Race, Place, and Crime: How Violent Crime Events Affect Employment Discrimination[1]

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This article examines how exposure to violent crime events affects employers' decisions to hire black job applicants with and without a criminal record. Results of a quasi-experimental research design drawing on a correspondence study of 368 job applications submitted to 184 hiring establishments in Oakland, California, and archival data of 5,226 crime events indicate that callback rates were 11 percentage points lower for black job applicants than for white or Hispanic applicants and 12 percentage points lower for those with a criminal record than those without one. Recent exposure to nearby violent crimes reduced employers' likelihood of calling back black job applicants by 10 percentage points, whether or not they had a criminal record, but did not have the same effect on callback rates for white or Hispanic applicants.

INTRODUCTION

In spite of legal, policy, and normative attempts to improve their hiring outcomes, labor market discrepancies persist for job applicants who are black and bear a criminal record (Pager 2007*a*; Oreopoulos 2011; Gaddis 2014; Pedulla 2014; Kang et al. 2016). The "crisis of joblessness" these stigmatized job applicants face has been fueled by the unprecedented growth in the U.S.

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prison population and its disproportionate impact on blacks (Sampson and Lauritsen 1997; Pettit and Western 2004; Uggen, Manza, and Thompson 2006; Pager 2007*a*; Smith 2007; Alexander 2010; Wakefield and Uggen 2010; Morenoff and Harding 2014).

Audit studies—powerful tools designed to unearth discrimination by employing experimental techniques in real labor markets—have enabled researchers to interrogate how employers' classification of job applicants on the basis of particular characteristics, such as race, affects their likelihood of being hired (Pager 2007*b*).[2] Bearing a criminal record halves callback rates for white men, from 34% to 17%, whereas otherwise equivalent black men with no history of incarceration experience a callback rate that is at least equal to that of bearing a criminal record for whites (i.e., 14%; Pager 2003). Black men with a criminal record face a callback rate of 5%, limited by race and the stratifying influence of the American prison system (Pettit and Western 2004; Uggen et al. 2006; Alexander 2010; Wakefield and Uggen 2010; Morenoff and Harding 2014).

While much work investigates the obstacles facing black men with and without a criminal record in the hiring process (Wilson 1987; Moss and Tilly 2001; Tilly et al. 2001; Smith 2007), the social context in which employers and their organizations exist is rarely examined, even though there are compelling theoretical reasons to do so (for an exception, see Tilcsik [2011]; for a related review, see Fernandez and Su [2004]).

The perceptions and meaning attributed to stigma are produced and reinforced by social context (Goffman [1963] 1986; Hagan 1994; Sampson 2012). Two contextual factors would appear to be especially important but have yet to be fully explored: the place and time in which hiring decisions are made.[3] First, everyday life unfolds in places, such as neighborhoods, which give rise to distinct shared cultural understandings that in turn influence social interactions, subjective experiences, and perceptions (Goffman 1974; Harding 2010; Sampson 2012). More specifically, places provide a visible and tangible form to various stereotypes ascribed to stigmatized social categories (Gieryn 2000). Second, time delineates when and what people pay attention to in their

[2] There are two types of audit studies: in-person audit studies and correspondence tests. Both allow researchers to randomly assign job applicants, who are the same on all observable and employment-relevant characteristics except for those that are carefully controlled, to real employers hiring for open jobs. In-person audit studies simulate the hiring process by sending pairs of individuals to apply for job openings in person, whereas correspondence tests simulate the correspondence between job applicants and employers using résumé submissions.

[3] Though past research uses "space" and "place" interchangeably, I draw on Gieryn's (2000 p. 465) conception of place as "space filled up by people, practices, objects, and representations" that has a unique geographic location, takes a physical form, and is imbued with meaning and value. I focus on the place where organizations are located and where employers make their hiring decisions.

social context and the extent to which certain perceptions are more salient than others (DiMaggio 1997). Understanding the ways in which these two dimensions of employers' social context affect the likelihood of hiring potentially stigmatized job applicants enriches theoretical models of hiring by highlighting where and when discriminatory behaviors are more likely to occur.

Building on these linkages among place, time, and perceptions, I argue that recent exposure to nearby events can temporarily shift employers' use of stereotypes when evaluating job applicants. I focus on violent crime events in the neighborhood because there are differences in the extent to which people pay attention to, interpret, and make sense of violent events (Hannerz 1969; Black 1983; Sharkey and Sampson 2015). In other words, both place and time matter for how people, including employers, interpret and act on violent events during hiring processes.

This prediction that violence could affect employers' evaluations of race and criminality in hiring decisions is not axiomatic. Social contexts produce various cultural frames through which neighborhood characteristics can be perceived and interpreted (Lamont and Small 2008). Fraught relationships between young black men, police, and the criminal justice system give rise to and reinforce cultural frames, such as legal cynicism, which leads people to question the legitimacy of the law and of law enforcement agents, breeding doubts about the procedural fairness of arrests, convictions, and the meaning of criminality (Anderson 1999; Carr, Napolitano, and Keating 2007; Kirk and Papachristos 2011; Desmond, Papachristos, and Kirk 2016).[4] This cultural frame corrodes mainstream conceptions of crime, criminals, and corresponding racial associations, making it less likely that exposure to violent events would activate prejudicial stereotypes about blacks and criminality (Tyler 1990).

Although the legal cynicism perspective would anticipate little to no effect of violent events on hiring, I propose that exposure to recent, local, and episodic violent events above and beyond historical levels of violence can grab people's attention, raise their fears about the threat of future crime and victimization, alter behaviors, and bias perceptions in decision making (President's Commission on Law Enforcement and Administration of Justice 1967, p. 87; Skogan 1986*a*; Lacoe and Sharkey 2016; Legewie 2016). Thus, I argue that recent exposure to nearby violence, in particular, dominates employers' perceptions in the short term, counteracting the legal cynicism frame and giving rise to the activation and application of stereotypes about blacks and criminals in hiring decisions (Bobo and Kluegel 1993; Fiske 1998; Peffley and Hurwitz 1998).

[4] At the time this study was conducted in the United States, increasingly cynical sentiments about the criminal justice system and police were formalized under the Black Lives Matter movement; large-scale protests in Oakland, California, self-identifying under this name began six months after data collection concluded.

I employ a quasi-experimental research design that draws on an original correspondence study and archival data of 5,226 crime events that occurred in Oakland, California, before and during the study period to examine how exposure to recent and proximate violent crime events affects employers' likelihood of calling back perceived white, black, and Hispanic job applicants with and without criminal records. This allows me to account for stable historical base rates of crime across neighborhoods, while taking advantage of temporal variation in violent crime events.[5]

To preview the results, I find evidence that employers' callback rate for black job applicants is 11 percentage points lower than the callback rate for white or Hispanic job applicants. When prospective employers were exposed to more recent and proximate violent crime events, the callback rate for black job applicants was reduced by 10 percentage points, whereas callback rates for Hispanic job applicants were not reduced. In contrast, job applicants with a criminal record suffer a 12 percentage point penalty in callback rate from employers as compared to job applicants without a criminal record. For these stigmatized job applicants, exposure to recent proximate violent crime events has no impact on employers' callback rates. On average, employers' callback rates for black job applicants and black job applicants with a criminal record were similar, suggesting that the typical employer does not perceive a distinction between these types of job applicants and that race and criminality remain deeply intertwined. I discuss the implications of these findings for research on labor market inequality, neighborhood effects, and racism.

RACISM, CRIME, AND STEREOTYPES

Race, Incarceration, and Hiring

Several explanations for why black men and women, and those with a criminal record, face such high rates of joblessness have been put forth, including differences in education and labor market experience, statistical discrimination, and poor access to social capital; but an enduring one is pervasive employer discrimination (Moss and Tilly 2001; Holzer, Raphael, and Stoll 2002*a*, 2002*b*; Pager 2003, 2007*a*; Bertrand and Mullainathan 2004; Smith 2007; Pager and Shepherd 2008; Pager, Western, and Bonikowski 2009; Gaddis 2014). Employers have been known to veil their stereotypes about blacks in evaluations of their "hard" and "soft" skills: black workers are perceived to be less motivated, less obedient, lazy, undependable, and combative (Kirschenman and Neckerman 1991; Holzer 1996; Moss and Tilly 2001;

[5] Controlling for historical base rates of crime is conceptually similar to the Mundlak (1978) approach in mixed-effects models, which compares group means (base rates of crime) with deviations from the mean (recent and proximate exposure to violence).

Shih 2002).[6] Economic theories of statistical discrimination emphasize the cognitive efficiencies of relying on group averages, especially when faced with uncertainty and information scarcity, regardless of one's own group membership. When group averages are hard to observe, are incorrectly assessed, are derived from systematically biased processes, or fail to be updated, the use of stereotypes is more likely (Ayres and Siegelman 1995). The challenge of investigating whether or not employers are applying these stereotypes to discriminate against black job applicants is ensuring that researchers compare hiring outcomes of two job applicants who are truly similar on all observable and unobservable dimensions, except for race. Many studies employ the audit methodology to overcome this, which measures callbacks—whether or not an employer calls back a job applicant who has submitted an application. Audit studies thus typically focus on the first stage of the hiring process, before applicants fully present their qualifications, where researchers estimate that more than three-quarters of differential treatment in employers' responses toward stigmatized applicants occurs (Bendick, Brown, and Wall 1999).

A number of studies have documented differences in callback rates between perceived white and black job applicants whose résumés are otherwise identical. Bertrand and Mullainathan (2004) used a correspondence study to identify a 50% gap in employers' callback rates between perceived white and black job applicants across more than 1,300 jobs. Similarly, two in-person audit studies reported that black job applicants received callback rates of 15% and 14%, as compared to callback rates of 31% and 34% for white job applicants (Pager 2003; Pager et al. 2009). In a similar vein, researchers have investigated how bearing a criminal record affects employment prospects of black, white, and Hispanic job applicants. Unlike other potentially stigmatizing marks, a criminal record is assigned by the state, making it appear more legitimate (Pager 2007*a*). This presumed legitimacy, combined with the unprecedented boom in incarceration rates in the United States, contributes to employers' use of criminal records to classify, understand, and evaluate job applicants. In-person audit studies conducted in low-wage labor markets in Milwaukee and New York City estimate that a criminal record reduces callback rates for otherwise equivalent job applicants by approximately 50% (Schwartz and Skolnick 1962; Pager 2003, 2007*a*; Pager et al. 2009).[7]

[6] I use the term "employers" throughout this article but note that hiring may be conducted in groups (e.g., multiple people make hiring decisions). Furthermore, evidence suggests that stereotypes about members of different racial groups are widely held by all people, regardless of their own racial group membership (Nosek, Banaji, and Greenwald 2002).

[7] I focus my argument on the potentially stigmatizing mark of being perceived as black, in particular, and corresponding stereotypes that uniquely describe young black men, not about racial minorities, in general. For example, there is evidence that employers view

Given the well-documented tendency for job applicants who are black or bear a criminal record to receive fewer callbacks from employers, I begin with previously established baseline expectations:

Baseline hypothesis A.—*Black job applicants are less likely to receive callbacks from employers than are white or Hispanic job applicants.*

Baseline hypothesis B.—*Job applicants with a criminal record are less likely to receive callbacks from employers than are job applicants without a criminal record.*

Although social scientists have rigorously examined the extent to which one's perceived race and criminality potentially stigmatize job applicants, less known is how the places in which employment opportunities are embedded and the times of hiring activity shape hiring outcomes for job applicants perceived to be black or bear a criminal record. This article expands demand-side models to include contextual dimensions of place and time by drawing on traditions in urban sociology, culture, cognition, and criminology.

Embedding in Place and Time

Places, such as the neighborhoods where employers work, host the events and activities that yield distinct shared cultural understandings, which in turn influence people's interactions, subjective experiences, and perceptions (Goffman 1974; Harding 2010; Sampson 2012). Life unfolds within a place—for example, people inhabit offices, coffee shops, and bus stations—frequently and consistently, such that certain associations between what is seen in a particular place and parts of life become deeply ingrained in individuals' minds and imbued with meaning. People develop perceptions of the world around them—including attitudes, values, and beliefs about others—based on what they see and experience, which emerge from and are shaped by the events that unfold within the neighborhood (Harding 2010; Sampson 2012). Thus, nearby events influence what people, such as employers, can see and the meaning they associate with what they observe.

