



# From Opt Out to Blocked Out: The Challenges for Labor Market Re-entry after Family-Related Employment Lapses

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#### Abstract

In today's labor market, the majority of individuals experience a lapse in employment at some point in their careers, most commonly due to unemployment from job loss or leaving work to care for family or children. Existing scholarship has studied how unemployment affects subsequent career outcomes, but the consequences of temporarily "opting out" of work to care for family are relatively unknown. In this article, I ask: how do "opt out" parents fare when they re-enter the labor market? I argue that opting out signals a violation of ideal worker norms to employers—norms that expect employees to be highly dedicated to work and that this signal is distinct from two other types of résumé signals: signals produced by unemployment due to job loss and the signal of motherhood or fatherhood. Using an original survey experiment and a large-scale audit study, I test the relative strength of these three résumé signals. I find that mothers and fathers who temporarily opted out of work to care for family fared significantly worse in terms of hiring prospects, relative to applicants who experienced unemployment due to job loss and compared to continuously employed mothers and fathers. I examine variation in these signals' effects across local labor markets, and I find that within competitive markets, penalties emerged for continuously employed mothers and became even greater for opt out fathers. This research provides a causal test of the microand macro-level demand-side processes that disadvantage parents who leave work to care for family. This is important because when opt out applicants are prevented from re-entering the labor market, employers reinforce standards that exclude parents from full participation in work.

#### **Keywords**

opting out, family, work, gender, parenthood

The decision to become a stay-at-home parent tends to be a constrained one. Today, it is rare for women and men to aspire to become stay-at-home parents; most people hold ideals of balanced work and family arrangements (Stone 2008; Williams, Manvell, and Bornstein 2006). However, balance is difficult to achieve within the modern labor market, in which employers seek candidates who can fulfill "ideal worker

norms" of intense time commitment and perpetual availability for work-related tasks

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(Davies and Frink 2014; Kelly et al. 2010; Turco 2010). Overwork is increasingly common (Cha and Weeden 2014), as is spillover of job-related work into home life (Reid 2011; Turco 2010). These expectations for employees conflict with similarly intensive parenting standards for middle- and upper-class parents (Blair-Loy 2003; Jacobs and Gerson 2001), contributing to parents' decisions to "opt out" of work to care for children full-time (Stone 2008). Opting out is a gendered process: over the past two decades, 18 to 20 percent of mothers did not work for pay in order to care for children for one or more years, compared to a peak rate of only about 1.2 percent among fathers (Flood et al. 2015). These departures from the labor force are usually temporary; for example, the median lapse in employment among mothers is about two years (Reimers and Stone 2008; Stone 2008).

Do parents face penalties when they seek to return to work after opting out? In this article, I examine how demand-side processes, in the form of employer preferences, influence hiring prospects for both mothers and fathers who have previously opted out. I argue that opting out signals to employers that potential employees prioritize family over work, and that the act of opting out violates the ideal worker expectations that are ubiquitous in modern workplaces. This violation of ideal worker norms leads to fewer job opportunities for job applicants who have opted out.

Despite fairly high rates of individuals leaving work for caretaking responsibilities, we know relatively little about the demandside processes faced by these job-seekers after they decide to resume working (see Lovejoy and Stone 2012). Sociological research has examined historical trends in the rate of opting out (e.g., Boushey 2008); demographic characteristics of mothers who leave work (e.g., Percheski 2008); and supplyside decisions and preferences—for example, why caretakers leave work, and how they conceive of their employment decisions (Stone 2008; Williams et al. 2006). In contrast to the dearth of demand-side studies of opt out applicants, a substantial line of related research examines how another type of employment lapse—unemployment from job loss—affects job prospects (e.g., Eriksson and Rooth 2014; Nunley et al. 2017; Pedulla 2016; Winefield, Tiggemann, and Winefield 1992). Existing research also documents the "motherhood penalty" in the labor market—establishing that mothers face penalties in hiring and wages relative to fathers and childless women—but these studies typically examine mothers with continuous employment records (e.g., Budig and England 2001; Budig, Misra, and Boeckmann 2012; Correll, Benard, and Paik 2007).

What are the mechanisms through which a gap in employment leads to lower callback rates during the job application process? A theory of skill deterioration, derived from human capital theory, suggests that time out of work leads to skills becoming rusty and obsolete; employers prefer to hire applicants with continuous employment records to avoid high training costs (Mincer and Ofek 1982; Nunley et al. 2017). In contrast to skill deterioration theories, signaling theories posit that employment history signals information about the job applicant to the employer beyond skill decline; employers rely on assumptions or stereotypes based on employee characteristics or job history to make hiring decisions (Spence 1973; Stiglitz 2002). Signaling theories have been tested with respect to unemployment: a bout of unemployment "scars" the job applicant by signaling lower applicant competence, and it leads to reduced job opportunities for unemployed individuals (Eriksson and Rooth 2014; Pedulla 2016).

I propose a résumé signaling theory in which opting out for family reasons produces negative perceptions about applicants' commitment and dedication to work. In this theory, opting out signals a violation of ideal worker norms, which is distinct from the unemployment scarring signal of perceived competence. Given that employers have rigid expectations for employees to dedicate themselves fully to work, violating these ideal worker norms by demonstrating a prioritization of family evokes a moral evaluation of

applicants' work-family choices. Potential employers thus perceive opting out as indicating lower dedication to work and, as a result, view opt out applicants as less worthy of a job.

To test that opting out signals a violation of ideal worker norms-and whether these signals are distinct from perceptions of unemployed and employed applicants—this article presents three empirical studies. In Study 1, I use an original national survey experiment of 1,000 U.S. respondents to test socialpsychological perceptions of opt out, unemployed, and employed applicants—all parents. Respondents rated résumés on dimensions that align with ideal worker norm violation as well as unemployment scarring theories. The findings from Study 1 establish that opting out signals a violation of ideal worker norms: opt out applicants are perceived as less committed to work, less reliable, and less deserving of a job than are unemployed applicants. I further find that opt out fathers experience an even greater penalty on ideal worker norm violation measures compared to opt out mothers.

In Study 2, I test how these perceptions play out in the real labor market. I conducted a large-scale audit study in which 3,407 job applications were submitted to professional and managerial job openings across 50 metropolitan areas in the United States, recording callbacks for each application. The audit study tests how each type of résumé signalunemployment scarring, ideal worker norm violation, and signals of motherhood or fatherhood-lead to differences in employers' hiring preferences. The audit study findings show that, overall, opting out leads to fewer callbacks than does unemployment, and unemployment, in turn, produces fewer callbacks compared to the continuously employed. In the aggregate, I find no significant gender differences in the effects of employment history.

In Study 3, I exploit variation across the audit study cities to examine how these signals vary in strength as local labor market contexts vary. In labor markets in which job competition is relatively higher, there are longer job

queues for each job opening. I predict that in these competitive settings, employers more readily enact preferences to distinguish between negative signals. Weaker negative signals that have less of an effect in low-competition environments will be more apparent in competitive contexts. I find that in competitive job markets, gendered signals become apparent: when there are longer job queues, the motherhood penalty emerges among employed applicants and opt out fathers fare worse than in less competitive cities.

The results of these studies collectively demonstrate that ideal worker norm violations convey stronger negative signals than does unemployment scarring. The effects of motherhood/fatherhood signals are variable across labor markets, with stronger consequences in competitive labor market contexts, and relatively muted effects in less competitive contexts.

This article contributes to scholarship in two key ways. First, I add to scholarship on family, gender, and work by testing to what extent signaling a commitment to family over work influences subsequent career opportunities. Second, scholars have long recognized the importance of both *micro-level decisions* on hiring processes (e.g., Correll et al. 2007) and *macro-level contextual factors* (e.g., Fallick 1996; Haurin and Sridhar 2003). To understand how opting out affects job prospects, this study draws on micro-level processes of résumé signals and macro-level labor market contextual variation to develop an integrated theory of signaling and queuing.

# THEORETICAL INFLUENCES: SKILL DETERIORATION AND RÉSUMÉ SIGNALING PROCESSES

How do gender and labor market history influence the hiring process? Two broad theoretical perspectives propose possible mechanisms: human capital theories and signaling theories. *Theories of skill deterioration* suggest that applicants who have a decline in

skills or human capital are less desirable employees and will be hired less frequently. Signaling theories claim that information on a résumé sends a signal to employers based on stereotypes or assumptions. In this study, I examine signals produced from three pieces of information: unemployment, opting out, and motherhood/fatherhood, each of which have the possibility to produce distinct signals for employers.

#### Skill Deterioration Theories

Skill deterioration theory draws on human capital theories to argue that differences in skills or abilities explain why applicants with employment lapses are less desirable than the steadily employed (Acemoglu 1995; Becker 1964). Human capital theories generally explain variations in job-related outcomes in terms of workers' differing skills and competencies (Becker 1964). The logic behind this argument is that when individuals have gaps in employment, their skills and human capital deteriorate from lack of use and their skills may become obsolete. By hiring applicants with more recent work experience, employers avoid training costs (Becker 1964).

