Race, Gender, and Unemployment Scarring*

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ABSTRACT

Understanding the manner in which social categories aggregate to produce inequality lies at the heart of scholarship on social stratification. Conceptualizing, measuring, and testing for the interactive consequences of membership in different social groups, however, is challenging, limiting our knowledge about the joint effects of multi-category membership. Drawing on distinct sets of theoretical insights, this article develops and empirically tests competing predictions about how three social divisions – white and black, male and female, employed and unemployed – intersect to shape a key economic outcome: the ability to get a job. The empirical results, drawn from an experimental audit study of job openings in five U.S. labor markets, demonstrate that the consequences of unemployment differ in important ways by the race and gender of the job applicant. White workers face severe penalties for long-term unemployment at the hiring interface. However, while black workers face intense racial discrimination, they do not bear any additional penalty for having a history of unemployment. The racialized scarring effects of unemployment also differ by the gender of the worker, with black women bearing relatively stronger penalties than black men for unemployment histories. These findings have implications for understanding the aggregation of social categories in the production of inequality as well as the contours of labor market stratification in the United States.

Race, Gender, and Unemployment Scarring

Scholars of labor market stratification have focused significant attention on how race and gender discrimination as well as spells of unemployment independently shape workers' employment opportunities. Researchers have demonstrated that African Americans face persistent discrimination at the hiring interface (Pager, Western, and Bonikowski 2009; Bertrand and Mullainathan 2004; Moore 2010). At the same time, scholars have documented hiring discrimination against women in particular sectors of the economy (Neumark 1996) as well as women who are mothers (Correll, Benard, and Paik 2007). Additionally, recent research has found that a history of long-term unemployment can have a direct, negative effect on a worker's ability to obtain employment in the future (Kroft, Lange, and Notowidigo 2013; Ghayad 2013; Eriksson and Rooth 2014). These lines of research have developed largely independently, however, leaving important unanswered questions about how these key dimensions of social and economic life – race, gender, and unemployment – intersect in the production of workers' labor market opportunities.

Understanding how social categories – male and female, white and black, employed and unemployed – aggregate to produce inequality lies at the heart of scholarship on social stratification (Collins [1990] 2000; McCall 2005; Browne and Misra 2003). Challenges with conceptualizing, measuring, and testing the ways social categories combine with one another, however, have limited our theoretical and empirical knowledge about how social divisions jointly influence key social and economic outcomes. This article contributes new insights to these debates by theorizing and examining how these three aspects of social life combine with one another to shape a key economic outcome: the ability to get a job.

This article distills and demonstrates how social category aggregation influences labor market inequality by addressing two central questions. First, how do race and histories of unemployment intersect in the production of workers' employment opportunities, specifically workers' hiring outcomes? And, second, do these consequences further vary by the gender of the worker? Given the racialized and gendered nature of unemployment in the United States – with an unemployment rate for African Americans that is nearly double that of whites and black men facing higher rates of unemployment than black women (Bureau of Labor Statistics 2014a) – understanding how unemployment scarring intersects with race and gender at the hiring interface is foundational to understanding the factors that contribute to persistent labor market inequality as well as how distinct social categories aggregate in the production of economic opportunity.

Existing perspectives offer two primary predictions as to how race and unemployment will interact at the hiring interface. One possibility – consistent with a human capital perspective (Becker 1964) – is that these social categories will combine in a straightforward, additive manner whereby unemployment negatively impacts white and black workers' labor market opportunities in a similar manner. I refer to this possibility as the "consistent, additive effects" perspective. An alternative line of thought – developed by research on the "intersectionality" of social categories, such as race and gender (Collins 1990[2000]; see also Browne and Misra 2003), and scholarship on the intersection of race and crime (Bodenhausen 1988) – emphasizes that belonging to multiple negatively stereotyped groups often results in a "double disadvantage" (Beale 1970; King 1988; Ransford 1980; Best et al. 2011). In this case, the stereotypes associated with being black and the stereotypes associated with being unemployed may reinforce one another, leading to deeper penalties of unemployment for African Americans than for whites (Karren and

Sherman 2012). I refer to this line of thought as the "confirmatory, multiplicative effects" perspective.

In this article, I develop a third, alternative theoretical account of social category aggregation. Building on insights from the social psychology of impression formation (Fiske and Neuberg 1990) and status-based theories of discrimination (Correll and Ridgeway 2003; Berger and Fisek 2006), I argue that a history of unemployment may provide limited new information to employers about black job applicants, applicants about whom employers already hold deep, negative stereotypes, such as having poor work ethics and "spotty" employment histories (Waldinger and Lichter 2003; Pager and Karafin 2009). Conversely, employers are less likely to expect a white worker to have a history of unemployment. Thus, an unemployment spell may provide an employer with unexpected, meaningful information about white job applicants whereas it provides no additional information about black applicants. The consequences of unemployment may therefore be strong and negative for whites, but relatively weak for African Americans. I refer to this line of thought as the "redundant information, muted effects" perspective.

I further develop and examine this theoretical argument by exploring gender variation in the intersecting consequences of race and unemployment. Previous research has documented the highly differentiated stereotypes that employers hold about black men and black women (Kennelly 1999; Moss and Tilly 2001), with stereotypes about black men corresponding more closely with unemployment. Thus, the consequences of unemployment may differ for these groups. However, the aforementioned theoretical perspectives offer divergent predictions about whether the penalties of unemployment will be relatively stronger for black men or for black women.

To improve our empirical understanding of the potentially heterogeneous effects of unemployment scarring as well as to deepen our theoretical understanding of social category aggregation, I draw on original data from an experimental audit study of job openings in five U.S. labor markets. In the experiment, I manipulated job applicants' race (white vs. African American) and gender (male vs. female) using racialized and gendered names. Additionally, I randomly assigned a subset of the applications a 12-month spell of unemployment, leaving the other applications with seamless, continuous work histories. I then tracked employers' responses to each application, generating evidence of the causal effect of race, gender, and unemployment on the probability that an applicant will receive a positive response (i.e., a "callback") from an employer. The results provide strong support for the "redundant information, muted effects" perspective, demonstrating that the scarring effects of long-term unemployment are more severe for white workers than black workers. While black workers face intense racial discrimination when they have seamless histories of employment, they face no additional penalties for having a spell of long-term unemployment on their resumes. The results also demonstrate that the racialized effects of unemployment further vary by the gender of the worker, with black women bearing relatively stronger penalties than black men. These findings contribute new insights to the literature on the aggregation of social categories as well as scholarship on the production of labor market inequality.

The article proceeds as follows. First, I discuss the existing literature on how race, gender, and unemployment independently shape workers' hiring outcomes. I then discuss the stereotypes associated with race, gender, and having a history of unemployment that are likely implicated in producing differential outcomes at the hiring interface. Next, I theoretically derive competing empirical predictions about: 1) how race and unemployment will jointly shape hiring

outcomes, and 2) how gender will further shape the joint consequences of race and unemployment. I then discuss the data and methods, present the main empirical findings, test for the robustness of the empirical results, and examine the generalizability of the findings using separate data from a standard labor force survey. I conclude with a discussion of the implications of the findings for research on social stratification and the aggregation of social categories in the labor market.

RACE, GENDER, & UNEMPLOYMENT SCARRING

The independent effects of race, gender, and long-term unemployment on future employment opportunities have received significant attention in the literature on social stratification. Evidence of racial discrimination in hiring in the U.S. labor market has been repeatedly documented using experimental methods (see Pager 2003; Betrand and Mullainathan 2004; Pager et al. 2009). Bertrand and Mullainathan (2004) used a correspondence study method, sending approximately 5,000 experimentally manipulated resumes to apply for 1,300 job openings, and found that applicants with white-sounding names received approximately 50% more "callbacks" for job interviews than identical applicants with black-sounding names. Using an audit study method with actors posing as job applicants, rather than simply sending paper or electronic job applications, Pager et al. (2009) tested for racial discrimination in New York City's low-wage labor market. Similar to Bertrand and Mullainathan (2004), they found that white applicants were approximately twice as likely as nearly identical black applicants to receive positive responses from employers (Pager et al. 2009).

Evidence of gender discrimination in hiring is more complicated. Studies is this area have found discrimination against women in the hiring process in particular sectors, such as the

restaurant industry (Neumark 1996). And, when gender is combined with other social categories, important biases emerge. For example, Correll et al. (2007) find a strong motherhood penalty in both lab- and field-experimental settings. However, some recent experimental audit studies that have included a gender manipulation – although not focused on gender as the primary category of interest – have found a limited main effect of gender on hiring outcomes (Kroft et al. 2014; Bertrand and Mullainathan 2004). Together, these findings suggest that a worker's gender often plays an important role at the hiring interface, but its consequences appear to be somewhat contingent on other factors, such as the worker's parental status.