For example, seeing young, black men can trigger associations with neighborhood characteristics, such as crime levels. Quillian and Pager (2001) find that stereotypes about blacks and criminality are activated when the presence of young black men in a neighborhood increases, thus amplifying residents'

Hispanic workers as more reliable and hard-working than black workers, suggesting that there is something uniquely detrimental about being perceived as black as compared to being perceived as Hispanic or nonwhite (Kirschenman and Neckerman 1991; Waldinger and Lichter 2003). Therefore, I examine employers' callback rates for black male job applicants as compared to white and Hispanic male applicants.

perceptions of neighborhood crime levels beyond actual crime rates. Similarly, when the concentration of minority groups and poverty in a neighborhood increases, residents perceive heightened disorder, beyond independent measures of observable neighborhood conditions (Sampson and Raudenbush 2004). The visible nature of race, in particular, makes it easier for neighborhood residents to construct a link between what is seen in the neighborhood and a racial group, contributing to the formation, durability, and persistence of racial stereotypes. Thus, place, through the geographic boundaries that determine what is proximate and what a person sees, shapes both the content of racial stereotypes and which visual cues activate racial stereotypes.

Second, *when* people pay attention to something in their neighborhood is another characteristic of the social context that shapes people's perceptions. (DiMaggio 1997). More recent events are more likely to capture attention, shift perceptions, and alter behavior than are more distal events. For example, the event of a police officer's shooting by a black suspect activates racial stereotypes about blacks and violence in the days that follow and causes local police to substantially increase the use of force against blacks in routine police stops (Legewie 2016). Similarly, coverage of recent violent crime events on the news heightens negative attitudes about blacks, even when the perpetrator's race is not disclosed (Gilliam and Iyengar 2000). Evidence abounds that exposure to recent environmental cues primes people to think of racial stereotypes (Mendelberg 2008).

The Impact of Violent Crime Events

A growing body of research documents how exposure to violence has a range of far-reaching consequences for both individuals and communities (Skogan 1990; Sharkey and Sampson 2015). Direct or indirect exposure to violent crime within the neighborhood influences human behaviors in a variety of ways, including physiological, cognitive, affective, or behavioral (Skogan 1990; Sacco 2005; Sharkey and Sampson 2015). For example, a homicide event, a case of extreme violence, increases interactions between police and residents through elevated stop, question, and frisk activity (Lacoe and Sharkey 2016). Similarly, people, especially residents of black neighborhoods, are far less likely to report crime through 911 calls after high-profile cases of police violence (Desmond et al. 2016).

Employers most frequently mention crime and threats to safety in relation to hiring processes, reflecting how employers are exposed to and pay attention to violence around their establishments (Moss and Tilly 2001). Compared to other types of crime and neighborhood- and individual-level characteristics, exposure to proximate violent crime is a robust and consistent predictor of one's fear of crime (President's Commission on Law En-

forcement and Administration of Justice 1967, p. 87; Skogan 1986*a*, 1986*b*; Zhao, Lawton, and Longmire 2015). Fear heightens people's perceptions of risk, amplifies fears of victimization, and can activate the body's endocrine system to alert a person to danger (Silberman 1978; Perkins and Taylor 1996; Rountree and Land 1996). Fears of violent crime lead people to make behavioral changes such as staying home at night, carrying a weapon for protection, or avoiding public transportation (Sacco and Nakhai 2001). For employers, fear of future crime is motivated not only by concerns about their own safety but also by concerns about the safety of their customers and their employees and, by extension, the growth of their business (Moss and Tilly 2001).

Under conditions of fear and threat, such as those that occur after being recently exposed to violent crime, individuals are likely to narrow their field of attention and increase the tendency toward well-learned responses (Staw, Sandelands, and Dutton 1981; Gilbert and Hixon 1991). This tendency makes it more likely that violent crime will activate a particular kind of stereotype for employers—stereotypes associating blacks with criminality (Loury 2002; Loury et al. 2008; Muhammad 2011). The concurrent rise of violent crime and the era of mass incarceration in the United States both reflected and reinforced the links between violence, perceptions of blackness, and perceptions of criminality, yielding cultural stereotypes about blacks as hostile, aggressive, violent, and criminal. Such perceived links are particularly surprising given that rates of actual crime and actual risk of exposure to crime in the United States have declined; yet many people continue to believe that violence has increased (Sharkey 2018). These cultural stereotypes about blacks persist deep in people's minds and affect people's perceptions, feelings, and behaviors (Duncan 1976; Sagar and Schofield 1980; Devine 1989; Bobo and Kluegel 1993; Devine and Elliot 1995; Fiske 1998; Peffley and Hurwitz 1998; Payne 2001; Correll et al. 2002; Greenwald, Oakes, and Hoffman 2003). For example, a white person's fear of being a victim of a crime is greater when imagining an encounter with a black stranger than with a white stranger (St. John and Heald-Moore 1996). Similarly, blacks are more likely than whites to be perceived as a criminal holding a gun, even when blacks are holding harmless hand tools or are police officers (Greenwald et al. 2003).

The connotation between blacks and violent crime is so strong, in part, because it is consistent, bidirectional, and automatic. For example, Eberhardt et al. (2004) demonstrate that stereotypes about blacks and criminality are automatically triggered both by seeing black people and by merely thinking about crime. Therefore, even minimal exposure to violent crime—for example, when one employer hears from another about recent, nearby violence—is likely to activate stereotypes about blacks and criminality.

Violence captures people's attention and, because it is sporadic, quickly becomes salient. Thus, it is more likely that employers will use activated ste-

reotypes when evaluating job applicants. Exposure to violent crime also leads to mortality salience for individuals, which amplifies recency effects, such that information about proximate violent criminal activity is disproportionately influential in shaping social judgments (Asch 1946; Landau et al. 2004). Thus, any information related to crime or criminality will loom larger in employers' decisions.

Hiring decisions are already fertile ground for the use of stereotypes because information about job applicants' skills and future abilities is scarce and uncertain (Heckman and Siegelman 1993). Applying stereotypes about blacks and criminality makes it even harder for employers to pay attention to individuating information about a particular black job applicant (Rothbart, Evans, and Fulero 1979; Devine 1989; Dovidio et al. 2010). For example, when evaluating job applicants, employers may draw on hypothetical scenarios to consider how a candidate would perform on the job. During these hypothetical forecasts, employers are more likely to use stereotypes about blacks as criminals to fill in the gaps to estimate a candidate's future performance.

The arguments above lead me to hypothesize that, for employers, any kind of recent exposure to proximate violent crime amplifies fears, activates stereotypes about blacks and criminals, and draws attention to information that reinforces stereotypes about blacks and criminality. Thus, employers will be more likely to use stereotypes about blacks and criminality when "judging" a job application, leading them to select another candidate that is dissimilar to blacks and criminals (Newman 1999). I argue that employers' preference for a job applicant who is not associated with violence or crime will lead to fewer callbacks for both black job applicants and job applicants with a criminal record.

Hypothesis 1.—*Black job applicants are less likely to receive callbacks from employers in establishments that have been recently exposed to violent crime than are white or Hispanic job applicants.*

Hypothesis 2.—*Job applicants with a criminal record are less likely to receive callbacks from employers in establishments that have been recently exposed to violent crime than are job applicants without a criminal record.*

Discrimination toward the Doubly Stigmatized

The link in people's minds between perceptions of those who are black and those who bear a criminal record has been calcifying as the prison system continues to incarcerate a higher proportion of young black men, relative to the population, and as media outlets disproportionately cover such stories, relative to white men (Gilliam and Iyengar 2000; Muhammad 2011). What, then, is expected for the outcomes of black job applicants who bear a criminal record? To the extent that employers already hold deep-rooted

prejudicial beliefs about black men being more prone to criminal behaviors and criminals being more likely to be black, then receiving a job application from a black man with a criminal record may be only redundant information that serves to confirm their deleterious beliefs. In such a case, employers' preference for nonblack workers without a criminal record may already be reflected in the lower callback rates for black job applicants. Then, employers will be less likely to differ in their behavioral responses to a black job applicant as compared to a black job applicant with a criminal record because, in the minds of employers, the two job applicants were already quite similar. In contrast, some employers may even respond positively toward black applicants with a criminal record because attitudes may vary across a city or stereotypical associations between black men and violence may be weaker in less violent areas, where people have less contact with crime events.

On the other hand, a résumé from a job applicant who bears both marks together may compound employers' concerns. It is then likely that recent exposure to nearby violent crime will intensify activated stereotypes about blacks and criminals, such that black job applicants with a criminal record are perceived to be even worse candidates than black job applicants without a criminal record.

DATA AND METHODS

I employed a quasi-experimental research design using an original field experiment (correspondence study) and archival data (crime events). I first conducted a correspondence study in which I submitted résumés of hypothetical but realistic job applicants to real job postings across neighborhoods within the city of Oakland, California, where real violent crime events occurred. I measured employer callbacks, which are an indicator of an employer's real interest in moving a job applicant from the initial application stage to the next stage of the hiring process. Although a callback at the initial application stage is not representative of a job offer, it is an important outcome that affects job applicants' subsequent access to opportunities in the labor market (Pager et al. 2009). By randomly assigning résumés of hypothetical job applicants, which were equivalent across all employment-relevant characteristics, except for two that were experimentally manipulated, to real job openings, this methodology offered more compelling causal evidence than archival or observational data (Pager 2007*b*).

The quasi-experimental research design relies on three dimensions of variation. First, I experimentally varied the perceived race of the job applicant using racialized names on hypothetical résumés. Second, I experimentally varied whether or not job applicants had a criminal record, which was

also indicated on their résumé. The third was an employer's recent exposure to violent crime—that is, the number of real violent crimes that occurred in a hiring establishment's neighborhood in the time period just before I submitted a hypothetical job application. While a hypothetical job applicant's perceived race and criminal record were experimentally manipulated using random assignment, I used naturally occurring variation in the timing and location of violent crime events in the city. By controlling for historical base rates of crime to focus on the effect of recent exposure to violence, this quasi-experimental approach is conceptually similar to the Mundlak mixed-effects estimator, which decomposes variation into group means and deviations from the mean (Mundlak 1978).

Sample of Jobs

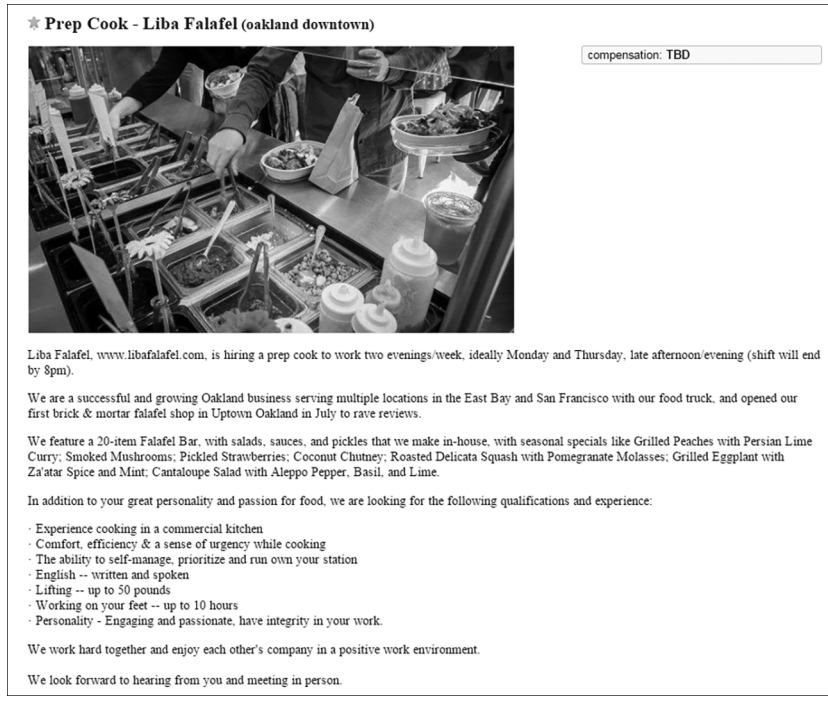
I sampled all unskilled jobs in the food, beverage, and hospitality industry in Oakland that required only a high school diploma as listed in job postings on Craigslist. Since two hypothetical job applicants' résumés were submitted to each job posting, the unit of analysis is each application that was submitted to an employer. To identify the types of real jobs that formerly incarcerated job applicants apply to within low-wage labor markets, I conducted seven interviews with local nonprofit organizations, employers, and policy organizations that hired and served the ex-offender population and provided reentry services. I gained access to these informants through referrals that snowballed more referrals. These informants confirmed that Craigslist is a dominant job search tool used by job applicants with a criminal record seeking employment in low-wage labor markets, alleviating concerns about external validity. In fact, Craigslist was one of the job search sites recommended by job training program managers working with prison populations before their release.[8] This is consistent with current trends in audit study research and with research showing that the share of unemployed applicants using the internet for job searches tripled from 24% in 1998 to 74% in 2008 (Kuhn and Mansour 2012; Lahey and Beasley 2018).