Skill deterioration incurred during an employment lapse is ostensibly gender neutral and invariant across the type of lapse. Human capital theories have proposed gender differences in the accumulation of skills, but there is no reason why skills, once attained, should decline at varying rates for men and women (Acemoglu 1995; Becker 1964). Skill obsolescence during a lapse should also occur similarly for unemployed and opt out individuals—the reason for a lapse ought not to matter, only the lapse's duration. Holding constant the amount of time out of the labor force, skill deterioration theory predicts the following hypotheses:

Skill deterioration: Both unemployed and opt out applicants will fare more negatively than continuously employed applicants, but there will be no differences in the effects of opting out compared to unemployment, nor differences between mothers and fathers.

#### Signaling Theories

In contrast to skill deterioration theory, signaling theories predict varying negative effects for unemployment compared to opting out and for motherhood compared to fatherhood. Developed by economists who recognized an information asymmetry between job applicants and employers, signaling theories propose that résumés provide employers with various pieces of information that "signal" the quality of potential employees (Connelly et al. 2011; Spence 1973, 1981; Stiglitz 2002). Originally applied to theorize how high-quality applicants could signal their ability to potential employers, recent research has extended this theory to establish that résumé information can signal negative qualities as well (Pedulla 2016; Stiglitz 2002). Because employers have limited time and resources to devote to screening and interviewing job candidates, they use résumé information to make decisions about whether to move forward with a candidate. Employment history on a résumé can signal assumptions about the applicant's quality, ability, and value (Spence 1981; Stiglitz 2002). Résumés can also provide information on applicant characteristics (e.g., education, gender, race, age, parental status), which lead to assumptions and biases about a job applicant based on widely held beliefs about said identity/ characteristic (Ridgeway and Correll 2004).

One of the most heavily studied negative résumé signals is current unemployment. Whereas skill deterioration theory argues that unemployed candidates fare worse on the job market due to employers' fears of reduced skill levels, studies based on signaling find that unemployment incurs penalties beyond what would be expected from skill deterioration. Unemployment scarring studies argue that employers are drawing from limited information on a job applicant, and a lapse in employment is perceived as a signal that the applicant is an inferior worker and less desirable as an employee (Kroft, Lange, and Notowidigdo 2013). Unemployment due to job loss is interpreted as a sign of an unstated negative characteristic and is said to "scar"

the job applicant: employers may assume applicants lost a previous job and were unable to regain a job because they are lower-quality employees (Eriksson and Rooth 2014; Gangl 2004). This proposition has been tested empirically by using experimental designs to account for human capital (Pedulla 2016), and by assessing unemployment's effect net of job tenure, specific skills, and lapse length (e.g., Arulampalam, Gregg, and Gregory 2001; Eriksson and Rooth 2014; Gangl 2004; Ghayad 2015; Kroft et al. 2013).

The reduced-quality signal produced by unemployment has not been operationalized consistently, and scholars tend to use it as an umbrella concept (e.g., Arulampalam et al. 2001). Employers may make any number of assumptions about quality for applicants with longer-term unemployment lapses. For example, these applicants could be perceieved as lower quality at the time of job loss—that is, there could be an unobserved negative trait that led to them becoming unemployed (Stiglitz 2002). This negative trait might be skill levels or on-the-job behavior, such as reliability or interpersonal skills (Clark, Georgellis, and Sanfey 2001). Furthermore, long-term unemployment itself could raise doubts about an employee's quality, suggesting there is a reason that prevented the applicant from regaining a job over a number of months (Stiglitz 2002). In a recent audit study and survey experiment, Pedulla (2016) takes an important step toward theorizing how quality is perceived for unemployed applicants. Pedulla (2016) compared job applicants with one year of unemployment to applicants with other types of employment histories. This study found that overall, unemployed applicants—particularly unemployed men—received callbacks at substantially lower rates than did the continuously employed (5.9 percent compared to 10.4 percent, respectively). Pedulla theorizes that the scarring unemployment signal could operate through notions of either competence or commitment. Pedulla's study finds that perceptions of competence mediate the lower callback rate among unemployed men, but he finds no significant effects of perceived

commitment for unemployed compared to employed applicants.

How strong is the negative signal of unemployment in the context of other résumé signals? Unemployment scholars would suggest that unemployment scarring occurs largely because of assumptions made about the involuntary nature of unemployment (Kroft et al. 2013; Pedulla 2016). Applicants who have been unemployed for several months or longer not only provoke questions about why they lost their previous position, but why they have not found a new job (Arulampalam et al. 2001; Eriksson and Rooth 2014; Ghayad 2015). Opt out applicants, in contrast, could be perceived as voluntarily having a lapse in employment, and they might avoid the negative competence signals incurred by an involuntary lapse and lengthy job search. Unemployment scarring theories thus predict the following hypothesis:

*Unemployment scarring:* Unemployed applicants will fare worse than both opt out and employed applicants because of reduced perceived worker quality.

Alternatively, opting out may incur greater penalties than unemployment by signaling a violation of ideal worker norms, a signal that has yet to be considered in demand-side employment research. Ideal worker norms include the expectation that employees prioritize work over all other parts of their lives (Blair-Loy 2003; Davies and Frink 2014; Turco 2010). Professional and managerial jobs today demand intense time commitments, and employers expect employees to always be available (Davies and Frink 2014; Kelly et al. 2010; Rivera and Tilcsik 2016). Employees are increasingly likely to work longer hours (Cha and Weeden 2014), and technological changes have led to greater spillover of work-related tasks at homesuch as checking email and responding to phone calls after leaving the office (Reid 2011; Turco 2010). Mothers and fathers alike report high levels of work-family conflict, finding it difficult to fulfill all expectations associated with work and with intensive

parenting (Blair-Loy 2009; Davies and Frink 2014; Kelly et al. 2010). Opting out of work to care for children is a direct violation of these pervasive expectations for employees to prioritize work above all. By signaling their lower dedication to work, periods of opting out could undermine applicants' efforts to reenter the work force.

This prediction finds support in the caretaker bias literature. Studies have found that prioritizing caretaking tasks over work can result in a host of negative outcomes for employees in their workplaces. For instance, parents who use flexibility policies to try to reconcile work and family demands experience lower wages on average (Blair-Loy and Wharton 2002; Glass 2004), increased harassment (Berdahl and Moon 2013), fewer promotions (Cohen and Single 2001), and lower performance evaluations (Albiston et al. 2012). Scholars of cultural moral schemas argue that gender, work, and family (and their intersection) are areas of life rife with moral conceptions of how individuals ought to behave, and who is a worthy fulfiller of moral standards (Blair-Loy 2003, 2009; Blair-Loy and Williams 2013; Steiner 2007). Because ideal worker standards are proscriptive ideas about how employees should behave, violating these standards invokes moralistic judgments about the worth of the employee—judgments that go beyond strategic estimations of employee productivity, skill level, or availability (Blair-Loy 2009; Davies and Frink 2014; Townsend 2002).

Caretaker and flexibility bias studies focus on penalties for prioritizing family within workplace contexts, but it is reasonable to expect that such censuring would also be evident during the hiring process. Given that ideal worker norms are so pervasive in the professional and managerial occupations that are the focus of this study, I propose that violating these norms will produce large negative effects—potentially larger than the quality signal of unemployment. Ideal worker norm violation theories posit the following hypothesis:

*Ideal worker violation:* Opt out job applicants will experience worse job application

outcomes than will unemployed and employed applicants.

# Gender Heterogeneity in Signal Strength

The above theories describe hypothesized variation in signals sent by differing employment histories. Employers are also expected to respond to résumé signals of gender and parenthood. Research on the motherhood penalty in hiring has found that résumé information about motherhood produces reduced hiring chances for mothers relative to childless women and fathers (Correll et al. 2007). The motherhood penalty theory argues that motherhood is a status characteristic, that is, an identity that elicits a host of assumptions and stereotypes about an individual (Correll et al. 2007; Ridgeway and Correll 2004). Bias against mothers is rooted in perceptions of lower competence and commitment to work: mothers are viewed as more distracted, and employers assume that children's demands will reduce mothers' availability for work and their dedication to work-related tasks (Correll and Benard 2006; Correll et al. 2007; Ridgeway and Correll 2004). To date, the motherhood penalty literature has focused on the effect of motherhood among currently employed applicants (e.g., Correll and Benard 2006; Correll et al. 2007; Gangl and Ziefle 2009); it would yield the following prediction about motherhood as a résumé signal across other employment statuses:

Motherhood penalty: Within employed, unemployed, and opt out groups, mothers will face penalties compared to fathers.

Because the motherhood penalty involves perceptions of mothers' lower commitment to work, and ideal worker norm violation theory also predicts lower perceived commitment for opt out applicants, opt out mothers signal lower commitment in two ways (Dumas and Sanchez-Burks 2015; Sallee 2012). This interaction suggests that the motherhood penalty will be amplified among opt out applicants:

Motherhood penalty for opting out: The motherhood penalty will be larger for opt out applicants than among unemployed or employed applicants.