Scholars of unemployment scarring have drawn on survey data to demonstrate the association of unemployment with lower future wages and worse employment opportunities (Ruhm 1991; Gregg 2001; Gangl 2006; Blau and Robins 1990). Recently, however, researchers in this area have turned to experimental techniques that enable the estimation of the direct, unbiased effect of unemployment spells on future labor market outcomes (Eriksson and Rooth 2014). Kroft et al. (2013) use an experimental audit study method to demonstrate that the length of an unemployment spell negatively impacts a worker's probability of receiving a callback for an interview. Also using experimental methods, Ghayad (2013) finds that employers actually prefer workers with less relevant experience to workers with histories of unemployment, holding all else equal. Together, these studies provide compelling evidence of a direct, causal, negative effect of being unemployed on a worker's likelihood of obtaining a job.

There is significant evidence that these key social divisions – between whites and blacks, men and women, the employed and the unemployed – have meaningful consequences for workers' labor market opportunities. While multiple mechanisms likely link these categorical

memberships with particular employment outcomes, in this article I focus on the role of employers' stereotypes in generating disparate outcomes.

The Stereotypical Underpinnings of Hiring

The hiring process is difficult. Employers often receive dozens, if not hundreds, of applications for a single opening and need to make important decisions about who to hire. While the literature on hiring is too large to summarize here (for discussions of the hiring literature, see Oyer and Schaefer 2011; Rivera 2012; Moss and Tilly 2001), given the need to make quick judgments about job applicants, employers are likely to use stereotypes as heuristic devices to sort potential job applicants (Fiske 1998). Thus, employers likely deploy stereotypes about race, gender, and unemployment histories during the job application process to determine whom to interview from the large pool of candidates.

A significant body of research examines the racial stereotypes that many employers hold about African American workers (Shih 2002; Pager and Karafin 2009; Waldinger and Lichter 2003; Moss and Tilly 2001). Qualitative research consistently finds that employers hold deep-seated stereotypes about black workers as lacking skill, motivation, and "soft skills" as well as having poor employment histories that are often riddled with spells of unemployment. Moss and Tilly (2001) found that 33.4% of the employers they interviewed, out of 350 face-to-face interviews, made statements about black workers lacking motivation and 20.3% indicated that they thought blacks had lower levels of hard skills (p. 97). Similarly, drawing on extensive qualitative interviews with employers in Los Angeles, Waldinger and Lichter (2003) quote one of their respondents, discussing black workers, as saying: "They don't try hard enough. They want everything to be handed down to them. They don't want to work for what they get" (p.

171). While much of the research on employers' stereotypes of black workers focuses on the lower skilled labor market, obtaining additional educational credentials does not necessarily protect black individuals from experiencing discrimination (Feagin 1991). Indeed, the white-black unemployment rate ratio is consistent across the education spectrum, with African Americans facing unemployment at approximately twice the rate of whites (Bureau of Labor Statistics 2014b). Thus, the negative stereotypes that employers hold about African American workers may play an important role in the production of racial discrimination in hiring for all black workers, not just those in the low-skilled labor market.

There is also a significant body of research that examines the deeply held cultural beliefs and stereotypes about women as workers. Stereotypes of women as being "communally" oriented – compared to agentic, aggressive men – are powerful in the labor market context (Rudman and Glick 2001). Additionally, women are stereotyped as warm, friendly, collaborative, and emotionally understanding (Heilman 2012). While the aforementioned stereotypes are not necessarily negative, women are also often stereotyped as being less competent than men and having priorities outside of the workplace that come first (e.g., childcare and family responsibilities) (Bobbitt-Zeher 2011). Insofar as these stereotypes suggest that a female job applicant may not correspond to the employer's conception of the "ideal worker" (Correll et al. 2007) – a notion that often overlaps with the idea that workers should be fully committed to their workplace with limited competing demands on their time – women may face penalties at the hiring interface.

Scholars have also focused on the stereotypes, and related stigma (Goffman 1963), associated with unemployment. Unemployed workers may be deemed less competent, less ambitious, lacking skills and motivation, or having something that is "not quite right" about them

(Newman 1999; Letkermann 2002; Karren and Sherman 2012; Blau, Petrucci, and McClendon 2013). In turn, these stereotypes may serve as negative signals about a worker's quality to the future employer (Gibbons and Katz 1991; Gangl 2006; Eriksson and Rooth 2014), reducing the unemployed worker's likelihood of getting a job. Obtaining information about the quality of a worker from a job application can be difficult. Thus, these stereotypes about the unemployed may be used as heuristic devices to decide which workers to interview or hire.

Although stereotypes are only one factor in shaping hiring decisions, it is likely that employers utilize these deeply held beliefs about African Americans, women, and the unemployed to differentiate among job candidates during the applicant screening process. Below, I build on insights from social psychology, status-based theories of bias and discrimination, and the literature on the intersectional nature of social category aggregation to conceptualize how race, gender, and unemployment – and their associated stereotypes – will interact at the hiring interface. I then analyze original experimental audit study data to test for these joint consequences within a causal empirical framework.

TOWARD AN INTERSECTIONAL APPROACH

While there is compelling evidence about the independent effects of race, gender, and unemployment in shaping hiring outcomes as well as the deeply held stereotypes about people who occupy those social positions, little is known about how these three factors intersect. Indeed, the two U.S.-based experimental audit studies of unemployment scarring intentionally chose names for their fictitious job applicants that were "minimally informative about the race of the applicant" (Kroft et al. 2013, p. 1135, see also Ghayad 2013, p. 7). And, even less is known about how gender may further shape the interaction between race and unemployment. However,

the unemployment rate for black workers consistently hovers at approximately twice the unemployment rate for white workers (Bureau of Labor Statistics 2014c). Additionally, gender and race intersect in important ways in terms unemployment rates. While the unemployment rate for white men and white women has been quite similar since the early 1990s, black women have consistently maintained *lower* unemployment rates than black men over that same period (Bureau of Labor Statistics 2014c).

The ways in which categories, such as race and gender, aggregate in the labor market and other domains of social and economic life have been of central concern to sociologists (Collins [1990] 2000; McCall 2005). Scholarship on the "intersectionality" of social categories opens important avenues for scholars to generate more complex insights about the contours of social inequality by simultaneously considering the experiences of belonging to multiple social groups. While theoretically rich, consistent empirical evidence on the intersection of race, gender, and other social categories in the labor market has generally been lacking. In the conclusion of their review of the literature on race and gender labor market inequality, Browne and Misra (2003) argue: "… scholars must develop more middle-range theories to specify the conditions under which intersections of gender and race are exacerbated or neutralized" (p. 507). This article attempts to advance scholarship in this area by developing theoretical insights about how race, gender, and unemployment interact at the hiring interface. To build these insights, I first conceptualize how race and unemployment may interact with one another during the job screening process. I then theorize how gender may further shape the race and unemployment intersection.

Consistent, Additive Effects

A first possibility, which is in line with a human capital perspective (Becker 1964), is that race and unemployment will aggregate in a consistent, additive manner. Black workers will face racial discrimination and workers with unemployment histories will face penalties compared to their same-race, continuously employed counterparts. One mechanism proposed in the unemployment scarring literature is that unemployment negatively impacts workers' future hiring outcomes because it stunts their human capital development or even leads to a deterioration of skills (for a discussion of this argument, see Eriksson and Rooth 2014; Kroft et al. 2013; Gangl 2006). Thus, insofar as employers prioritize human capital at the hiring interface, workers with a history of unemployment are posited to face worse outcomes than workers with seamless employment histories because they have lower levels of human capital. Since the rate of human capital deterioration is unlikely to vary by the race of the worker, this perspective suggests that unemployment will have a similar, negative effect for both white and black workers.

Some of the existing experimental audit study research that has examined how race intersects with human capital accumulation supports the "consistent, additive effects" perspective. For example, Gaddis (2015) examines how race (white versus black) interacts with elite versus less-selective college education credentials at the hiring interface. The findings from this experimental audit study indicate that black job applicants face racial discrimination and applicants with college degrees from less selective educational institutions receive lower "callback" rates for jobs than applicants with elite educational credentials. However, there is no interaction between race and the status of an applicant's educational credentials. In other words, college selectivity has similar consequences for both white and black workers. Following

insights from a human capital perspective (Becker 1964) and experimental research in this area (Gaddis 2015), unemployment may have a similar, negative effect on both white and black job applicants.

Confirmatory, Multiplicative Effects

Scholarship that focuses on the role of stereotypes in the evaluation process, however, suggests that race and unemployment may interact in a multiplicative, negative manner. A significant body of research in sociology – largely in the tradition of "intersectionality" scholarship (Collins 1990[2000]; McCall 2005) – offers the insight that the aggregation of social categories is more than the sum of its parts. Building on this line of thought, some scholars have argued that belonging to multiple negatively stereotyped groups may result in a "double disadvantage," whereby the joint effect of belonging to both groups is more severe than simply adding together the penalties associated with each group independently (Beale 1970; King 1988; Ransford 1980). Much of the research in this tradition has focused on the intersection of race and gender, with some empirical work in the legal domain finding evidence of a "double disadvantage" for women of color (Best et al. 2011). However, the empirical evidence about how race and gender intersect in the labor market is more complicated and does not uniformly conform to a "double disadvantage" hypothesis (Greenman and Xie 2008; for a summary, see Browne and Misra 2003).