In an effort to generate unbiased estimates of how employers' callback rates vary for different kinds of stigmatized job applicants, I constructed a sample of jobs that closely resembled actual jobs that black job applicants and job applicants with a criminal record would apply for, based on informants' feedback. Estimating employer callback rates from jobs that stigmatized job applicants may not qualify for or choose to apply for would re-

[8] Some job postings on Craigslist explicitly asked applicants not to drop off their application materials in person because of employers' busy schedules.

sult in overestimates of labor market discrimination, so I focused on jobs in the food and beverage industry, particularly "back of the house" jobs in the kitchen. My informants suggested that job applicants with a criminal record were less likely to apply for "front of the house" jobs that often involved customer service or monetary transactions. Stigmatized job applicants themselves believed that the mark of a criminal record eroded any trust employers had in their ability to serve as a representative of an establishment with customers or to handle money. Therefore, I monitored job postings daily and submitted job applications for all job postings on Craigslist that advertised a need for a back of the house job, which included postings for a dishwasher, sous chef, prep cook, or line cook. Figure 1 provides an example of the format and content of a job posting.

To maximize comparability across jobs and minimize the influence of factors such as commuting distance or public transportation on callback rates, I sampled all jobs in the same city, Oakland: Oakland's population is 28% black, 26% white, 25% Hispanic, 17% Asian, and 6% self-reporting as identifying with two or more races. Twenty-eight percent of Oakland residents are foreign born, and the median household income is $51,563, as compared



Prep Cook - Liba Falafel (oakland downtown)

compensation: TBD

Liba Falafel, www.libafalafel.com, is hiring a prep cook to work two evenings/week, ideally Monday and Thursday, late afternoon/evening (shift will end by 8pm).

We are a successful and growing Oakland business serving multiple locations in the East Bay and San Francisco with our food truck, and opened our first brick & mortar falafel shop in Uptown Oakland in July to rave reviews.

We feature a 20-item Falafel Bar, with salads, sauces, and pickles that we make in-house, with seasonal specials like Grilled Peaches with Persian Lime Curry; Smoked Mushrooms; Pickled Strawberries; Coconut Chutney; Roasted Delicata Squash with Pomegranate Molasses; Grilled Eggplant with Za'atar Spice and Mint; Cantaloupe Salad with Aleppo Pepper, Basil, and Lime.

In addition to your great personality and passion for food, we are looking for the following qualifications and experience:

- Experience cooking in a commercial kitchen
- Comfort, efficiency & a sense of urgency while cooking
- The ability to self-manage, prioritize and run own your station
- English -- written and spoken
- Lifting -- up to 50 pounds
- Working on your feet -- up to 10 hours
- Personality - Engaging and passionate, have integrity in your work.

We work hard together and enjoy each other's company in a positive work environment.

We look forward to hearing from you and meeting in person.

FIG. 1.—Example job posting. Color version available as an online enhancement.

to $61,400 for the state of California (U.S. Census Bureau 2015).[9] The racial and economic diversity of Oakland residents reduced concerns that this study would be revealed if prospective employers reviewed nonwhite résumés.

A total of 368 job applications were submitted to 184 jobs over five months from August 2014 through December 2014. Within the sample of 184 jobs, I was able to identify the addresses of 146 employment establishments using the information contained within the online job posting (not all job postings included the name or address of the hiring establishment). For models containing variables measuring neighborhood crime, sample size will be limited to the 292 job applications submitted to these 146 employment establishments. No significant differences were found for callback rates by month of the study. I also randomized the order in which applications were submitted to minimize the likelihood of any order effects and found no significant differences in callback rates resulting from order of application.

Randomization

Two dimensions of hypothetical job applicants' résumés were experimentally manipulated using random assignment: (1) the job applicant's perceived race: black, white, or Hispanic; and (2) whether or not the job applicant was perceived to have a criminal record. To avoid disrupting the normal set of job applications that employers review and arousing any suspicions about the job applications, I submitted two hypothetical job applicants' résumés for each job opening identified, with zero to five days in between so that all résumés were received by employers within the same week.

While some prior audit studies utilize a matched pair design in which employers evaluate pairs of résumés within one dimension of variation, such as race, I selected an unmatched pair research design, which meant that employers did not always evaluate hypothetical résumés within the same racial category (Vuolo, Uggen, and Lageson 2018). Randomization across two dimensions meant that some employers, therefore, received two résumés from job applicants with a criminal record or other employers received two résumés from job applicants of the same race. One key reason for the selection of this approach was to reduce the risk that employers would detect the study. The relatively small set of applications and job openings heightened the potential risk of discovery. The unmatched pair approach also reduced concerns about detection in cases in which one employer could be hiring for

[9] Monthly unemployment rates steadily declined during the study's time period in the Oakland, Hayward, and Berkeley metropolitan area, from 6.2% in August to 5.7% in September, 5.6% in October and November, and 5.1% in December (Bureau of Labor Statistics 2015). Although the unemployment rate was declining, year-over-year change in the unemployment rate was merely 1.3%. It is thus possible that callback rates were slightly higher because of the increase in hiring activity in the metropolitan area.

multiple restaurants that would have received multiple sets of similar application materials.

Study Design—Developing Fictitious Résumés

To create realistic job application materials, I sought assistance from my informants. They shared real résumés of job applicants with and without a criminal record who had recently reentered the labor market or had recently been hired; I reviewed them to better understand the language used to describe prior work experience and the aesthetic design of their job materials.[10] Both baseline résumés and those signaling a criminal record were built on the actual résumés I obtained through these contacts to ensure external validity. Baseline résumés described back of the house work experience at different restaurants for the exact same amount of time; however, the dates of employment varied across templates. All résumés indicated that hypothetical applicants had approximately 44 months of work experience (for résumés with a criminal record, 44 months of experience include 18 months of experience gained while serving a prison sentence) and gaps in their work experience that amounted to two months of unemployment. Prior work experience across résumés consisted of job roles such as dishwasher, stocker, prep cook, or line cook.

All hypothetical résumés were aesthetically equivalent on all dimensions, such as the amount of text on the résumé, except for the content of the two experimentally manipulated dimensions (race and criminal record). Regression analyses revealed no relationship between the aesthetic format of the hypothetical résumés and the likelihood of employer callback. All résumés had between nine and 13 bullet points describing the hypothetical job applicants' work experience.

All résumés developed for hypothetical job applicants listed graduation from the largest public high school in Oakland, which had approximately 2,100 students enrolled. The high school is also among the most diverse in the city: 37% African-American, 23% Caucasian, 18% Latino/Hispanic, 15% Asian, 5% Pacific Islander, and 2% other. This high school was selected for all hypothetical job applicants' résumés to limit potential confounds introduced by educational background. Because none of the résumés used in this study indicated any history of college or university, an important scope condition of this study is that it is limited to male job applicants with only a high school diploma.

[10] From this review, I learned that, on average, this population rarely used cover letters, although many job postings asked for them. When sampling jobs for this study, hypothetical applicants submitted only résumés to job postings, even in cases in which the job posting directed applicants to submit additional materials such as cover letters or answers to specific questions.

Résumés did not include information about the hypothetical job applicant's place of residence, as is increasingly common for online job applications. Given evidence that more disadvantaged neighborhoods can be stigmatizing, as compared to less disadvantaged neighborhoods, excluding any information about a home address enabled me to reduce employers' use of additional potentially stigmatizing evidence when evaluating résumés (Besbris et al. 2015). Two additional factors supported the choice to not include place of residence. First, concerns about applicants' safety as well as the potential for employers to discriminate on the basis of perceived commuting distance fuel a debate around the need to include home address on résumés (Moss and Tilly 2001; Morris 2016). Second, my informants discussed how rising housing costs in Oakland pose challenges for formerly incarcerated individuals seeking permanent housing, leading them to often not include their place of residence on job application materials.

Finally, all résumés indicated that the applicants were certified with a California Food Handler Card, which is required by state law. All examples of real résumés used in job searches provided evidence that the California Food Handler Card requirement was widely known across job applicants from various racial and socioeconomic backgrounds.

Signaling Race of Male Job Applicants

I manipulated the racialized names of hypothetical applicants to vary employer perceptions of the job applicant's race. I began by compiling the most common male first names from 1988 to 1998 from Social Security Card applications for the State of California.[11] This produced a list of the most common male names of boys who ranged from 16 to 26, which corresponded to the ages of men applying for entry-level jobs. Across the 11 years of Social

[11] This study focuses on callback rates for male job applicants with and without a criminal record, in part because men are more likely to be convicted of violent crimes and face higher incarceration rates (Bureau of Justice Statistics 2001; Federal Bureau of Prisons 2018). Although the bulk of empirical work on the impact of incarceration on employment has focused on men's employment outcomes, women are a growing proportion of the prison population, which increases the need to understand how race, incarceration, and violence affect women's labor market outcomes (Lalonde and Cho 2008; Galgano 2009). For example, incarcerated mothers are three times more likely to be single parents than incarcerated fathers and are increasingly more likely to report being their family's primary source of financial support (Bureau of Justice Statistics 2004). Criminal conviction patterns also vary greatly by gender; women are more likely to be convicted of nonviolent crimes than men, demanding scholarly attention to the perceived relationships between race, gender, and criminality (Bureau of Justice Statistics 2006). Finally, the paucity of scholarship on female criminality prevents us from fully understanding how potential gender differences in criminality relate to other outcomes across the life course and limits our theories to focus on the criminality of men (for further discussion, see Bloom [2003]).

Security data, many names were consistently popular every year, resulting in a list of 130 different male names. In addition, I supplemented this list of 130 names with male first names that have been used in prior research studies to signal race (Bertrand and Mullainathan 2004).[12]

To pretest the effectiveness of the perceived race signal on a random sample of the population, I used Amazon Mechanical Turk to sample 50 participants from the United States, who were all employed full-time and were over 18 years of age.[13] I asked participants to "indicate what race/ethnicity a person with that name would be" and used the survey responses to identify the first and last names that the highest percentage of respondents indicated were perceived to be a white, black, and Hispanic male. The racialized first names used in the field experiment were Brett, Alan, John, and Richard to signal a white male; Jermaine, Tremayne, Jamal, and Tyrone to signal a black male; and Alejandro, Julio, Eduardo, and Armando to signal a Hispanic male. The racialized last names selected were McCarthy, Sullivan, Ryan, and Kelly to signal white; Jackson, Washington, Robinson, and Jones to signal black; and Hernandez, Garcia, Rodriguez, and Martinez to signal Hispanic.

Signaling a Criminal Record

I signaled whether or not job applicants bore a criminal record through their résumés. Past correspondence studies have used two tactics to signal a criminal record (Schwartz and Skolnick 1962). One approach is to list a parole officer as a reference. However, there is scant evidence that employers in low-wage labor markets use or pay attention to references, raising concerns that this type of signal may go unnoticed (Pager 2003, 2007*a*). A second approach is to indicate work experience gained within a correctional facility while incarcerated. This work experience can be listed using the name of the correctional facility or, if time was served at a facility that con-

[12] Although the use of racialized names is prevalent in research, it is possible that racialized names may also signal information about a job applicant's social class, vary in the extent to which they signal a particular race (e.g., names can be perceived as more or less black vs. black or nonblack), and vary on the basis of how people perceive race (Pager 2007*a*; Gaddis 2014, 2017).

[13] I also collected demographic information about participants such as marital status, age, race/ethnicity, socioeconomic status, and education levels to ensure that perceptions of race were uncorrelated to other characteristics of the evaluator. Of the participants, 56% were male. Participants self-reported their race, resulting in a sample that was 86% white, 10% Asian, 8% black, and 6% Hispanic. (Note that the sum is greater than 100 because participants were able to select multiple racial categories.) Although the high proportion of white participants in the sample raised slight concerns about generalizability to the racial diversity of employers in Oakland, actual experimental findings tend to be similar across online survey platforms regardless of the racial differences in subject pools (Weinberg, Freese, and McElhattan 2014).

tracts prison labor, work experience can be listed under the name of the employment contractor. However, listing work experience gained within a correctional facility under the name of a federal contractor, such as UNICOR, can be interpreted as misleading by prospective employers, who may be familiar with the tactic and therefore understand that the work was conducted within a correctional facility. To avoid appearing deceptive to employers, the signal of a criminal record was explicitly conveyed using work experience listed under a state prison.[14] Work experience in a correctional facility was listed as the most recent employment experience to reduce the potential influence of signals associated with a hypothetical applicant's work experience after being incarcerated—for example, to limit concerns about why the applicant was seeking new employment.

Because the focus of this study is the impact of violent events on employers' evaluations of job applicants, I aimed to develop a signal of incarceration that was weakly correlated with violence to examine whether employers' responses to violence extend beyond job applicants with violent convictions. Survey results indicate that employers are more averse to job applicants with violent or property-related convictions, compared to job applicants with drug convictions (Holzer, Raphael, and Stoll 2004; Pager 2007*a*). Thus, the signal of a criminal record was designed to signal a nonviolent drug conviction that would be interpreted as a possession conviction, as compared to a possession for sale or distribution conviction. Insights from my informants confirmed that employers who typically receive applications from applicants with a criminal record would be able to detect the difference between nonviolent and violent convictions. Influenced by determinate sentencing laws in California, the median time served for a nonviolent conviction such as possession of marijuana is 18.2 months.[15] In contrast, the length of a sentence served for a violent crime conviction of robbery ranges between 36 and 108 months, with a median time served of 43.5 months (California Department of Corrections and Rehabilitation 2014). To construct a conservative test of the stigma of a criminal record, hypothetical job applicants had shorter, 18-month sentences.

