



Employment Processes as Barriers to Employment In the Lower-Wage Labor Market

Literature Review

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Employment Processes as Barriers to Employment in the Lower-Wage Labor Market: Literature Review

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Overview

Introduction

This literature review is part of a project commissioned by the Office of Planning, Research, and Evaluation of the Administration for Children and Families, within the U.S. Department of Health and Human Services, entitled ***Employment Processes as Barriers to Employment in the Lower-Wage Labor Market***. The project, conducted by Abt Associates and its partner the University of Chicago Crown Family School of Social Work, Policy, and Practice, is developing a comprehensive understanding of racial biases and other barriers in the lower-wage labor market that harm the employment outcomes of job seekers and workers of color.

Primary Research Questions

What does existing research tell us about:

- The persistent and emerging sources and forms of racial bias in the lower-wage labor market?
- How bias is manifested in different employment processes, from recruitment through job separation or advancement?
- The effect of different types of bias on the employment outcomes of workers of color?
- Areas for future research that hold promise for reducing racial bias in employment processes?

Purpose

This literature review summarizes research to date on racial bias in the lower-wage labor market, informs the identification of promising interventions and strategies that address racial bias in employment processes for further study, and suggests new areas for future research.

Key Findings and Highlights

Racial bias within employment processes can take many forms. Some forms are **direct**, where racist beliefs are engrained in an individual's actions or in business processes, policies, and systems. Hiring managers' negative stereotypes about workers of color that lead to less hiring of Black or Hispanic workers is an example of direct bias. Such bias can be **explicit**, where the actor is aware of their racial bias, or **implicit**, where the actor is unaware of their racial bias. Racial bias within employment processes can also be **indirect**, where an individual's actions or business processes, policies, and systems are neutral—or at least not overtly racist—yet there is a disproportionately adverse effect on certain racial/ethnic groups. Often, indirect bias results from the interplay of employment processes with existing structural racism within U.S. society that affects where people live, who is in their social networks, their educational attainment, criminal legal system involvement, and access to technology. For instance, requiring college degrees in hiring can disadvantage workers of color who possess the skills to succeed in those jobs because of discriminatory policies that have historically prevented individuals of color from accumulating wealth needed to access higher education.

Whether racial bias is direct or indirect, explicit or implicit, is not always clear or mutually exclusive. In recognizing these diverse sources of bias, it is important to expand understanding of the possibilities for disrupting racial bias in employment processes beyond direct and explicit types of discrimination.

Methods

We searched research databases and the internet for studies from multiple disciplines that analyze aspects of racial bias in employment processes in the lower-wage labor market. Our review included both qualitative and quantitative descriptive studies of how bias manifests, as well as causal studies of the

impact of bias on employment outcomes. Reviewers systematically extracted information on those studies, which senior researchers then analyzed to identify themes.

Recommendations

This literature review makes evident that additional research is needed not only to better understand the nature and effects of racial bias in employment processes in the lower-wage labor market, but also to identify effective strategies to disrupt this bias. The review identifies four priorities for further research based on their potential to yield actionable evidence for disrupting racial bias in employment processes: (1) creating greater transparency on the extent of bias and equity in employment processes, including the development of “equity metrics” and more effective ways to use existing metrics to inform decision-making regarding how employment processes are designed; (2) informing equitable use of technology to disrupt racial bias; (3) identifying the interrelatedness of various forms of bias in employment processes, and the constellation of conditions necessary to deliver more equitable employment outcomes; and (4) more deeply engaging workers of color in evaluating and reinventing employment processes to develop effective ways of disrupting racial bias.

Executive Summary

Researchers have documented racial bias in all employment processes, from those used by employers to find, screen, and hire job applicants to those used to assign workers tasks, work hours, and wages. Bias also shows up in processes used by employers to provide workers with training and mentorship, and to assess worker performance to determine job advancement and termination. Improving employment outcomes for workers of color necessitates that employers, policymakers, worker advocates, and researchers identify both the sources of racial bias in these processes and promising practices to reduce them.

This literature review summarizes current evidence on sources of racial bias within the lower-wage labor market, as well as sources of bias that restrict mobility out of it. Drawing on evolving evidence of promising strategies for disrupting racial bias, the review suggests directions for future research to inform the disruption of racial bias in employment. This literature review is part of a project commissioned by the Office of Planning, Research, and Evaluation of the Administration for Children and Families, within the U.S. Department of Health and Human Services, entitled *Employment Processes as Barriers to Employment in the Lower-Wage Labor Market*. The project is being conducted by Abt Associates and its partner, the University of Chicago Crown Family School of Social Work, Policy, and Practice.¹

The discussion that follows divides employment processes into five categories: (1) processes affecting the composition of the applicant pool; (2) processes affecting who is hired from the applicant pool; (3) processes affecting the quality of employees' initial job assignment; (4) processes affecting employee development and support; and (5) processes affecting employee advancement and termination. After a discussion of the types of bias covered in this review, this executive summary provides an overview of evidence on the nature of racial bias in each of these processes in the lower-wage labor market, strategies that have been used to address these biases, and four directions for future research.

Definition of Bias

For this review, a process is defined as *biased* if it systematically disadvantages qualified job seekers and workers of color—irrespective of employers' intent. That is, whether a process is considered biased depends on the processes' outcomes, not on employers' decision-making that led to the process. An employment process can be biased even if it is not “discriminatory” by conceptual or legal definitions. Some types of bias may be the result of an intent to discriminate, others may not. **Direct** bias occurs when the job applicant's or worker's race is either intentionally (explicit bias) or unintentionally (implicit bias) the basis for differential treatment. But even employment processes not directly based on the race of the applicant or employee can have disproportionate adverse effects on individuals of color. Sources of such **indirect** bias often spring from broader racial inequities such as residential segregation and the wealth gap. For example, workers of color are disproportionately disadvantaged when work sites are located in areas hard to reach by public transit and when jobs require credentials that are expensive to obtain. Additionally, because workers of color are over-represented in lower-wage jobs, they are disproportionately affected by problematic conditions in those jobs. All of these types of bias are within the scope of this review.

¹ In this report, the terms “job seeker(s) of color,” “applicant(s) of color,” “worker(s) of color,” and “community(ies) of color” are meant to refer to those who are non-Hispanic Black or African American, non-Hispanic Asian, Hispanic or Latino, American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander, or any combination of these. Throughout the report, “White” denotes non-Hispanic White individuals and communities.

Key Findings: Bias in Employment Processes

This literature review incorporates what is currently known about the nature and forms of employment bias in the five targeted categories of employment processes. **Direct racial bias** has been found in all of them. Most of the existing research on racial bias in employment processes has focused on higher-paid technical and professional jobs; that literature is beyond the scope of this review. But research in the lower-wage labor market reveals similar sources of direct racial bias that systematically disadvantages job seekers and workers of color, as documented in the full review. Specifically, research shows that direct racial bias in the lower-wage labor market is evident in:

- **Hiring.** Job postings commonly contain racially coded language that discourages job seekers of color from applying (Gaucher et al., 2011; Nobel, 2017); job ad placement algorithms target job seekers of certain races for certain types of jobs (Ali et al., 2019); hiring managers look at “Black or Hispanic names” in applications less favorably than “White names” or assume that incarceration accounts for gaps in the employment profiles of workers of color (Bertrand & Mullainathan, 2004; Kline & Walters, 2021).
- **Job and schedule assignments.** Employers in service and industrial sectors routinely segregate workers of color into lower-paid jobs with less customer interaction and into part-time and contingent arrangements that lack steady hours and benefits (Bernstein et al., 2014a; Wilson, 2020); managers preference White workers in assigning shifts and hours or in making schedule changes (Lambert et al., 2014; Ruetschlin and Asante-Muhammad, 2015).
- **Employee advancement and termination.** Compared to White workers, workers of color are less likely to be promoted and more likely to be laid off, fired, or surveilled for purposes of potential disciplinary action (Alimahomed-Wilson & Reese, 2021; Byron, 2010; DeVaro et al., 2018; Elvira & Zatzick, 2002; Wilson & Roscigno, 2016).
- **Work culture.** Workers of color often experience routine acts of discrimination, leading to unfair performance evaluations, denials of promotion, poor treatment, inferior task assignments, and worker stress (Dnika & Thorpe-Moscon, 2018; Mong & Roscigno, 2010).

The review also finds evidence of **indirect racial bias** in all categories of employment processes. This type of bias is often **related to structural racism in the United States**. Although indirect, these biases can harm job seekers and workers of color and stem from:

- **Geography.** Patterns of residential segregation mean that workers of color tend to live farther from employers than do White workers (Holzer, 2023). Workers of color consequently have less access to job openings and greater difficulties getting to work and responding to scheduling changes once hired (Stoll, 2006; Stoll & Covington, 2012; Lambert et al., 2014).
- **Social networks.** Networks tend to be racially homogenous and localized, in part due to residential segregation, so job seekers of color often do not learn about or get referred to as high quality jobs as do White workers, whose social networks more commonly include people who are employed in steady, full-time jobs (Holzer, 2000; Henly, 2000; McPherson et al., 2001; Pedulla & Pager, 2019).
- **Educational requirements.** Structural barriers related to access to high-quality education mean that job seekers of color have lower educational attainment, on average, than White job seekers, so they are more affected (e.g., do not apply or are screened out) when employers require higher levels of education than are needed to perform tasks (Fuller & Raman, 2017; Fuller et al., 2022).
- **Criminal legal system involvement.** Black and Hispanic workers also experience higher rates than White workers of poverty, residential segregation, and intensive policing which are accompanied by significantly higher rates of criminal legal system involvement as well.

Employer prejudice, concerns about reliability and liability, and lengthy gaps in employment due to incarceration lower these workers' chances of being hired, the quality of their initial job assignment, and advancement opportunities (Agan & Starr, 2018; Doleac & Hansen, 2016; Barnes, 2020).

- **Digital access and literacy.** Workers of color, on average, have less access to the internet, less access to or familiarity with devices other than smartphones, and less fluency in digital skills than do their White counterparts (Vogels, 2021). Thus, they can have less knowledge of online job postings and fewer opportunities to submit online applications, participate in online interviews, or access online work schedule information (National Skills Coalition, 2020).

Finally, the review also includes evidence of **indirect** racial bias in employment processes affecting job seekers and workers of color **because they are over-represented among lower-wage workers**.

Employment processes affected by this form of bias include those related to:

- **Hours and schedules.** Lower-wage jobs are more often part-time, volatile in number and timing of work hours, and lacking in employee control of work schedules (Finnigan & Hunter, 2018; Lambert et al., 2014; Lambert et al., 2019). As a result, workers in lower-wage jobs have more difficulty earning a family-sustaining income, accessing benefits such as employer-sponsored health insurance, and advancing in or retaining jobs (Clawson & Gerstel, 2014; McCrate, 2012).
- **Training and mentorship.** Workers in lower-wage jobs experience high turnover and are in positions with few advancement pathways; they receive few training opportunities and little mentorship (Fuller & Raman, 2022).
- **Advancement and termination.** Workers in lower-wage jobs are less frequently assessed for purposes of advancement and skill development and are more frequently assessed for disciplinary purposes; they receive less information on the nature and impact of performance reviews or information on career pathways (Wilson & Roscigno, 2016; Wilson et al., 1999; DeVaro et al., 2018; Giuliano et al., 2011; Fuller & Raman, 2022).

Key Findings: Areas for Further Research

Additional research is needed not only to better understand the nature and effects of racial bias in employment processes in the lower-wage labor market, but also to identify effective strategies to disrupt this bias. The review identifies four directions for further research with potential to yield actionable evidence for disrupting racial bias in employment processes: (1) creating and evaluating greater transparency on the extent of bias and equity in employment processes, including using existing employer data to develop “equity metrics” to track bias in those processes; (2) examining how to best use technology to disrupt racial bias; (3) identifying the interrelatedness of various forms of bias in employment processes, and the constellation of conditions necessary to deliver more equitable employment outcomes; and (4) more deeply engaging workers of color in evaluating and reinventing employment processes to disrupt racial bias.