Similarly, scholarship on the intersection of race and crime has emphasized the multiplicative role that presenting information about one's demographic characteristics alongside additional types of information (i.e., the type of crime committed) may play in the evaluations of individuals. Scholars in this area argue that when an individual presents additional information

that complies with the stereotypical understanding of that individual's group membership, those negative stereotypes may become amplified. As Bodenhausen (1988) writes: "Evidence that corroborates stereotypic beliefs may receive more attention and rehearsal and may therefore more often be incorporated into the decision-maker's mental representation of the of the case" (p. 727). Indeed, Bodenhausen (1988) finds empirical support for this idea in his research focusing on a mock juror decision-making task where the effects of Hispanic ethnicity and stereotype activation compound one another, resulting in multiplicative penalties for stereotype-confirming Hispanic targets. Other experimental evidence demonstrates similar multiplicative effects for African Americans when they commit stereotypically race-congruent crimes (e.g., burglary or auto theft) as opposed to stereotypically race-incongruent crimes (e.g., embezzlement) (Jones and Kaplan 2003; Gordon et al. 1988) (see also Macrae and Bodenhausen 2000). Similar findings have emerged in research on hiring decisions. In an audit study of low-skilled job openings in New York City, Pager, Western, and Sugie (2009) found that the negative effect of having a criminal conviction on a worker's likelihood of receiving a "callback" for a job was stronger for black applicants than white applicants.[1]

In line with a "confirmatory, multiplicative effects" perspective, Karren and Sherman (2012) develop a theoretical argument about how race and unemployment will intersect during the job screening process. Specifically, they argue that African Americans who are laid off or unemployed will be seen by employers as confirming a set of deeply held racial stereotypes and, thus, unemployment will exacerbate the disadvantage they already face for being black (Karren and Sherman 2012). While Karren and Sherman (2012) do not empirically test this argument, a

[1] This finding is similar to an earlier audit study conducted by Pager (2003) in Milwaukee. In that study, descriptive evidence indicated that black applicants were penalized more heavily for a criminal conviction than white applicants. Although, in that earlier study, the interaction term between being black and having a criminal conviction was not statistically significant.

clear empirical prediction is made: the penalties of unemployment will be more severe for black job applicants than they are for equally qualified white job applicants.

Redundant Information, Muted Effects

The aforementioned perspectives generally suggest that race and unemployment will either: 1) have similar consequences for whites and blacks, or 2) unemployment will be *more* penalizing for blacks than whites. In this section, however, I offer an alternative theoretical account – the "redundant information, muted effects" perspective – suggesting that the negative consequences of long-term unemployment may actually be less severe for black job applicants than for white job applicants. The intuition here is that when strong stereotypical expectations about group membership are reinforced by stereotype-consistent information, that additional information is "down-weighted" in importance and has little additional effect.

Social psychological research on impression formation suggests that perceivers form impressions of others through a multi-stage process (Fiske and Neuberg 1990). Since individuals are "cognitive misers," wanting to spend as few resources as possible when evaluating others, group-based stereotypes are used early in the impression formation process as a way to classify targets quickly and easily. Beyond that preliminary act of categorization, additional information is processed and deployed in different ways. As Fiske and Neuberg (1990) write: "If the additional information is interpreted to be either consistent with or adaptable to the initially determined category label, then the perceiver's affects, cognitions, and behavioral tendencies are likely to be based on the initial category" (p. 7). Theoretical work in the status characteristics tradition offers a similar insight about how information about multiple category memberships will be aggregated in the evaluation process. Discussing this idea, referred to as the "attenuation

principle" in status characteristics theory, Correll and Ridgeway (2003) write: "additional consistent information is subject to a declining marginal impact. If we already know that a person is a Harvard trained lawyer, learning that he is also a white man will have only a slight positive effect …" (p. 34; see also Berger and Fisek 2006).

The primary relevant insight offered by research on impression formation and the aggregation of status characteristics is that additional information that is congruent with the initial stereotypes about a target's group membership will not shift the initial impression formation process or will have a limited effect on shifting the initial evaluation. In other words, the additional category provides limited new information and therefore is not of particular use to the evaluator. Western and Beckett (1999) use a similar logic to interpret their empirical finding that the post-release, negative consequences of incarceration for workers' employment outcomes last longer for whites than for blacks. They write: "Because of the high incarceration rate among young African-American men, black ex-inmates may be less stigmatized than their white counterparts. Employers may treat black noninmates and ex-inmates more similarly as a consequence" (Western and Beckett 1999, p. 1050). A similar theoretical explanation may account for the way that race and unemployment histories intersect.

As was discussed above, a large body of extant research finds that employers hold strong, negative stereotypes about African American job applicants and that many of those stereotypes have to do with African American workers having poor work ethics and "spotty" employment histories (Moss and Tilly 2001; Kirschenman and Neckerman 1991; Waldinger and Lichter 2003; Pager and Karafin 2009). Employers may therefore assume that black workers have a history of unemployment, regardless of their actual employment history. Additionally, employers' stereotypes about African Americans are quite similar to common stereotypes about

the unemployed – lacking competence, being unmotivated, etc. (Karren and Sherman 2012). Thus, employers' racial stereotypes about African American workers may overlap so strongly with stereotypes about the unemployed that information about a black worker's actual unemployment history may provide limited new information about the applicant to the employer. These insights lead to the empirical prediction that while black workers will face severe racial discrimination, they will not bear an additional penalty for a history of unemployment.

The Gendered Intersection of Race and Unemployment

Employers' racial stereotypes are strong and persistent. However, they also vary in important ways by the gender of the worker. While black men are often stereotyped as unmotivated, criminal, and having poor work histories (Moss and Tilly 2001), employers tend to stereotype black women as single mothers (Kennelly 1999). Additionally, there is a long history of black women working outside of the home (Collins 2000), making it unlikely that employers stereotype black women as taking time out of the labor force to care for children or having spells of unemployment. Indeed, drawing on data from their interviews with employers in five cities, Moss and Tilly (2001) report that employers consistently stated preferences for black women over black men, suggesting that stereotypes about being a single parent may be less pernicious than stereotypes about one's work ethic, criminality, and poor employment outcomes during the hiring process. Moss and Tilly (2001) argue that employers perceived black women as more educated and skilled than black men. They write: "Respondents described black women as having 'better communication skills, better work skills in everything,' and being 'a hell of a lot sharper' and 'very impressive' compared to black men, who 'tended to be less skilled, less educated'" (Moss and Tilly 2001, p. 127). Thus, employers' expectations about unemployment

histories may be different for black men and black women. Specifically, unemployment is likely to be perceived as less congruent with employers' stereotypes of being an African American woman.

Given employers' distinct stereotypes about black men and black women, gender variation in the joint consequences of race and unemployment can assist in understanding the underlying processes that are at work. If the theoretical insights offered by the "confirmatory, multiplicative effects" perspective are supported, then black women would be expected to receive relatively smaller penalties than black men for a history of unemployment because unemployment would *not* reinforce the most salient stereotypes about black women. However, if the "redundant information, muted effects" line of thought accurately depicts how categories aggregate at the hiring interface, then the relative negative consequences of unemployment will be stronger for black women than they are for black men because unemployment would provide less redundant information about black female job applicants. In other words, the negative stereotypes associated with unemployment would provide employers with additional information about black female applicants that they would not provide about black male applicants.

DATA & METHODS

Given the methodological concerns about using standard labor force surveys to identify racial discrimination and unemployment scarring (i.e., bias due to selection and omitted variables), I analyze original experimental audit study data to address the theoretical issues at stake. For the audit study, I submitted 2,766 fictitious and experimentally manipulated job applications to 2,411 job openings between November of 2012 and June of 2013.[2] With this

[2] The experiment was fielded during the recovery from the "Great Recession," which may influence the empirical findings. On the one hand, conducting the experiment in a time of economic recovery may mean that the effects that

method, the random assignment of demographic categories (race and gender) and employment histories (either seamless employment or long-term unemployment) to each job application removes concerns about selection bias in terms of labor supply (e.g., human capital, social capital, and job search behavior). Equally importantly, the random assignment of job applications to each job opening removes concerns about omitted variables bias on the demand side of the job matching process (e.g., firm size, formalization, and organizational demographic composition) (see Pager 2007). Thus, the research design enables the generation of unbiased, causal estimates of the average treatment effects of the race and gender of the job applicant as well as how these categorical differences vary with histories of long-term unemployment versus histories of seamless, continuous employment.[3] After sending each application, I tracked the "callbacks" (i.e., positive employer responses) received by each application.[4] The overall callback rate was 6.9%, which is consistent with previous studies using similar methods (Correll et al. 2007; Bertrand and Mullainathan 2004).

