imprecise, these findings suggest that hiring-related discrimination against mothers may not be present in all occupations. The occupation with the longest hours and least flexibility – marketing managers – is the only one in this study that shows clear evidence of discrimination at the hiring stage. Occupations that are comparatively more flexible and less time intensive show no evidence of discrimination. In sum, the results suggest that context matters in shaping the effects of motherhood.

Discrimination against mothers in retail salesperson and cashier jobs would be important because these occupations represent a substantial share of the jobs held by low-skilled women. Together, however, callback rates for mothers in the 2 low-skilled occupations together are only an estimated 11 percent lower than for childless women. Although federal welfare reform legislation tied benefit receipt to low-income mothers' employment, evidence of discrimination in these jobs would suggest that these women may face significant employment barriers in an important segment of the low-wage labor market. Because workers in low-skilled occupations work fewer hours and are more interchangeable than workers in high-skilled jobs, how employers define the "ideal worker" should be different on average in low- versus high-skilled jobs.

This study highlights the importance of considering discrimination in context. Given differences in time demands and flexibility in different occupations, the extent to which motherhood is viewed as incompatible with successful job performance is likely to vary across occupations. Time intensive jobs that require workers to be present for long hours and at particular times should, in theory, be viewed by employers as requiring a level of commitment that is incompatible with the time commitments of motherhood. Because college-educated mothers engage in more intensive parenting behaviors than less educated mothers, employers may be particularly likely to view parenting responsibilities as competing with job responsibilities in such occupations. By explicitly focusing on variation in the effects of motherhood rather than average effects in a single occupation or across occupations, this study not only identifies specific conditions under which discrimination occurs, but also provides important clues as to why.

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## **Appendix 3A: Resume Design Details**

### **Applicant Names**

For first names, I use names that are common among birth cohorts of women represented in this study: 1987 and 1991. I select first names that are within the 20 most common first names for girls in both 1987 and 1991 based on Social Security Administration records. To ensure that differences in callback rates for mothers and childless women are not affected by first names, I randomize which name is used for mothers and childless women within each applicant pair. Last names are selected based on data from the 2000 Census on the 1000 most common surnames.<sup>20</sup> I select last names that are distinctively (> 90 percent) non-Hispanic white.

### **Adding Home Addresses and Zip Codes**

When selecting zip codes to add to each resume in each city, I attempt to avoid suggesting a race or ethnicity other than non-Hispanic white or a socioeconomic status that is either very high or very low. I restrict zip codes to those that are well-populated and that are within a reasonable commuting distance to the city center. Using data from the 2010 – 2014 American Community Survey (ACS), I drop zip codes that are in the top or bottom quintiles of the unemployment or the median family income distribution within each city. I also exclude zip codes that are within the top quintile of percent Hispanic or non-Hispanic black. I drop zip codes that are in the bottom quintile of the population distribution within each city. Finally, I drop zip codes that are more than 10 miles from city hall in each city. From the remaining zip codes, I select one per city to add to both resumes, and I use the same zip codes for low- and high-skilled applicants.

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<sup>20</sup> Data: [http://www.census.gov/topics/population/genealogy/data/2000\\_surnames.html](http://www.census.gov/topics/population/genealogy/data/2000_surnames.html)

To identify home addresses within each zip code, I use a similar procedure to that of Neumark et al. (2015). Using the website Zillow.com, I search for homes for sale within each selected zip code and choose a street at which housing prices are approximately average for the city. To verify that the street is residential, I use the street view function on Google maps. Next, I select a house number for a specific unit with a value that is similar to the estimated median home value for the zip code based on data from Zillow.com. Home addresses are randomized between mother and childless applicants within each city.