Next, I worked with local nonprofits specializing in prisoner reentry to obtain examples of real résumés used by ex-offenders who had served prison

[14] State prison was selected because sentences that are greater than one year are typically served at facilities operated by state systems (as compared to county jails, which are designed for short sentences for felonies or misdemeanors or holding people awaiting trial or arraignment). The federal prison system, meanwhile, is designed for individuals who violate federal laws.

[15] Since 43.4%, the largest proportion, of male inmates in the California state prison system have sentences based on determinate sentencing laws, employers who attempt to infer the type of conviction on the basis of the length of a prison sentence are most likely to draw inferences that are aligned with determinate sentencing laws.

sentences between one and two years in length, resulting from nonviolent criminal convictions. My informants advised job applicants with a criminal record to describe prison work in the "work experience" section of their résumé because low-wage employers increasingly use internet platforms such as Craigslist to post job openings. The most common kinds of prison work that were included on job applicants' résumés were work in the laundry room and kitchen. Figure 2 provides an example of work experience descriptions on résumés with and without a criminal record.

Violent Crime Events

Analyses investigating exposure to violent crime are based on 5,226 dated and geocoded crime events that occurred over 18 months. Data included all crime events for which police reports were filed from July 1, 2013, to December 31, 2014, allowing me to account for up to one year of historical crime events, which I define as the stable base rates of crime. Thirty percent of crime events were violent crimes, which included simple assault, aggravated assault, gun robbery, strong-arm robbery, carjacking robbery, knife robbery, all other kinds of robbery, and suspicious events (most often reported because of concerns about physical safety).[16] Crime victim surveys reveal that victims are more likely to report violent crimes than property crimes, enhancing data quality and reducing measurement error of violent crime events (Bureau of Justice Statistics 2018). Figure 3 depicts the spatial distribution of violent crime events in Oakland over the 18 months for which data are available.

In total, there were 78 different kinds of crime events in the data set, 25 of which were different types of homicide. To streamline analyses, crimes were consolidated into seven categories, which were provided by the Oakland Police Department (OPD). Table 1 displays the frequency of the seven consolidated crime categories in the data set, which included property, violent, quality of life, homicide, weapons, sex, and gambling. It seems likely that these crime categories influence information about city crime that was disseminated by OPD, by news affiliates, and by other media outlets, because OPD uses these same crime categories in their own routine, internal tracking, and reporting systems. Such consistency in how crime events are categorized increases the likelihood that the crime event report data capture

[16] For example, there were 782 events of simple assault, which the California Penal Code 240 defines as an unlawful event to cause a violent injury on another person. Twenty-five percent of violent crime events were various types of robbery, which is considered more severe than assault. In California Penal Code 211, robbery is defined as "the felonious taking of personal property in the possession of another, from his person or immediate presence, and against his will, accomplished by means of force or fear."

EMPLOYMENT EXPERIENCE

California Prison System, Kitchen Assistant, Sacramento, CA **Jan 2013-May 2014**

- Transferred ingredients from delivery truck to refrigerators.
- Worked with a team to prepare food.
- Wash dirty food trays.

Pasta Pomodoro, Line Prep Cook, El Cerrito, CA **May 2011-Nov 2012**

- Completed kitchen tasks such as line setup, food preparation, cleanup and breakdown.
- Planned and organized the preparation of food products.
- Prepared food items consistently and adhered to all recipe standards.
- Filled in as needed in cleaning, preparing and cooking

Applebee's, Dishwasher, Alameda, CA **June 2010-April 2011**

- Maintained kitchen work areas, equipment, plates and utensils in a clean, sanitary and orderly condition.
- Washed pots, pans and trays by hand and/or machine.
- Assisted in food preparation procedures. Completed all assigned prep work.
- Removed trash and garbage to dumpster area.
- Washed work area tables, walls, refrigerator equipment, cooking equipment and floors.
- Transports heavy cases and restocked supplies.

Employment Experience

Crepevine, Prep Cook, Berkeley, CA **February 2012 – April 2014**

- Prepared food stations including setup and cleanup.
- Assisted with planning and preparation of food products.
- Adhered to recipes.
- Filled in with cooking when needed.

Subway, Sandwich Artist, Oakland, CA **June 2010 – November 2011**

- Assisted Subway customers with orders,
- Prepared food to customer specifications,
- Operated cash registers and completed other jobs assigned by a Subway manager.
- Responded to customer questions and complaints about personnel or products.
- Cleaned kitchen, restaurant, and restroom areas.
- Stocked food goods when supply was low.

FIG. 2.—Example of résumé content

FIG. 3.—Spatial distribution of violent crime events from July 1, 2013, to December 31, 2014. Darker areas represent a concentration of violent crime events. Color version available as an online enhancement.

exposure to the same violent crime events that employers would have categorized in their minds as such.

Measures

The study's dependent variable is whether or not an employer calls back a hypothetical job applicant whose résumé was submitted to a real job opening. Most often, "callbacks" are phone calls placed either to conduct a brief phone interview or to schedule an interview in person. Sometimes employers used hypothetical job applicants' e-mail addresses, which were listed on the hypothetical applicants' résumés, to invite them for an interview. I also considered such e-mails "callbacks" and included them in the data set.

To measure the independent variable of an employer's exposure to violent crime, I follow Sharkey and colleagues in defining an employer as "exposed" if a violent crime occurred within a specified geographic radius of the employment establishment within a given time period before a hypothetical job applicant's résumé was submitted (Sharkey 2010; Sharkey et al. 2012).

TABLE 1
FREQUENCY TABLE OF CRIME EVENTS FROM JULY 1, 2013, TO DECEMBER 31, 2014

Type of Crime	Count	Percentage
Property	2,836	54.3
Violent	1,546	29.6
Quality of life	454	8.7
Homicide	226	4.3
Weapons	100	1.9
Sex	62	1.2
Gambling	2	.0
Overall total	5,226	100.0

Identifying the causal impact of exposure to violence on employers' callback rates is challenging because employers do not randomly sort into the neighborhoods where they locate. I assume that temporal variation in exposure to violent crime is random, conditional on a historical rate of crime, which I control for. To assess the importance of geographic and temporal proximity in analyzing the effects of violent crime, I used multiple definitions of exposure, with a geographic radius ranging from 0 to 1,000 meters and a temporal radius ranging from 0 to 80 days preceding the hypothetical job applicant's résumé submission. For example, I began with a geographic radius of 250 meters, followed by 300 meters, followed by 350 meters, and so on. I used a similar approach to measure recency by beginning counting violent crime events that occurred within the geographic radius in the five days preceding the résumé submission, followed by 10 days, followed by 15 days, and so on. This measure of exposure to violent crime is a count of the number of violent crimes (excluding homicide events) that an employer was exposed to at the firm's establishment, which, in this study, is a firm in the food, beverage, and hospitality industry.[17] For simplicity, I report models in which employers' exposure to violence was captured up to 70 days before job ap-

[17] I also measured exposure to proximate violent crime by including events of homicide along with other violent crime events. The data contained only 226 events of homicide, for many of which the police have little information about the motive or suspects. For example, one homicide event occurred when a car drove up and started shooting at three men in the front of their home. Similarly, another homicide victim lost her life in her own car when another car drove up and shot her for no known reason. Thus, a cursory internet search of the characteristics of homicide events in Oakland suggests that employers' exposure to homicide was quite limited. For example, the maximum number of homicides that occurred within 500 meters of a hiring establishment and up to 80 days preceding the submission of a hypothetical job applicant's résumé was two. In model specifications containing interaction terms for employers' exposure to recent proximate violent crimes including homicide across a range of time and distance bands, the term is not consistently significant. Findings are also null in models when employers' exposure to violence is defined as exposure to recent proximate homicides across the same range of time and distance bands.

plications were submitted and within 450 meters of the hiring establishment; this variable ranged from 0 to 10. I mean-centered exposure to violence to aid the interpretation of main effects in the presence of interactions, reported as violence (MC).

Other independent variables included binary indicators for whether a hypothetical job applicant's résumé signaled black, white, or Hispanic, as well as whether the résumé signaled a criminal record. These dummy variables captured the presence of the stigmatizing marks of being black or bearing a criminal record. The reference group in all models is a white job applicant without a criminal record.

Controls

A crucial control for my arguments is the baseline level of crime in the neighborhood. This was measured by taking the number of all crime events that occurred up to one year before the hypothetical job applicant's résumé was submitted. The range of dates that determine what is historical crime varied depending on the definition of exposure to violent crime, which varied across models. For example, if exposure to violent crime was defined as the number of violent crimes within 60 days preceding the submission of a résumé, then historical crime in that model measured crimes that occurred in the last 365 days (one year) excluding the 60 days preceding the résumé submission.

In addition, I constructed controls for variation in job postings—specifically, whether a job posting explicitly stated a preference for Spanish-speaking applicants (Spanish-speak in table 3 below)—and the graphical format of the hypothetical résumés submitted to job openings (résumé format in table 3 and collectively referred to as job controls in table 4 below). I also constructed additional neighborhood-level control variables using data from the 2014 American Community Survey (ACS) five-year estimates to control for other factors that influence employers' decisions to work in certain neighborhoods. To use these census estimates at the block group level, I geocoded each hiring establishment to identify its block group. The 146 hiring establishments with known addresses represented 62 unique block groups. I used four control variables from these data that extant theory suggested might influence employers and hiring. First, since population density per square mile may have influenced the number of customers and applications received by employers, I controlled for this variable, which ranged from 0 to 2,451 people with a mean of 1,204. Second, I controlled for the number of black residents near employers' establishments that potentially shaped their perceptions about blacks, using the percentage of black residents, which ranged from 0% to 63.3% with a mean of 18.5%. The third and fourth controls were median household income and the unemployment rate, both potentially shaping

the establishment's selected location and the set of job applications received. Median household income ranged from $0 to $154,875, with a mean of $68,323. The unemployment rate varied from 0% to 31.9% with a mean of 7.8%.

Across all model specifications, these controls fail to reach significance and do not affect the point estimates of other variables. Because these controls are available only for employers with known addresses and ACS data are available only at the block group level, including them in model specifications reduces statistical power. Therefore, I report models with and without controls (referred to as neighborhood controls in table 4).

Analytical Strategy

I report linear probability models predicting the probability that a hypothetical job applicant receives a callback, with standard errors clustered at the job level since two applications were submitted for each job opening. I also estimated logistic regression models, which produced substantively equivalent results (see fig. 4 below). In principle, relying on variation within individual employers by including employer fixed effects could sharpen the causal identification. In practice, however, there was not enough variation in exposure to recent and proximate violence within employer to do so.

RESULTS

I submitted 368 résumés and received 91 callbacks from employers, resulting in an overall callback rate of 24.7%. Both this callback rate and the callback rates by racial/ethnic group fall within the range that has been reported in prior research (Schwartz and Skolnick 1962; Pager 2003, 2007*a*; Pager et al. 2009).

Table 2 tabulates actual callback rates by race and criminal record. White job applicants received a callback or job offer 38.2% of the time, as compared to 39.1% for Hispanic job applicants and 18.2% for black job applicants. Employers' preference for nonblack job applicants is clear from the wide gap between callback rates. A black job applicant must apply to twice as many jobs to earn the same number of callbacks as his white or Hispanic counterparts. The lack of a sizable gap in callback rates between Hispanic and white job applicants distinguishes these results from those reported in prior studies (Pager et al. 2009). It is worth noting that the Hispanic share of Oakland's population is 25.4% and is growing (U.S. Census Bureau 2015). Consequently, 7% of job postings explicitly included text stating that it would be beneficial if job applicants were Spanish/English bilingual, and I controlled for this. It is likely that even more employers favored perceived Hispanic applicants for this same reason but did not explicitly state this in

TABLE 2
Frequency of Receiving Callbacks by Race and Criminal Record

	Callbacks/Total Jobs	Callback Rate (%)
White—no criminal record	21/55	38.2
White—criminal record	10/56	17.9
Black—no criminal record	11/67	16.4
Black—criminal record	12/66	18.2
Hispanic—no criminal record	25/64	39.1
Hispanic—criminal record	12/60	20.0

their posting. Employers' nearly equivalent treatment toward white and Hispanic applicants suggests that in this sample the most salient boundary is between perceived black and nonblack job applicants.