There were two primary axes of variation in the field experiment. One axis varied the demographic background of the applicant, which was signaled using racialized and gendered names (Bertrand and Mullainathan 2004). The names that were likely perceived as white by employers were Jon Murphy and Matthew Stevens for men and Katherine Murphy and Emily Stevens and women. It is not clear whether these names actively led employers to think the applicant was white or whether these names simply did not prime a race of the applicant and,

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are detected are conservative since employers may perceive unemployment as outside of the worker's control. On the other hand, the increased competition in the labor market due to the recession may exacerbate employers' discriminatory behaviors because they have a larger pool of applicants to choose from.

[3] Importantly, while the internal validity is strong with these types of experimental research designs, the generalizability of the findings beyond the experimental context is unable to be empirically examined. I will attempt to address some of these concerns below by supplementing the experimental findings with an analysis of standard labor force survey data.

[4] I coded callbacks from employers within 90 days of submitting the application. There were very few callbacks that came after 90 days and the empirical results are not sensitive to this cut-off point.

thus, defaulted to assumptions of whiteness. To signal an African American racial background, racialized male and female names were used: Darnell Washington and Tyrone Jackson for men and Kimora Washington and Kenya Jackson for women. Using names to signal race is complicated, since heavily racialized names may signal more than just the race of the applicant, such as the applicant's social class (see Fryer and Levitt 2004). To gain some traction on this issue, I obtained data on the first names of all New York State resident births in 2008-2009 by the mother's race and educational attainment. I then selected names that were highly likely to have a black mother and names that were highly likely to have a white mother (at least 60% for the black names and 70% for the white names). Next, I took this set of names and selected a set where the average level of maternal education was similar, attempting to net out the potential confounding effects of social class. Additionally, all of the resumes in the study explicitly state that the applicants have attained a college degree, which is a clear marker of the applicant's social class. While I attempt to control for the social class of the applicant, this places an important scope condition on the findings from the field experiment: the findings are limited in their generalizability to workers with a college education.

The second axis of variation in the experiment was designed to examine the consequences of applicants' employment histories. Thus, this axis varied the most recent employment experience on the applicant's resume. Each resume was randomly assigned 12 months of recent experience either in a regular job (thus, indicating a seamless, continuous employment history since graduating from college) or a spell of unemployment.[5]

[5] Unemployment was signaled through dates that the applicant did not have a job. The formal definition of unemployment is that an individual does not have a job *and* is looking for work. Details about the second component of the definition – searching for work – are not present in the unemployment condition. This method of signaling unemployment, however, is consistent with previous audit studies in this area (see Kroft et al. 2013).

Each job application consisted of a resume and a cover letter. Since two resumes were submitted for some of the job openings, I constructed two separate resume templates that presented similar credentials, but varied in their appearance. I pre-tested the resume templates before using them to ensure that they received similar ratings on key dimensions, such as perceived skill and experience. The educational credentials on the resumes were similar, with each applicant graduating from comparably ranked public universities in the Midwest. After graduating from college, each resume indicated that the applicant had one job that lasted for roughly two years and then a second job that lasted for over four years. Then, all resumes indicated that the applicant transitioned to a new job or a spell of unemployment for the 12-month period prior to the application being submitted. To standardize the number of jobs on the resumes for the applicants in the seamless employment and unemployment conditions, I included a summer internship during college on the resume for the unemployed applicant. Thus, the applicants in both employment history conditions had experience with three separate employers. For examples of the resumes used in the field experiment, see Appendix A. Each resume was accompanied by a cover letter. The two cover letter templates were quite similar, while also accurately reflecting the work histories presented on the resumes. While the general text of the cover letter for each experimental condition remained consistent across employers, the cover letter was personalized with the employer's name and the job title for the open position.

In the experiment, I submitted applications to four different job types – sales, accounting/bookkeeping, project management/management, and administrative/clerical – to include variety in the level of skill required for the position. The applications were submitted to job openings in five major cities – New York City, Atlanta, Chicago, Los Angeles, and Boston – to ensure some geographic variety. Importantly, though, the employment histories for each

applicant were specific to the labor market in which the applicant was applying. If a resume was submitted for a job in New York City, for example, the applicant's resume presented an employment history with real employers in New York City. The resumes also included an email address and a local phone number where the applicant could receive responses from employers. Each phone number had its own voice mailbox and a unique race- and gender-specific voice recording. Each application also included an address for the applicant. The applicants' street addresses were located roughly one block away from each other in each city, but on separate streets. Actual addresses were used in the study to limit employers' suspicion that the applicant was fictitious. However, the apartment numbers on the resumes were not real.

I drew the sample of job openings for the experiment from one of the leading national on-line job posting websites. Thus, the sample represents a broad cross-section of job openings. Additionally, the use of a national job posting website provides some consistency in the jobs being posted across the five different labor markets. I used a computer script to generate the sample of openings that met the criteria for the experiment. Each search of the job posting website was for a particular job type (e.g., sales), within a 20-mile radius of a given city, that was posted over the previous 30 days, and that could be applied for directly through the job posting website.[6] After collecting the job openings that matched these requirements, duplicate postings from the same employer were removed to reduce the likelihood that employers would perceive the resumes as fictitious.

[6] Due to technical issues with the computer script, I limited the search to jobs posted for fewer than 30 days in a few cases. The level of education included in the search criteria differed across occupations. For accounting and sales jobs, the education level was limited to jobs requiring an Associates or Bachelors degree. For the project manager/manager openings, the search was limited to jobs requiring a Bachelors degree, due to the large number of openings in this category for most cities. Finally, I did not limit the administrative assistant searches by education because many employers did not specify any education level requirement for this job type. Some job openings required completing intensive applications on the employer's website. I did not submit applications for these jobs for two reasons. First, the IRB protocol did not cover these applications. And, second, the more intensive applications often included essay questions that would have made it difficult to ensure that differences in answers to the application questions were not responsible for driving the "callback" findings.

After the final set of job openings was selected for a given job type in a given city, I randomly assigned each job opening to a demographic category (white male, black male, white female, or black female) and to receive either one resume with a seamless employment history, one resume with 12 months of unemployment, or two resumes (one with a seamless history and one with an unemployment history).[7] The random assignment of applications to each job opening enables me to generate unbiased estimates of race and gender discrimination in hiring as well as the direct effect of a spell of long-term unemployment on job applicants' future labor market opportunities. To ensure that different aspects of the applications – the name on the resumes, the format of the resumes, and the order that the resumes were submitted (in the cases where two resumes were submitted) – would not be correlated with the treatments of interest, these application attributes were randomized and counterbalanced.

The primary dependent variable in the field experiment was whether the applicant received a positive response or "callback" from the employer. "Callbacks" were received via both phone and email. I coded a response from an employer as a "callback" if the employer requested an interview with the applicant or if the employer asked the applicant to contact them to discuss the position in more depth. I did *not* code auto-generated responses or simple requests for more information as positive responses.

RESULTS

How do race and long-term unemployment intersect in shaping the ability of workers to obtain employment? Figure 1 presents the descriptive distribution of callbacks from employers in the field experiment, broken down by the applicant's race and employment history. Moving

[7] This experiment was embedded within a larger experiment and some employers received additional resumes not included in these analyses. However, given the large volume of resumes that employers receive for each opening that they post, there is no reason to believe that the additional resumes influenced the results presented here.

forward, I will refer to applicants with a particular demographic-sounding name as applicants from that demographic background (i.e., "white applicants"). While this approach loses some precision, it will hopefully increase the clarity of the findings.

First, Figure 1 demonstrates that severe racial discrimination persists. White applicants with seamless employment histories received a callback rate nearly twice that of black applicants with seamless histories of employment (10.4% vs. 5.8%, $|z| = 3.12$, $p < .01$). This finding confirms evidence from previous research about the continued effects of racial discrimination in hiring (Bertrand and Mullainathan 2004; Pager et al. 2009). Next, I examine how experiencing long-term unemployment affects the callback rates of white and black applicants. A clear pattern emerges: white applicants with seamless, continuous employment histories received callbacks at almost twice the rate of white workers experiencing a spell of long-term unemployment. This difference is statistically significant (10.4% vs. 5.9%, $|z| = 3.04$, $p < .01$), providing compelling evidence of unemployment scarring for white workers. However, there is no substantive or statistically significant difference in the callback rate between black applicants with seamless employment histories and black applicants with histories of unemployment (5.8% vs. 5.9%, $|z| = .10$, $p = .92$).[8] To examine whether the effect of unemployment varied in a statistically significant way by the applicant's race, I turn to Model 1 in Table 1. Model 1 is a logistic regression model, with standard errors clustered at the level of the job posting.[9] The model includes an interaction term between being a black applicant and having a history of unemployment. The model also controls for the gender of the applicant. The positive and statistically significant interaction term indicates that there are meaningful racial differences in

[8] An initial concern may be that there is a "floor effect" driving the findings. In other words, there may be no way for black applicants who are unemployed to receive a lower callback rate than black applicants who have seamless employment histories. This issue is addressed later in the article.