An alternative prediction is that penalties for opting out are worse for fathers than for mothers. This potential "fatherhood penalty" finds support in literature on norm violation, which demonstrates that those who are most expected to hold a norm are more severely punished when they violate the norm. In an audit study of gay men, for example, Tilcsik (2011) found that the hiring penalty for gay applicants was largest when the job advertisements used highly masculine language. With respect to ideal worker norm violations, because fathers are expected to prioritize work and be breadwinners for their families (Rudman and Mescher 2013; Townsend 2002), fathers who opt out could face harsh penalties. Indeed, prior studies have found that evaluators are more willing to criticize and stigmatize parents in nontraditional positions, such as stay-at-home fathers, questioning whether they were making appropriate work/family decisions (Brescoll and Uhlmann 2005; Brescoll et al. 2012; Coltrane et al. 2013). Put another way, because fathers face greater pressure to work hard and commit to work compared to mothers, fathers who opt out could be perceived as highly uncommitted to work, because they violated more rigid ideal worker norms through their decision to leave work for family reasons (for a related discussion of men who request family leave, see Rudman and Mescher 2013). This fatherhood penalty leads to the following hypothesis:

Fatherhood penalty for opting out: Fathers who opt out will be viewed more negatively than mothers who opt out.

Because this study focuses on mothers and fathers, I can test for gender heterogeneity among parents in the effects of opting out.<sup>2</sup>

Theoretical predictions for how gender may interact with unemployment scarring are

less clear. Pedulla (2016) found that unemployed men received lower callback rates than unemployed women; this gender difference was marginally significant in the audit study, but the gender gap was not reproduced in a follow-up survey experiment of mechanisms. Studies on time use document that upon unemployment, mothers increase housework and childcare time to a greater degree than do unemployed fathers (Berik and Kongar 2013). It is thus possible that employers interpret unemployment differently for mothers and fathers, and perhaps believe that mothers become more committed to family (and less committed to work) during their lapse. In this case, unemployed mothers would experience similar processes as opt out mothers. The theoretical processes concerning the gendered effects of unemployment are less clear, however, so I do not produce a priori predictions on this interaction.

The above signaling theories imply a twostep process for how signaling affects employment outcomes. First, a piece of information on the résumé triggers employers' assumptions about the job applicant. Second, if employers think these (perceived) qualities are relevant to hiring, then in the aggregate, applicants with negative résumé signals will experience reduced callback rates when applying for jobs. The survey experiment presented in Study 1 tests the first part of the process: whether the signal itself produces different assumptions about job applicants. The audit study, presented in Studies 2 and 3, examines the second step-how employers in an actual labor market respond to each signal in their callback decisions.

# STUDY 1: PERCEPTIONS OF APPLICANTS

Theory

In Study 1, I used an original survey experiment to test whether skill deterioration or signaling theories best predict how perceptions of opt out job applicants compare to perceptions of unemployed and employed applicants.

Skill deterioration theory proposes that perceptions of skills lost are the predominant reason why a gap in employment could produce negative outcomes. I asked survey respondents to rate applicants' *capability* as a primary measure of skill level. If skill deterioration were the only process occurring and there were no additional signaling processes, this theory would predict that unemployed and opt out applicants will both experience negative capability ratings, relative to employed applicants, and capability will be the only perceived difference between intermittently employed and continuously employed applicants.

Unemployment scarring theories suggest that unemployment operates as a negative signal through perceived employee quality. The theoretical argument is that evaluators assume that applicants with a bout of unemployment are weaker employees overall whether in their ability and skills or their day-to-day work output. Perceived quality can be operationalized in a number of ways. Capability (a measure of perceived competence) and reliability (measuring dependability and consistency in work) have been demonstrated to affect perceptions of unemployed individuals (Clark et al. 2001; Pedulla 2016). In the context of the survey experiment, the unemployment scarring theory thus predicts that unemployment will lead to reduced perceptions of capability and reliability, relative to both employed and opt out applicants.

Violating ideal worker norms by prioritizing family over work—as is the case with opt out applicants—signals reduced commitment to work and less reliability at work (Brumley 2014; Davies and Frink 2014; Dumas and Sanchez-Burks 2015; Sallee 2012). In other words, evaluators may be concerned that applicants will leave work again in the future, or that they will be less present on a daily basis—because of competing family demands—and thus will be less reliable (Fuegen et al. 2004; Rivera and Tilcsik 2016). To capture the moral assessment associated with violating ideal worker norms, respondents were asked how deserving of the job they perceived applicants to be. In contrast to opt out applicants, unemployed applicants are not predicted to be perceived as less deserving—all else being equal, unemployed applicants may garner sympathy and be thought of as more deserving of a job, because they did not voluntarily stop working and have expressed continued interest in working. Thus, if opting out corresponds to a violation of ideal worker norms, then opt out applicants should be rated as less committed, deserving, and reliable than unemployed and employed applicants.

Finally, Study 1 allows for a test of competing predictions for gender heterogeneity in the effects of opting out. On the one hand, opting out could be worse for mothers than for fathers. Because the motherhood penalty operates in part through perceived commitment (Correll et al. 2007; Fuegen et al. 2004), opt out mothers may be perceived as even less committed than working mothers. On the other hand, ideal worker norms apply more strictly to fathers (Townsend 2002), so opt out fathers who violate these norms may be penalized to a greater extent than opt out mothers. Thus, either opt out mothers or opt out fathers may be rated lower on ideal worker measures (commitment, deservingness, and reliability).

#### Survey Experiment Design and Methods

The survey experiment was designed to test the effects of unemployment and opting out, relative to same-gender continuously employed applicants. The experiment was fielded by YouGov to a sample of 1,000 U.S. respondents<sup>3</sup> in January 2014. YouGov samples from a panel of approximately 1.8 million individuals in the United States and uses a matching algorithm to create a sample representative of the same population targeted by the American Community Survey (i.e., the noninstitutionalized adult population).

Survey respondents were told they were helping a large U.S. accounting firm evaluate job applicants for a midlevel accounting position, and they would be presented with applications for two of the final applicants for the position. I chose accounting because it is an occupation most Americans are familiar with, is a large and growing profession (Bureau of

Labor Statistics 2016), and has been used in existing experimental studies (e.g., Pedulla 2016). All respondents viewed one continuously employed applicant and a second applicant who was either unemployed or had opted out. Within respondents, applicant gender was held constant, such that both résumés belonged to either two mothers or two fathers.

This experimental design allows for a strong causal test of the effects of opting out and unemployment. When considering two applicants who vary only on employment history, does the same decision-maker respond differently to intermittent employment compared to continuous employment? Within-subject estimates of the effect of unemployment and opting out, compared to continuous employment, allow for a test of how each type of intermittency leads to different perceptions about job applicants.

Respondents rated each fictitious applicant on several dimensions: commitment, reliability, capability, and deservingness. For example, respondents were asked: "How committed do you consider Name?" Response options ranged from 1 (not at all committed) to 7 (extremely committed).<sup>4</sup> These measures were developed based on social psychological literature and existing findings about unemployment, motherhood, and ideal worker norms (e.g., Correll et al. 2007; Davies and Frink 2014; Pedulla 2016). Because applicant gender was held constant within respondents, the design of Study 1 tests signaling of employment history more precisely than motherhood or fatherhood signals.5 However, betweensubject estimates of gender can give clues as to whether there are amplifying or muting effects of motherhood and fatherhood.

## Study 1 Results: Micro-Level Perceptions

Table 1 presents findings from OLS linear regressions for each of the résumé ratings, with fixed effects for respondent. The treatment effects in these models can be interpreted as the within-respondent difference between intermittent employment (unemployed or opt out) applicant ratings,

compared to a same-gender continuously employed applicant.

With respect to the unemployment signaling theories, unemployed applicants were rated significantly lower than employed applicants on measures of commitment, capability, and reliability. These are all measures of quality, confirming theories of how unemployment scarring signals operate through perceived quality.

Opt out applicants were rated lower than employed applicants on measures of commitment, capability, deservingness, and reliability. Commitment and reliability directly correspond to the violation of ideal worker norm theories. Opt out applicants, but not unemployed applicants, were rated as less deserving of the job than employed applicants. This suggests that the act of opting out contributes to ideas that these applicants are less in need of a job. The deservingness penalty suggests a moral violation—individuals who work hard and are dedicated to work are perceived as deserving and worthy (Blair-Loy 2009), but opting out violates these ideals and thus these applicants are viewed as less worthy of a job.

Figure 1 displays the average predicted levels of each standardized rating measure, with 95 percent confidence intervals. Figure 1 is from the fixed-effects model (see Table 1, Model 1), with dependent variables standardized to allow for interpretation across measures. Opting out yields a predicted penalty of about .2 standard deviations from the mean across measures of capability, reliability, and deservingness (-.187, -.158, -.203, respectively). The largest penalty for opting out is produced through perceptions of commitment (-.459 standard deviation units). When testing for significance in the ratings for unemployed compared to opt out applicants, the opt out effect is significantly more negative than the unemployed effect on measures of commitment, deservingness, and reliability (p < .05). Compared to employed applicants, both the unemployed and opt out applicants incur penalties on capability ratings and are not viewed as significantly different on this measure.