Introduction

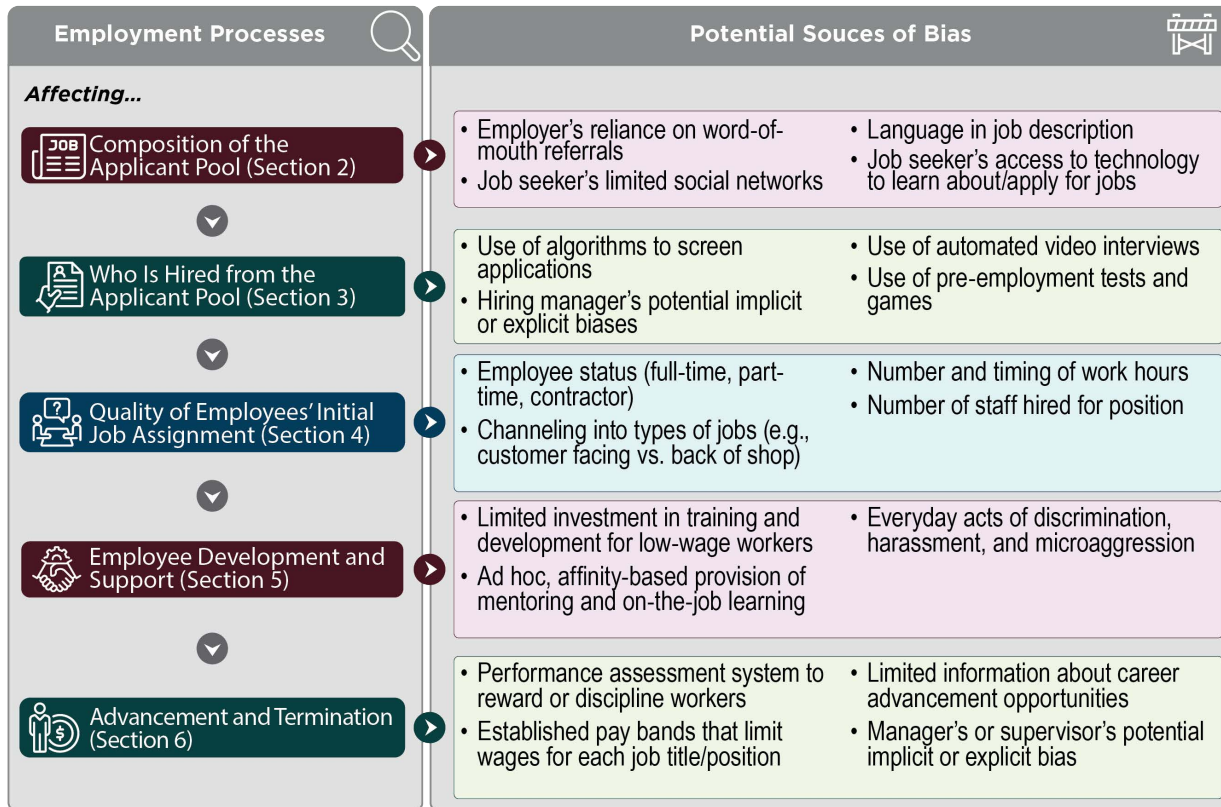
This report reviews literature on the biases that workers of color face in the lower-wage labor market, including biases that obstruct their advancement into higher-paying jobs. It also identifies potential strategies to overcome biases in employment processes and suggests directions for future research. This literature review is part of a study commissioned by the U.S. Department of Health and Human Services, Administration for Children and Families, Office of Planning, Research, and Evaluation entitled *Employment Processes as Barriers to Employment in the Lower-Wage Labor Market*. This review was conducted by Abt Associates and its partner, the University of Chicago Crown Family School of Social Work, Policy, and Practice.

The structure of this report is as follows:

- **Section 1: Key Concepts and Definitions** discusses the concepts of bias and other relevant definitions and frameworks that this report uses. The remainder of the report is organized by five types of employment processes the literature indicates systematically disadvantage job seekers and workers of color (see Exhibit 1).
- **Section 2: Composition of the Applicant Pool.** The potential for racial bias starts with processes that employers use that affect the applicant pool for job openings. These processes are related to (1) where and through what mechanisms employers advertise open positions, affecting which job seekers become aware of job openings; (2) job posting content—including the job description, job requirements, and language used—affecting who decides to apply; and (3) the employer’s preferred mechanism for submitting a job application, affecting which interested job seekers successfully apply.
- **Section 3: Who Is Hired from the Applicant Pool.** Racial bias can exist in the processes employers use to make hiring decisions. These processes are related to (1) who is retained in the applicant pool, including resume and application screening using artificial intelligence; and (2) the subsequent screening of applicants being actively considered for hire, such as via interview, standardized test, or scored game.
- **Section 4: Quality of Employees’ Initial Job Assignment.** Once a job applicant is hired, racial bias can be present in processes that affect the quality of the job into which the new employee is placed. These processes are related to (1) who is assigned to what job; and (2) who is scheduled to work when and for how long.
- **Section 5: Employee Development and Support.** Racial bias can be present in employment processes that affect how, and which, workers are developed and supported in the workplace. These processes are related to (1) who receives what types of training and professional development, mentorship, and related opportunities for growth and support on the job; and (2) determining the nature of the work culture for supporting individual and specific groups of workers.
- **Section 6: Advancement and Termination.** Racial bias can be present in employment processes affecting employee promotions, raises, and terminations. These processes are related to (1) whose performance is assessed and rewarded; (2) whose performance is assessed and disciplined; (3) who advances in the workplace; and (4) who is terminated from employment.

After providing an overall summary of findings,

- **Section 7** identifies potential strategies to disrupt racial bias in employment processes in the lower-wage labor market based on this review and suggests areas for future research.

Exhibit 1. Employment Processes and Areas of Bias

1. Key Concepts and Definitions

This review is grounded in a set of conceptualizations of bias and of the lower-wage labor market. Below we define both and discuss how they are related.

1.1 Forms of Racial Bias in Employment Processes

Racial bias can be present in all employment processes, from finding, screening, and hiring job applicants and assigning workers tasks, work hours, wages, and training opportunities to determining promotions and terminations. Within these processes, racial bias may be present in areas such as managerial decision-making, the design and use of technology (e.g., to screen job applications or set schedules), and an employer's work culture. As discussed in each section, racial bias disadvantages workers of color in terms of job offers, wages, hours, opportunities for training and advancement, and job retention.

Bias vs. discrimination

A key distinction to establish for the purposes of this review is between **bias** and **discrimination**. Much of the existing research in this field—particularly in economics—focuses on discrimination. Studies of racial discrimination focus on employer decision-making—that is, how an employer treats job seekers or workers of different racial backgrounds who are otherwise similar in characteristics that employers observe. That view considers employers' actions from the employers' perspective.

This review, by contrast, focuses on outcomes of employers' decisions. For the purposes of this review, a process is defined as *biased* if its outcomes systematically disadvantage qualified job seekers and workers of color—irrespective of employers' discriminatory intent or practice. An employment process can be biased even if it is not “discriminatory” by conceptual or legal definitions.

It is not possible for employers to have perfect information about the skills of applicants or the broader pool of possible applicants. And although they have better information about their own employees than they do of job seekers, even that information is imperfect. Much of the classical economics literature on discrimination centers on the distinction between “taste-based discrimination” and “statistical discrimination.” With taste-based racial discrimination (Becker, 1957), employers have a preference for certain workers based on their race, irrespective of their objective assessment of likely productivity. In contrast, with statistical discrimination, employers are using racial identity as a signal of likely productivity that *on average* is statistically accurate at the moment of the decision (Phelps, 1972). Statistical discrimination by an employer is expected to decline as the employer receives more accurate information on each individual's productivity; for example, the employer finds with experience that productivity does not vary by race *per se* but rather with factors related to race, such as access to training.² Taste-based discrimination, on the other hand, would be unaffected by additional information

² As an illustration, take the extreme case where an employer is assessing new applicants but knows almost nothing about their potential productivity. Suppose that all applicants are from one of two groups, called Group A and Group B here, and that the only thing the employer knows about the applicants is which group (A or B) the applicant is from. Further, suppose that the distribution of productivity among members of both groups is very similar—that is, there are highly productive and less highly productive applicants from both Group A and B, but on average, applicants from Group A are slightly more productive because they have had more access to higher quality training. If the employer had perfect information about the future productivity of applicants, they would end up hiring applicants from both Group A and Group B because there are highly productive applicants in both

on productivity because such employers are willing to base decisions on race even when doing so results in suboptimal outcomes. The important point for this review is that whether taste-based or statistical, discrimination can bias employment outcomes; thus, steps should be taken to reduce both forms. As discussed in the section below, the review does emphasize different mechanisms by which employment processes can produce biased outcomes that disadvantage workers of color. But for the purposes of the review, the distinction between the roles of taste-based and statistical discriminations in producing bias is not of primary importance.

Direct and indirect racial bias

Racial bias within employment processes can take different forms. Racial bias can be **direct**, where the job applicant's or worker's race is the basis for differential treatment. That direct bias could stem from decision makers' beliefs about or attitudes toward workers of color.³ It could also stem from broader processes, policies, and systems that tend to treat individuals differently based on race. Direct bias can be explicit or implicit. **Explicit** bias is present when an individual is aware of their racial prejudice or attitude, as when a White hiring manager does not assign a new employee who is a member of a different race to a customer-facing job based on a conscious belief that workers of the new hire's race have inferior customer service skills. **Implicit** bias is present when an individual is unconscious of their racial prejudice or attitude, as when a White supervisor spends more time mentoring White team members because the supervisor unconsciously feels more comfortable interacting with them.⁴

Racial biases can also be **indirect**. Here, employer actions and organizational processes, policies, and systems are not overtly racist and might appear neutral, but they still have a disproportionate adverse effect on certain groups. For example, an employer's decision to locate its office or manufacturing facility far from neighborhoods with high concentrations of job seekers of color might be based solely on issues of cost or proximity to suppliers. Still, the effect of the decision is indirectly biased against qualified job seekers of color, who are more likely to have poor transportation access. In the same way, an employer's strong preference for using social networks such as personal contacts or employee referrals for hiring might be neutral — driven by a desire to reduce search costs and identify a pool of candidates on which they have better information about their productivity.⁵ But if most employees are White, this preference is indirectly biased against job seekers of color because they are less likely to be part of these networks (Henly, 2000). Indirect bias is a frequent result of the interplay of seemingly neutral employment processes with structural racism within other aspects of U.S. society that affect where people live, who is

groups. But if the employer knows nothing other than whether the applicant is from Group A or Group B, they might hire applicants only from Group A. Conventional economic theory would consider this to be a rational decision that constitutes “statistical,” not “taste-based” discrimination. But for the purposes of this review, that decision, though statistically rational for the employer given the information they have available, is biased. It systematically disadvantages applicants from Group B compared to counterparts from Group A who would have the same productivity. See Bartoš et al. (2016).

³ Those beliefs and attitudes include both prejudice that the economics literature would consider taste-based, as well as what that literature would consider beliefs that underlie statistical discrimination.

⁴ Though these examples are illustrative of racial bias perpetrated by White individuals affecting workers of color, such bias can also be perpetrated by individuals of color affecting other individuals of color, often when the latter hold subordinate class positions (Pyke, 2010).

⁵ Sometimes hiring through networks could also be driven by a desire to produce a more racially homogenous candidate pool, in which case the employer's decision would be a form of direct, explicit bias.

in their social networks, their educational options, prior criminal legal system involvement, and access to technology.

Combating bias requires that we understand bias regardless of its source or type. Addressing and disrupting bias within employment processes to improve racial equity in lower-wage employment necessitates that employers, policymakers, researchers, and other interested collaborators first understand where and how racial bias is present in employment processes. It also requires understanding the drivers of biased employment processes, that is, what employers do and how they do it. This literature review aims to reveal the many forms racial bias can take in employment processes, why they occur, and their consequences for job seekers and workers of color.

1.2 Characterizing the Lower-Wage Labor Market

This literature review, and the larger project of which it is a part, focuses on the *lower-wage labor market*. Rather than applying a strict threshold in defining *lower-wage*, as is sometimes the approach in studies of lower-paying jobs and occupations, the focus is on employment at the lower end of the labor market where wages are commonly too low to support individuals and families and jobs typically have little stability, few fringe benefits, and limited career advancement opportunities (Urban Institute, 2000).