### **Adding Email Addresses**

To provide employers with a means of contacting applicants to request interviews, I add email addresses and local phone numbers for each applicant and monitor accounts for responses. To construct email addresses for each candidate, I use two different commonly-used email providers. I use different email providers for each applicant as an additional measure to prevent employers from becoming suspicious that the applicants are fictitious. These two email providers appear to be similarly popular based on data from Google Trends. Email domains are randomized within each mother and childless applicant pair. In addition to the email domain differing within each applicant pair, I also vary the email address style as a measure to avoid making the resumes appear too similar. Applicants within each pair are randomized on email address styles:

Table 3A1

| Email Address Style                              | Email Address Example        |
|--------------------------------------------------|------------------------------|
| first name (.) middle initial (.) last name      | emily.a.walsh@domainname.com |
| first initial, middle initial, last name, number | ejwalsh1@domainname.com      |

## **Adding Phone Numbers**

I purchase phone numbers for applicants through the website Vumber.com using area codes close to the central business area in each city. The phone numbers used in the experiment are identical to those used for real physical phones, but voicemail can be monitored online through a central account without the costs associated with purchasing and maintaining a physical phone. To facilitate matching of responses to specific experimental conditions and job postings in cases where the employer provides limited information when inviting an applicant for an interview, I create unique phone numbers for each labor market (6), occupation (4), and motherhood status treatment (2). I avoid area codes that were created very long ago or very recently as well as zip codes that are more difficult to obtain (e.g. area code 212 in New York City). I use the same area codes for each member of the applicant pair, but to avoid making employers suspicious, each phone number has a different prefix and line number.

## **Low-Skilled Applicants' Education**

To signal that low-skilled applicants have a high school degree, it is necessary to list the high school from which the applicants graduated. Within each metropolitan area, I select two public high schools based on school quality rating, location, racial and ethnic composition, and family income composition. To signal similar educational training and skills for both applicants, I select schools that are of similarly high quality (rated at least 5 out of 10 on the website [greatschools.org](http://greatschools.org)). Because I intend to signal that both applicants are non-Hispanic white, I include schools that have racial compositions of at least 20 percent non-Hispanic white students (percent non-Hispanic white ranges from 21 percent to 49 percent). I also select high schools that are neither extremely high nor low in family income composition based on percent of students

receiving free or reduced lunch. The percent of students receiving free or reduced lunch at schools in this study ranges from 29% to 60%. Within cities, I attempt to match schools on these factors. Because some school districts are highly racially segregated and do not have 2 or more public schools that have at least 20 percent of students who are non-Hispanic white, in some cases I select high schools that are within the greater metropolitan area but outside of the city. Finally, I restrict high schools to those that were open when the applicants are listed to have graduated.

### **High Skilled Applicants' Education**

Applicants for high-skilled jobs have college degrees from large, public universities. For marketing jobs, applicants have a bachelor's degree in business with a major in marketing. Applicants for accounting jobs also have a bachelor's degree in business, but with a major in accounting. For marketing and accounting positions, these credentials match those required for most of the job openings I observed on the job search websites used in this study.

Ideally, educational credentials selected for applicants will be perceived as being of the same quality by employers. To match applicants on educational quality, I use the U.S. News and World Report national college and university rankings from 2016. To select universities, I use the overall national university rankings along with rankings for undergraduate business programs specifically. I selected similarly ranked schools that are outside of the top 100 in the national rankings that have an undergraduate degree program in Business with a major in both accounting and marketing.

### **Appendix 3B: Ethical Considerations in Correspondence Tests**

It is important to carefully consider ethical issues involved in using correspondence test methods, particularly because deception is involved and employers do not provide informed consent. Researchers in correspondence tests submit application materials from fictitious applicants that do not represent actual job seekers. Therefore, correspondence tests deceive employers and impose costs on them.

The American Sociological Association's code of ethics identifies specific considerations related to the use of deception in research (Section 12.05). Under this code, sociologists should not use deception unless (a) deception will not be harmful to research participants, (b) deception is justified by the study's scientific or practical benefits, (c) equally effective alternative procedures not involving deception are not feasible, and (d) researchers have obtained IRB approval for the use of deception.

**Harm:** I aim to both maximize the scientific and policy-related benefits of this study and to minimize the harm to employers. In this study, submission of fictitious applications does impose a cost on employers: time. However, by submitting only 2 applications per job opening, and including each employer only once in the experiment, I reduce the burden on employers compared to if more than 2 applications had been sent to each job opening or employer. Additionally, because the matched pair design used in this study produces more statistically efficient estimates compared to submitting only one application per employer, the study reduces the total number of job applications submitted to employers. To further reduce the burden on employers, I email employers within 24 hours of receiving a callback to thank the employer from the applicant but decline the interview offer. This procedure provides employers with the

information necessary to move on to other job candidates quickly and to continue searching for candidates to fill their job openings.