[9] I obtain consistent results when using logistic regression models with job posting-specific random effects and linear probability models with standard errors clustered at the level of the job opening.

the consequences of long-term unemployment. Together, these findings indicate that while black workers face severe discrimination and white workers face scarring effects for histories of unemployment, the scarring effects of unemployment do not appear to exist for black workers. These results provide support for the empirical predictions generated by a "redundant information, muted effects" perspective.

[Figure 1 About Here]

[Table 1 About Here]

The above analyses combined the applications submitted by male and female job applicants in each racial group. However, employers' categorical expectations about the employment histories of black men and black women are likely distinct, thus producing gender-differentiated effects in the intersection of race and unemployment. Figure 2 disaggregates Figure 1 by the gender of the applicant. As expected, gender differences in the effects of race and unemployment emerge. The statistical tests that examine the gender-differentiated patterns of callbacks by race and unemployment are presented in Models 2 through 4 of Table 1. In Model 2, I limit the analysis to male applicants and implement a logistic regression model (with standard errors clustered by the job opening), including an interaction between being black and having a history of unemployment. The results demonstrate that black men with seamless employment histories face severe discrimination compared to white men with seamless employment histories. And, white men with histories of long-term unemployment face severe penalties compared to white men with seamless employment histories. However, the large, positive, and statistically significant coefficient for the interaction term indicates that the consequences of long-term unemployment differ in meaningful ways for white and black men. Thus, Model 2 replicates the descriptive pattern demonstrated in Figure 2.

Model 3 replicates Model 2, but examines female applicants rather than male applicants. While the coefficients in Model 3 point in the same direction as the coefficients in Model 2, none of them reach statistical significance. This finding provides preliminary evidence that race and unemployment scarring operate differently for male and female workers. However, to formally test that hypothesis, I implemented Model 4 in Table 1. Model 4 includes a three-way interaction between having a history of long-term unemployment, being a black applicant, and being a female applicant. The coefficient for this three-way interaction is negative and statistically significant, providing evidence that the racialized scarring consequences of unemployment differ by gender. The relative scarring consequences of unemployment for black women are more severe than they are for black men. Again, this finding provides support for an "information redundancy, muted effects" perspective on the racialized consequences of unemployment scarring.

[Figure 2 About Here]

The results presented above provide compelling evidence in support of the theoretical perspective where information about a worker that is consistent with stereotypes about that worker's group (e.g., unemployment for black men) carries limited additional penalty. An extension of this line of thought is that information that is *inconsistent* with stereotypical expectations about a worker's group membership will produce relatively stronger consequences. Indeed, this is what the results demonstrate for black women: they face relatively stronger penalties for histories of unemployment than black men. An additional test of this perspective would be to examine whether the penalties for unemployment are strongest among the group least expected to have a history of unemployment: specifically, white men. To examine this possibility, I estimated a logistic regression model predicting whether the applicant received a

callback and included in the model an indicator variable for being a white male applicant, an indicator variable for having a history of unemployment, and an interaction between being a white male applicant and having a history of unemployment. Given the theoretical insights offered by a "redundant information, muted effects" perspective, one would expect a negative interaction between being a white male applicant and having a history of unemployment. Indeed, this is what the model demonstrates. The interaction term between being a white male applicant and having a history of unemployment is negative (Coef. = -0.833; OR = 0.435) and statistically significant ($p < .05$) (results available upon request). This analysis provides additional support for a process of social category aggregation where additional categories that provide redundant stereotypical information result in muted effects.

ADDITIONAL CONSIDERATIONS

While the findings presented above provide compelling evidence about how race, gender, and unemployment combine in the production of hiring outcomes, in this section I discuss the robustness and generalizability of the findings. I first test for the robustness of the findings across occupations and labor markets. Next, I explore an alternative hypothesis for the empirical findings presented above. Finally, I consider issues of generalizability and external validity by analyzing data from a standard labor force survey conducted with a national, probability-based sample of respondents.

Occupation and Labor Market Variation

In this section, I attempt to ensure that the findings are not being driven by one of the four occupations or five labor markets in the field experiment. First, to examine potential

occupational variation, I implemented Model 1 in Table 1, including controls for each of the occupations in the experiment. The results were unchanged. Then, I implemented that same model, but included an interaction between race, unemployment, and each occupation. None of the three-way interactions were statistically significant and a Wald test indicated that the set of three-way interactions was also not statistically significant. Finally, I ran the model four times, dropping a different one of the occupations each time. The empirical pattern held in each case (results available upon request).

I also examined whether the findings were driven by one of the five labor markets under investigation. To empirically test for the robustness of the findings across labor markets, I first implemented Model 1 in Table 1, controlling for each labor market. The results held. Then, I included interactions between race, unemployment, and the labor market of the application. The three-way interactions were not statistically significant, independently or jointly. Finally, I ran the model five times, dropping a different labor market in each model. The empirical findings held (results available upon request). Together, these analyses provide compelling evidence that the findings are not being driven by a particular occupation or labor market.

The Possibility of "Floor Effects"

An alternative account for the empirical findings could be that the data demonstrate "floor effects" for race and unemployment. In other words, the negative consequences of being black (with a seamless employment history) or being unemployed (and white) are so severe that there is no way for African Americans with a history of unemployment to receive an even lower callback rate. One way to test for this possibility is to examine a subset of applications where the callback rates are higher than the full sample. The data from Boston enable this possibility

because the callback rate in the Boston labor market was higher than other labor markets (10.3% in Boston vs. 6.1% in the other labor markets). Additionally, the callback rate for black applicants with seamless employment histories in Boston was relatively high (8.3%), even higher than the overall callback rate for the study. Therefore, it would be difficult to argue that black applicants with histories of unemployment in Boston would be unable to receive a callback rate lower than 8.3%, the callback rate for seamlessly employed black applicants in Boston. However, the empirical pattern in Boston is consistent with the main results presented above. There is no additional penalty of unemployment for black job applicants; black applicants with histories of unemployment received callbacks 11.0% of the time (compared to 8.3% in the seamless employment condition). Indeed, when Model 1 from Table 1 is implemented on the subsample of applications submitted in Boston, the interaction between being black and having a history of unemployment remains positive and statistically significant ($p < .05$). While not definitive, this analysis provides some empirical evidence against the argument that floor effects are entirely responsible for the empirical pattern presented in the experimental audit study.

Generalizability

While experimental audit studies generate internally valid causal estimates, an important limitation of this methodology is that the generalizability of the findings remains unknown. The audit study presented above generates estimates of how race, gender, and long-term unemployment jointly affect the labor market outcomes for workers of a particular age and educational background, in four occupational groups, in five U.S. labor markets, and for jobs at employers who listed openings through the job posting website used for the study. While there are theoretical reasons to think that the findings may extend beyond the particular context of the

experiment, the data are unable to empirically address that issue. Thus, I conducted a supplementary analysis using the Displaced Workers Survey (DWS), a probability-based sample of displaced workers in the United States. The DWS, a supplement to the Current Population Survey (CPS), is a cross-sectional survey conducted every two years that, in addition to standard socio-demographic information, collects the following information about workers who were displaced from their jobs: the reasons they were displaced, their current employment status, the length of time that they were without work, as well as information about their pre-displacement earnings and job characteristics. For an in-depth discussion of the DWS, see Moore (2010).

The items asked in the DWS enable an analysis of whether there are racial differences in the length of time that it takes white and black workers to become reemployed after they are displaced. Thus, it is possible to examine whether the probability of becoming reemployed declines over time for white workers (suggesting a scarring effect of unemployment), but remains relatively consistent for black workers (suggesting limited additional penalties for black workers of unemployment). In other words, the DWS provides an opportunity to explore whether the empirical pattern observed in the experimental audit study extends beyond the scope conditions of the experimental design.