Understanding the prevalence and composition of the lower-wage labor market provides a foundation for understanding the sources of racial bias examined in this review. WorkRise (2023) built a profile of workers in their “prime working years” (ages 25 to 54) in lower-wage jobs, defined as earning less than two-thirds of the median wage for workers in that age group. In 2023, that comprised workers earning below \$16.98 per hour, or roughly \$35,000 per year if working on a full-year, full-time basis. By that definition, in 2023 more than 30 million workers qualified as having low wages, 28.5% of the prime-age labor force.

Hispanic and Black workers are disproportionately represented in these jobs. Specifically, WorkRise found that **Hispanic workers make up 27 percent of workers in lower-wage jobs, compared to 15 percent of workers in mid/high-wage jobs, while comprising 18 percent of prime age workers⁶. For Black non-Hispanic workers, who make up 14 percent of prime age workers, the corresponding figures are 17 percent (lower) and 13 percent (mid/high)**. Other groups disproportionately represented in lower-wage jobs are:

- Women (52% of workers in lower-wage jobs vs. 45% of mid/high-wage workers, and 47% of prime age workers).
- Workers without a high school diploma (13% vs. 3%, and 6% of all prime age workers).

Other research has found that younger workers and foreign-born workers are also disproportionately likely to be in lower-wage jobs (Ross and Bateman, 2019). Ross and Bateman further found that nearly half of all workers in lower-wage jobs are found in just 10 occupation groups. Those are retail sales (8 percent of all workers in lower-wage jobs); information and records clerks; cooks and food preparation; building cleaning and pest control; material moving; food and beverage serving; construction trades; material recording, scheduling, dispatching, and distributing; motor vehicle operators; and personal care and service workers.

To the extent possible, this literature review focuses particularly on workers in the lower-wage labor market who are the primary source of income support in their households and have less than a four-year

⁶ Some percentages above are authors’ calculations using data presented in WorkRise (2023).

college degree, and thereby restricted career advancement opportunities. This contrasts with workers in lower-wage jobs who are secondary earners in mid/high-wage households, are traditional college students, or have higher levels of educational attainment but are early in their careers and have better prospects for career advancement.

2. Composition of the Applicant Pool

Employers balance several objectives when assembling a pool of applicants from which to hire. A key goal is to attract applicants who will meet or exceed basic job requirements, including having the required skills and the availability to work when needed (Bills et al., 2017). Employers also seek applicants who are trustworthy, reliable, and have realistic expectations about job requirements and conditions.

Employers adopt different approaches to finding candidates with these hard-to-assess qualities. One approach is to generate a small pool of applicants whose attributes are known or can be assumed (Goger & Jackson, 2020), often relying on current employees to help recruit new ones by providing referrals (Granovetter, 1995; Henly, 2000). In addition to referrals, direct application through walk-ins is an informal method that smaller employers use to recruit applicants (Holzer, 1986, p. 6). Another approach is to use job ads and postings to generate a large pool of applicants, who then submit applications that can be screened for skills, trustworthiness, and availability. Finally, employers can outsource the recruitment process to a staffing agency that takes its own approach to generating an applicant pool.

This section discusses three types of employment processes that can introduce racial bias and thus affect the composition of the job applicant pool in the lower-wage labor market: (1) processes related to where and through what mechanisms employers advertise open positions, affecting which job seekers become aware of job openings; (2) processes related to job posting content—including the job description, job requirements, and language used—affecting who decides to apply; and (3) processes related to applying for a job opening using the employer’s preferred submittal mechanism, affecting which interested job seekers successfully apply. Racial bias in these recruitment processes can lead to an applicant pool that excludes qualified workers of color.

2.1 Processes Affecting Who Is Aware of Job Openings

An employer’s processes for determining whether, where, and through what mechanisms to advertise an open position can negatively affect job seekers of color. These processes include reliance on informal mechanisms such as referrals and direct applications, formal mechanisms such as job advertisements (which increasingly occur online), and/or use of staffing agencies.

2.1.1 Referrals

Many employers rely on referrals as the sole or primary recruitment strategy to fill positions, so “the power of who you know goes a long way” in learning about these job openings (Reeves & Deng, 2022, p.3). Social networks are particularly crucial for finding and obtaining jobs in the lower-wage labor market (Henly, 2000). Because these networks tend to be racially homogeneous and localized, job seekers of color and job seekers who live in low-income areas often do not hear of or get referred to opportunities in predominantly White, higher-income areas where many employers are located (Holzer, 2000; Henly, 2000; McPherson et al., 2001). One study mapped interpersonal networks in a large American city and compared them in terms of their value for helping to access jobs (Busette et al., 2020). The study found networks are strongly homogeneous across racial groups, and thus information and resources associated with networks flow within racial groups rather than between them. Black men had the least access to job information through their networks.

Even when Black job seekers’ networks are similarly effective as White job seekers’ networks in providing information about job openings, they can be less effective in leading to employment because Black job seekers’ networks are less likely to include someone working at the employer or who can contact the employer on their behalf (Pedulla & Pager, 2019). Though not necessarily motivated by race, network-based hiring nonetheless can perpetuate racial inequality (Ionnides & Datcher Louri, 2004). For example, technology companies—although not always part of the lower-wage labor market—fail to find and retain diverse, qualified workers due to, among other factors, “narrow hiring pipelines” and “an overreliance on exclusive social networks” (Goger & Jackson, 2020).

2.1.2 Direct Application

In addition to referrals, some employers might use another informal method to fill jobs—direct application (e.g., walk-ins)—although this is becoming increasingly infrequent except among small “mom and pop” employers. One older study found that the largest contributing factor to higher rates of job offers received by White compared to Black youth was the use of direct application. According to the study, the “large racial difference in this category, compared to more formal methods [of job recruitment] where criteria are likely to be more standard and objective, suggests that discrimination may be a relevant explanation for a major part of the difference in youth employment probabilities” (Holzer, 1986, p. 6). More recent research lends support to the effect of bias when employers know the race/ethnicity of the applicant early in the recruitment process, as with direct application. One study found that identically qualified Latino and especially Black male applicants were much less likely than White male applicants to receive callbacks or job offers for entry-level, lower-wage jobs after direct application and initial interviews with employers, due to racial bias (Pager et al., 2009).

2.1.3 Job Advertising

Employers most commonly fill jobs by advertising job openings through an array of methods. Where and through what mechanisms employers advertise jobs can affect which job seekers learn about them. Job openings advertised mainly in print, such as in local newspapers, are likely more accessible to job seekers within geographic proximity to the advertising employer. Thus, information available, for example, to inner-city Black applicants about openings in more job-rich areas, such as predominantly White suburbs, can be limited (Holzer, 2000).

Today, employers primarily turn to the internet to advertise jobs, often using “algorithmic ad platforms and job boards to reach the most ‘relevant’ job seekers.” These predictive technologies target who is most likely to click on a job ad (versus who is most qualified), which “reinforces gender and racial stereotypes, even when employers have no such intent” (Bogen, 2019). One study found that broadly targeted ads on Facebook for supermarket cashier positions were shown to an audience of 85 percent women. At the same time, jobs with taxi companies went to an audience that was approximately 75 percent Black (Ali et al., 2019, p. 2). Such ads can thus exemplify statistical discrimination in targeting audiences based on whether they are more likely to be demographically representative of existing workers in the job being advertised, limiting reach to expand diversity. Another study based on qualitative interviews with 15 employers of workers in lower-wage jobs reported that local hiring managers join specific Facebook groups for job seekers in their industry area and then post their openings on the thread or in response to individual comments (Lu & Dillahun, 2021). This practice potentially brings local workers and hiring managers together but also can introduce bias if hiring managers try to interpret cues about job seekers’ credibility or commitment from their Facebook profiles and posts as a prescreening mechanism.

Other technologies developed by companies such as Facebook and Zip Recruiter use algorithms to “learn” employers’ hiring preferences based on past recruiting interactions to determine which job seekers to solicit for new openings, which can reinforce biases (Bogen, 2019). Beyond direct bias inherent in some of the technologies used to recruit job seekers, employers’ exclusive use of the internet to advertise job openings negatively affects opportunities for job seekers with limited digital access and/or digital literacy (see [Digital Access](#) box, below).

2.1.4 Staffing Agencies

Many employers use independent staffing agencies to meet their recruitment needs, particularly for positions that are lower wage, do not require substantial formal training, and are temporary and/or part-time positions. These agencies can also exhibit bias in selecting job seekers for open positions. One study of multiple Chicago staffing agencies found that 38 percent discriminated against Black job seekers, who

Digital Access, Digital Literacy, and Bias in Employment Processes Affecting the Applicant Pool

The “digital divide” affects all aspects of employment opportunities, including processes that determine applicant pool composition. Black and Hispanic/Latino households are far less likely to have at-home internet and digital literacy; that is, the skills needed to effectively use information and communication technologies. For example, the National Skills Coalition (2020) found that 17% of Black and 32% of Latino/Hispanic workers have no digital literacy, compared to 9% of White workers. Digital access and literacy are critical to the job search and application processes. According to a Pew Research Center study, 79% of Americans who recently searched for a job used online resources, roughly equal to the combined proportion who used close personal connections, professional contacts, employment agencies, and job fairs (Smith, 2015b). Employers that rely on the internet to post jobs and accept applications can exclude qualified candidates who have limited internet access and/or digital literacy (when these are not needed for the position). To apply for a job, an applicant might first have to complete an online application with multiple fields and pages, upload documents such as a resume and work sample, take an online pre-employment assessment, and have ready access to email to receive correspondence about their application.

Another Pew study found that far fewer low-income Americans, a group in which individuals of color are overrepresented, than high-income Americans have home computers (59% vs. 92%), broadband internet at home (57% vs. 93%), or own smartphones (75% vs. 97%) (Vogels, 2021). Individuals who have less educational attainment and are unemployed thus are required to rely much more on smartphones than computers for searching for and applying for jobs (Smith, 2015a). Pew further found that nearly half of job seekers using smartphones reported challenges accessing job-related content and reading job posting text because of how content displayed on their phones; more than a third reported difficulty entering text and submitting files on their phones when completing job applications (Smith, 2015a). Although job seekers without a home computer or internet can find public access (e.g., libraries), that access is often time limited and thus not amenable to responding quickly to communications from potential employers (Kang, 2016).

were offered jobs at just 75 percent the rate of Hispanic or Latino applicants (Scott, 2021).⁷ That study further found that those staffing agencies offered 82 percent of job assignments exclusively to either an equally qualified Hispanic/Latino or a Black job seeker (as opposed to both), unlawfully steering certain job applicants to specific jobs based on race or ethnicity.

2.2 Processes Affecting Who Decides to Apply for Job Openings

A job seeker who is aware of a job opening first will read and assess the content of the job posting, which has the potential to include racial bias, both within the job description and within the specific job requirements. As discussed in this section, the job description might intentionally or unintentionally include racially “coded” language that discourages certain job seekers from applying, even for lower-wage positions. Or the posting might be indirectly biased by requiring higher levels of skills and/or experience than are needed to perform the job functions.

2.2.1 Job Posting Phrasing

Much of the research about biased language in job postings focuses on gendered language in male-dominated industries, which can be instructive when considering racially coded language. “Masculine-themed” wording (e.g., *competitive*, *leader*, *he*, *his*) in job advertisements can serve to maintain gender inequality in traditionally male-dominated occupations by effectively discouraging women from applying to these jobs (Gaucher et al., 2011; Nobel, 2017; Bickmore et al., 2021). Both gender and racial bias are apparent in job description language designed to appeal to young White men (e.g., *ninja*, *rockstar*, and

⁷ Similar research by Bendick and Cohn (2021) also argues that Black applicants are disadvantaged compared to identical Latino applicants in lower-wage jobs.

mention of workplace “perks” such as beer fridges and ping-pong). Ads that reference “native English speaker” or use the term “legal” discourage immigrant job seekers from applying (Davis, 2022; Ongig, 2022).

2.2.2 Job Requirements

Employers often have legitimate reasons for requiring a formal credential—even a bachelor’s degree—for entry into lower-wage jobs. For example, automation and other changes to the nature of work can necessitate higher-level or specialized skills for occupations in fields such as advanced manufacturing. On the other hand, research shows that employers raise hiring requirements when the labor market changes, rather than when the job has changed (Modestino et al., 2016; 2020). In particular, employers have been found to require a formal credential when loose labor market conditions (a higher supply of job seekers competing for fewer available jobs) allow for it, even when job tasks do not require additional skills.