Not debriefing employers is also a choice designed to reduce harm. Debriefing of subjects making hiring decisions could place those subjects at risk of termination if their behavior were to be more closely scrutinized by supervisors as a result of supervisors' awareness of subjects' participation in an audit study of hiring discrimination. In principle, supervisor scrutiny could occur even if the subject in question is not a discriminatory employer, and despite the fact that discrimination is not identifiable from callback outcomes observed for any one matched pair of candidates. Hiring managers or human resources personnel subjects could face risks of termination if their supervisors were erroneously to believe that subjects are discriminating merely by having participated in the study.

Under the study design, for an individual subject, there is no way to link a particular subject to discriminatory behavior, either legally or statistically. Because the two fictitious job applications will be matched in qualifications by design, if subjects were to pick one applicant in the pair randomly, a mother would be selected half the time on average, and a non-mother would be selected half the time. Only in the aggregate can we determine whether discrimination has occurred. Subjects at the individual employer level therefore will not be at risk of being identified as engaging in discriminatory behavior in any case, and thus not subject to legal risks of charges of discriminatory behavior. I also protect the confidentiality of subjects participating in this study, and individual subjects or companies will never be identified in presentations or publications. Therefore, subjects will not be at risk of being associated with participating in a study on labor market discrimination. The risks to subjects under this research protocol are no greater than those ordinarily encountered in daily life.

**Scientific and Practical Justification for Deception:** The potential benefits of the research for science are important and will enhance our understanding of the conditions under which discrimination by motherhood status is more or less pronounced. This, in turn, will inform our theories of why discrimination occurs and how it contributes to inequality. There are also potentially important benefits of this study for society. By focusing on women in low-skilled jobs, the design provides an evaluation of an important assumption underlying welfare reform in the 1996 Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA): that low-skilled mothers do not face significant employment barriers (Corcoran et al. 2000). Discrimination also matters because it undermines equality of opportunity and creates important costs for society (Riach and Rich 2004).

**Equally-Effective Alternative Procedures Not Involving Deception Are Not Feasible:** Because the purpose of this study is to evaluate labor market discrimination by motherhood status in a real world context, subject awareness of participation would compromise the results by altering subjects' behavior. Therefore, it is essential that subjects remain unaware of their participation in the study. Because discrimination is not a socially acceptable behavior, assessing the level of discrimination in different occupations would be extremely difficult to do by using standard survey methods. Moreover, regression-based approaches to identifying discrimination are not valid because "unexplained" associations between motherhood and wages are consistent with multiple explanations. As Bertrand and Mullainathan (2004:999) point out, survey researchers can never identify discrimination using standard regression approaches because individuals who looks the same in surveys may look very different to employers, who are likely to have far more information. A correspondence test in this instance is the only valid way to address the research questions posed in this study.

**IRB Review:** This study design was reviewed and approved by the Princeton University Institutional Review Board.

## **Conclusion**

This dissertation addresses important and unresolved questions that are central to understanding how parenthood contributes to inequality both between- and within-generations. Using two large-scale experiments, I posed three questions. First, do more- and less-educated parents have different views about “good” parenting? Second, how does gender influence how parents evaluate different types of parenting behaviors? Finally, do employers discriminate similarly against mothers in low- and high-skilled occupations?

Although education differences in cultural conceptions of good parenting are the primary explanation offered for education differences in parenting behavior (Calarco 2014; England and Srivastava 2013; Lareau 2003), Chapter 1 demonstrates that more- and less-educated parents have remarkably similar views about what constitutes good parenting. Moreover, this strong approval of intensive parenting is highly consistent across a wide range of situations. Differences in cultural conceptions of good parenting are therefore unlikely to be the primary driver of differences in parenting behavior. Instead, the findings are consistent with the theory that resource constraints lead to the less-intensive parenting methods used by economically disadvantaged parents. Low-income parents face a wide range of stressors that may negatively impact parenting, and they also possess fewer resources to cope with those stressors than higher income parents (Gennetian and Shafir 2015).