Table 1. OLS Regression Estimates of Experimental Condition on Résumé Rating Measures

	Commitment	Capability	Deserving	Reliability
Model 1: Employment History C	Condition, with Respo	ndent Fixed Effe	cts	
Employment (Ref. = Employee	d)			
Unemployed	290*	229*	.081	192*
	(.071)	(.053)	(.064)	(.062)
Opt Out	835*	315*	280*	365*
	(.067)	(.050)	(.061)	(.058)
Respondent Fixed Effects?	Yes	Yes	Yes	Yes
Constant	5.917	6.157	5.640	5.182
R-squared	.670	.754	.712	.719
Model 2: Employment History a Employment (Ref. = Employee		ns, Between-Effec	cts Estimates	
Unemployed	411*	294*	001	300*
	(.098)	(.076)	(.094)	(.086)
Opt Out	952*	358*	324*	406*
	(.099)	(.079)	(.093)	(.092)
Gender (Ref. = Father)				
Mother	.061	.080	.130	.117
	(.076)	(.070)	(.079)	(.075)
Unemp. $\times$ Mother	.066	.104	.012	.100
	(.132)	(.105)	(.124)	(.115)
Opt Out × Mother	.451*	.134	.198	.232*
	(.126)	(.102)	(.117)	(.118)
Respondent Fixed Effects?	No	No	No	No
Constant	5.771	5.790	5.488	5.677
R-squared	.065	.019	.012	.020
Observations	1,942	1,942	1,942	1,942

*Note:* In Model 1, respondent fixed effects are used, so coefficients should be interpreted as within-respondent differences in employment history (relative to employed condition). In Model 2, estimates are between subjects, with clustered standard errors.

### Gender Differences in Ratings

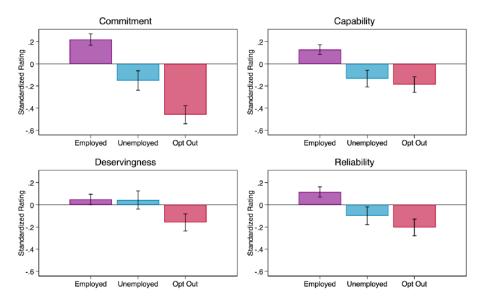
Because respondents viewed two résumés from applicants of the same gender, it is not possible analytically to use respondent fixed effects and test for main effects of mother/fatherhood in rating outcomes. In the bottom panel of Table 1, I present between-subject estimates of the effects of employment, gender, and employment × gender interactions. Standard errors are clustered by respondent.<sup>6</sup>

Overall, I find no significant gender differences in the effects of employment or unemployment. In contrast, opting out does produce some gendered effects. On measures of commitment and reliability, opting out is significantly less negative for mothers than for fathers. This finding provides support for the fatherhood penalty hypothesis for opting out, which predicted that opt out fathers will experience greater penalties for violating ideal worker norms than will opt out mothers.

#### Discussion of Study 1 Findings

Study 1 demonstrates three important findings. First, comparing unemployed to employed applicants, I find partial support for the unemployment scarring hypothesis: unemployed applicants were rated lower than employed

<sup>\*</sup>p < .05 (two-tailed tests).



**Figure 1.** Survey Experiment Ratings by Employment Condition *Note:* Estimates are from a fixed-effects model (see Table 1, Model 1) with standardized dependent variables.

applicants on capability, reliability, and commitment.<sup>7</sup> However, opt out applicants were rated lower than unemployed applicants on perceptions of commitment, deservingness, and reliability. Because these measures correspond to ideal worker norm standards, Study 1 establishes that opting out signals a violation of ideal worker norms, and that ideal worker norm violations are stronger negative signals than is unemployment scarring, supporting the ideal worker norm violation hypothesis.

A second important finding is that both unemployed and opt out applicants incur similar penalties on perceived capability, which is a measure of perceived skill decline and competence. This finding suggests that skill deterioration is at play, and it provides partial support for the skill deterioration hypothesis: both types of lapses produce assumptions about potential skill decline. However, in contrast to a pure skill deterioration explanation, unemployed and opt out applicants are not rated lower solely based on capability; they additionally incur penalties on other dimensions.

These two findings suggest that if employers care most about skills and ability in sorting job applicants, then unemployment and opting out should have similar effects in real job application settings. If, however, employers prefer that employees uphold ideal worker norms, then opt out applicants will fare worse than unemployed applicants when attempting to gain a job. The audit study will test these processes.

The third key finding from Study 1 is that unemployment produced no gender differences in effects, but opting out was somewhat worse for fathers than for mothers. Because of the survey experiment design—in which respondents viewed two applicants of the same gender—it is possible that gender effects could emerge differently in a context with both men and women applicants. The audit study will test to what extent this fatherhood penalty among opt out applicants appears in real labor market settings.

# STUDY 2: AUDIT STUDY MAIN EFFECTS

Theory and Hypotheses

To examine how signals of unemployment scarring and ideal worker norm violation affect demand-side employer preferences in hiring, I conducted a large-scale audit study with the same six experimental conditions as used in the survey experiment. Audit studies, a type of

field experiment, have been considered the "gold standard" for establishing employer preferences or discrimination in hiring (e.g., Pager, Bonikowski, and Western 2009). The audit study methodology combines the benefits of experimental research to assess causality with the benefits of observational studies that assess real-life effects outside the laboratory.8 By sending fictitious résumés and job applications in response to real job openings, experimentally manipulating particular qualities on the résumés, and recording callback rates across the experimental conditions, audit studies allow researchers to measure employer preferences in ways that are not observable in most types of survey data.

Based on the employment results from the survey experiment in Study 1, I argue that opting out signals a violation of ideal worker norms. If employers value ideal worker norms, they will view this violation as a meaningful negative signal. Opt out applicants will thus receive fewer callbacks than both unemployed and employed applicants. In Study 1, I found that unemployment signals lower quality relative to continuous employment, and unemployment scarring theories predict that unemployed applicants will receive fewer callbacks than employed applicants. In addition, I found that both unemployed and opt out applicants were rated similarly on measures of capability. If employers view capability signals as more important than ideal worker norm violation signals, then opt out and unemployed applicants should receive similar callback rates in the audit study.

The survey experiment found that opt out fathers were rated lower than opt out mothers on ideal worker norm violation measures. This suggests that in the audit study, opt out fathers will receive fewer callbacks than opt out mothers. Although I found no evidence of the motherhood penalty in the survey experiment, the experimental design was not well-suited to observe overall gender effects. It is thus possible that in a competitive environment with mixed-gender applicants (as is the case in the audit study), a motherhood penalty will emerge, either in the main effect or in amplifying the effect of opting out.

#### Audit Study Design

In this study, one job application was submitted to each of 3,407 job openings that were posted on a large job-listing website between August 2015 and January 2016. The job listings were sampled from 50 major metropolitan areas in the United States, allowing for a range of labor market contexts. This sample yielded about 600 jobs per experimental condition.

In the applications, experimental manipulations (gender and employment status) were signaled in two places: on the cover letter and on the résumé itself. Gender was signaled through the applicants' names, which are common names and easily identifiable by gender. The names (Elizabeth/Joseph Anderson, Emily/Sam Harris) were pretested on Amazon Mechanical Turk, an online platform, and respondents rated names as similar in terms of gender recognition, assumptions about applicants' race/ethnicity, and commonness.

All of the fictitious applicants are parents. To signal parenthood, the cover letters state that applicants are moving to a new city with their family, which is why they are seeking a new job. Applicant résumés also include a line stating that the applicant was a parent volunteer at the local elementary school. Opting out is signaled on the résumé by stating next to the most recent job that the applicant "left to take care of my children." This is restated in a similar manner on the cover letter.9 Unemployed applicants' résumés state that they were laid off due to downsizing from their most recent job.10 Résumés for both unemployed and opting out applicants state they were out of work for a period of 18 months, which holds constant the length of employment lapse across lapse type.

All applicants are college-educated and have held two jobs since college for a total of about 9.5 years of work experience. Across each employment condition (continuously employed, unemployed, and opt out), applicants have the same number of years of work experience, but the timeline shifts for those with employment lapses. For example, the unemployed applicant has experienced a

contemporary bout of unemployment but has the same number of years of employment as the continuously employed applicant. This timeline implies that applicants are approximately 32 to 34 years of age, making it reasonable that they could be parents.

Job applications were sent to five types of positions, each of which requires a college degree but no additional licenses or degrees: human resources managers, marketing directors, accountants, financial analysts, and software engineers. <sup>11</sup> Skills and language describing past work experience were tailored to the job type, but details of the cover letter and résumé were constant across condition. All the fictitious applicants had real emails, phone numbers, and addresses. The separate phone numbers for each name had a recorded voicemail with a male or female voice.