These job requirements reduce the applicant pool (Kelly et al., 2022), with a particular effect on job seekers of color, who overall have lower levels of educational attainment. This includes “middle skills” jobs that traditionally require more than a high school diploma or equivalent but less than a bachelor’s degree (Fuller & Raman, 2017; Fuller et al., 2022). Recent analyses reveal how Black job seekers are often excluded from higher-wage jobs through employer practices that raise educational requirements beyond that necessitated by job tasks, such as requiring a college degree when in the past a high school diploma was sufficient (Hamilton & Darity, 2013). Employers could use minimum educational requirements because they lack ways to gain credible information on applicants’ skills. Fuller et al. (2022) suggest that employers might use degree requirements as a proxy for “soft skills” (e.g., communication skills, ability to work with others), which can be difficult to assess.

2.2.3 Job Location

Job location can affect application decisions. Research suggests that spatial mismatch between the physical location of jobs and where job seekers of color reside at least partially explains racial disparities in employment (Holzer, 2023). Job seekers tend to prefer jobs located near their homes to facilitate caregiving and minimize commuting time and costs (Gobillon et al., 2007). Studies indicate that not only do Black neighborhoods have fewer jobs than more affluent White neighborhoods (Stoll, 2006; Stoll & Covington, 2012), they also have less efficient and fewer public transportation options (Spieler, 2020). Studies indicate that the transportation systems serving Black and Hispanic neighborhoods are “riddled with inequities” that derive in part from the view that members of White communities have to be enticed to use public transportation whereas members of communities of color can be depended on, and are dependent on, public transportation (Spieler, 2020). Although some evidence indicates that spatial mismatch might be lessening in recent years, current research reinforces the negative effects of job locations outside of job seekers’ neighborhoods, particularly for Latino and Black workers and in the context of limited transportation options (Paul & Morris, 2022).

2.3 Processes That Affect Who Submits a Job Application

A job seeker who decides to apply for a posted opening must successfully navigate the employer’s application process. Applying can entail responding to questions that do not match job requirements and are difficult for some job seekers to answer, including questions about criminal legal system involvement (see [Ban the Box](#) box, *below*). Additionally, applying can require providing documentation, such as specific references, licenses, or forms of identification, that are not related to job tasks and are difficult or impossible for some applicants to access. Finally, the process can present barriers to applying, such as onsite hiring kiosks that require digital access/literacy (see [Digital Access](#) box, *above*).

Information in resumes that indicate the likely race of applicants of color are linked to lower rates of callbacks and job offers for these job seekers (Pager et al., 2009; Howard & Borgella, 2019). Although most of this research examines racial bias in applications for professional or technical positions, research

by Kline and Walters (2021) found racial bias against distinctively Black names among managers hiring for all types of jobs (see Section 3.1.1). A study by Kang et al. (2016) found that applicants of color who altered their resumes to “Whiten” them (i.e., remove elements that would identify them as not White) received more callbacks. Beyond the equity-related problems with that approach, researchers further found that whitening backfired in some cases when job applicants of color deleted experiences from their resumes that demonstrated skills/expertise relevant to the job (Kang et al., 2016). The study authors also found that a smaller proportion of job seekers of color modified their resumes when the job postings included an explicit commitment to diversity. Particularly troubling is that despite a stated commitment to diversity, these employers made fewer callbacks to applicants of color than their White counterparts.

“Ban the Box” and Bias in Employment Processes Affecting the Applicant Pool

Employers use of job postings—or more commonly, job and application questions—that discourage otherwise qualified individuals with criminal records from applying for a job reduces the diversity of the applicant pool. Jurisdictions throughout the United States have adopted “ban the box” and other “fair-chance” hiring policies to address this bias and the resulting disparities in employment outcomes for job seekers with criminal records, who are disproportionately Black and Latino/Hispanic men (Agan & Starr, 2018). Ban the box policies prevent employers from conducting criminal background checks until an applicant is further in the hiring process. This gives the applicant an opportunity to detail relevant skills and experience without being quickly screened out by a hiring manager or electronic screening software based on responses to questions about criminal legal system involvement.

Despite broad support for ban the box policies, research suggests they have done little to remove barriers to employment for these job seekers, and in some cases they have exacerbated racial stereotyping (Doleac & Hansen, 2016). Research indicates that when questions about prior convictions are excluded on a job application, it can lead some hiring managers to assume criminal legal system involvement when they see gaps in employment and low educational attainment, such as a GED or no high school diploma, combined with the applicant’s age, race, and gender, especially for young Black men. In this way, ban the box policies can increase the racial disparity in callback rates between Black and White applicants (Agan & Starr, 2018). In leaving the employer space for generalization and negative stereotyping, ban the box policies appear to decrease callback rates for Black and Hispanic/Latino applicants—and increase rates for White applicants—regardless of criminal history (Barnes, 2020).

This evidence does not invalidate the importance of efforts to reduce barriers to employment for qualified applicants with past criminal legal system involvement. Emsellem and Avery (2016) of the National Employment Law Project argue that managers’ use of applicant race and age as proxies for criminal legal system involvement is akin to racial profiling and that the real take-away from these studies is “the need for stronger antidiscrimination law enforcement and further policy reforms to help eradicate the underlying discrimination” (p. 1). A primary weakness of ban the box policies is that they do not remove or reduce employer hesitation about hiring individuals with criminal backgrounds, which stems largely from concerns about liability and work readiness or ability.

2.4 Strategies for Disrupting Bias in Processes Affecting the Applicant Pool Composition

There are no simple solutions for disrupting racial bias in processes affecting the composition of the applicant pool. Much of the responsibility for addressing these biases lies with employers. As a starting point, employers can acknowledge that bias exists within these processes, work to identify where it exists, and implement strategies to minimize it (Knight, 2017). Specific strategies employers and stakeholders can adopt are:

- **Deploying more formal, standardized methods of publicizing job openings that minimize the use of referrals or walk-ins, to reduce direct and indirect bias within these informal methods.** Referrals will certainly continue as a method for finding job candidates, particularly in

2. COMPOSITION OF THE APPLICANT POOL

lower-wage labor markets, but employers can take steps to diversify their networks, including incentivizing employees to refer candidates of color.

- **Diversifying where they advertise open jobs, including by targeting job boards and other resources that reach communities of color.** For example, employers can partner with labor market intermediaries connecting them with job seekers of color (Holzer, 2000). Entities such as American Job Centers (AJCs), which provide services to employers and job seekers, can reduce job seekers' reliance on referral networks and provide access to digital technology needed to apply for jobs. AJCs, in turn, must build trust among employers that the job candidates they refer are high quality (Henly, 2000). AJCs and other community-based agencies can vouch to employers that their services are voluntary (job seekers engage due to a desire to work, not because they are mandated) and strive to “reach a wide range of job seekers, develop strong relationships with employers and job seekers, and operate...in a professional, flexible, and nonbureaucratic fashion” (Henly, 2000, p. 156). Lower-wage job seekers might see community organizations as particularly credible sources of job referrals (Fuller et al., 2022).
- **Determining whether the job advertising algorithms they use (or are considering) lead to more equitable hiring outcomes** (Bogen, 2019). Such an examination led Amazon, for example, to discontinue a predictive tool it used to help recruiters find passive candidates (individuals not actively looking for new employment) to solicit because it demonstrated bias against women (Bogen, 2019). Digital advertising platforms similarly can take steps to address discrimination through “increased commitment and transparency...as well as development of new algorithmic and machine learning techniques” (Ali et al., 2019, p. 15). And though laws in the United States prohibit discrimination in marketing employment opportunities, lawmakers can do more work to update civil rights protections as applied to new hiring and job advertising technologies (Ali et al., 2019; Bogen, 2019).
- **Removing biased, racially coded language from job descriptions and replacing it with neutral, unbiased language and specific, clear descriptions of the skills required.** There are several technological solutions to address this form of bias. For example, companies can use [Ongig's Job Description Text Analyzer](#) to scan their job postings for exclusionary phrases based on the reader's race/ethnicity, primary/secondary language, and immigration status. Another innovative technological solution uses an artificial intelligence “virtual agent” based on a Black woman job seeker to review and provide feedback on a draft job description; this use of virtual reality encouraged users to remove bias from their job postings (Bickmore et al., 2021).
- **Eliminating degree requirements that are not necessary to perform a given job.** Though not specific to the lower-wage labor market, a recent study of information technology jobs posted between 2017 and 2020 found that employers began to move in this direction, likely in response to a labor shortage exacerbated by the COVID-19 pandemic (Fuller et al., 2022). Because employers might use degree requirements as a proxy for soft skills, the authors found that when employers removed degree requirements from their job postings, they replaced them with more explicit and detailed requirements for soft skills. The result is increased clarity for both employer and job seeker, as well as training providers, about the specific skills necessary to perform a given job. One study recommends that employers “give a work sample test” that requires applicants to solve work-related problems or complete a skills test. The work sample test enables the employers to compare the judgement of applicants, whereas the skills test “force[s] the employers to critique the quality of a candidate's work versus unconsciously judging them” (Knight, 2017).

Example: HireReach

Accurately assessing the skills needed to perform a job is the foundation of the “evidence-based selection process” for hiring currently practiced by [HireReach](#), an employer-training academy in partnership between a group of local employers (Talent25) and a local workforce agency in Michigan (West Michigan Works!). This initiative, funded by the W.K. Kellogg Foundation and the Doug & Maria DeVos Foundation, seeks to shorten the hiring process, improve job retention, and increase diversity. Early in the academy, employers conduct a job grouping exercise in which they identify the foundational and occupational competencies of their jobs, using O*NET, the Department of Labor’s Occupational Information Network, to better understand the specific skills required for those jobs. Employers then implement a series of standardized steps, which seek to remove bias from and improve the efficacy of their hiring. One of the standardized steps includes administering online assessments for job applicants that seek to measure overall job fit and interest and produce a score on a 5-star scale. Employers are trained to interpret the assessment results and can use this tool to hire external candidates or promote internally.

- **Reducing the impact of limited digital access and literacy on job seekers’ ability to find and apply for job openings.** Employers can use non-digital methods alongside digital ones for posting jobs and for the completion and submission of job applications, as well as ensure that online materials are “smartphone friendly.” Beyond these employer practices, public policies and investments can increase access to computers and broadband internet, as well as provide digital skills, to communities of color (Chakravorti, 2021).

3. Who Is Hired from the Applicant Pool

For employers that approach recruitment by generating a pool of applicants, the next step in the hiring process is to screen applications to identify whom to hire. Selecting applicants for hire into a lower-wage job typically begins when an employer representative—or an automated system—screens the submitted application, commonly without any interaction with the applicant. If the application is retained at this initial screening, the employer representative, or the technology, might advance the applicant to the next phase of screening, which varies across employers.

Carefully screening applications and conducting interviews can be time-consuming, so employers seek ways to streamline the hiring process, particularly for low-paying jobs. Because it is difficult, and costly, for employers to accurately assess how well applicants will perform on the job, employers often use information such as educational credentials and assessment tests to proxy skill levels and desired worker characteristics such as reliability. Increasingly, employers are looking to emergent hiring technologies to reduce their time-to-hire and increase the overall quality of their workforce by freeing up more time for managers to focus on applicants ranked as most qualified.

This section discusses two types of employer processes that can introduce racial bias and thus affect who is hired from the applicant pool: (1) those affecting who is retained in the applicant pool, including resume and application screening using artificial intelligence (AI); and (2) those affecting applicants who have survived the initial screening and are actively being considered for hire. This subsequent screening could involve an interview or a standardized test or gamification in which an applicant participates in a computerized game to measure basic skills. Racial bias in these screening processes can result in low hire rates and lengthened unemployment among qualified workers of color.

3.1 *Processes Affecting Who Is Retained in the Applicant Pool*

3.1.1 **Resume and Application Screening**

Several studies document bias in resume screening. First, applicants with last or first names common to Black people are less likely to be selected for interviews than are applicants with names common to White people (Bertrand & Mullainathan, 2004; Kline & Walters, 2021; Kline, et al., 2021). Although most of the research on bias in the screening of resumes focuses on hiring for professional and managerial positions, Kline and Walters (2021) demonstrated that hiring managers are biased against distinctively Black names for jobs at all levels of the labor market.