Callbacks for Black Job Applicants

Black job applicants received a callback rate that was 11.6 percentage points less ($P < .01$) than that of white and Hispanic job applicants in model 1, providing support for baseline hypothesis A (see table 3). In contrast, the average expected callback rate for nonblack job applicants was 28.9%. Model 2 includes a term for Hispanic so that the effect of being perceived as black can be compared relative to a white job applicant, while teasing out the effect of Hispanic job applicants. In model 2, being black continues to have a detrimental effect on callback rates of −10.6 percentage points, resulting in an average callback rate of 17.3%. The coefficient on "black" is negative but not statistically significant across models 2–6 ($P < .10$). For example, a white man who applies to seven back of the house job openings in Oakland is likely to be called back by approximately two employers (equivalent to a 27.9% callback rate). In comparison, a black man will need to apply to more than 11 jobs in order to receive those same two callbacks from employers (equivalent to a 17.3% callback rate). To contextualize this finding, a black job applicant would need to apply to four or five more jobs than his white counterpart merely to earn two callbacks in the first phase of the hiring process. In model 2, the coefficient for Hispanic is slightly positive, 1.9 percentage points, but not significant ($P = .761$). Thus it appears that, on average, employers do not draw a statistically significant large distinction between white and Hispanic job applicants.[18]

[18] As expected, the coefficient on the interaction of Hispanic job applicants and job postings that explicitly state a preference for Spanish-speaking job applicants is 46.9%, meaning that these employers are statistically significantly more likely to call back Hispanic job applicants ($P < .01$). Because of space constraints, I do not report this model.

TABLE 3
Linear Probability Models Predicting Employer Callbacks to Job Applications

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Black	−.116**	−.106	−.107	−.112	−.113	−.119
	(.0447)	(.0580)	(.0576)	(.0577)	(.0641)	(.0644)
Hispanic		.0191	.0166	.0166	.0382	.0393
		(.0627)	(.0616)	(.0615)	(.0699)	(.0701)
Criminal record			−.119**	−.119**	−.140**	−.141**
			(.0455)	(.0456)	(.0527)	(.0530)
Violence (MC)					.0547	.0524
					(.0298)	(.0322)
Black × violence (MC)					−.0970**	−.0959**
					(.0292)	(.0307)
Hispanic × violence (MC)					−.0609	−.0639
					(.0310)	(.0327)
CR × violence (MC)					−.0077	−.0062
					(.0231)	(.0234)
Historical crime (00s)						.00377
						(.0125)
Spanish-speak				.122		.0435
				(.104)		(.108)
Résumé format				.0556		.0642
				(.0379)		(.0458)
Constant	.289**	.279**	.339**	.248**	.373**	.262**
	(.0348)	(.0486)	(.0572)	(.0764)	(.0617)	(.0930)
Observations	368	368	368	368	292	292
Adjusted R^2	.014	.012	.028	.032	.049	.044

Note.—MC = mean centered. SEs are in parentheses.
* $P < .05$.
** $P < .01$.

Callbacks for Job Applicants Perceived to Bear a Criminal Record

Models 3 and 4 provide strong and robust support for the detrimental impact of a criminal record on callback rates. Model 3 reveals that employers penalize applicants with a criminal record by reducing their likelihood of a callback by 11.9 percentage points ($P < .01$), independent of the effects of a job applicant's race. This effect is highly significant when compared to the 33.9% callback rate that can be expected for white applicants without a criminal record. Model 4 approximates the effect of a criminal record when controlling for a job applicant's race, job postings stating a preference for Spanish-speaking applicants, and the format of the hypothetical applicant's résumé. In model 4, the stigmatizing mark of a criminal record continues to reduce the likelihood of a callback by 11.9 percentage points ($P < .01$). For example, these estimates suggest that job seekers with a criminal record must work even harder for employer callbacks, applying to 50% more jobs, than otherwise equivalent job applicants.

Effect of Exposure to Violent Crimes on Callbacks for Black Job Applicants

I turn next to investigating the effect of exposure to recent and proximate violent crime events on employers' likelihood of callbacks for black job applicants and job applicants with a criminal record.[19] Employers who were exposed to a greater than average level of proximate violent crimes had a significantly lower likelihood of calling back black job applicants as compared to white and Hispanic job applicants. Model 5 indicates that a black job applicant submitting his résumé to an employer that has been exposed to above-average violent crimes is 9.7 percentage points ($P < .01$) less likely to receive a call than his white or Hispanic counterparts who submit résumés to the same employer. This finding suggests that employers' preferences for black job applicants—or the extent to which being perceived as black is stigmatizing in the labor market—vary across neighborhoods with different levels of exposure to violence. On the one hand, black men may face higher callback rates in nonviolent neighborhoods relative to neighborhoods exposed to greater violence. On the other hand, in Oakland, where employers were exposed to an average of 1.9 violent crime events, black job applicants may face barriers finding employment opportunities in neighborhoods with lower than average exposure to violent crime events. In contrast, the coefficient of violence (MC) indicates the effect of recent exposure to violence for white job applicants without a criminal record and is positive but not statistically significant. This suggests that employers may have a more positive response to white job applicants relative to black job applicants after recent exposure to proximate violence.

The same pattern of effects emerges when controlling in model 6 for historical base rates of crime, that is, for the number of crime events that occurred in the same geographic radius up to one year ago as well as job applicants' résumé format and job postings seeking Spanish-speaking applicants. Thus, employers' exposure to violence captures the effect of recent violent crimes, above and beyond routine, ordinary levels of crime that are less likely to influence employers' minds because they may already be desensitized to base rates of crime. Exposure to above-average levels of recent, proximate violent crime events reduces callback rates for black job applicants by 9.6 percentage points ($P < .01$), net of the impact of historical crime rate, résumé formatting, and job postings with a preference for Spanish speakers. The same pattern of results emerges in models that control for neighborhood characteristics at the block group level, which include the percentage of black resi-

[19] In models 6 and 7, exposure to violent crime is reported using violent crime events that occurred within 450 meters up to 70 days preceding the submission of a hypothetical job applicant's résumé. In a subsequent section, I further discuss results across the range of time and distance bands.

dents, population density, unemployment rate, and median household income (not reported).

Effect of Exposure to Violent Crimes on Callbacks for Job Applicants with a Criminal Record

In contrast, employers' likelihood of calling back a job applicant with a criminal record is unchanged after recent exposure to proximate violence. In models 5 and 6, the interaction term of a job applicant with a criminal record and an employer who has recently been exposed to violent crime (CR × violence [MC]) is slightly negative and fails to reach significance. These results indicate that employers' perceptions of job applicants with a criminal record do not seem to be associated with the violent crime events that occur near the establishment. The constant term and positive coefficient of violence (MC) in models 5 and 6 suggest that employers have a preference for white applicants in neighborhoods with average exposure to violence. In other model specifications that are not reported, I explored the role of other types of crime and found no evidence of a relationship between crime and callbacks for applicants with a criminal record. One possible interpretation is that employers' stereotypes of criminals are less precise, coherent, and consistent than stereotypes of blacks. Therefore, the link between local events of violent crime and criminals, as signaled through a drug conviction, may not always activate prejudicial stereotypes about criminals. Along the same lines, it is possible that drug-related crime events, not violent crime events, are more closely linked to prejudicial beliefs about criminals. Unlike violent crime events, drug arrests are less visible and less likely to be reported in the media, so perhaps the relevant event that activates stereotypes about criminals is the reporting of news about drug-related criminal activity, which is not always consistently aligned with the actual occurrence of crime events.

Callbacks for Black Job Applicants with a Criminal Record

I turn next to investigating callback rates for black men with a criminal record, applicants bearing both types of potentially stigmatizing marks, in models 7–11 (see table 4). The coefficient for the interaction black × criminal is positive and significant ($P < .05$), suggesting, at first glance, that employers are more likely to call back black job applicants with a criminal record. At the same time, the main effects of being perceived both as a black job applicant and as an applicant with a criminal record are negative and statistically significant ($P < .01$). One interpretation of this result is that employers are sympathetic to or reward the honest act of openly disclosing a criminal record on a black man's job application, when employers may

TABLE 4
Linear Probability Models Predicting Callbacks to Job Applications

	Model 7	Model 8	Model 9	Model 10	Model 11
Black	−.218**	−.228*	−.235*	−.257**	−.236*
	(.0805)	(.0921)	(.0929)	(.0972)	(.0929)
Hispanic	.00881	.0258	.0246	.0130	.0233
	(.0863)	(.0945)	(.0945)	(.0993)	(.0964)
Criminal record	−.203**	−.229**	−.233**	−.255**	−.231**
	(.0768)	(.0825)	(.0830)	(.0881)	(.0849)
Violence (MC)					.0361
					(.0378)
Black × violence (MC)					−.0788*
					(.0393)
Hispanic × violence (MC)					−.0380
					(.0415)
CR × violence (MC)					.0290
					(.0393)
Black × CR	.221*	.249*	.253*	.271*	.242*
	(.0996)	(.116)	(.116)	(.121)	(.115)
Hispanic × CR	.0126	.0195	.0240	.0348	.0235
	(.102)	(.114)	(.113)	(.119)	(.116)
Black × CR × violence (MC)					−.0339
					(.0470)
Hispanic × CR × violence (MC)					−.0683
					(.0494)
Job/neighborhood/historical crime controls	No/No/No	No/No/Yes	Yes/No/Yes	Yes/Yes/Yes	Yes/No/Yes
Constant	.382**	.419**	.318**	.422*	.314**
	(.0688)	(.0830)	(.104)	(.198)	(.103)
Observations	368	292	292	280	292
Adjusted R^2	.037	.039	.039	.031	.050

Note.—MC, mean centered. Standard errors are in parentheses.
* $P < .05$.
** $P < .01$.

have already assumed that black men were involved in some type of criminal activity. A closer examination of predicted callback rates in figure 4 (discussed in detail below) reveals that black men with a criminal record are more likely to receive callbacks from employers in areas with less than average exposure to violence. Thus, the positive, significant coefficient of black × CR is driven, in part, by higher callback rates for black applicants with a criminal record from employers with below-average exposure to violence.

Model 11 does not find support for the notion that employers' likelihood of providing callbacks to black job applicants with a criminal record is influenced by their recent, proximate exposure to violent crime events (black × CR × violence [MC]) interaction term coefficient estimate of −3.4% and $P = .47$). It is possible that the impact of exposure to violence has an effect on a job applicant's callback rates only when no other conflicting information

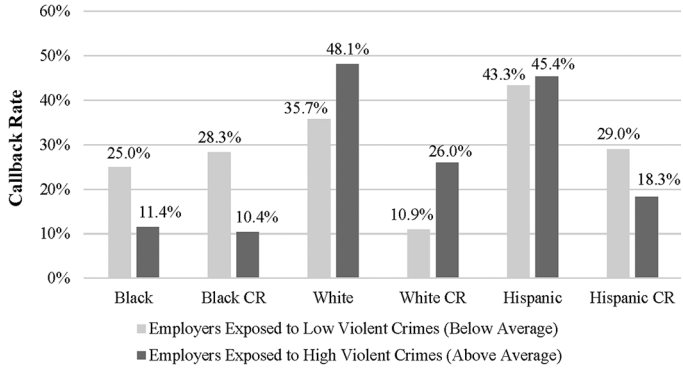


FIG. 4.—Callback rates, by race and exposure to violent crime events. Source: Data are from the original experimental audit study. Reported here are predicted probabilities from a logistic regression analogous to model 11 reported in table 4. "Low" and "high" correspond to below- and above-average levels of exposure to violent crimes, respectively. "CR" indicates a criminal record. For example, "black" represents black job applicants without a criminal record and "black CR" represents black job applicants with a criminal record. I report predicted probabilities from a logistic regression (instead of linear probability models) because logistic regression bounds predicted probabilities between zero and one. Results are substantively similar with linear probability models, which are reported in tables 3 and 4.

is provided. For example, when a black applicant with a criminal record submits a résumé to an employer who has recently been exposed to violence, the employer may pay more attention to the details about the criminal record that are provided on the résumé. In this case, the signal of a criminal record was designed to suggest a nonviolent criminal record. Thus, exposure to violence may lead employers to pay more attention to criminality, but the presence of conflicting information about the job applicant's violent tendencies may result in a null effect. It is also possible that a larger sample size is needed to better understand the role of exposure to violence on callback rates for black job applicants with a criminal record.

To aid in the interpretation of the core results, figure 4 illustrates how callback rates from employers exposed to below- and above-average levels of violence vary by race and criminal record. Lighter and darker gray bars represent callback rates for employers in neighborhoods with below- and above-average exposure to violent crimes, respectively. Figure 4 shows that differences in callback rates across groups seem larger for employers exposed to greater levels of violence (dark gray), suggesting that race matters more for those employers who are exposed to higher, rather than lower, levels of violence. In areas with greater exposure to violence, black men with a criminal record face the lowest callback rates and white applicants without a criminal record face the highest callback rates. In areas with lower exposure to violent crime events, differences between callback rates for white job

applicants compared to black and Hispanic job applicants are smaller, suggesting that advantage accrued to white males, even those with a criminal record, may be concentrated in particular places.[20] Taken together, these predicted values unearth employers' preference for white applicants in neighborhoods with greater levels of violence. Thus, figure 4 sheds further light on how greater exposure to violence shapes callback rates for members of different racial groups.