To sample across cities, I used a major jobposting website that accumulates job postings from multiple smaller websites. To determine which jobs to send applications to, I created a Python script that enabled web scraping of all relevant job openings within 25 miles of each of the 50 cities in the study. Each day that I sent out applications, I scraped all jobs that were listed since the previous application date (typically every weekday) for each city and job category. For instance, the script collected all jobs listed in each of the 50 metropolitan areas that matched search criteria for the five job types (e.g., software engineering in New York City). The information scraped included the full job description, the company, salary, job title, and application website. From this complete list of jobs, I randomly subsampled to select which job openings to send applications to. For example, in one day there might be more than 7,000 jobs posted across the five job categories and 50 cities, and I might sample 200 from this list to send applications to in that day. Because I collected information on both the sample and the full list, I was able to verify that the sampled jobs did not differ from the full population on characteristics such as salary, description key words, and length of time listed on the website. Some audit studies do not use computer-generated random samples and rely on researchers choosing relevant jobs. This yields the potential for researchers to unconsciously bias the selection process, a possibility that is untestable because data on non-selected jobs are not collected. My sampling process eliminates this possibility.

### Measures and Analytic Strategies: Study 2

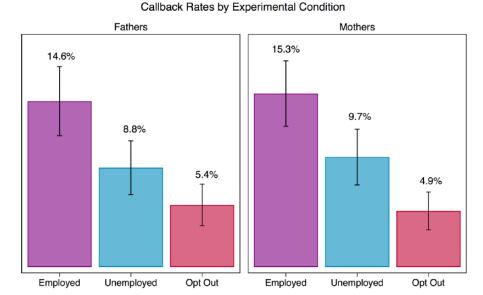
The dependent variable of interest is the callback rate. When employers responded to a submitted job application, responses were coded if they requested an interview with the applicant. For example: "Dear Joe, We appreciate your interest in a career with us. Congratulations on being selected for our initial screening. We think you are a strong candidate for our marketing team and would like to set up a phone interview. Please call us to discuss this opportunity further and find a time to interview."<sup>12</sup>

For the majority of applications, no response was received. This is typical of audit studies—past studies have found about an 8 percent response rate (e.g., Pedulla 2016; Tilcsik 2011). In the overall sample, 9.45 percent received an interview request, and 8.34 percent received a formal rejection. The remaining applications received no response, which is a presumed rejection.<sup>13</sup>

Study 2 gives results from the main effects of the experimental conditions on response rates. Because of random assignment, any difference in response rates by condition can be attributed to the experimental manipulation, and simple t-tests of mean differences are adequate to test for significant differences. In addition, I conducted logistic regressions predicting a callback (0 = no callback, 1 = callback). The primary independent variable is the experimental condition (employment history and gender), and models control for job type.

### Study 2 Results: Audit Study Main Effects

Figure 2 displays the mean callback rate by experimental condition, with 95 percent confidence intervals. The results show that employed fathers and mothers received the highest response rates. Among employed fathers, 14.6



# Figure 2. Mean Response Rates by Experimental Condition in Audit Study, All Job Types Source: Audit study data, collected 2015 to 2016.

percent received requests for interviews, compared to 15.3 percent of employed mothers; this small gender difference was not statistically significant. Relative to the continuously employed, unemployed applicants received about two-thirds as many callbacks: 8.8 percent of unemployed fathers and 9.7 percent of unemployed mothers received interview requests. Finally, opt out applicants fared the poorest in terms of callback rates. Only about 5.4 percent of opt out fathers and 4.9 percent of opt out mothers received interview requests. Relative to their unemployed counterparts, opt out applicants were about half as likely to receive an interview request (t-statistic = 4.03, p < .05).

Table 2 presents logistic regressions predicting callback rate, with controls for job type. Model 1 includes the main effects of employment, and Model 2 interacts employment with gender. These results show that the employment effects are statistically significantly different, but there are no statistically significant gender differences.

#### Discussion of Study 2 Results

In the audit study, unemployed applicants were penalized relative to the continuously employed, and the opt out applicants faced a greater disadvantage relative to the unemployed. With respect to the hypotheses, a pure skill deterioration explanation does not hold, because opt out applicants faced greater disadvantages than the equivalently qualified unemployed applicants. The scarring signal of unemployment is evident, but this signal is less damaging to hiring opportunities than is the violation of ideal worker norms that opt out applicants demonstrate. Within each employment condition, results are consistent by gender, with no evidence of the motherhood penalty in the main effects, and no evidence of the fatherhood opting out penalty in the main effects.<sup>14</sup>

Overall, these findings support the ideal worker norm violation hypothesis. The unemployment scarring hypothesis is partially supported, because unemployment produces a negative effect relative to continuous employment. However, in these occupational contexts, violation of ideal worker norm signals swamp quality signals of unemployment and produce greater negative results.

Why are there no observable gender differences in these effects? As I will discuss in more detail later, these résumés are relatively high quality—the employed applicants'

**Table 2**. Logistic Regressions Predicting Callback from Audit Study, across Experimental Conditions

	Model 1: Main Effects of Employment Condition	Model 2: Interaction with Gender
Employment (Ref. = Employed)		
Unemployed	563*	592*
	(.137)	(.200)
Opt Out	-1.190*	-1.105*
•	(.155)	(.223)
Gender (Ref. = Father)		
Mother		.075
		(.173)
Employment × Gender		
Unemployed × Mother		.059
		(.274)
Opt Out × Mother		163
•		(.311)
Job Type (Ref. = Software Engineer)		
Financial Analyst	754*	757 <b>*</b>
•	(.180)	(.180)
Accountant	058	057
	(.151)	(.151)
Marketing Director	-1.313*	-1.313*
	(.234)	(.234)
HR Manager	889*	894*
-	(.208)	(.208)
Constant	-1.268	-1.308
Observations	3,407	3,407

Source: Audit study data, collected in 2015 to 2016.

callback rate was higher than in several recent audit studies (including Correll and colleagues' [2007] motherhood penalty study). Gendered assumptions of motherhood and fatherhood might be minimized by résumé quality. Or, motherhood and fatherhood might send relatively weaker signals than employment history, and as such these signals were obscured by the stronger employment history signals. If this were the case, then weaker signals would be observable only in certain conditions. I propose that variation in callbacks across local labor market context—particularly, the competitiveness of a labor market—allows for testing of signal strength. In a low competition labor market, weaker signals are not easily observable because there are fewer job applicants, and employers must prioritize ranking applicants with strong signals. In highly competitive markets, employers have more applicants to choose from, and in these contexts weaker signals can be used to rank applicants. Study 3 tests these propositions.

## STUDY 3: VARIATION IN CALLBACKS ACROSS LOCAL LABOR MARKETS

Signaling could operate differently across local labor markets. Labor market scholars have proposed queueing theories to explain how hiring processes work across contexts. The queueing approach to hiring is as follows: job-seekers rank jobs by preference, and employers rank job applicants for a particular job opening (Blanchard and Diamond

<sup>\*</sup>p < .05 (two-tailed tests).

1994; Fernandez and Mors 2008; Moscarini 2005; Reskin and Roos 2009). The extent to which these queues overlap determines job outcomes (callbacks and eventual hiring) (Reskin and Roos 2009). Because researchers control the job application strategy in audit studies, job-seekers' interests are rendered irrelevant, allowing for a focus on employers' perspectives. In queueing theories, if a certain characteristic is viewed as less desirable (e.g., motherhood), then a résumé signaling this characteristic will place the applicant further back in the queue (if all else is equal).

The queueing theory allows for a theoretical test of relative signal strength by examining to what extent the outcomes associated with résumé signals vary across labor market context. Queueing theories do not predict that a signal itself changes across context (Moscarini 2005) (e.g., opting out may produce a negative signal across all contexts), but that an applicant's queue position as a result of the signal could change due to the size of the applicant pool. Thus, the observed effects of résumé signals can vary across labor market competitiveness, which allows for a test of relative signal strength.

The predictions of signal variation across labor markets are as follows. Local labor markets that are competitive—with relatively few job openings compared to the number of jobseekers—are associated with longer queues for any particular job (Fernandez and Mors 2008; Reskin and Roos 2009). In these competitive markets, a résumé trait that sends a relatively weak negative signal could push an applicant farther back in the queue in an absolute sense: even if their relative queue posiremains constant, in competitive environments there will be more desirable applicants ranked higher in the queue (Reskin and Roos 2009). In contrast, a labor market with low competition may be more forgiving of negative signals; with shorter queues, fewer ideal applicants top the queue. Finally, signals could be invariant to labor market context; this might occur if a signal is so negative that it pushes an applicant toward the bottom of a queue no matter the context. If this is the case, there may be no observable differences in callback rates across context.<sup>15</sup>

The following hypothetical example helps illustrate the logic of this argument. Consider two signals, one weaker and one stronger. Suppose the weak signal moves an otherwise ideal candidate 10 percent lower in a ranking of job candidates, whereas the strong signal moves this ideal candidate 50 percent lower in ranking positions. In a less competitive context in which there are 10 applicants for a job, the weak signal moves a candidate from position 1 to position 2, whereas the strong signal moves the candidate down to position 6. If three applicants are called in to interview, the weak signal candidate gets a callback but the strong signal candidate does not. In a competitive context with 100 job applicants, the signals may produce the same relative effect but move candidates further down a queue in an absolute sense. Now, the weak signal with a 10 percent penalty moves the candidate from position 1 to position 11, and the candidate with a strong negative signal (50 percent) moves to position 51. When the top three applicants are offered an interview, neither candidate receives a callback. Thus, the weak signal is only observed to produce a negative effect in competitive environments, whereas the strong signal is observable across all contexts.