For the empirical analysis presented below, I draw on six waves of the DWS (2000, 2002, 2004, 2006, 2008, and 2010).[10] I limit the sample to workers who were displaced from their jobs according the Bureau of Labor Statistics official definition of displacement,[11] report being either non-Hispanic white or non-Hispanic black, are between the ages of 20 and 64, and who were working in a full-time job prior to their displacement. The outcome variable for the analysis is

[10] The DWS data were downloaded from the website of the Center for Economic Policy and Research (http://ceprdata.org/cps-uniform-data-extracts/cps-displaced-worker-survey/) (last accesses on October 7, 2014).
[11] The Bureau of Labor Statistics defines displaced workers as: "persons 20 years of age and older who lost or left jobs because their plant or company closed or moved, there was insufficient work for them to do, or their position or shift was abolished" (Bureau of Labor Statistics 2014d).

whether the DWS respondent is employed. The key independent variables are: 1) the race of the worker (white or black), 2) the number of weeks since being displaced (logged to adjust for skew),[12] and 3) an interaction between race and time since displacement. In line with the analysis in the field experiment, I also examine how the interaction of race and weeks since displacement varies by the gender of the worker. If the results from the DWS are consistent with the findings from the experimental audit study, the data would show a positive and statistically significant interaction between being black and the duration of time since displacement. The "main effect" of being black (i.e., the coefficient for being black that is not interacted with time since displacement) would be negative, as would the "main effect" of a worker's duration since displacement. Additionally, we would expect a three-way interaction between race, gender, and weeks since being displaced. Following the analytic strategy of Moore (2010), I control for workers' earnings in their previous job, which should assist in adjusting for a worker's observable and unobservable human capital and ability. Controls are also included for marital status, age, age-squared, gender, education, reason for displacement, year of displacement, previous industry, suburban or rural location, whether the respondent was a union member at his or her last job, whether the respondent had health insurance at his or her last job, and the survey wave. The data are not weighted in the multivariate analyses presented below, but the results are robust to the inclusion of weights.

Model 1 in Table 2 examines these relationships using a logistic regression model that includes an indicator variable for being black, the weeks since the respondent was displaced (logged), an interaction between those two variables, and the full set of controls discussed above. The negative and statistically significant coefficient for being a black worker indicates that,

[12] Displaced workers who reported "zero weeks" since being displaced were not included in the main analyses because the natural log of zero is undefined. However, when those workers are included in the analysis as having "zeroes" on the log scale of time since being displaced, similar results emerge.

directly after displacement, black workers are less likely than white workers to be reemployed. The negative and statistically significant coefficient for weeks since displacement (logged) provides evidence that, for white workers, the likelihood of being reemployed is lower after longer periods of time without work. And, importantly, the interaction between being a black worker and the weeks since a worker was displaced is positive and statistically significant. This set of findings closely parallels the findings from the experimental audit study, presented in Model 1 of Table1, above. To clarify these empirical results, Figure 3 graphically presents the findings from Model 1 in Table 2. The figure presents predicted probabilities of reemployment at each week post-displacement (in the log scale), separately for white and black workers. These estimates are drawn from the full multivariate logistic regression presented in Model 1 of Table 2, holding all covariates at their means. For graphical clarity, 90 percent confidence intervals, rather than 95 percent confidence intervals, are presented. The figure demonstrates that after approximately 20 weeks post-displacement ($exp(3)=20.1$) the racial reemployment penalty for black workers dissipates and black workers are reemployed at a similar rate to white workers.

I next attempt to replicate the gender-specific analyses presented above. Model 2 in Table 2 replicates Model 1, but limits the sample to male respondents. As can be seen, the findings hold. Among men, there is a positive interaction between being black and the weeks since the worker was displaced. Model 3 in Table 2 subsets the analysis to women. We see negative coefficients for being black and the weeks since displacement, although only the coefficient for weeks since displacement is statistically significant. And, while the interaction term between being black and the time since the worker was displaced is positive, it is not statistically significant. These findings are quite similar to the findings from the experimental audit study. Time since displacement is statistically significantly less penalizing for black men than for white

men, but that pattern does not hold for women. Finally, in Model 4, I analyze data from the full sample, but include a three-way interaction term between race, gender, and weeks since the worker was displaced. The coefficient for the three-way interaction term is negative (the same as in the experimental audit study), but is not statistically significant. This is where the findings from the DWS diverge from the experimental audit study. However, these analyses demonstrate that key pieces of the analysis in the experimental audit study replicate on a national probability sample of displaced workers.

[Figure 3 About Here]

[Table 2 About Here]

Given the nature of the DWS data, it is not possible to determine whether the same demand-side processes are at work as in the audit study. Yet, it is compelling that similar empirical patterns emerge between these dramatically different types of data. Additionally, as with any survey data, the analyses presented from the DWS data are subject to concerns about selection and omitted variables bias. However, these concerns are addressed in the design of the experimental audit study. Therefore, together, the experimental findings and the results from the DWS analysis provide compelling evidence about how race, gender, and unemployment intersect in shaping the labor market outcomes of workers.

DISCUSSION & CONCLUSION

The way that individuals experience social and economic life is rarely one-dimensional. People occupy multiple social categories that jointly shape the ways that they are treated and the opportunities they are afforded. Yet, examining how different categorical memberships aggregate can prove challenging for social scientists. This article attempts to address some of

these issues by theorizing and empirically addressing within a causal framework how race, gender, and unemployment interact in their consequences for workers' employment opportunities.

Two primary patterns emerge from this study. First, rather than unemployment having similar consequences for white and black workers or unemployment amplifying the negative effects of being black, the findings point in a different direction. The empirical results support the "redundant information, muted effects" perspective: employers' racial stereotypes are so intense and so saturated with conceptions of African Americans having "spotty" work histories that an actual spell of unemployment provides the employer with limited additional information. Thus, while black workers face strong racial discrimination, they bear no additional penalty for a history of unemployment. It is striking that a year of unemployment has no additional effect for black workers beyond the discrimination they face for being black. In other words, the findings demonstrate that black workers – specifically, black men – regardless of their personal employment history, bear the scarring effects of a year of unemployment.

The second key finding demonstrates that the varied consequences of unemployment by race further differ by the gender of the worker. Employers' stereotypes of black women are less about "spotty" work histories and unemployment than their stereotypes about black men. The empirical results demonstrate that the penalty for black women of having an unemployment history is relatively stronger than it is for black men. These gender-differentiated findings further support the "redundant information, muted effects" perspective of social category aggregation during the job application process. Importantly, though, a history of unemployment was signaled on the resumes as a gap in employment, which could indicate either unemployment or time out of the labor force altogether. For female job applicants, employers may be likely to interpret this

employment gap as taking time away from work to care for young children. A similar interpretation is unlikely for men, whom employers are likely to perceive as unemployed if they have a twelve-month gap in employment. While this possibility does not undermine the "redundant information, muted effects" perspective, gendered stereotypes about parenthood and labor force participation may contribute to the empirical patterns that emerge. Future research would be well served to explore this issue in more depth.

The findings presented here open important avenues for future research. Specifically, the results support a different theoretical explanation than some existing experimental audit study research on how race interacts with other dimensions of social life. Previous scholarship on race and different types of educational credentials (Gaddis 2015) finds that these attributes aggregate in a consistent, additive way. Other audit study research finds that race and having a criminal conviction combine in a multiplicative, negative manner (Pager, Western, and Sugie 2009). Additionally, recent evidence suggests that attributes generally conceived of as negative can actually have positive implications for the evaluations of black male job applicants. In a survey experiment, Pedulla (2014) finds that gay black men are recommended for higher starting salaries than straight black men. Thus, existing research presents empirical cases where combining the race of a job applicant (specifically, being a black applicant) with additional social characteristics has negative effects, positive effects, and no additional effects. Given this variation, scholars of social stratification have the opportunity to build a theoretical framework for conceptualizing how race and other social categories aggregate in the labor market as well as in other institutional domains.

These findings also have potential implications for public policy. Legislators and policymakers have become increasingly concerned about employers passing over workers who

are unemployed (The White House 2014). Some states have even gone as far as passing laws to prohibit hiring discrimination against unemployed individuals (National Council of State Legislators 2013). The results from the experimental audit study provide additional evidence that workers with long-term unemployment histories face severe challenges as they try to obtain employment. And, given that race and gender discrimination in hiring is illegal, policymakers may be interested in thinking broadly about how the consequences of long-term unemployment vary systematically with workers' demographic characteristics.

While making important contributions to scholarship on labor market stratification and social category aggregation, this article is not without limitations. First, the analyses presented here are limited to employers' decision-making at the initial applicant screening stage. Thus, no information is available about actual hiring decisions, wage setting, promotions, or terminations. It is possible, for example, that employers prefer to interview or hire workers that may seem less desirable (i.e., black workers with unemployment histories) because they can offer those workers lower starting salaries and, thus, produce savings on their labor costs. The data available here are, unfortunately, not able to examine that possibility. Additionally, all applications were submitted in response to on-line job postings and, thus, I am not able to examine whether these results may look different when applications are submitted through referral networks. Network referrals may have distinct consequences for how race and unemployment intersect at the hiring interface. Also, the experimental results are limited to college-educated workers of a particular age, in particular labor markets, and in specific occupations, which leads to questions about generalizability. While I attempt to address this issue by presenting supplementary analyses using standard labor force survey data, external validity concerns may persist. Another challenge with audit studies of hiring outcomes is that it is difficult to explore how the characteristics of the

labor queue (Reskin 1999; Kornrich 2009), such as the number and quality of the applications for the opening or the demographic composition of the application pool, influence hiring decisions. While these factors do not bias the estimates presented here, they likely serve as moderating forces in shaping the ways that race, gender, and employment histories impact workers' hiring outcomes. Finally, while significant effort was taken to ensure that the racialized names in the experiment were not also suggesting something about the applicants' social class, it is not possible to ensure this with complete certainty. Future research would be well served to examine the intersection of race and unemployment for workers of different social classes.