Varying Measures of Exposure

To further investigate the sensitivity of the effect of recent and proximate exposure to violent crime, I also estimated models using measures of exposure that varied the time and distance band up to 1,000 meters surrounding a hiring establishment and up to 80 days preceding the submission of a hypothetical job applicant's résumé; specifically, exposure is measured within 25, 45, 65, and 80 days preceding the submission of a job application from 250 to 1,000 meters around an employer's establishment. These models (not reported) demonstrate that employers exposed to violent crime within 500 meters of their establishment and up to 80 days before the submission of a résumé by a black job applicant will be significantly less likely to call back that black job applicant, ranging from a 1% to 11% reduction in callback rates across time and distance bands (negative and statistically significant interaction term of black $\times$ violence [MC]). These results suggest that the effects of exposure taper beyond particular geographic and temporal boundaries, which is consistent with my argument emphasizing the recency and proximity of violent crime events.

Robustness Checks

I also estimated additional models to test the robustness of the findings that callback rates are shaped by exposure to violent crime events—the place and time of violence—for job applicants perceived to be black. First, I tested whether employers' exposure to nonviolent (rather than violent) crime had any effect on employers' callback rates for black job applicants. I used the same geographic and temporal bands to define exposure (within 450 meters and 70 days preceding the submission of a résumé) and test whether the place and time of nonviolent events shape callback rates. In a model specification including the interaction term of a black job applicant and an employer's exposure to nonviolent crime, the term failed to reach significance.

[20] Further analyses (not reported) reveal no statistically significant differences between callback rates for black, white, and Hispanic job applicants with criminal records from employers exposed to below-average levels of violent crime.

That employers' callback rates appear to be influenced by exposure to recent and proximate violent crime, but are unaffected by exposure to recent and proximate nonviolent crime, lends additional support to arguments that violence distinctly influences employers' hiring decisions as compared to nonviolent events of crime.

Second, I conducted a falsification or placebo test, in which I aim to show that exposure to violent crimes that occur after (not before) hypothetical job applications were submitted is not associated with callback rates, as this is an unlikely and unexpected outcome. If these models were to produce statistically significant estimates of a relationship between exposure to violence after job application submissions and applicants' callback rates, then concerns about identifying spurious relationships would be heightened. This analysis specifically tests the role of time and of violence, in particular, for callback rates. In these models, I constructed multiple measures of exposure to recent and proximate violent crime as the count of violent crime incidents that occurred within 350 meters and within 500 meters and took place 25, 45, 65, and 80 days after the hypothetical job applicants' résumés were submitted. The coefficients of the interaction terms (e.g., interaction of exposure to recent proximate violent crime within various time and distance bands × black, which were each estimated in separate models) were negative, which was expected given the high serial correlation of crime. Across all these models, the interaction term was null, providing support that employers' evaluations of black job applicants are distinctly influenced by proximate crime that occurs in the time period just before (and not just after) a résumé is received.

A third robustness check further tested the importance of the place and time of violent crime events by exploring the interaction term of black job applicants and employers' exposure to violent crime incidents that occurred in the 365 days (full year) preceding the submission of the résumé and within 100, 250, 500, 750, and 1,000 meters of employers' establishments. Across these models, none of the interaction terms were significant, demonstrating that exposure to violent crime over a longer time horizon does not influence employers' evaluations of black job applicants and lending support for the argument that the recency of proximate violent crime has a distinct effect on employers' evaluations of black job applicants.

Finally, I conducted randomization inference as a final robustness check. This tests the likelihood of obtaining the same results under the sharp null hypothesis that if there were no actual treatment effect, then all the callback rates in the control groups would have been unchanged if they had been in the treatment groups (Gerber and Green 2012).[21] For example, hypothetical

[21] Randomization inference is particularly valuable when distributions of outcomes are skewed, sample sizes are small, or random assignment methods are complex. When an

résumés were randomly assigned a signal of race (either black, Hispanic, or white). I randomly reassigned the variable across observations and then reconducted the same analyses. Simulating this 1,000 times created a reference distribution (under the null hypothesis that the treatment had no effect) of estimated coefficients for the rerandomized variable. I then examine where the coefficients identified in this article lie in the distribution of the simulated results given 1,000 possible randomizations. I find that the estimates produced from this study lie outside the 95% confidence interval of the simulated coefficients, making it highly unlikely that the coefficients resulting from this sample emerged in the absence of any real treatment effect.

DISCUSSION AND CONCLUSION

This study finds that callback rates for black male job applicants are significantly reduced by 10 percentage points when employers have been recently exposed to proximate violent crime events. In contrast, recent and proximate violent crime events do not affect employers' callback rates for white or Hispanic job applicants in the same way. By turning my attention to how the timing of and proximity to recent violent crime events within an employer's neighborhood impose penalties on applicants with two potentially stigmatizing, potent, and prevalent marks—being black and bearing a criminal record—this article addresses a gap in our understanding of the social contextual factors that shape employers' hiring decisions.

More than 10 years after Pager's (2003) seminal study on the mark of a criminal record, this study finds that job applicants with a criminal record continue to face lower callback rates than equally qualified job applicants without a criminal record. No evidence emerged of a relationship between employers' exposure to neighborhood violence and callbacks for job applicants with a nonviolent criminal record, suggesting that the time and place of hiring matter for how some, but not all, potentially stigmatizing characteristics are evaluated and warrants future investigation.

The revolving door between young black men and the American prison system serves to perpetuate stereotypes about black men as hostile, aggressive, and violent (Bobo and Kluegel 1993; Fiske 1998; Peffley and Hurwitz 1998). Thus, a more nuanced understanding of the ways in which the place and time of violent crime events in the neighborhood influence employers'

experiment involves random assignment of individual subjects or units, outcomes are distributed more or less symmetrically around the mean, and the sample is greater than 100, the difference between conventional *P*-values and randomization inference *P*-values may be negligible. Note that this approach cannot be used to test hypotheses where subgroups are unobserved—e.g., estimating complier average causal effect if noncompliance is unknown (Gerber and Green 2012).

evaluations of job applicants' race and criminality is of growing importance for prisoner reentry into communities, in particular, racism, labor market inequality, and demand-side models of hiring, more broadly (Morenoff and Harding 2014). Thorough consideration of how place and time of events shape employer perceptions extends prior work from demonstrating that inequality in hiring decisions exists to identifying where and when it is more likely to happen.

Empirical evidence for this finding was collected quasi-experimentally from back of the house jobs in the low-wage labor market in Oakland, California. Using a field experimental correspondence study, I submitted two job applications for each job opening, randomizing the hypothetical job applicant's perceived race and whether or not the applicant had a criminal record. I exploited natural variation in the occurrence of violent crime events in an employment establishment's neighborhood to analyze differences in callback rates. Results, stable across various robustness checks, indicate that employers recently exposed to nearby violent crime events are 10 percentage points less likely to call back job applicants perceived as black, providing evidence for spatially and culturally selective hiring practices. Overall callback rates were 11 percentage points lower for black job applicants than for white or Hispanic applicants and 12 percentage points lower for those with a criminal record relative to those without one.

Limitations

This article is not without limitations. First, this study takes place in one city, posing limits to the generalizability of these findings to other cities across the United States.[22] While there are strong theoretical reasons to believe that exposure to violent crime events influences employers' callback rates for black job applicants empirically testing the generalizability of these findings across other cities, with varying racial compositions, is an important step for future research. Second, this study could not identify employers' race, which may affect hiring dynamics and can be extended in future research. Third, this study captures a sample of employers' hiring decisions at one phase of the job application process—limiting our visibility into other phases of employment such as interviews, performance evaluations, promotions, or terminations—and one type of job search (direct rather than through social networks). Future research can adapt this research design to investigate the extent to which these findings generalize across other phases of employment and types of job searches. A fourth limitation is that

[22] In particular, Oakland has a larger Hispanic population than other cities, which may be influencing the results that employers fail to distinguish between white job applicants and Hispanic job applicants.

this study focuses on callbacks for male, not female, job applicants. Thus, our understanding of the relationship between perceived race and incarceration is limited to the labor market outcomes of men. As a growing proportion of women are incarcerated and women are increasingly likely to serve as primary caregivers and financial supporters of their families, understanding whether and how violent crime events shape callback rates for women with and without a criminal record is imperative. Furthermore, this study signals race through specific names, which are also likely to be associated with perceptions about one's socioeconomic status or the extent of one's racial identity and may vary on the basis of perceivers' characteristics (Gaddis 2017). Future research can expand the use of racialized names to better account for other characteristics of a hypothetical job applicant that may also be associated with particular racialized names or can construct alternative signals of race. Finally, the research design employed here assumed that violent events are salient in employers' minds, which future research can more directly observe by manipulating employers' exposure to information about violence more directly.

Contributions

These limitations notwithstanding, this article extends our understanding of how racially prejudicial views lead to harmful labor market outcomes by injecting dimensions of social contextual nuance. Sociologists have long recognized that the stigmatization of marks is contextually constituted (Goffman [1963] 1986). Past research on potentially stigmatizing marks in labor markets has not yet explored how the evaluation of and penalties accompanying potentially stigmatizing marks might vary across places and times within a city. Overlooking place and time implicitly assumes that employer perceptions do not vary, limiting us to a static understanding of employer hiring decisions, instead of a dynamic process in which the social construction of stigmatizing marks in hiring decisions is contingent on contextual characteristics. By focusing on violent crime events, this article unearths important temporal and geographic variation in a social context—reminding us that one's subjective experience can vary both across neighborhoods and across time.

Second, this article contributes to the growing literature that seeks to bridge labor market inequality and urban sociology by examining how neighborhood characteristics influence the job search process for black job applicants with and without a criminal record (Beggs and Villemez 2001; Cohen 2001; Cohen and Huffman 2003; Fernandez and Su 2004). Neighborhoods and the events that transpire within them have heterogeneous effects for different people: this article provides evidence that neighborhood violence negatively shapes outcomes for black job applicants, but not white and Hispanic

job applicants with a criminal record (Sharkey 2006; Sharkey and Faber 2014). While some neighborhood characteristics, such as the racial composition of neighborhood residents, evolve over long periods of time, the events that take place within neighborhoods occur intermittently and can be disruptive for people's lives even over the short term. My findings suggest a microprocess in which not only do neighborhoods contribute to the formation of stereotypes, but the geographic and temporal sequences of events that take place within neighborhoods contribute to the salience and use of prejudicial perceptions in hiring decisions. Discriminatory behaviors and prejudicial attitudes take on various forms, and unlike the overt racism that characterized the period preceding the Civil Rights era, the nature of modern racism is subtle and covert—and, can be triggered by relevant events (Merton 1970; Bonilla-Silva 2003).[23] If modern prejudice is so cloaked that it can lie deep in a person's unconscious, understanding the social contextual characteristics that trigger these beliefs is critical for investigating when and how racial prejudice is consequential. Overall, this study extends knowledge of how neighborhood characteristics shape outcomes across the life course, including culture, health, and education outcomes, by illustrating a new dynamic relationship between neighborhood effects and labor markets.

Third, I highlight the importance of another aspect of neighborhoods, exposure to violent crime events, demonstrating that the effects of local violence extend far beyond victims of crime. This work joins a burgeoning literature on the widespread effects of violence ranging from children's functioning and academic performance to police stop, question, and frisk activity to people reporting crime through 911 calls (Sharkey and Sampson 2015; Desmond et al. 2016; Lacoe and Sharkey 2016; Legewie 2016). The psychological ripples of violence linger, such that prejudicial stereotypes about blackness are activated and lead to discriminatory outcomes. Thus violence has the potential to affect some social groups, such as black men, twice: first, through mere exposure and, second, through exclusion from the labor market. But the short-term impact of indirect exposure to violence is not limited merely to discriminatory labor market outcomes. Rather, these findings introduce the possibility that indirect exposure to violence can affect other outcomes resulting from microinteractions in which stereotypes can be brought to bear on individuals' decisions. In contrast and at a broader level, these data also suggest that exposure to violence has the potential to shape perceptions of whiteness in evaluation processes, including where and when advantages accrue to white men with and without a criminal record.

[23] In fact, researchers utilizing techniques designed to study less conscious or automatic cognitions have shown that, to some extent, people may be unaware of their own racial prejudices (Greenwald, McGhee, and Schwartz 1998; Wittenbrink and Schwarz 2007; for a review, see Quillian [2006]).