I propose that—in this study—employment history produced a strong negative signal, whereas gender (motherhood/fatherhood) within an employment group produced a weaker negative signal. As described in Study 1, the fatherhood penalty among opt out applicants could emerge in high competition contexts, as could the motherhood penalty among employed applicants, as Correll and colleagues (2007) found. Queueing theories thus produce the following hypotheses for the signals introduced in the prior theory sections:

Labor market context: In labor markets with high competition, relatively weak negative signals will be observable, whereas in labor markets with low competition, only stronger signals will be observed. Gender differences within the opt out and employed conditions may only be observable within high competition contexts.

#### Study 3 Design and Measures

Study 3 uses the audit study data and exploits variation across location. As mentioned earlier, the audit study was conducted across the 50 largest metropolitan areas in the United States. The dependent variable in this study is again the callback rate across experimental condition. To measure labor market context, I used American Community Survey (ACS) 2006 to 2015 data (Ruggles et al. 2015) to create citylevel measures of job-seekers in the major occupation groups of the audit study jobs. The ACS asks whether an individual—employed or unemployed—is currently searching for a new job. I used this to create an occupationspecific job-seeker rate, which varies across city.<sup>16</sup> For example, applications in the audit study for software engineering positions were assigned the job-seeker rate for "computer and mathematical occupations" for the metropolitan area in which the job was posted.<sup>17</sup>

I then used logistic regressions to predict a callback, interacting experimental condition with the local job-seeker rate, and controlling for job type. Standard errors are clustered by location. In Part 3 of the online supplement, I explain how I tested models with additional contextual controls and detail different coding options for the job market competitiveness measure. Because the marginal effects of interaction terms are not directly interpretable from logistic regression coefficients (Ai and Norton 2003; Norton, Wang, and Ai 2004), I display results graphically and present a linear probability model for ease of interpretation.

### Study 3 Results: Interactions with Labor Market Context

Figure 3 shows the results of predicted callback rates as the local job-seeker rate varies, across experimental condition, derived from Table 3, Model 2. Job-seeker rates of these occupations vary from 2.9 to 7.8 percent in

the 50 cities in my sample, with the average at 4.9 percent.

As the local job-seeker rate increased, employed fathers remained likely to receive interview requests, and there was no significant variation across local labor market in employed fathers' callback rates. Employed mothers, in contrast, were less likely to receive callbacks in high job-seeker contexts than they were in cities with lower job-seeker rates. This suggests that in labor markets with high job-seeker rates and more opportunities for employer discretion, employed fathers benefit. In these locations, the motherhood penalty is striking: with a local job-seeker rate of 7 percent, employed fathers are predicted to have a 15.7 percent chance of receiving a callback, compared to employed mothers' predicted callback rate of 7.9 percent. In less competitive markets with low job-seeker rates, employed mothers are given more callbacks, on average.

Turning to the unemployed applicants, I find no significant relationship between the local job-seeker rate and the callback rate for unemployed fathers or mothers. However, in high job-seeker contexts, the gap between employed and unemployed mothers is no longer statistically significant. This suggests that in contexts with increased competition, employment history distinctions matter less for mothers, because mothers from all employment groups fare relatively poorly in these contexts.

Finally, in examining the opt out applicants, I find a slight negative effect for fathers as job-seeker rates increase. Just 2.5 percent of opt out fathers are predicted to receive callbacks in competitive labor markets with job-seeker rates of 7 percent (CI: [.3 percent - 4.9 percent]). In less competitive markets (job-seeker rates of 4 percent), 7.2 percent of opt out fathers are predicted to receive callbacks (CI: [4.3 percent - 10.1 percent]). For mothers, however, callback rates among opt out applicants remain consistently low across the local labor market context. This finding suggests that even in labor markets with low competition, employers are not interested in hiring opt out mothers.

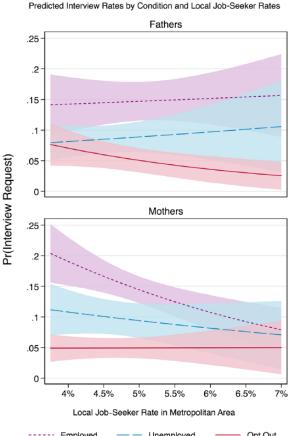


Figure 3. Callback Rates across Local Job-Seeker Rates, by Experimental Condition

*Note:* Job-seeker rates are from the American Community Survey 2006 to 2015, for the 50 metropolitan areas in the audit study.

Table 3 shows the regression estimations predicting callbacks, from which Figure 3 is derived, and confirms the findings from Figure 3. Models 1, 2, and 3 are logistic regressions, and Model 4 is a linear probability model, which allows for simpler interpretation of interaction effects (Ai and Norton 2003). In Model 1, I present the experimental condition main effects (coded as a six-category variable rather than 3 × 2 employment × gender interaction so as to avoid cumbersome three-way interactions). Model 2 interacts experimental condition with the local job-seeker rate.

Source: Audit study data, 2015 to 2016.

When considering job-seeker rates as a measure of local labor market competition, it is plausible that these rates are related to several additional factors that capture the city's economic and occupational context. To ensure that related contextual measures do not explain the job-seeker findings, I added four city-level context measures to Model 3: the city's occupational composition (measured as the percent of managerial and professional workers in the city's workforce), mothers' labor force participation rate, estimates of the number of new hires within each audit study occupation, and estimates of the change in occupation size from 2015 to 2016.18 Each contextual control variable is interacted with the experimental condition to ensure that the job-seeker interactions are not due to correlations with these other context measures. Because these measures are

**Table 3**. Callback Rates by Experimental Condition, Interacted with Local Labor Market Contexts

	Model 1: Logistic Regression, Main Effects	Model 2: Logistic Regression, Interaction with Job-Seeker Rate	Model 3: Logistic Regression with Additional Contex- tual Controls	Model 4: Linear Probability Model with Controls
Condition (Ref. = Employed Father)				
Unemployed Father	592*	589*	710*	059*
Opt Out Father	(.178) -1.105* (.248)	(.175) -1.146* (.251)	(.240) -1.119* (.243)	(.017) 089* (.018)
Employed Mother	.075	.045	.046	.011
Unemployed Mother	458* (.217)	475* (.205)	546* (.189)	045* (.021)
Opt Out Mother	-1.193* (.217)	-1.196* (.211)	-1.220* (.230)	094* (.018)
Job-Seeker Rate (JSR)	(.217)	.038	.230 (.153)	.027
Condition × JSR		(.121)	(.155)	(.017)
Unemployed Father × JSR		.060 (.191)	.007 (.285)	012 (.024)
Opt Out Father $\times$ JSR		396 (.203)	547* (.243)	043* (.019)
Employed Mother $\times$ JSR		382* (.191)	499* (.244)	066* (.030)
Unemployed Mother $\times$ JSR		(.191) 195 (.186)	302 (.233)	036 (.025)
Opt Out Mother $\times$ JSR		032 (.237)	166 (.278)	026 (.021)
Job Type (Ref. = Software Engineer)		(.237)	(.270)	(.021)
Financial Analyst	757* (.189)	704* (.194)	787* (.199)	070* (.018)
Accountant	057 (.146)	(.194) 021 (.151)	089 (.155)	007 (.017)
Marketing Director	-1.313* (.216)	-1.278* (.222)	-1.395* (.221)	101* (.015)
HR Manager	894* (.213)	866* (.219)	956* (.232)	081* (.018)
Additional metro-area context measures	None	None	Yes	Yes
Constant Observations R-Squared	-1.263 3,407	-1.292 3,407	-1.291 3,407	.193 3,407 .050

Source: Audit study data.

Note: Standard errors are clustered by city. Contextual measures are mean-centered, so all coefficients should be interpreted at the mean of these variables. See text and the online supplement for variable coding, which are from the American Community Survey (ACS) data and the Quarterly Workforce Indicators (QWI) data. Additional metropolitan area context measures: percent managerial and professional workforce (ACS), mothers' labor force participation (ACS), occupation-industry hires (QWI), occupation-industry employment change in previous quarter (QWI). Each contextual control measure is interacted with the experimental condition to allow for variation across context on these dimensions. The full table with omitted coefficients is available upon request.