Hiring managers also sometimes use gaps in employment history to screen resumes, eliminating those with longer spells of unemployment. Black workers, especially Black men, spend more time than White men unemployed while seeking a job (Weller, 2019). Recent experimental research suggests that the strong congruence between race and length of unemployment can also result in employers paying less attention to spells of unemployment when hiring Black as compared to White job seekers. “[B]ecause stereotypes about unemployed workers overlap heavily with employers’ stereotypes of [B]lack workers as having low levels of competence, poor work ethics, and ‘spotty’ employment histories,” employers may see information on long-term employment as redundant to information on race” (Pedulla, 2018, p. 1478). In essence, being Black is itself enough to diminish job prospects, regardless of length of unemployment.

3.1.2 **Algorithmic Application Screening**

Some employers use computerized (algorithmic) application screening with the intent of reducing racial and gendered biases, decreasing time-to-hire, and/or increasing the overall quality of their workforce (Bogen & Rieke, 2018; Deros & Ryan, 2018; Zschirnt & Ruedin, 2016). Although it is unclear how common the use of such technologies is in the lower-wage labor market *per se*, 98 percent of Fortune 500 companies use what are referred to as “Applicant Tracking Systems” in their hiring process. Many of these employers have large hourly workforces in high-turnover jobs they seek to fill quickly (Sánchez-

Monedero et al., 2020, p. 458). In most cases, these technologies act as a filter, automatically removing the “least qualified” applicants from the applicant pool, increasing the time the human resources professional or hiring manager can spend on the remaining “more qualified” applicants.

Proponents of these screening methods argue that the tools allow for fairer treatment of applicants compared to traditional hiring methods (Chamorro-Premuzic & Akhtar, 2019; Polli, 2019). For example, a busy hiring manager might select only a few applicants based on narrow criteria, such as a particular credential, and thus bias the applicant pool away from applicants with comparable skills and experience. A computerized screening tool can take many qualities into account to assign every applicant a composite score that broadens the pool of applicants for the manager’s close consideration. The rationale is that each applicant is ensured a fair shot at passing the screen, regardless of their background.

Algorithmic approaches to hiring could hold promise to disrupt racial bias, but evidence questions this claim (Ajunwa & Greene, 2019; Köchling & Wehner, 2020; Li et al., 2020). When software rather than people screens resumes, applicants of color are hired less often (Bogen & Rieke, 2018). The algorithms used to remove applicants from the pool suffer from many of the same limitations that undermine the fairness of algorithmic solutions in a variety of areas, from policing and sentencing to receipt of public benefits (Eubanks, 2018; Noble, 2018; O’Neil, 2016).

One such limitation is that algorithms are trained on “what is.” For applicant-screening algorithms, this means that the characteristics of workers searched for by the algorithm are those found in the current and recent workforce (Ajunwa, 2020; Bogen & Rieke, 2018; Köchling et al., 2021). This tends to privilege the credentials common to White male workers, especially when hiring for high-quality jobs (Eubanks, 2018). Even when using “big data” with substantial numbers of non-White workers to train algorithms, nuanced patterns of success are hard to discern because information on race is often missing or coded inconsistently in employer databases; for example, some firms categorize race as “African American” whereas others use “Black” (Hooker, 2021).

3.2 *Processes Affecting Applicants Being Considered for Hire*

3.2.1 **The Interview**

For job applicants that are retained in the applicant pool, the next screening step is typically an interview with a human resources professional, worksite hiring manager, or in smaller workplaces, a staff supervisor or business owner. Interviews are another potential area for both explicit and implicit bias. Bias at this step can be difficult to measure, though, because employers typically provide limited information to applicants or otherwise document why they were not offered a job following an interview. On the positive side, an interview affords the applicant an opportunity to explain gaps in employment that might otherwise be attributed to lack of experience or other personal shortcomings. On the negative side, the hiring manager might use the interview to further stereotype an applicant based on characteristics deemed unfavorable, placing the applicant at risk of not being hired or of being “down channeled”—that is, channeled into a less desirable position with little customer interaction (Langston et al., 2020).

In the same way that some employers use technology to reduce applicant screening costs and increase fairness, some include automated video interviews in their screening process. Regardless of who the applicant is or how well they answered a prior question, each question is asked the same way to every applicant, decreasing bias in the content of the interview. Rather than requiring applicants to interview at a specific time of day or even in a specific location, which can be difficult to orchestrate due to childcare duties, school, or erratic work schedules, applicants can interview whenever it suits them. Employers are using automated interview systems to fill entry-level jobs. For example, [HireVue](#), one vendor of “hiring intelligence platforms,” offers an integrated system (job posting, application, interviewing, evaluation of fit) for hiring workers into hourly positions in manufacturing, retail sales, and hospitality.

Although the use of video interviewing, given its increased accessibility and standardization, holds promise to improve the fairness of interviews, it can also embed bias. Using AI to evaluate video interviews is proving problematic, especially for reducing racial and gender bias (Fernández-Martínez & Fernández, 2020). Some AI systems monitor facial expression, eye movement, and vocal tone. Research on these technologies reveals bias. For example, facial recognition software performs worse in judging emotions of interviewees with darker skin. And cultures vary in direct eye contact; and pronunciation and tone of words vary by ethnicity and region of the country (Buckingham, 2021; Köchling et al., 2021). Some critics of using AI to screen video interviews seek to regulate or ban its use. In 2020, the state of Illinois enacted the Artificial Intelligence Video Interview Act, which requires companies to notify applicants that AI will be used to assess their video interview and on what criteria, to secure applicants' consent to the use of AI, and to limit the use of the video to the sole purpose of hiring. Some software vendors that incorporate video interviews into their platforms responded to criticisms of bias by excluding facial recognition software and by taking additional steps to reduce bias. The extent to which these steps help disrupt bias is strongly questioned (Deros & Ryan, 2018; Sánchez-Monedero et al., 2020).

3.2.2 Pre-Employment Tests and Games

The screening process does not always involve an interview, especially when there are few job requirements and many vacancies to fill, as is often true in the lower-wage labor market. Instead of, or in addition to, a screening interview, some employers incorporate one or more cognitive test as part of the screening process, assessing cognitive aptitude (i.e., verbal, math, and spatial reasoning), personality, emotional intelligence, or risk tolerance. The ability of cognitive tests to predict success on a particular job has long been debated (Aguinis et al., 2010). Tests are often “normed” on current job holders, creating a possible source of racial and gender bias comparable to those found in resume screening algorithms.

The new trend in testing applicants' suitability for a job is “gamification.” Applicants complete a set of games during the screening process. Developers pitch these screening systems to employers as measuring basic skills and propensities that predict job success while simultaneously avoiding the cultural biases structured into conventional multiple-choice tests. Gamification is gaining popularity in the lower-wage labor market (Hon, 2022). Part of employers' rationale for using gamification is to reduce implicit bias in the application process by evaluating an applicant's skills directly instead of from the credentials and experience listed on a resume (The Talent Games, 2022). For example, Amazon does not require an in-person interview for positions in its warehouses (except for drivers). Instead, its online application includes three games. Applicants are instructed: “After answering a few optional questions about your work history, you'll play three puzzle games. Watch the instruction video before you start, relax, and do your best. This important step is where your organization skills can really shine.”⁸

As in other types of AI used to screen applicants, the games could build in biases by using predictive assessments (Equalture, 2022). Critics of gamification seek more information on how the games' scores map onto job duties and job success (Raghavan et al., 2020), a condition of fair employment practices under U.S. Equal Employment Opportunity Commission guidelines. The fact that multiple employers contract with the same vendors for applicant screening services raises the risk—at least in theory⁹—that job applicants' score on a game travels with them as they apply to jobs with different employers, shaping their prospects for employment long term and without their knowledge.

⁸ <https://hiring.amazon.com/hiring-process/application-guide/>

⁹ Anecdotally, a member of our research team had that exact experience.

3.3 *Strategies for Disrupting Bias in Processes Affecting Who Is Hired from the Applicant Pool*

The literature provides compelling evidence of racial bias in the process of screening applicants for jobs. The literature also suggests ways to reduce racial bias, including new technologies, though these suggestions are based more on rationale than rigorous evidence at this point. Even so, below are a set of pragmatic interventions that, with rigorous evaluation, hold promise for diminishing racial bias in the screening process. Specific strategies, primarily for employers, that can potentially be adopted and evaluated include:

- Blinding resumes and applications to reduce explicit and implicit racial bias in hiring.** Because of the racialized nature of names and educational institutions, employers can adopt systems in which applicants submit their initial application using an identification number and restrict information to educational outcomes (e.g., high school diploma or equivalent, bachelor's degree) rather than the name of the institution attended. Information on race, gender, or age would not be collected on the application (Lin et al., 2021). Some employers, such as Deloitte and Ernst & Young, have already adopted such practices with the goal of expanding their labor pool and reducing racial and gender bias. The extent to which blinding is sufficient to reduce barriers to positive employment outcomes for job applicants of color in entry-level jobs has not been rigorously assessed, however. It could take several iterations to develop applications that are sufficiently de-racialized, as resumes and applications contain subtle cues that can signal minority status (Bogen & Rieke, 2018; Dovidio & Gaertner, 2000).
- Increasing the transparency of hiring processes and auditing racial disparities to identify and disrupt sources of racial bias in each component of the hiring process.** Improving transparency and accountability is the most common suggestion made in the literature to disrupt racial bias in hiring processes (see Bogen & Rieke, 2018; Fernández-Martínez & Fernández, 2020; Guest & Cleveland, 2019; Schumann et al., 2020; Nandigama & Shyamsunder, 2021). Raghavan et al. (2020) suggest that employers and the software vendors they use provide details of their hiring processes and issue reports on their outcomes, breaking out statistics by applicant characteristics. Although job seekers might not consult such statistics before applying for a job, the information could inform the efforts of labor groups, reporters, policy advocates, and business leaders. Researchers in business schools also advocate for greater transparency and for systematically tracking applicants throughout the screening process so that points of bias can be identified (see Chamorro-Premuzic & Akhtar, 2019). Lu and Dillahun (2021) join the call for greater transparency, arguing that, at the least, employers should provide applicants with information on whether their application was reviewed and the number of workers hired in the past week, to rebalance power between applicants and employers. Some current computerized screening systems already have the capacity to produce reports that break out each component of screening by race and other personal characteristics. It is unclear what proportion of employers, and which ones, use such capabilities, and if they do, how this information is used to reduce bias. Assessing the outcomes of screening and hiring systems could be a promising strategy for disrupting racial bias in organizations that use software to screen applicants (Schumann et al., 2020).¹⁰

¹⁰ Bornstein (2017) argues that companies that do not take steps known to reduce sources of racial bias in their employment processes are engaging in “reckless discrimination,” which amounts to intentional disparate treatment under Title VII of the Civil Rights Act.

Example: New York City's AI Law

Public policies can support transparency and auditing racial disparities in employer hiring processes. For example, New York City recently passed a landmark law, effective in January 2023, that requires employers to audit the AI systems they use for hiring to assess racial and gender bias and holds employers liable for failing to comply. As a new and unfamiliar requirement, employers are looking for guidance on how to comply (Vanderford, 2022).

- **Training managers to avoid racial bias as they screen applicants, because, at a minimum, the last step in the screening process almost always includes a person.** Managers need to know how to use information on applications if they are to disrupt racial bias. The literature clearly indicates that technology cannot reduce racial bias on its own. Interventions to reduce racial bias in hiring will be successful only if they include attention to implementation by the person or people who are involved in each phase of screening. This could involve training staff at multiple levels of an organization. Many companies, for example, implemented “unconscious bias (UB) training” to disrupt bias, including bias in the screening process. However, a 2019 meta-analysis (Forscher et al., 2019) and an in-depth review of more than 700 employers (Kalev et al., 2006) find that UB training is often ineffective and can even contribute to additional racial and gender bias if not implemented well. Other research suggests, however, that UB training can be effective if it is mandatory, tracks the racial and gender makeup of hires over time, and provides concrete strategies for reducing bias, but only 10 percent of UB training programs examined incorporated such strategies (Gino & Coffman, 2021).
- **Training and supporting job seekers of color in the lower-wage labor market to help them master today’s screening processes.** In addition to preparing applicants for interviews, both in person and by video, training can help job seekers of color prepare for potential testing and gamification. Workers in lower-wage jobs who have little time or money to prep on their own or who are unfamiliar with technology or unaware of gamification’s use in recruitment are likely to be at a substantial disadvantage in ultimately securing a job, even when they pass the initial screening hurdle. Widely advertising and providing training free of charge both seem essential to improving racial equity in screening processes and, ultimately, in hiring. Although our review revealed that some workforce development programs are providing training in video interviewing,¹¹ we did not find any research on training effectiveness or any examples of programs preparing job seekers for gamification.