Contrary to prior research findings, this study provides new evidence of the extent to which perceptions of black men are intertwined with criminality. So ingrained is this view in employers' minds that this sample revealed only a slight gap in callback rates for black men and black men with a criminal record, suggesting that the assumption that a job applicant has a criminal disposition is already accounted for when an applicant is perceived to be black. Regardless of whether this is based on a small sample of personal experiences, statistical generalizations, or distorting stereotypes, widely held and deep-rooted cultural perceptions about the characteristics of black men shape, in this case, opportunities that are available to them in the labor market. These findings raise important questions about whether perpetuating perceptions of a black culture of violence or failing to effectively reduce racialized violence is more detrimental for employment outcomes than contact with the criminal justice system (Kennedy 2011; Leovy 2015).

Directions for Future Research

This study paves the way for several future research directions. First, the place and time of other phases of the hiring process can be investigated (e.g., the social context in which interviews are conducted, negotiations take place, or wages are set). Additional research can explore whether social contextual factors affect various job search behaviors that precede hiring decisions. For example, exposure to violence may activate stereotype threat for certain job applicants, consequently altering their job search behaviors.

Second, future research can explore how other kinds of neighborhood events serve as racialized cues, which may also have important implications for potential interventions. For instance, protest events about police treatment of blacks may have an impact on teachers' evaluations of black students' intelligence in the classroom or landlords' decisions in the rental housing market. Furthermore, future research can extend this work by investigating potentially heterogeneous effects of neighborhood events and characteristics for different types of people.

Finally, while indirect exposure to violence may shape an individual's fears and perceptions, less explored is how individuals carry the psychological effects of even indirect exposure to violence with them in future interactions in ways that may consequently influence life outcomes for themselves and others. Examining the particular mechanism through which people are exposed to violence—for example, through print or television news coverage, social media, network ties, or direct observation—is an important avenue for future inquiry. Future scholarship can also tease apart the impacts of different levels of exposure to various types of violence such as terrorism or gun violence, which may be linked to other kinds of religious and racialized perceptions, on outcomes in labor markets and across the life course.

Conclusion

In conclusion, this study highlights the merits of combining insights from research on labor market inequality and cultural and urban sociology to understand how employer perceptions of job applicants are influenced by elements of their local neighborhood context. This work sets the stage for future investigations into the place and time of hiring and the interrelationships among neighborhood characteristics, perceptions, and labor market outcomes.

REFERENCES

Alexander, Michelle. 2010. *The New Jim Crow: Mass Incarceration in the Age of Colorblindness*. New York: New Press.

Anderson, Elijah. 1999. *Code of the Street*. New York: Norton.

Asch, Solomon E. 1946. "Forming Impressions of Personality." *Journal of Abnormal and Social Psychology* 41:258–90.

Ayres, Ian, and Peter Siegelman. 1995. "Race and Gender Discrimination in Bargaining for a New Car." *American Economic Review* 85 (3): 304–21.

Beggs, John J., and Wayne J. Villemez. 2001. "Regional Labor Markets." Pp. 503–29 in *Sourcebook of Labor Markets: Evolving Structures and Processes*, edited by Ivar Berg and Arne L. Kalleberg. New York: Kluwer Academic/Plenum.

Bendick, Marc, Jr., Lauren E. Brown, and Kennington Wall. 1999. "No Foot in the Door." *Journal of Aging and Social Policy* 10 (4): 5–23.

Bertrand, Marianne, and Sendhil Mullainathan. 2004. "Are Emily and Greg More Employable than Lakisha and Jamal? A Field Experiment on Labor Market Discrimination." *American Economic Review* 94 (4): 991–1013.

Besbris, Max, Jacob W. Faber, Peter Rich, and Patrick Sharkey. 2015. "Effect of Neighborhood Stigma on Economic Transactions." *Proceedings of the National Academy of Sciences* 112 (16): 4994–98.

Black, Donald. 1983. "Crime as Social Control." *American Sociological Review* 48:34–45.

Bloom, Barbara E., ed. 2003. *Gendered Justice: Addressing Female Offenders*. Durham, N.C.: Carolina Academic Press.

Bobo, Lawrence, and James R. Kluegel. 1993. "Opposition to Race-Targeting: Self-Interest, Stratification Ideology, or Racial Attitudes?" *American Sociological Review* 58:443–64.

Bonilla-Silva, Eduardo. 2003. *Racism without Racists: Color-Blind Racism and the Persistence of Racial Inequality in the United States*. Lanham, Md.: Rowman & Littlefield.

Bureau of Justice Statistics. 2001. *Criminal Offenders Statistics*. Washington, D.C.: Bureau of Justice Statistics, U.S. Department of Justice.

———. 2004. *Parents in Prison and Their Minor Children*. Washington, D.C.: Bureau of Justice Statistics, U.S. Department of Justice.

———. 2006. *Prisoners in 2006*. Washington, D.C.: Bureau of Justice Statistics, U.S. Department of Justice.

———. 2015. "Local Area Unemployment Statistics (LAUS)." http://www.bls.gov/data/#unemployment.

———. 2018. *Criminal Victimization, 2016 Revised*. Washington, D.C.: Bureau of Justice Statistics, U.S. Department of Justice.

California Department of Corrections and Rehabilitation. 2014. *Prison Census Data*. Sacramento: Offender Information Services Branch, Estimates and Statistical Analysis Section, Data Analysis Unit.

Carr, Patrick J., Laura Napolitano, and Jessica Keating. 2007. "We Never Call the Cops and Here Is Why: A Qualitative Examination of Legal Cynicism in Three Philadelphia Neighborhoods." *Criminology* 45 (2): 445–80.
Cohen, Philip N. 2001. "Race, Class and Labor Markets: The White Working Class and Racial Composition of U.S. Metropolitan Areas." *Social Science Research* 30:146–69.
Cohen Philip N., and Matt L. Huffman. 2003. "Individuals, Jobs, and Labor Markets: The Devaluation of Women's Work." *American Sociological Review* 68 (3): 443–63.
Correll, Joshua, Bernadette Park, Charles M. Judd, and Bernd Wittenbrink. 2002. "The Police Officer's Dilemma: Using Ethnicity to Disambiguate Potentially Threatening Individuals." *Journal of Personality and Social Psychology* 83 (6): 1314–29.
Desmond, Matthew, Andrew V. Papachristos, and David S. Kirk. 2016. "Police Violence and Citizen Crime Reporting in the Black Community." *American Sociological Review* 81 (5): 857–76.
Devine, Patricia G. 1989. "Stereotypes and Prejudice: Their Automatic and Controlled Components." *Journal of Personality and Social Psychology* 56:5–18.
Devine, Patricia G., and Andrew J. Elliot. 1995. "Are Racial Stereotypes *Really* Fading? The Princeton Trilogy Revisited." *Personality and Social Psychology Bulletin* 21 (11): 1139–50.
DiMaggio, Paul. 1997. "Culture and Cognition." *Annual Review of Sociology* 23:263–87.
Dovidio, John F., Miles Hewstone, Peter Glick, and Victoria M. Esses. 2010. "Prejudice, Stereotyping and Discrimination: Theoretical and Empirical Overview." Pp. 3–29 in *Sage Handbook of Prejudice, Stereotyping and Discrimination*, edited by John F. Dovidio, Miles Hewstone, Peter Glick, and Victoria M. Esses. London: Sage.
Duncan, Birt L. 1976. "Differential Social Perception and Attribution of Intergroup Violence: Testing the Lower Limits of Stereotyping of Blacks." *Journal of Personality and Social Psychology* 34:590–98.
Eberhardt, Jennifer L., Phillip A. Goff, Valerie J. Purdie, and Paul G. Davies. 2004. "Seeing Black: Race, Crime, and Visual Processing." *Journal of Personality and Social Psychology* 87 (6): 876–93.
Federal Bureau of Prisons. 2018. "Inmate Gender." https://www.bop.gov/about/statistics/statistics_inmate_gender.jsp.
Fernandez, Roberto M., and Celina Su. 2004. "Space in the Study of Labor Markets." *Annual Review of Sociology* 30:545–69.
Fiske, Susan T. 1998. "Stereotyping, Prejudice, and Discrimination." Pp. 357–411 in *Handbook of Social Psychology*, edited by Daniel T. Gilbert, Susan T. Fiske, and Gardner Lindzey. New York: McGraw-Hill.
Gaddis, S. Michael. 2014. "Discrimination in the Credential Society: An Audit Study of Race and College Selectivity in the Labor Market." *Social Forces* 93 (4): 1451–79.
———. 2017. "How Black Are Lakisha and Jamal? Racial Perceptions from Names Used in Correspondence Audit Studies." *Sociological Science* 4:469–89.
Galgano, Sarah Wittig. 2009. "Barriers to Reintegration: An Audit Study of the Impact of Race and Offender Status on Employment Opportunities for Women." *Social Thought and Research* 30:21–37.
Gerber, Alan S., and Donald P. Green. 2012. *Field Experiments: Design, Analysis, and Interpretation*. New York: Norton.
Gieryn, Thomas F. 2000. "A Space for Place in Sociology." *Annual Review of Sociology* 26:463–96.
Gilbert, Daniel T., and J. Gregory Hixon. 1991. "The Trouble of Thinking: Activation and Application of Stereotypic Beliefs." *Journal of Personality and Social Psychology* 60 (4): 509–17.
Gilliam, Franklin D., Jr., and Shanto Iyengar. 2000. "Prime Suspects: The Influence of Local Television News on the Viewing Public." *American Journal of Political Science* 44 (3): 560–73.

Goffman, Erving. (1963) 1986. *Stigma: Notes on the Management of Spoiled Identity*. New York: Simon & Schuster.
———. 1974. *Frame Analysis: An Essay on the Organization of Experience*. New York: Doubleday Anchor.
Greenwald, Anthony G., Debbie E. McGhee, and Jordan L. K. Schwartz. 1998. "Measuring Individual Differences in Implicit Cognition: The Implicit Association Test." *Journal of Personality and Social Psychology* 74 (6): 1464–80.
Greenwald, Anthony G., Mark A. Oakes, and Hunter G. Hoffman. 2003. "Targets of Discrimination: Effects of Race on Responses to Weapons Holders." *Journal of Experimental Social Psychology* 39:399–405.
Hagan, John. 1994. *Crime and Disrepute*. Thousand Oaks, Calif.: Pine Forge Press.
Hannerz, Ulf. 1969. *Soulside: Inquiries into Ghetto Culture and Community*. New York: Columbia University Press.
Harding, David J. 2010. *Living the Drama: Community, Conflict, and Culture among Inner-City Boys*. Chicago: University of Chicago Press.
Heckman, James J., and Peter Siegelman. 1993. "The Urban Institute Audit Studies: Their Methods and Findings." Pp. 187–258 in *Clear and Convincing Evidence: Measurement of Discrimination in America*, edited by Michael Fix and Raymond J. Struyk. Washington, D.C.: Urban Institute Press.
Holzer, Harry J. 1996. *What Employers Want: Job Prospects of Less-Educated Workers*. New York: Russell Sage Foundation.
Holzer, Harry J., Steven Raphael, and Michael A. Stoll. 2002*a*. "How Do Crime and Incarceration Affect the Employment Prospects of Less-Educated Young Black Men?" Paper prepared for the Extending Opportunities Conference, Washington, D.C., May.
———. 2002*b*. "Perceived Criminality, Background Checks, and the Racial Hiring Practices of Employers?" Discussion paper no. 1254-02. University of Wisconsin, Institute for Research on Poverty.
———. 2004. "Will Employers Hire Former Offenders? Employer Preferences, Background Checks, and Their Determinants." Pp. 205–46 in *Imprisoning America: The Social Effects of Mass Incarceration*, edited by Mary Pattillo, David Weiman, and Bruce Western. New York: Russell Sage Foundation.
Kang, Sonia K., Katherine A. DeCelles, András Tilcsik, and Sora Jun. 2016. "Whitened Résumés: Race and Self-Presentation in the Labor Market." *Administrative Science Quarterly* 61 (3): 469–502.
Kennedy, David M. 2011. *Don't Shoot: One Man, a Street Fellowship, and the End of Violence in Inner-City America*. London: Bloomsbury.
Kirk, David S., and Andrew V. Papachristos. 2011. "Cultural Mechanisms and the Persistence of Neighborhood Violence." *American Journal of Sociology* 116 (4): 1190–1233.
Kirschenman, Joleen, and Katherine Neckerman. 1991. "'We'd Love to Hire Them, but . . .': The Meaning of Race for Employers." Pp. 203–34 in *The Urban Underclass*, edited by C. Jencks and P. Peterson. Washington, D.C.: Brookings Institute.
Kuhn, Peter, and Hani Mansour. 2012. "Is Internet Job Search Still Ineffective?" Manuscript. University of California, Santa Barbara.
Lacoe, Johanna, and Patrick Sharkey. 2016. "Life in a Crime Scene: Stop, Question, and Frisk Activity in New York City Neighborhoods in the Aftermath of Homicides." *Sociological Science* 3:116–34.
Lahey, Joanna, and Ryan Beasley. 2018. "Technical Aspects of Correspondence Studies." Pp. 81–102 in *Audit Studies: Behind the Scenes with Theory, Method, and Nuance*, edited by S. Michael Gaddis. Cham: Springer.
Lalonde, Robert J., and Rosa M. Cho. 2008. "The Impact of Incarceration in State Prison on the Employment Prospects of Women." *Journal of Quantitative Criminology* 24 (3): 243–65.