<sup>\*</sup>p < .05 (two-tailed tests).

included as a robustness test, I do not discuss the coding or motivation of variables here, but I elaborate on these decisions in Part 3 of the online supplement. Finally, Model 4 in Table 3 presents the full model as a linear probability model, in which interaction effects are easily interpreted. This model confirms that there is a significant negative interaction of employed mother  $\times$  job-seeker rate, indicating that relative to employed fathers, employed mothers fare worse as competition increases (p < .05). Similarly, opt out fathers fare worse as local job-seeker rates increase.

#### Study 3 Discussion

The variation across local labor markets demonstrates two important findings. First, although I observed no motherhood penalty in the overall callback rates, a motherhood penalty emerges in highly competitive markets for employed mothers compared to employed fathers. These results support the labor market context hypothesis for the motherhood penalty signal, among employed applicants. Considering a queueing approach to hiring, this result suggests that motherhood is a negative signal for employed applicants but is only observable in competitive contexts with longer queues. In contexts where there are fewer job-seekers (and shorter job queues), I do not find a significant motherhood penalty, and employed mothers fare relatively better in these contexts. These findings suggest that for employed parent applicants, employers differentiate by gender-preferring fathers—in longer queue contexts, when they are more easily able to enact their applicant preferences.

Opt out fathers receive fewer callbacks in contexts with high job-seeker rates than in less competitive environments. This again suggests that gender—in this case, father-hood—is a relatively weaker negative signal among opt out applicants. Although opting out produces negative effects for both mothers and fathers, opt out fathers incur reduced callbacks in job markets with long queues, and they do somewhat better in job markets

with less competition. These findings support the fatherhood penalty for opting out hypothesis: in competitive markets, fathers who violate ideal worker norms by opting out incur greater penalties than do mothers.

I find that employment status sends strong negative signals across labor market contexts. Unemployed mothers and fathers, as well as opt out mothers, do not experience detectably different callback rates across labor markets. These findings support the labor context hypothesis: strong negative signals place applicants toward the bottom of queues no matter the size of the pool of other applicants.

# CONCLUSIONS AND DISCUSSION

In today's labor market, jobs are increasingly demanding and require workers to fulfill ideal-worker norms, which involve being constantly available, working long hours, being highly dedicated, and putting work above competing life demands (Blair-Loy 2003, 2009; Cha and Weeden 2014; Turco 2010). Among workers who have family responsibilities—particularly caregivers and parents the challenge of fulfilling ideal-worker expectations and balancing family demands can lead to career interruptions. Existing scholarship demonstrates that parents who opt out of paid labor do so because of the inflexibility of employment and the challenge of adequately fulfilling the demands of both intensive jobs and intensive parenting (Stone 2008). Among parents who leave work, the tendency is to remain out of the labor market temporarily and to return to work after several years (Percheski 2008; Stone 2008). Yet, existing scholarship does not satisfactorily assess the subsequent labor market consequences faced by individuals who opt out. In particular, there has been limited study of the demand-side processes that occur during the labor market re-entry process.

In this article, I developed a new signaling theory in which opting out signals a violation of ideal worker norms. In Study 1, a survey experiment, I demonstrated that opting out

leads to more negative perceptions than unemployment on metrics of commitment, deservingness of the job, and reliability. In Study 2, an audit study conducted across 50 U.S. metropolitan areas, I tested the relative strength of the ideal worker norm violation signal, unemployment scarring signal, and motherhood penalty signal. I found that job applicants who had been out of work to care for children fared worse in terms of hiring prospects, compared to otherwise equivalent applicants who were unemployed because of a job loss. The unemployed, in turn, are disadvantaged relative to continuously employed applicants. In the aggregate, I found no gender differences in callback rates for mothers compared to fathers. These findings demonstrate that, among the occupations and cities in the sample, violating ideal worker norms by opting out sends a strong negative signal to employers—a signal that swamps the signals of unemployment scarring.

To further examine how signal strength varies across contexts, in Study 3 I integrated the signaling theory with a theory of labor markets as queues. I tested how callback rates differ across the 50 cities in the audit study, using job-seeker rates as a measure of market competitiveness. I argued that strong negative signals (e.g., opting out) place applicants toward the bottom of a job queue no matter the quality or quantity of the other job applicants. Less damaging negative signals will be observed only when labor queues are long, such as in competitive markets where employers have the option of indulging in taste-based preferences and ranking large numbers of applicants. Using this theoretical framework, I found that in competitive markets with higher job-seeker rates, a motherhood penalty was apparent among employed applicants, and employed fathers emerged as preferred applicants. Furthermore, opt out fathers faced additional negative penalties in competitive cities, suggesting that fathers face greater penalties for violating ideal worker norms.

These contextual findings show that macro-level processes across locations can affect hiring processes with systematic

patterns. This is not a new idea, but it is rarely incorporated into field experiments on hiring (for important exceptions, see Kroft et al. 2013; Tilcsik 2011). The conclusions drawn from these experimental findings might have been quite different had I sampled only one or two cities. With new technology available to social scientists, including web scraping and "big data" approaches to data collection, it is now feasible to test whether audit study effects vary across contexts. My study incorporates these macro-level labor market contexts into the signaling theories tested in an audit study context. In short, I find that location matters, and it would be fruitful for future research to continue to extend audit study methodology along this trajectory. An important subsequent project could measure variation in gender attitudes at the city level (perhaps using social media data), and assess to what extent hiring processes for women and mothers vary across these dimensions.

This research leaves some unanswered questions, which could inspire future research ideas. First, the résumés in this study examine one method of signaling unemployment, opting out, and parenthood. To provide a clear causal test of reasons for employment lapses, I used several common methods of depicting a gap in employment; among real applicants, there is certain to be substantial variability in explaining an employment lapse. Résumé signaling theories rely on the idea that information (or lack thereof) on a job application stimulates assumptions about the job applicant. A natural question follows: Are there ways of signaling employment history or parenthood that do not produce negative assumptions, or do variations in signaling language yield different outcomes than those observed in the current study? For example, it would be worth testing whether giving no information or less information to explain a lapse yields different effects than informing employers that a layoff caused unemployment.

In a related area, future research would benefit from continued theorization of the multidimensionality of assumptions produced by signals. I argued that opting out signals are

distinct from unemployment scarring signals, and although opting out produces a larger negative effect than unemployment, there is some overlap in the types of assumptions provoked by both types of lapses (e.g., capability, reliability). Future research could do more theorizing as to what additional perceptions are invoked by different résumé signals, including perceptions of likeability, interpersonal skills, short-versus long-term commitment, cultural capital, and other moral evaluations relating to the work-family intersection.

Next, the finding that opt out fathers are penalized as much or more than opt out mothers should be unpacked in future research. I argued that this fatherhood penalty occurs because fathers experience higher expectations to uphold ideal worker norms than do mothers, and they are punished to a greater extent when they violate these norms. Considering the dearth of stay-at-home fathers in today's labor market, this finding raises important theoretical questions on the gendered nature of care work. For example, are stay-at-home fathers experiencing penalties for violating male breadwinner or other gender expectations in conjunction with violating ideal worker norms? If, in the future, stay-athome fathers become increasingly normalized, would this increase the perceived status of opting out and reduce penalties associated with opting out for both mothers and fathers? Future research could work to distinguish theoretically between the gendered nature of care work, breadwinner expectations, and ideal worker norms, to develop a more comprehensive understanding of how employers perceive opt out fathers.

Future research could also extend the scope of this study to different occupations, racial/ethnic groups, and caregiver characteristics. The current audit study is limited to highly educated applicants who have college degrees and are perceived to be white. Less-educated and lower-income mothers, however, often stay at home to avoid the cost of childcare; an important next project might examine variation in the effect of family lapses among less-educated applicants. Assumptions about

parenthood vary by race and ethnicity as well, and these assumptions could lead to different outcomes in the hiring context. Additionally, this article examines the effects of opting out for mothers compared to fathers, but not for childless individuals. It would be worthwhile to test whether similar patterns emerge for childless applicants who engage in other forms of care work (e.g., caring for a sick parent), and if there are gender differences under these conditions.

Finally, researchers should conduct qualitative interviews with employers about their perceptions of former stay-at-home mothers and fathers who returned to work. How much experience do employers have with these types of job applicants, and what are their perceptions of employees who had previously taken lapses for family care? Asking these types of questions will allow for a more precise test of whether opt out penalties follow from tastebased preferences or from statistical discrimination processes: employers might justify their decisions to penalize opt out applicants through a rational business perspective, arguing that these employees are less reliable and less committed to work. Assessing employer familiarity with these types of employees, and their perceptions of work quality and commitment post-lapse, could provide leverage toward understanding these processes.

This article suggests that the way we organize labor produces systematic disadvantages for primary caretakers and contributes to our understanding of how gender inequality in the labor market is maintained and reinforced. In our current gender system, mothers are more likely than fathers to interrupt employment to care for children. We know from existing literature that mothers are "pushed out" of work when workplaces are inflexible and intensely demanding (e.g., Stone 2008). My research shows that, after being pushed out, they are kept out and have reduced job opportunities when attempting to regain employment. When fathers opt out-challenging the normative gendered division of labor-they too face penalties, and in some contexts greater penalties than opt out mothers. These processes

produce a reinforcing cycle: ideal worker norms limit job opportunities when caretakers are in work, which contributes to an increased likelihood of leaving work, but the same ideal worker norms are invoked to prevent re-entry back into work. To level the playing field, we may require a rethinking of the ideal worker norm that prevents caretakers from reaching their career goals. Until we reach such a point, it remains unlikely that these forms of inequality will change.