¹¹ For example see the “How to Prepare for a Video Interview” workshop offered by Jefferson County’s (CO) Business & Workforce Center [here](#), [this video](#) on “Ready to Work: Land the job with virtual interview prep” from Workforce Solutions Borderplex (West Texas), and [this primer](#) from Illinois workNet.

4. Quality of Employees' Initial Job Assignment

Employers place newly hired employees in a job with a particular status (e.g., full-time, part-time, temporary) and compensation structure (e.g., hourly, salaried, eligibility for benefits). In doing so, employers seek to balance the often-competing goals of maintaining a workforce that will deliver acceptable quality products and services while also controlling costs for labor. How employers navigate these forces has important ramifications for the quality of the job in which newly hired workers are placed.

This section discusses two central employer processes that can introduce racial bias in ways that affect the quality of the job into which a hired employee of color is initially placed: (1) processes affecting who gets what job, particularly occupational segregation by race; and (2) processes affecting who gets how many and what hours, including decisions affecting staff size and composition, scheduling, communicating the work schedule, and making adjustments to the schedule once posted.

4.1 Processes Affecting Who Gets What Job

Initial job placement is a critical step in the employment process because it typically determines the occupation that workers will enter and wages they will receive. Studies show that much of wage inequality occurs between occupations (Penner 2008; Wilmers & Aeppli, 2021). Thus, initial job placement is a critical juncture where racial disparities emerge. The literature provides strong evidence of racial bias in employment at the point of initial job placement. For example, recent analyses of U.S. Census Bureau Current Population Survey data show that at the start of the COVID pandemic, Black women were more likely than their White counterparts to be working in jobs requiring close physical proximity to clients, patients, or colleagues—jobs that pay the lowest wages within the occupation (Biu et al., 2021). When it comes to key sectors of the lower-wage labor market, a series of Restaurant Opportunities Centers (ROC) United studies provides evidence on both the nature and ramifications of the sorting that occurs at the point of hire in the restaurant industry (ROC United, 2015; ROC United & ROC Seattle, 2020; see also Bendick et al., 2010). Women and hires of color are concentrated in the lowest-paying segments (fast-food) and sections (back-of-the-house, such as dishwashers) of the restaurant industry. Similar racial disparities in job placement are found in the retail sector, as well. Notably, Black and Hispanic/Latino retail workers are overrepresented in cashier positions, which are the lowest-paying jobs in retail (Ruetschlin & Asante-Muhammad, 2015).

Qualitative studies further show how racial disparities in wages and work hours occur at the point of initial job placement. For example, one in-depth study of sorting by race and ethnicity in three high-end restaurants in Los Angeles shows how both explicit and implicit bias, by managers and customers, led to the placement of White workers into customer-facing positions that offered workers ample tips and flexible work hours, whereas Hispanic/Latino workers were relegated to back-of-the-house positions that were low paying with erratic hours (Wilson, 2020).

Initial job placement matters for not only initial wages but wage growth, as well. Because companies typically establish pay bands that limit the range of wages for each job title/position, wages are capped at some point no matter how much experience a worker brings or accrues. As workers of color are disproportionately represented at the lower tiers of jobs with narrow wage ranges, they are at higher risk of low hiring wages and limited wage growth. In the context of occupational stratification, in which workers of color, compared with White workers, are systematically assigned to lower-level jobs, these policies disproportionately disadvantage workers of color even when “evenly” applied to all workers in the same job (Lambert, 2008; Lambert et al., 2014).

4.2 Processes Affecting Who Gets How Many and What Hours

Unless codified in company policy, an employment contract, collective bargaining agreement, or new municipal scheduling ordinances, employers are not required to provide employees a specific number of hours of work, advance notice of their work schedule, or input into their schedule. Although the federal Fair Labor Standards Act (FLSA) requires that workers paid by the hour receive an overtime premium for the hours they work beyond 40 per week, the FLSA does not limit the hours that employees can be required to work, except for a few occupations (e.g., airline pilots, some medical personnel, truck drivers, and airport traffic controllers). At the point of hiring, new hourly employees commonly learn their title, wage rate, benefits for which they are or can become eligible, employment arrangement (part-time, full-time, temporary/seasonal, independent contractor), and work location. Information about the times and days they will work might be less forthcoming, however. Although new hires might have initially been promised steady, full-time hours, they can be scheduled for far fewer hours or hours that vary week to week. They also might find that they are required to regularly work more or fewer hours than they were told at the time of hire. Workers in lower-wage jobs, especially workers of color, are at heightened risk of problematic work schedules, as outlined below.

4.2.1 Racial Bias in the Quality of Work Schedules in Lower-Wage Jobs

Nationally representative data indicate that unstable, unpredictable work hours are widespread, especially among workers in lower-wage jobs (Finnigan & Hunter, 2018; Lambert et al., 2014; Lambert et al., 2019). More than three-quarters of hourly workers in the bottom third of the wage distribution experience variations in weekly work hours that average more than a full day of pay (Lambert et al., 2014). Some 40 percent of hourly workers report that they “know when they will need to work” one week or less in advance, and about half of hourly workers report that they have little or no input into the number or timing of the hours they work (Lambert et al., 2019).

Workers of color are at even higher risk of schedule unpredictability and instability. A larger proportion of Black than White workers experience the “triple whammy” of work hour volatility, limited advance notice, and lack of schedule control (Lambert et al., 2014). For example, one study found that problematic scheduling conditions are “intensified for Black and Latino workers, who are more likely to be the sole earner in their household, and who must put in more working hours than other retail employees to overcome the racial wage divide” (Ruetschlin and Asante-Muhammad, 2015, p. 23) (see [How Problematic Work Schedules Matter](#) box, below).

Racial segregation by occupation is part of the reason workers of color are at heightened risk of schedule unpredictability and instability. Workers of color are overrepresented in industries such as retail, warehousing, building services, and food services, in which employers use scheduling practices that enable them to easily adjust employees’ work hours to mirror variations in business demand, which leads to inadequate and unstable hours for many workers in those industries (Cauthen, 2011; Lambert, 2008; Shakesprere et al., 2021). Employees with a history of involvement in the criminal legal system are largely relegated to jobs in these sectors, if they can find work at all (Houston & Bernstein, 2000). Within these industries, workers of color are at higher risk of problematic scheduling practices. For example, using data from a survey of more than 32,000 workers in 123 large U.S. retail and food-service firms, Storer et al. (2020) found that a larger share of Black, Hispanic/Latino, “other,” and multiracial workers than their White coworkers experienced shift cancellations, on-call work, back-to-back shifts, and insufficient hours.

Golden and Kim (2020) report that a larger proportion of Black (13 percent) and Hispanic/Latino (15 percent) than White (7 percent) part-time workers in the United States are underemployed, defined as wanting to work more hours than currently assigned, even if not full-time. And many workers of color working part-time would prefer full-time hours; for example, more than 40 percent of workers of color in part-time jobs in the retail industry report they want full-time positions (Ruetschlin & Asante-

Muhammad, 2015). Even when full-time positions are available, workers of color are at a disadvantage in securing one. A 2020 survey of low-paid workers conducted by the Project on Managing the Future of Work shows that workers of color working part-time hours are twice as likely as White workers working part-time to report that they have applied for a full-time job but not received an offer for one (Harvard Business School, 2022).

How Problematic Work Schedules Matter to Workers' Well-Being and Family Economic Security

More than half of all U.S. workers—and more than 60% of workers of color—are paid by the hour.* This means that when hours are few, earnings are low; when hours are erratic, earnings are unstable. Workers in lower-wage jobs are concentrated in six occupations in which “limited hours compounded workers in lower-wage jobs’ income disadvantage”—food service, sales, building services, personal care services, and transportation and materials moving (U.S. Government Accountability Office, 2017, p. 14). Workers of color are overrepresented in all of these occupations.

This overrepresentation in involuntarily part-time work limits workers of colors’ access to benefits defined in both public and employer policy. In several states, part-time workers cannot access Unemployment Insurance benefits (Traub & Diehl, 2022). Employers face no penalties when they do not offer health insurance to employees who average less than 30 hours a week. Moreover, approximately a quarter of workers of color (Black 24%, Hispanic/Latino 24%, White 18%) who have *not* advanced in their current lower-wage job report that schedule instability is among the biggest barriers to their upward mobility (Harvard Business School, 2022).

Problematic work schedules disproportionately disadvantage workers of color at home as well as at work. Schedule input eases potential conflicts between work and caregiving, attending classes, and holding a second job (Clawson & Gerstel, 2014; McCrate, 2012). Unpredictability, including short advance notice and last-minute schedule changes, interferes with careful planning and creates stress for workers and families. For example, from an innovative daily time-diary study of retail workers, Ananat and Gassman-Pines (2020) find that on days when parents of young children had an unanticipated work schedule change, they were more likely to experience a negative mood and diminished sleep quality.

*Most U.S. workers are paid by the hour: 2021: 55.8% overall; 53.1% men; 57.9% women. This is especially true among workers of color: 63.6% of Black workers (62.3% men; 64.6% women), 68.7% of Hispanic/Latino workers (67.9% men; 69.8% women), in contrast to 51.7% of White workers (49.4% men; 54.3% women) (2021 Annual Averages, Current Population Survey). These percentages were higher before COVID-19. Unemployment during the pandemic has been concentrated in hourly jobs, and many workers remain unemployed, especially workers of color.

4.2.2 The Scheduling Process

Studies have shown that the scheduling process is subject to racial bias—with hourly workers of color reporting significantly less schedule input and advance notice than White workers. For example, one study found 77 percent of hourly Black workers as compared to 62 percent of hourly White workers report that their employer controls the timing of their work. In addition, 11 percent of hourly Black workers as compared to 19 percent of hourly White workers report that they control the number of hours they work either freely or within limits (Lambert et al., 2019). Among the hourly workers who know their schedule a day or less in advance (15 percent of Black workers, 12 percent of White workers), the majority of White workers (77 percent) report that they largely control their work hours whereas the majority of Black workers (69 percent) report they have no control (Lambert et al., 2019).

As with job search and applicant screening, employers’ scheduling decisions are multi-component processes. The key steps include determining staff size and composition, scheduling individual workers for work hours, communicating the schedule to workers, and adjusting the work schedule as business needs change. How bias can emerge from each step in the scheduling process is discussed below.

Determining Staff Size and Composition

The more workers on staff, the fewer hours available for each worker, on average. Thus, management's decision of how many workers are needed in each role is a foundational part of the scheduling process. This determination is only loosely related to business demand. Although a big-box employer, such as Target or Walmart, could not effectively operate with only a handful of employees, employers have a great deal of discretion in how many workers they keep on staff and whether these positions are part-time or full-time, or hourly, salary, or contracted (Lambert & Henly, 2012).

Many employers limit the share of hourly workers classified as full-time, hiring a primarily part-time workforce (Lambert et al., 2012). Because part-time workers commonly have less access to employer benefits than do workers with full-time status, hiring part-time workers can reduce an employer's short-term outlays for labor. A large part-time staff also increases labor flexibility for managers of frontline staff (lower-paid staff who directly serve customers or support higher-paid staff), as it gives managers wide discretion to schedule workers for short shifts during times of peak demand and to vary workers' hours day to day and week to week as demand shifts (Houseman, 2001; Lambert, 2008). In a study of a national retail firm, 67 percent of managers reported that they preferred "to keep their staff on the large side so they had a pool of workers to draw on when needed" versus 33 percent who preferred "to keep their staff small to help ensure workers get hours" (Lambert & Henly, 2012). Labor flexibility also accrues to employers when deploying workers through staffing agencies; these workers also are ineligible for the company's benefits and can be offered work some days but not others or not at all (Weil, 2014).