What benefits do these findings have for policy? Billions of dollars are spent annually on programs that attempt to support parental investments in children (Daro and Dodge 2010; Kahn and Moore 2010). Given the high costs of existing programs and their modest impacts (Kalil 2015), it is important that future parenting interventions are founded on empirically-tested assumptions. Interventions based on the notion that less-educated or low-income parents have

different cultural conceptions of good parenting will risk being ineffective if this premise influences program design.

The study demonstrates the importance of carefully assessing the causal mechanisms linking parental education and parenting behaviors in order to evaluate their plausibility. The results also align with other research exploring the causes of socioeconomic status-based differences in family behavior. While policymakers have devoted considerable resources to promoting marriage among low-income families as a poverty-reduction strategy (Cherlin 2003), researchers have provided compelling evidence that economically disadvantaged parents' marriage behavior is not driven by cultural differences such as a devaluation of marriage. Low-income, unmarried parents value marriage highly, but have high economic and relationship standards for marriage that are difficult to achieve given their circumstances (Edin and Kefalas 2005; Gibson-Davis, Edin, and McLanahan 2005). Economic factors appear to substantially constrain less-educated individuals' marriage behavior (Oppenheimer, Kalmijn, and Lim 1997; Schneider 2011; Watson and McLanahan 2011).

Future research should attempt to provide more direct tests of the hypothesis that constraints limit disadvantaged parents' ability to use more intensive parenting methods. Quasi-experimental interventions have demonstrated that policy changes that give white-collared workers control over their schedules have the potential to significantly reduce work-family conflict (Kelly, Moen, and Tranby 2011). However, we currently know much less about how changing such constraints could impact the parenting behaviors of economically disadvantaged parents.

As in the first chapter on education and parenting, gender differences in parenting behavior do not appear to be driven by parents' views about good parenting. The primary

explanation for gender differences in parenting is that men and women either face different cultural expectations or that they have different views about mothers' and fathers' parenting. The study supports the idea that intensive mothering is a coherent ideology (Hays 1996), but demonstrates that norms of intensive fathering are equally strong. Together with the findings from the first chapter, this study demonstrates that intensive parenting norms are both widespread and highly coherent. While there is evidence that gender egalitarian attitudes have slowed since the 1990s (Cotter, Hermsen, and Vanneman 2011), there is also evidence of continued progress, particularly among younger cohorts (Gerson 2010; Jacobs and Gerson 2016; Pedulla and Thébaud 2015). Future research should attempt to understand why these egalitarian ideals fail to translate into equality in practice.

Shifting to consider how both education and motherhood affect women's labor market opportunities in Chapter 3, the audit study attempts to strengthen the alignment between theory and empirical evidence by moving beyond estimating average effects to investigate variability in the effects of motherhood status across occupations. The findings suggest that labor market discrimination by motherhood status may depend on the fit between occupational role schemas and cultural beliefs about motherhood. Low- and high-skilled women differ substantially in the demands of their occupations. In jobs that do not require long work hours, in which workers are more easily interchangeable, and where there may be smaller benefits to employers investing in a particular worker, employers may be less likely to view motherhood status as incompatible with successful job performance. The implication of the findings from this study is that discrimination may then be especially likely in time intensive, inflexible occupations such as marketing manager positions. What is striking about the findings for marketing managers is that applicants

have seven years of continuous, full-time experience, so they face discrimination in spite of clearly signaling a strong commitment to the labor market.

This dissertation attempts to systematically evaluate the causal mechanisms hypothesized to explain three well-established empirical patterns related to parenthood and inequality. I demonstrate that cultural differences are an unlikely cause of both education and gender differences in parenting behavior. In addition, evidence from an audit study of discrimination by motherhood status in low- and high-skilled jobs suggests that mothers face employment discrimination, but these effects may vary based on features of the occupational context. The dissertation aims to strengthen theory and inform policy by rigorously testing the foundations of theories of social stratification.

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