Notwithstanding these limitations, this article makes important inroads into the understanding of racial and gender inequality in the labor market and the effects of long-term unemployment. In addition to the empirical contribution, this article builds theoretical insights to understand how key social distinctions – race, gender, and unemployment – intersect in the production of hiring outcomes. The findings also encourage future research to generate a theoretical framework that more broadly conceptualizes the aggregation of social categories in the production of labor market opportunities. Together, these theoretical and empirical insights expand sociological conceptions of how race, gender, and unemployment jointly shape the labor market outcomes of workers with implications for understanding the complex ways that social categories combine in the production of economic opportunity.

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APPENDIX A – RESUME EXAMPLES

Seamless Employment Example

Jon Murphy

94 East Open St., Apt. 6A
Boston, MA 0211X
617-858-58XX
jon.murphy@gmail.com

PROFESSIONAL EXPERIENCE

Index Technology – Boston, MA March 2012 – Present
Office Manager & Executive Assistant

- Coordinate all office management tasks, which includes working with computer and phone system vendors, maintaining necessary levels of office supplies, and managing all office filing systems.
- Answer and screen incoming phone calls, coordinate travel arrangements, and draft memos and letters for executive staff.
- Plan and coordinate all aspects of meetings for executive staff and key stakeholders.

West Houseman & Smith LLP – Boston, MA July 2007 – Feb. 2012
Administrative Assistant

- Provided administrative support to a partner at this leading Boston law firm.
- Managed partner's schedule and answered all incoming calls from both internal and external sources.
- Wrote and revised documents, memoranda, correspondence, time entries, and office forms.
- Prepared monthly client bills and processed all reimbursement forms.

Boston Properties – Boston, MA July 2005 – June 2007
Office Assistant

- Maintained schedule for executive staff, answered and placed telephone calls, and wrote memos and other correspondence.
- Set up and maintained paper and electronic filing systems for records and correspondence.
- Carried out special projects on an as-needed basis.

EDUCATION & TRAINING

Michigan State University – East Lansing, MI June 2005
B.A. in English

Forest Hills Central High School – Forest Hills, MI June 2001

LEADERSHIP EXPERIENCE

Michigan State University Student Government Sept. 2003 – May 2005
Treasurer

- Served as member and then Treasurer of student government during junior and senior year.
- Streamlined financial reporting system and maintained budget for different projects.

COMPUTER SKILLS

- High level of proficiency with Microsoft Word, Excel, Access, PowerPoint, and Outlook.

Unemployment Example

Jon Murphy

94 East Open St., Apt. 6A
Boston, MA 0211X
617-858-58XX
jon.murphy@gmail.com

PROFESSIONAL EXPERIENCE

West Houseman & Smith LLP – Boston, MA July 2007 – Feb. 2012
Administrative Assistant

- Provided administrative support to a partner at this leading Boston law firm.
- Managed partner's schedule and answered all incoming calls from both internal and external sources.
- Wrote and revised documents, memoranda, correspondence, time entries, and office forms.
- Prepared monthly client bills and processed all reimbursement forms.

Boston Properties – Boston, MA July 2005 – June 2007
Office Assistant

- Maintained schedule for executive staff, answered and placed telephone calls, and wrote memos and other correspondence.
- Set up and maintained paper and electronic filing systems for records and correspondence.
- Carried out special projects on an as-needed basis.

Anonymous Bank – Boston, MA Summer 2004
Summer Intern

- Assisted with meeting and conference planning, scheduling, and answering phones.
- Drafted memos and correspondence and participated in special projects on an as-needed basis.

EDUCATION & TRAINING

Michigan State University – East Lansing, MI June 2005
B.A. in English

Forest Hills Central High School – Forest Hills, MI June 2001

LEADERSHIP EXPERIENCE

Michigan State University Student Government Sept. 2003 – May 2005
Treasurer

- Served as member and then Treasurer of student government during junior and senior year.
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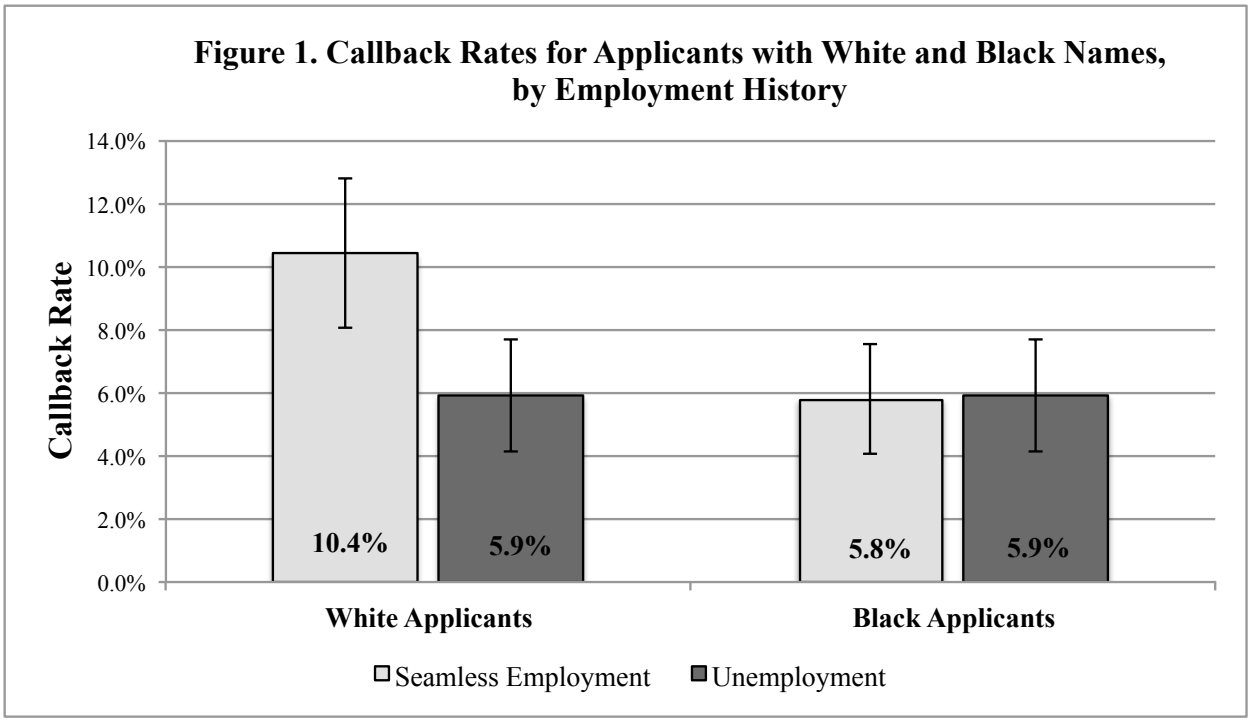
COMPUTER SKILLS

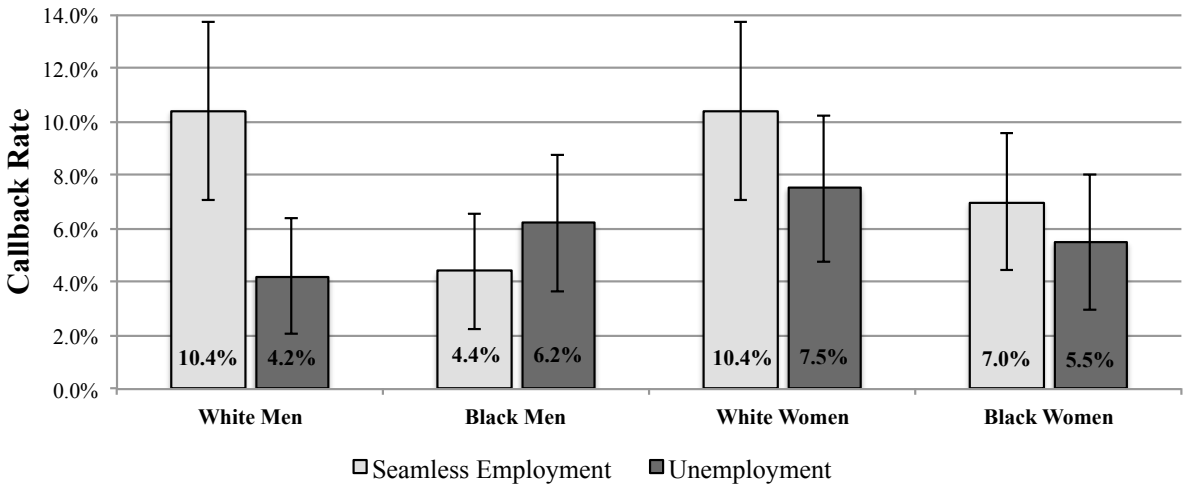
- High level of proficiency with Microsoft Word, Excel, Access, PowerPoint, and Outlook.