Although decisions regarding the number of workers in a particular type of job and employment status might appear race neutral, employers' preference for labor flexibility can result in racial disparities among workers. Part of the calculus in determining headcount in a job is the stability of the workforce. Managers tend to over-hire for jobs in which turnover is high, creating a cycle where high turnover begets over-hiring, which begets low hours, which fuels turnover (Ton, 2014; Lambert et al., 2012). Workers of color are at higher risk of being caught in this cycle by their overrepresentation in high-turnover industries, part-time jobs, and employment through staffing agencies.

Scheduling Individual Workers for Work Hours

The next component of the scheduling process is assigning individual workers to specific days and times of work, an activity typically at the discretion of managers. To schedule hours, some managers use basic technology, such as a spreadsheet, while others use integrated "workforce optimization" software that forecasts labor needs and then populates the schedule with individual workers (Disselkamp, 2009; Kesavan et al., 2022). This component of the scheduling process begins with the manager, or software, predicting how many workers are needed for specific times of the day and days of the week. A workforce optimization system does this by forecasting customer demand for each scheduling period (e.g., a shift, a week). The system considers factors likely to cause variation in demand—weather, local events, or known holidays (Disselkamp, 2009; Thompson, 2004). Once demand is predicted for a particular scheduling period, the system then identifies the number of workers needed for each position (e.g., cashiers during the day but not overnight when the store is closed). Without technological assistance, business managers and owners draw on their experience to predict how many workers will be needed to complete specific tasks in each hour of business.

Because managers often have discretion in determining which employees are assigned to particular shifts, there is potential for racial bias. Qualitative research shows that managers use work hours to reward and punish workers, providing more and better shifts to employees who are willing and able to accommodate manager requests (Wood, 2018; Misra & Walters, 2022). Workers of color are more likely than White workers to report that their availability is constrained due to limited transportation and multiple responsibilities (Ruetschlin & Asante-Muhammad, 2015) and are thus less likely to be "gifted" (Wood, 2018) additional hours. Another study found that racial mismatch between manager and worker is positively associated with low-quality work schedules. Because managers who control work schedules are

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disproportionately White (Stainback & Tomaskovic-Devey, 2009), workers of color, especially Black workers, experience more problematic scheduling practices than do White workers, including insufficient hours (Storer et al., 2020).

Although technology has the potential for reducing racial disparities in work hours, evidence suggests that current scheduling technology can exacerbate racial bias. Even when software creates schedules automatically, the algorithm can privilege certain workers over others in ways that align with managers' racial biases. For example, some scheduling software programs allow managers to tag employees with specific skills, increasing the probability that these employees will get more and preferred hours (Hueter & Swart, 1998; Schwartz & Desai, 2017). Some scheduling systems enable managers to favor workers by criteria known to explicitly disadvantage workers of color (e.g., job status, seniority, attendance, performance rating), in essence automating racial disparities into the assignment of hours and desirable shifts (Hueter & Swart, 1998; Mirrazavi & Beringer, 2007; Mohan, 2008; Wood, 2020).

A related issue is that most scheduling systems enable frontline managers to directly override the technology. In a study of Gap Inc., company systems recorded edit rates indicating that, on average, managers changed 80 percent of the schedules produced by the firm's software (Williams et al., 2018). Overriding a schedule produced by an algorithm is not necessarily bad. Bernstein et al. argue that a combination of technology, manager control, and worker input is needed to produce schedules that are good for both business and workers (2014a). Managers might be trying to disrupt racial disparities when editing schedules produced through technology or when making the schedule on their own. Data suggest this is not common though, as indicated by the disproportionate share of Black workers who experience insufficient hours, short advance notice, and little schedule control.

Communicating the Work Schedule

How far in advance workers are informed of their work schedule determines their ability to know when they will work, especially when hours vary from week to week (Henly & Lambert, 2014). Workers of color disproportionately work in jobs with short advance notice of their schedules, such as in food service, building services, and retail (Lambert et al., 2014). According to data from the 2016 General Social Survey, 33 percent of hourly White workers, 39 percent of hourly Black workers, and 59 percent of hourly Hispanic/Latino workers know their schedule a week or less in advance of the workweek (Lambert et al., 2019).

How the schedule is communicated also can incorporate racial bias. Increasingly, employers send the schedule to workers via an app or email. Given that workers of color have less access than White workers to wi-fi and the internet (see [Digital Access](#) box, Section 2), communications about scheduling can be delayed, introducing racial bias into schedule predictability. Moreover, unless required by laws such as municipal "fair workweek ordinances" that include a provision requiring employers to post a schedule that includes all workers at the worksite, employers communicating via an app commonly inform workers of only their own work schedule, making it harder for employees to discern patterns of racial and gender bias in the allocation of hours (Lambert, 2020).

Adjusting the Work Schedule

Last-minute schedule changes are a defining feature of low-paid jobs in which workers of color are overrepresented, such as retail, warehousing, and food service (Ananat & Gassman-Pines, 2022; Henly & Lambert, 2014; Lambert et al., 2012). One study found that 14 percent of workers in major retail and food service firms experienced a shift cancellation in the previous month and 26 percent worked on-call (Schneider and Harknett, 2019). A time-diary study of parents working in retail found that during the one-month period of data collection, 71 percent of parents had their hours changed at least once and 58 percent of parents had a least one shift cancelled; 8.8 percent of these changes were made less than a day in advance (Ananat and Gassman-Pines, 2020). Whether last-minute adjustments serve to increase or decrease work hours matters for financial security and varies by race. Using data from the National

Longitudinal Survey of Youth, one study found that workers of color are more likely to experience shortfalls in hours whereas White workers are more likely to experience surges in hours and thus earnings (Lambert et al., 2014). Similarly, other research found that Black, Hispanic/Latino, multiracial, and other non-White race workers are at higher risk of having a shift cancelled (Storer et al., 2020).

As when making the original schedule, scheduling technology that enables managers to tag workers for priority also can exacerbate racial disparities when changing the schedule. Some algorithms give preference to calling in workers who can arrive at the workplace quickly, disadvantaging workers who use public transportation from garnering additional hours and, as one study observed, workers of color are more likely than White workers to rely on public transportation and to have long commutes (Boushey & Ansel, 2016).

On the other hand, long hours from working overtime also can be problematic, especially when it is mandatory and on short notice. Although there is little information on the association between overtime and unpredictability in the United States, statistics from Canada indicate that more than half (58 percent) of Canadian workers paid by the hour who usually work overtime learn about overtime a day or less in advance (McCrate, 2018). Given that employment regulations are laxer in the United States (Fugiel & Lambert, 2019), the Canadian results raise concerns that overtime is highly unpredictable for U.S. workers paid by the hour.

4.3 *Strategies for Disrupting Bias in Processes Determining Job Placement and Work Hours*

The research reviewed above suggests that adjustments to employer practices as well as public policies are needed to disrupt bias in the sorting of new hires of different races into disparate types of jobs. The literature further suggests that improving work schedules is potentially an avenue for disrupting racial bias because workers of color are not only overrepresented in jobs where scheduling is problematic but also at heightened risk of problematic work schedules within these jobs. The literature offers several strategies for reducing bias in initial job placement and ongoing scheduling practices, as well as promising avenues for research:

- **Reducing racial bias in initial job placement through increases in the minimum wage and/or in access to full-time employment.** To mitigate the effects of occupational segregation by race, employer and public policies that raise the minimum wage could help workers at the bottom of the wage distribution, thus potentially reducing the wage gap between higher-paid White workers and their Black and Hispanic/Latino coworkers. In addition, the problem of assigning workers part-time status could be reduced by employers being encouraged to provide full-time work to those who desire it before hiring new part-time workers (Ruetschlin & Asante-Muhammad, 2015). New “fair workweek laws” in effect in several cities (e.g., San Francisco, Seattle, New York, Chicago, Philadelphia) include an “access to hours” provision that requires covered employers (primarily in service industries) to offer newly available hours to current employees before hiring new ones (Lambert, 2020).

It is important to acknowledge that such policies must weigh the potential negative effects on employment rates among workers in lower-wage jobs if such practices turn out to curb hiring among unemployed workers, a possibility that awaits evaluation.

- **Reducing over-hiring by guaranteeing workers minimum weekly hours.** Guaranteeing hourly workers minimum hours is one way to constrain over-hiring, resulting in more hours per worker, on average (Lambert et al., 2012). Several policy organizations advocate minimum hour guarantees to improve the well-being of workers and families (e.g., Center for Law and Social Policy, 2014; Cauthen, 2011). Costco is an example of an employer that guarantees minimum

Example: Occupational Segregation Racial Equity Toolkit

Restaurant Opportunities Centers (ROC) United, along with Race Forward and the Center for Social Inclusion, created a [toolkit](#) to help employers within the restaurant industry improve racial equity by tracking occupational segregation within their companies and measuring improvements in segregation over time (see ROC United, 2020). The toolkit offers strategies for disrupting implicit bias, including providing rubrics for more objective decision-making. The toolkit also points to the benefits of local public policy interventions supporting tax, licensing, and recognition incentives for restaurants that pay employees in all positions a living wage and take concrete steps to improve racial equity, including reducing occupational segregation and racial wage disparities.

hours (24 hours a week) to part-time employees and is highly profitable (Peck & Traub, 2011; Ton, 2014).¹² This corporate standard means that Costco managers must carefully consider their staffing levels, rather than hiring “extra” staff just in case they might need them resulting in some workers getting very few hours.

The possible downsides to providing minimum hours for both employees and employers need to be evaluated. For example, concentrating available labor hours on fewer workers could result in lower overall employment and make labor less flexible for managers. Research suggests, though, that the benefits might outweigh the costs. For example, problematic scheduling practices produce high turnover, generating spotty employment records for workers and high replacement costs for employers (Choper et al., 2022).

- **Implementing options already available in scheduling software to increase stability, predictability, and fairness of assigned work hours.** These options include setting minimum hours for all employees; populating the work schedule based on the prior week; providing information needed to push out schedules at least two weeks in advance; and allowing workers to update their availability in real time, so the system and manager can see they are available for additional hours. Although no studies to date have assessed the uptake of these features, ongoing conversations with vendors indicate that at least some employers are adopting them with the goal of increasing racial and gender diversity and equity.¹³

Research suggests that integrating these improvements could be good for business, too. A randomized experiment of a multi-component intervention to improve work schedules for sales associates conducted at the U.S. retailer Gap Inc. resulted in improved sales and lower labor costs for the company (Kesavan et al., 2022) as well as lower stress and better sleep for employees (Williams et al., 2019).

- **Increasing employee control over their work schedules.** As workers of color report less schedule control than White workers do, providing greater schedule input could improve racial equity. Employee input is transformative at two key points in the scheduling process:
 - **Input into the schedule.** As detailed above, many scheduling software programs use workers’ availability—and sometimes their scheduling preferences—in creating the schedule. How the algorithm uses this information depends on the tags that managers apply to individual employees, which give priority in ways that can introduce racial bias. These systems can,

¹² Costco employees must request in writing that they would like to work less, and this category of part-time employee is limited to approximately five workers in each warehouse. Most are students and retirees. Costco does hire seasonal workers, who are then given priority in the regular hiring process.

¹³ Recount by author S. J. Lambert regarding her ongoing communications with vendors.

however, be implemented so that employees' preferences are accommodated equally, decreasing the potential for bias in the scheduling process (Bernstein et al., 2014a, 2014b). Note, however, that self-scheduling in the context of over-hiring warrants caution. If there are too many workers for the hours available, then self-scheduling simply sets up a competition among workers under the pretext of impartiality.¹⁴ Workers whose availability for work is constrained by caregiving and other responsibilities are at a competitive disadvantage.

- ***Input into schedule changes.*** Several apps enable employees to post their scheduled shifts for coworkers to pick up and to pick up shifts posted by their coworkers or managers. One component of the Gap Inc.'s multicomponent intervention noted above was an app that sales associates could use to post and pick up work shifts. The app was popular, with 62 percent of part-time hourly associates posting or picking up a shift during the approximately 30 weeks of the experiment. Regardless of race, more than 95 percent of respondents to a survey of part-time Gap associates agreed that “the app makes it easy for associates to adjust their work schedules to fit their needs.” Workers in treatment stores more often than workers in control stores reported improvements in schedule control over the course of the experiment (Williams et al., 2017).

In the Gap study, employees were prequalified to pick up particular types of shifts (e.g., cashier, sales, stock). Once qualified, associates were free to post and pick up shifts without manager approval. Some employers using similar apps are requiring manager approval of each schedule change generated by an employee, structuring the potential for racial bias back into the process.