Lamont, Michèle, and Mario Luis Small. 2008. "How Culture Matters: Enriching Our Understanding of Poverty." Pp. 76–102 in *The Colors of Poverty: Why Ethnic and Racial Disparities Persist*, edited by Ann Chih Lin and David R. Harris. New York: Russell Sage Foundation.

Landau, Mark J., Michael Johns, Jeff Greenberg, Tom Pyszczynski, Andy Martens, Jamie L. Goldenberg, and Sheldon Solomon. 2004. "A Function of Form: Terror Management and Structuring the Social World." *Journal of Personality and Social Psychology* 87 (2): 190–210.

Legewie, Joscha. 2016. "Racial Profiling and Use of Force in Police Stops: How Local Events Trigger Periods of Increased Discrimination." *American Journal of Sociology* 122 (2): 379–424.

Leovy, Jill. 2015. *Ghettoside: A True Story of Murder in America*. New York: Spiegel & Grau.

Loury, Glenn C. 2002. *The Anatomy of Racial Inequality*. Cambridge, Mass.: Harvard University Press.

Loury, Glenn C., Pamela S. Karlan, Tommie Shelby, and Loic J. D. Wacquant. 2008. *Race, Incarceration, and American Values*. Cambridge, Mass.: MIT Press.

Mendelberg, Tali. 2008. "Racial Priming Revived." *Perspectives on Politics* 6:109–23.

Merton, Robert K. 1970. "Discrimination and the American Creed." Pp. 449–57 in *The Study of Society*, edited by P. I. Rose. New York: Random House.

Morenoff, Jeffrey D., and David J. Harding. 2014. "Incarceration, Prisoner Reentry, and Communities." *Annual Review of Sociology* 40:411–29.

Morris, Kevin. 2016. "3 Reasons Never to Include Your Street Address on Your Resume." https://thecareerexperts.com/jobseekers/resume-writing/3-reasons-never-to-include-your-street-address-on-your-resume/.

Moss, Philip, and Chris Tilly. 2001. *Stories Employers Tell: Race, Skill, and Hiring in America*. New York: Russell Sage Foundation.

Muhammad, Khalil Gibran. 2011. *The Condemnation of Blackness*. Cambridge, Mass.: Harvard University Press.

Mundlak, Yair. 1978. "On the Pooling of Time Series and Cross Section Data." *Econometrica* 46 (1): 69–85.

Newman, Katherine S. 1999. *No Shame in My Game: The Working Poor in the Inner City*. New York: Knopf and Russell Sage Foundation.

Nosek, Brian A., Mahzarin R. Banaji, and Anthony G. Greenwald. 2002. "Harvesting Implicit Group Attitudes and Beliefs from a Demonstration Web Site." *Group Dynamics: Theory, Research, and Practice* 6 (1): 101–15.

Oreopoulous, Philip. 2011. "Why Do Skilled Immigrants Struggle in the Labor Market? A Field Experiment with Thirteen Thousand Resumes." *American Economic Journal: Economic Policy* 3:148–71.

Pager, Devah. 2003. "The Mark of a Criminal Record." *American Journal of Sociology* 108 (5): 937–75.

———. 2007*a*. *Marked: Race, Crime, and Finding Work in an Era of Mass Incarceration*. Chicago: University of Chicago Press.

———. 2007*b*. "The Use of Field Experiments for Studies of Employment Discrimination: Contributions, Critiques, and Directions for the Future." *Annals of the American Academy of Political and Social Science* 109:104–33.

Pager, Devah, and Hana Shepherd. 2008. "The Sociology of Discrimination: Racial Discrimination in Employment, Housing, Credit, and Consumer Markets." *Annual Review of Sociology* 38:181–209.

Pager, Devah, Bruce Western, and Bart Bonikowski. 2009. "Discrimination in a Low-Wage Labor Market: A Field Experiment." *American Sociological Review* 74 (5): 777–99.

Payne, B. Keith. 2001. "Prejudice and Perception: The Role of Automatic and Controlled Processes in Misperceiving a Weapon." *Journal of Personality and Social Psychology* 81:181–92.

Pedulla, David S. 2014. "The Positive Consequences of Negative Stereotypes: Race, Sexual Orientation, and the Job Application Process." *Social Psychology Quarterly* 77 (1): 75–94.

Peffley, Mark, and Jon Hurwitz. 1998. "Whites' Stereotypes of Blacks: Sources and Political Consequences." Pp. 58–99 in *Perceptions and Prejudice: Race and Politics in the United States*, edited by Jon Hurwitz and Mark Peffley. New Haven, Conn.: Yale University Press.

Perkins, Douglas D., and Ralph B. Taylor. 1996. "Ecological Assessments of Community Disorder: Their Relationship to Fear of Crime and Theoretical Implications." *American Journal of Community Psychology* 24 (1): 63–107.

Pettit, Becky, and Bruce Western. 2004. "Mass Imprisonment and the Life Course: Race and Class Inequality in U.S. Incarceration." *American Sociological Review* 69 (2): 151–69.

President's Commission on Law Enforcement and Administration of Justice. 1967. *The Challenge of Crime in a Free Society*. New York: Avon.

Quillian, Lincoln. 2006. "New Approaches to Understanding Racial Prejudice and Discrimination." *Annual Review of Sociology* 32:299–328.

Quillian, Lincoln, and Devah Pager. 2001. "Black Neighbors, Higher Crime? The Role of Racial Stereotypes in Evaluations of Neighborhood Crime." *American Journal of Sociology* 107 (3): 717–67.

Rothbart, Myron, Mark Evans, and Solomon Fulero. 1979. "Recall for Confirming Events: Memory Processes and the Maintenance of Social Stereotypes." *Journal of Experimental Social Psychology* 15:343–55.

Rountree, Pamela W., and Kenneth C. Land. 1996. "Perceived Risk versus Fear of Crime: Empirical Evidence of Conceptually Distinct Reactions in Survey Data." *Social Forces* 74 (4): 1353–76.

Sacco, Vincent F. 2005. *When Crime Waves*. Thousand Oaks, Calif.: Sage.

Sacco, Vincent F., and Mahmoud Reza Nakhaie. 2001. "Coping with Crime: An Examination of Elderly and Nonelderly Adaptations." *International Journal of Law and Psychiatry* 24:305–23.

Sagar, H. Andrew, and Janet W. Schofield. 1980. "Racial and Behavioral Cues in Black and White Children's Perceptions of Ambiguously Aggressive Acts." *Journal of Personality and Social Psychology* 39 (4): 590–98.

Sampson, Robert J. 2012. *Great American City: Chicago and the Enduring Neighborhood Effect*. Chicago: University of Chicago Press.

Sampson, Robert J., and Janet L. Lauritsen. 1997. "Racial and Ethnic Disparities in Crime and Criminal Justice in the United States." *Crime and Justice: A Review of Research* 21:311–74.

Sampson, Robert J., and Stephen W. Raudenbush. 2004. "Seeing Disorder: Neighborhood Stigma and the Social Construction of 'Broken Windows.'" *Social Psychology Quarterly* 67 (4): 319–42.

Schwartz, Richard D., and Jerome H. Skolnick. 1962. "Two Studies of Legal Stigma." *Social Problems* 10:133–42.

Sharkey, Patrick T. 2006. "Navigating Dangerous Streets: The Streets and Consequences of Street Efficacy." *American Sociological Review* 71:826–46.

———. 2010. "The Acute Effect of Local Homicides on Children's Cognitive Performance." *Proceedings of the National Academy of Sciences* 107 (26): 11733–38.

———. 2018. *Uneasy Peace: The Great Crime Decline, the Renewal of City Life, and the Next War on Violence*. New York: Norton.

Sharkey, Patrick T., and Jacob W. Faber. 2014. "Where, When, Why, and for Whom Do Residential Contexts Matter? Moving Away from the Dichotomous Understanding of Neighborhood Effects." *Annual Review of Sociology* 40:559–79.

Sharkey, Patrick T., and Robert J. Sampson. 2015. "Violence, Cognition, and Neighborhood Inequality in America." Pp. 320–39 in *Social Neuroscience: Brain, Mind, and So-*

ciety, edited by R. Schutt, M. S. Keshavan, and L. J. Seidman. Cambridge, Mass.: Harvard University Press.
Sharkey, Patrick T., Nicole Tirado-Strayer, Andrew V. Papachristos, and C. Cybele Raver. 2012. "The Effect of Local Violence on Children's Attention and Impulse Control." *American Journal of Public Health* 102 (12): 2287–93.
Shih, Johanna. 2002. "'. . . Yeah, I Could Hire This One, but I Know It's Gonna Be a Problem': How Race, Nativity, and Gender Affect Employers' Perceptions of the Manageability of Job Seekers." *Ethnic and Racial Studies* 25:99–119.
Silberman, Charles E. 1978. *Criminal Violence, Criminal Justice*. New York: Vintage Books.
Skogan, Wesley G. 1986*a*. "The Fear of Crime and Its Behavioral Implications." Pp. 167–88 in *From Crime Policy to Victim Policy: Reorienting the Justice System*, edited by Ezzat A. Fattah. London: Macmillan.
———. 1986*b*. "Fear of Crime and Neighborhood Change." *Crime and Justice: A Review of Research* 8:203–29.
———. 1990. *Disorder and Decline: Crime and the Spiral of Decay in American Neighborhoods*. Berkeley and Los Angeles: University of California Press.
Smith, Sandra S. 2007. *Lone Pursuit: Distrust and Defensive Individualism among the Black Poor*. New York: Russell Sage Foundation.
Staw, Barry M., Lance E. Sandelands, and Jane E. Dutton. 1981. "Threat-Rigidity Effects in Organizational Behavior: A Multilevel Analysis." *Administrative Science Quarterly* 26:501–24.
St. John, Craig, and Tamara Heald-Moore. 1996. "Racial Prejudice and Fear of Criminal Victimization by Strangers in Public Settings." *Sociological Inquiry* 66 (3): 267–84.
Tilcsik, András. 2011. "Pride and Prejudice: Employment Discrimination against Openly Gay Men in the United States." *American Journal of Sociology* 117 (2): 586–626.
Tilly, Chris, Philip Moss, Joleen Kirschenman, and Ivy Kennelly. 2001. "Space as a Signal: How Employers Perceive Neighborhoods in Four Metropolitan Labor Markets." Pp. 304–38 in *Urban Inequality: Evidence from Four Cities*, edited by Alice O'Connor, Chris Tilly, and Lawrence D. Bobo. New York: Russell Sage Foundation.
Tyler, Tom R. 1990. *Why People Obey the Law: Procedural Justice, Legitimacy, and Compliance*. New Haven, Conn.: Yale University Press.
Uggen, Christopher, Jeff Manza, and Melissa Thompson. 2006. "Citizenship, Democracy, and the Civic Reintegration of Criminal Offenders." *Annals of the American Academy of Political and Social Science* 605:281–310.
U.S. Census Bureau. 2015. "Quickfacts: Oakland City, California." U.S. Census Bureau, Washington, D.C.
Vuolo, Mike, Christopher Uggen, and Sarah Lageson. 2018. "To Match or Not to Match? Statistical and Substantive Considerations in Audit Design and Analysis." Pp. 119–42 in *Audit Studies: Behind the Scenes with Theory, Method, and Nuance*, edited by S. Michael Gaddis. Cham: Springer.
Wakefield, Sara, and Christopher Uggen. 2010. "Incarceration and Stratification." *Annual Review of Sociology* 36:387–406.
Waldinger, Roger, and Michael I. Lichter. 2003. *How the Other Half Works: Immigration and the Social Organization of Labor*. Berkeley and Los Angeles: University of California Press.
Weinberg, Jill D., Jeremy Freese, and David McElhattan. 2014. "Comparing Data Characteristics and Results of an Online Factorial Survey between a Population-Based and a Crowdsource-Recruited Sample." *Sociological Science* 1:292–310.
Wilson, William J. 1987. *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy*. Chicago: University of Chicago Press.
Wittenbrink, Bernd, and Norbert Schwarz. 2007. *Implicit Measure of Attitude*. New York: Guilford.
Zhao, Jihong S., Brian Lawton, and Dennis Longmire. 2015. "An Examination of the Micro-Level Crime–Fear of Crime Link." *Crime and Delinquency* 61 (1): 19–44.