FIGURES & TABLES



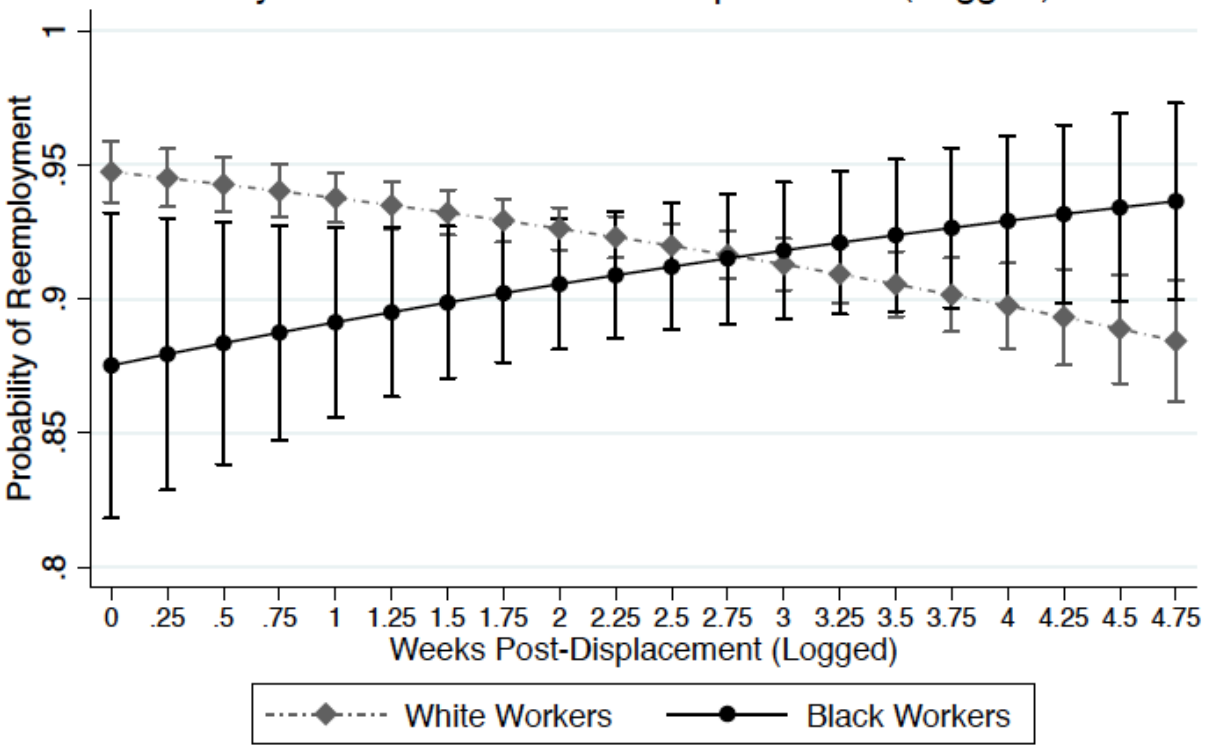
Source: Experimental audit study data.
Notes: 95% confidence intervals presented.

Figure 2. Callback Rates for Applicants with White and Black, Male and Female Names, by Employment History



Source: Experimental audit study data.
Notes: 95% confidence intervals presented.

Figure 3. Post-Displacement Reemployment Probabilities, by Race and Time Since Displacement (Logged)



Source: Displaced Workers Survey (2000-2010 waves).
Notes: Predicted probabilities are derived from Model 1 in Table 2. For graphical clarity, 90% confidence intervals are presented.

Table 1. Logistic Regression Models of the Effects of Race, Gender, and Unemployment on Callbacks from Employers

	Callback from Employer			
	All Applicants (1)	Male Applicants (2)	Female Applicants (3)	All Applicants (4)
Employment History				
Seamless Employment (Omitted)	--	--	--	--
	--	--	--	--
Unemployment	-0.612**	-0.960**	-0.352	-0.960**
	(0.190)	(0.294)	(0.255)	(0.294)
Black Applicant	-0.648**	-0.926**	-0.435	-0.926**
	(0.208)	(0.327)	(0.275)	(0.327)
Female Applicant	0.208	--	--	0.005
	(0.156)	--	--	(0.254)
Interactions				
Unemployment X Black Applicant	0.647*	1.330**	0.095	1.330**
	(0.294)	(0.457)	(0.397)	(0.456)
Unemployment X Female Applicant	--	--	--	0.608
	--	--	--	(0.389)
Black Applicant X Female Applicant	--	--	--	0.491
	--	--	--	(0.427)
Unemployment X Black X Female	--	--	--	-1.235*
	--	--	--	(0.605)
Constant	-2.263***	-2.158***	-2.154***	-2.158***
	(0.156)	(0.179)	(0.181)	(0.179)
n (observations)	2,766	1,382	1,384	2,766
n (clusters)	2,411	1,205	1,206	2,411

Statistical significance (two-tailed tests): * $p < .05$, ** $p < .01$ *** $p < .001$

Source: Experimental audit study data.

Notes: Log-odds presented. Clustered standard errors in parentheses.

Table 2. Logistic Regression Models of Reemployment, by Race, Gender, and Time Since Displacement

	Reemployment			
	All Applicants (1)	Male Applicants (2)	Female Applicants (3)	All Applicants (4)
Black Worker	-0.929**	-1.219**	-0.643	-1.158**
	(0.342)	(0.458)	(0.532)	(0.448)
Weeks Post-Displacement (Logged)	-0.179***	-0.155*	-0.188*	-0.160*
	(0.0504)	(0.0658)	(0.0807)	(0.0637)
Female	-0.0599	--	--	0.0437
	(0.124)	--	--	(0.284)
Interactions				
Black Applicant X Weeks Post-Displacement	0.338*	0.441*	0.259	0.430*
	(0.134)	(0.191)	(0.195)	(0.188)
Female Applicant X Weeks Post-Displacement	--	--	--	-0.0467
	--	--	--	(0.0997)
Black Applicant X Female Applicant	--	--	--	0.475
	--	--	--	(0.689)
	--	--	--	
Black X Female X Weeks Post-Displacement	--	--	--	-0.180
				(0.270)
Married	0.0893	0.475**	-0.334	0.0945
	(0.121)	(0.165)	(0.183)	(0.121)
Pay at Last Job (Logged)	0.112	0.209	-0.00587	0.110
	(0.104)	(0.159)	(0.166)	(0.104)
Age	0.115**	0.118*	0.109	0.117**
	(0.0420)	(0.0555)	(0.0674)	(0.0421)
Age Squared	-0.00150**	-0.00166**	-0.00130	-0.00151**
	(0.000476)	(0.000631)	(0.000761)	(0.000476)
Previous Job Tenure (Years)	0.0906	0.0644	0.134	0.0911
	(0.100)	(0.128)	(0.166)	(0.100)
Education				
Less than High School (Omitted)	--	--	--	--
High School	0.447*	0.529	0.340	0.456*
	(0.226)	(0.276)	(0.432)	(0.226)
Some College	0.438	0.494	0.374	0.445
	(0.230)	(0.282)	(0.438)	(0.231)
College	0.698**	0.491	1.036*	0.700**
	(0.263)	(0.320)	(0.500)	(0.263)
Advanced	0.609	0.725	0.582	0.612
	(0.327)	(0.431)	(0.562)	(0.328)
Reason for Displacement				
Plant Closing (Omitted)	--	--	--	--
Insufficient Work	-0.249	-0.234	-0.273	-0.242
	(0.142)	(0.187)	(0.227)	(0.142)
Position Abolished	-0.0562	-0.276	0.201	-0.0533
	(0.143)	(0.193)	(0.219)	(0.143)
Suburban Resident	0.120	-0.0235	0.257	0.116
	(0.130)	(0.175)	(0.201)	(0.130)
Rural Resident	-0.0517	-0.168	0.0745	-0.0540
	(0.153)	(0.206)	(0.239)	(0.153)
Last Job Unionized	-0.457**	-0.403	-0.664*	-0.463**
	(0.164)	(0.215)	(0.265)	(0.165)
Health Insurance at Last Job	-0.0678	0.0904	-0.327	-0.0648
	(0.145)	(0.195)	(0.228)	(0.145)
Constant	-0.193	-0.770	13.12	-0.251
	(1.195)	(1.570)	(572.8)	(1.198)
n	4,076	2,378	1,698	4,076

Statistical significance (two-tailed tests): * $p < .05$; ** $p < .01$; *** $p < .001$

Source: Displaced Workers Survey (2000-2010 waves).

Notes: Log-odds presented. Standard errors in parentheses. List-wise deletion used to deal with missing data. Weeks post-displacement logged in all cases. Survey year, previous industry, and year of displacement variables not presented for clarity.