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#### **Notes**

- I refer to individuals who leave work to care for family or children as having "opted out" of work. This is a common term in both the media and academic scholarship. However, it is generally understood that exiting a job is rarely entirely voluntary, and many times these individuals feel "pushed out" or "forced out" because the workplace is not flexible about reconciling conflicts between family and work responsibilities (see, e.g., Stone 2008).
- 2. The term "motherhood penalty" has primarily been used in literature comparing mothers to childless women, referring to a within-gender comparison (Budig and England 2001; Budig et al. 2012). In experimental research, scholars have compared mothers to childless women and to fathers, theorizing the motherhood penalty as an interaction of gender × parental status (e.g., Correll et al. 2007). The current study's experimental design compares mothers to fathers and does not include a comparison to childless women or men. The analytic consequences of this design are that childless women and men who leave work to care for family or who are unemployed could experience different processes that this study cannot directly test. In an online survey experiment not presented here, I found that parents experience greater hiring penalties than do childless applicants who have other family-related lapses (results available upon request). Future research would benefit from examining how these other family-related lapses (e.g., caring for a sick

- parent or partner) produce different assumptions in the hiring context than does caring for a child. Use of the terms "motherhood penalty" and "fatherhood penalty" in this article thus captures only the between-gender, within-parent comparison; this use deviates from how these terms have typically been applied in other research settings.
- Out of the 1,000 respondents, I excluded 29 from the analysis because they spent less than 10 seconds reading both résumés.
- For more details on measurement and survey experiment design, see Part 4 of the online supplement.
- 5. Because survey respondents are viewing two applicants of the same gender and told that these applicants are finalists for the position, responses to résumé ratings should be considered in the context of two same-gender applicants. It is possible that responses would change if respondents were rating two different-gender applicants or viewed the applicants in the context of a larger pool. The experimental design is helpful because it allows for a precise test of the effect of employment history, but the limitation is that any estimates of gender differences in ratings or effects are less straightforward to interpret.
- 6. In the experimental design in which gender of applicants is held constant within respondents, it is not possible to estimate the effect of applicant gender while using respondent fixed effects. There are two possibilities for estimation: (1) between-subject models estimating the main effect of applicant gender (clustering standard errors by respondent), and (2) respondent fixed-effects models estimating the interaction of gender with employment, but not estimating the main effect of gender. The first estimation strategy is shown in Table 1, Model 2. The second produces no substantive differences in effects, and is available upon request.
- 7. Pedulla (2016) found that unemployment did not lead to reduced perceptions of commitment to work, which is why commitment is not considered as an a priori prediction for the effects of unemployment. However, Pedulla's study consisted of childless applicants. Parents might face higher expectations to work (and provide for their children) than do childless applicants, and thus are penalized in perceptions of commitment. Given that perceived commitment is a key dimension on which employers make decisions (Correll et al. 2007), it would be worthwhile to further examine the contexts in which unemployed applicants are perceived as less committed.
- One critique of audit studies is that they are poorly suited to distinguish between statistical discrimination and taste-based discrimination. Statistical discrimination refers to cases in which businesses make decisions based on the productivity of a group; here, discrimination is justified from a business sense, because hiring decisions are made based on rational economic behavior (Correll and Benard 2006).

Taste-based discrimination, on the other hand, is made due to stereotypes about the performance of particular groups, which bias how employers evaluate these groups (Correll and Benard 2006). Audit studies are sometimes critiqued because they are unable to test which of these processes are taking place (e.g., Heckman 1998). One can speculate about what types of biases are entering into the decision-making process, but this critique of audit studies cannot be entirely avoided.

- 9. Is it common practice to mention being a stay-athome parent on one's résumé? Based on results from an October 2017 Google search of "should I put stay-at-home parent on my résumé?", the majority of blog posts and articles recommend to explicitly mention being a stay-at-home parent on the résumé and cover letter. Out of the first 50 Google search results, only five articles recommended not mentioning this in the résumé or cover letter, and another seven recommended putting it in the cover letter only but not on the résumé. The remaining 38 were either strongly in support of mentioning this in the résumé and cover letter (24) or were ambivalent (14) and said it is up to the job applicant, with no recommendation either way. Future research could more systematically study how common this practice is in real résumés and cover letters, but these results suggest that potential job applicants receive positive messaging and general encouragement to explicitly mention being a stay-at-home parent on their résumés and cover letters. The articles generally recommended being direct about the reason for leaving the most recent position, rather than creating a new position labeled "caretaker" or "stay-at-home mother" (see also Karsh and Pike 2009). Future research would benefit from examining whether employers perceive this information differently if listed on the résumé, cover letter, or in an interview, and whether there are ways to present this information positively to prevent employer bias.
- The unemployment lapse was signaled through a layoff to correspond to an involuntary bout of unemployment. Some researchers have signaled unemployment by providing a gap in employment but no explanation for the lapse (e.g., Eriksson and Rooth 2014; Kroft et al. 2013; Pedulla 2016). Economists suggest that a layoff due to downsizing is perceived negatively, because presumably companies lay off lower-skilled personnel during downsizing (Charness and Levine 2002; Gibbons and Katz 1991). Additionally, it is rare for applicants to directly state on a résumé that they were fired, but much more common to list a layoff (Claman 2013). To clearly signal unemployment—rather than a gap for an unknown reason-I used a layoff as a common way to explain a job loss. However, it is possible that giving information about a layoff mutes the negative effects of unemployment, compared to a lapse due to firing or another involuntary reason, or

- relative to no reason given. This possibility should be tested more thoroughly in future research.
- I chose these jobs because they are relatively common, vary in terms of gender composition, and exist across many different labor markets (Bureau of Labor Statistics 2016).
- 12. Occasionally, employers would respond in a more ambiguous way or ask for more information. For example: "Hi Elizabeth, Thanks for sending your résumé. I have a few questions: (1) Have you developed iOS apps before? If yes, are any currently in the app store? (2) It says you are moving to Los Angeles. Are you in Los Angeles now?" This was relatively rare and did not count as a callback. However, results are robust to including these responses, and these analyses are available upon request.
- 13. Using formal rejections could be attributable to features of the companies rather than the applicants, so I do not use this measure as a dependent variable in the analyses (these results are available upon request).
- 14. See Part 2 of the online supplement for interactions with job type and overall response rates by job type. The similar patterns across most of the jobs suggest that the effect of opting out does not vary widely by the feminization of jobs and is a persistent effect.
  - One possibility to consider is that the unemployment signal itself may produce different meaning in low versus high unemployment contexts, because employers are more or less forgiving of unemployment depending on whether it is common or uncommon in the local context. In other words, the unemployment signal strength could change across contexts, which would contradict the queueing theory assumptions of an invariant signal effect. Kroft and colleagues (2013) used an audit study to examine the effect of unemployment duration on callbacks across local labor markets, in the wake of the Great Recession. They found that unemployment duration has a stronger negative effect in low unemployment contexts, but when individuals have more than eight months of unemployment, the effect of unemployment is similar across low and high unemployment contexts. These findings suggest that the signal of longer periods of unemployment (in my study, 18 months) is invariant across labor market contexts, lending support for the queueing assumption of an invariant signal. It would be worthwhile to further examine whether rare or common résumé signals produce different effects across contexts to test this assumption more thoroughly.
- 16. (number of job-seekers / [number of job-seekers + number of non-job-seekers (employed)]) × 100 in the major occupational category. Note that this measure potentially misses job applicants who did not list an occupation on the ACS. However, the findings hold for alternative measures of local job competitiveness, including a city's overall unemployment rate, the unemployment or job-seeker

- rate of college-educated individuals, and the nonmanual occupation unemployment/job-seeker rate (see Part 3 of the online supplement).
- 17. City-level estimates of job-seeker context are based on the American Community Survey (ACS) PUMA (Public Use Microdata Area) definition. These consist of geographic areas with populations of 100,000 or more. Because the audit study contains the top-50 most populated cities in the United States, each of these cities corresponds to an ACS PUMA. One coding decision to note with respect to the constructed occupation-specific job-seeker rates is that accounting and financial analysts fall under the same major occupational group, per the 2010 Census occupational coding scheme ("financial specialists"). Both job types thus receive the same job-seeker rate values across cities. See Part 3 of the online supplement for additional details on contextual measures.
- 18. The first two measures are derived from ACS 2011 to 2015 data (Ruggles et al. 2015); the latter two are from the Quarterly Workforce Indicator (QWI) data (United States Census Bureau 2016), from the time period of the audit study (the last quarter of 2015 and the first quarter of 2016). See Part 3 of the online supplement for motivation and coding of these measures.

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