- **Increasing transparency and auditing of job placement and scheduling practices.** As with other employment processes, job placement and scheduling need greater transparency and auditing. Transparency is essential to implementing scheduling systems equitably and effectively (Bernstein et al., 2014a). Employees might not be aware that their manager is tagging them in ways that advantage or disadvantage them in getting hours and preferred shifts. Disparities in the number and stability of work hours might not be tracked at any level of a company. Just as reports on sales and productivity drive frontline manager behavior, reports on racial and gender equity and bias in work hours could drive new scheduling practices.

Several scheduling software systems already have the capacity to examine equity in work schedules, but research is needed to determine which employers take advantage of such

¹⁴ This is evident in the scheduling practices typical of the gig economy. For example, Instacart workers are “free” to pick up available shifts, but the competition for them is fierce (Bhuiyan, 2020). Workers with high priority status can pick up shifts for the upcoming week on Sunday whereas non-priority workers must wait until midweek to select shifts, if any remain or come up at the last minute. Workers earn priority by not declining *any* assigned shifts and can lose priority simply by being ill for a day. Self-scheduling in the context of over-hiring becomes a form of discipline (Wood, 2020). Self-scheduling could nonetheless be explored as an avenue for reducing racial bias in work hours, but the broader organizational context and the motivation of employers for implementing it should be examined carefully before considering it a route to disrupting racial bias.

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capabilities, with what goals, and to what effect. Transparency and auditing can also serve to disrupt processes that segregate workers of color into lower-paying jobs.

Example: California's Pay Transparency Bill

A few states have passed laws requiring employers to disclose job salary ranges in job ads (Colorado) automatically to job applicants after the initial interview (Nevada) or a job offer (Connecticut) or after a job offer if the candidate *requests* the information (Washington). California's recently enacted [Pay Transparency Bill](#) goes further. In addition to requiring employers to disclose job salary ranges in job ads and to current employees upon request, all employers with at least 100 employees must report to the state the median and mean hourly rate being paid to employees in each job category for every combination of race, ethnicity, and gender. Moreover, these larger employers are required to maintain records of each employee's job title and wage history during their employment and for three years thereafter. The California law is intended to prohibit discrimination in pay, provide all job applicants information from which to negotiate starting pay, and require metrics to identify barriers to advancement to higher-paying roles among marginalized workers.

5. Employee Development and Support

Employers have a vested interest in helping ensure their employees have the skills and resources needed to do their jobs well, but not all invest in providing professional development (e.g., training and mentorship) or a supportive work environment. When employers do invest, the investments are often not equal or equitable. For example, all workplaces deliver some training, even if it occurs on the job among coworkers. Some employers go beyond on-the-job training by investing in the development of workers, targeting workers they would like to retain and possibly promote. Workers of color typically are provided fewer of these opportunities, negatively affecting their job satisfaction and, as discussed in Section 6, their opportunities for advancement to higher-level positions with greater responsibility, autonomy, authority, and/or compensation. Employer policies and processes also affect their work environment or work culture and whether that culture is experienced as positive or negative by specific groups of employees, including workers of color.

This section first discusses racial bias present within employment processes used by employers in the lower-wage labor market to determine which of their employees receive what types of training and mentorship and related opportunities for learning and growth on the job. It next discusses employment processes that can disrupt or exacerbate racial biases that create an unsupportive work culture for workers of color.

5.1 *Processes Affecting Who Receives Professional Development Opportunities*

Opportunities for professional development, which typically include skills training and mentorship, are important for workers to succeed and advance in their jobs. Training often includes on-the-job development geared toward learning specific skills for a current or future position. Employers can also offer opportunities for employees to learn tasks outside main roles through cross-training, which also “increases exposure to a wider variety of supervisors, potential mentors, and promotion opportunities” (Hanleybrown et al., 2020, p. 26). Some employers also offer opportunities for employees to take courses off site that lead to certifications or college credits. In lower-wage jobs, managerial attention is often limited due to high employee-to-supervisor ratios, making it difficult for managers to provide regular feedback and information about skills gaps and training opportunities (Fuller & Raman, 2022).

Most employers do not offer formal training and related professional development opportunities for employees in lower-wage jobs. Recent research found that workers of color (particularly Hispanic/Latino but also Black), as well as workers with lower levels of education, receive significantly fewer formal training opportunities than do White workers and those with more education (Osterman, 2022). This could be the result of indirect bias if, for example, employers perceive less return to investments in training for workers in jobs with high turnover or with “flat” structures where employees have few opportunities to advance regardless of additional training (Osterman, 2022). Such jobs skew toward lower-wage positions that workers of color disproportionately hold. Though they receive fewer opportunities, workers in lower-wage jobs of all races view training as important. From a survey of more than 2,000 frontline workers (low-income hourly employees, disproportionately workers of color and women), 75 percent of respondents desired career learning opportunities, ranking it in the top five most highly valued “career advancement opportunities” (Bhaskaran et al., 2022).

Mentorship is another core component of professional development. In one recent study of workers in lower-wage jobs, workers reported that lack of mentorship or supervisory support was one of the top three challenges they faced to their success on the job (Fuller & Raman, 2022, p. 4). The majority (73 percent) of frontline workers in the aforementioned survey reported that they highly value mentorship and a supportive manager, viewing these as key to career advancement (Bhaskaran et al., 2022). Another study, though focused on employers in professional fields, found that these employers are also likely “to provide

inadequate support for underrepresented talent once they are on the job,” and that this lack of mentoring and inclusion harms underrepresented workers’ prospects for retention and advancement (Goger & Jackson, 2020). Another survey finds similar results—that workers of color have less access to mentorship than do White employees: 31 percent of Black respondents reported having access to a senior leader in the workplace compared to 41 percent of White workers (Coqual, 2019).

5.2 *Processes Affecting Who Experiences the Effects of Bias in a Work Culture*

“Work culture” refers to the group and individual values, attitudes, and behaviors of an employer’s workers that make up the day-to-day atmosphere of the workplace. An organization’s work culture can affect employee well-being, engagement, productivity, hiring, advancement, and retention. When a work culture fosters or tolerates racial bias, employees or groups of employees can experience this bias in the form of everyday workplace acts of discrimination, harassment, or microaggression, creating a hostile work environment. Organizational culture penetrates behaviors and processes from the top of the organization to the bottom. Thus, although research on the effects of racial bias within work cultures focuses mainly on the experiences of workers in higher-wage jobs, findings offer important insights for the lower-wage labor market. Moreover, studies that have examined racial bias and discrimination in the lower-wage labor market, such as in the retail sector, draw similar conclusions about the role of organizational culture in setting the tone of whether racial bias and discrimination will be tolerated (Williams, 2004; Williams & Connell, 2010; Walters, 2018).

A national study by the Center for Talent Innovation (CTI; now Coqual) of diverse workers (some in hourly jobs) at multinational corporations found that, beyond formal performance reviews, “bias creeps into daily assessments of employee potential, and that bias takes a damaging toll” (Caprino, 2017). The study found these biased daily assessments can determine which employees get quality assignments, earn the praise of their managers, or are forgiven for their mistakes, all of which cumulatively affect their odds of advancement with a company. Other research explored “everyday discrimination” in the workplace—the “subtle, pervasive discriminatory acts experienced by members of stigmatized groups on a daily basis” (Deitch et al., 2003, p. 1299). Though based on self-reported discriminatory experience—which itself might include bias on the part of those reporting—that research found that Black workers experienced higher levels of this discrimination than did White workers, leading to higher rates of job dissatisfaction and stress. Though discriminatory behavior is prohibited by law and (typically) company policy, it still can be supported by informal workplace subcultures and the “significant flexibility, discretion, and relational dynamics among and within the most formalized, bureaucratic environments” (Mong & Roscigno, 2010, p. 4).

When employees perceive bias at work, there is an effect on both them and their employer. According to the CTI study, these employees are about three times more likely than employees who do not perceive bias (20 percent vs. 7 percent) to be disengaged at work and almost three times more likely (34 percent to 13 percent) to indicate that they have withheld ideas over the previous six months (Caprino, 2017). Bias in the form of everyday workplace discrimination can manifest in objective ways, such as unfairly negative evaluations or denials of promotions and raises (see Section 6), or in less measurable ways, such as differential treatment, unequal task assignments and workloads (see Section 4), and acts of harassment that can have “quite significant social-psychological consequences for victims” (Mong & Roscigno, 2010, p. 5). One study found that Black male workers experience discrimination in the form of “significant levels of discretionary sanctioning and policing while on the job” (see Section 6; Mong & Roscigno, 2010, p. 15). Workers of color can also experience an “emotional tax” in the workplace: a “combination of feeling different from peers at work because of gender, race, and/or ethnicity and the associated effects on health, well-being, and the ability to thrive at work” (Dnika & Thorpe-Moscon, 2018, p. 4). One aspect of this “tax” is the feeling that they must constantly be on guard to protect against racial and gender bias, making them more likely to desire to leave their job (Dnika & Thorpe-Moscon, 2018).

The Tech Leavers Study by the Kapor Center for Social Impact and Harris Poll is instructive, finding that “unfairness in the form of everyday behavior (stereotyping, harassment, microaggressions, etc.) is a real and damaging part of the tech work environment, specifically affecting underrepresented groups, driving turnover, and affecting companies in financial and reputational costs” (Scott et al., 2017, p. 5). Though this study does not focus on the lower-wage labor market, other research has shown that workplace hostility hampers job retention among workers of color regardless of labor market sector (Dnika & Thorpe-Moscon, 2018).

Indirect bias can result in work cultures characterized by a general lack of support for workers in lower-wage jobs. The previously mentioned survey of frontline workers found that employers frequently underestimated the importance of a supportive work environment to their employees—many of whom were single parents or had faced adverse or stressful life experiences (Bhaskaran et al., 2022). Another study found that it was rare for employers of workers in lower-wage jobs to have conversations with them about ways to create a supportive work environment (Fuller & Raman, 2022). As an example, the study found that convenient access to the workplace was particularly important to the ability of workers in lower-wage jobs to succeed on the job, yet only 18 percent of workers reported that their employer had discussed their transportation needs with them.

5.3 *Strategies for Disrupting Bias in Employment Processes Affecting Employee Development and Support*

The literature suggests a variety of strategies for disrupting racial bias in employment processes affecting employee development and support. As with other employment processes, much of the responsibility in addressing these biases lies with employers, which should first acknowledge that bias exists within these processes, work to identify where it exists, and implement strategies to minimize it. Specific strategies and areas requiring future research include:

- **Providing workers of color who are currently in the lower-wage labor market more training opportunities aimed at reducing disparities in skill-building and career advancement opportunities.** Steps employers can take include (1) communicating clearly and frequently; (2) investing in skill building and professional development to align advancement with the skills of employees; (3) equipping managers of employees with skills and knowledge to support and grow their teams; (4) prioritizing employees’ preferences when determining incentives, such as more flexibility and transportation support for parents; and (5) investing in motivated workers who are eager to advance and grow (Bhaskaran et al., 2022). Employers can provide workers in lower-wage jobs a variety of training opportunities, including “stretch assignments” (on-the-job training that teaches new skills), cross-training opportunities, traditional learning and development sessions, and lateral opportunities (the ability to move laterally in the company based on interests and skill sets) (Bhaskaran et al., 2022).

Other training opportunities employers might provide to benefit workers in lower-wage jobs include English language, adult basic education or GED, and digital literacy classes and programs that provide soft skills, technical skills, or credentials required to advance in their companies (Fuller & Raman, 2022).

- **Providing workers in lower-wage jobs and workers of color with mentorship opportunities to support their job retention and advancement.** One study found workers in lower-wage jobs believed that a single supervisor or mentor was pivotal to their success, providing encouragement and actionable feedback and taking the time to learn about personal issues affecting their productivity such as childcare and transportation needs. The study further found that these workers can be reluctant to request such support, and that in response, employers can “ensure that supervisors are held responsible for initiating such conversations regularly [while equipping] workers with a list of questions to ask their supervisors” (Fuller & Raman, 2022, p. 37). Other

research on workers in lower-wage jobs suggests that within the first few months of employment, new employees be matched with mentors (“staff ambassadors”) who can provide coaching. The mentors help ensure that “employees have a solid understanding of available opportunities, the skills they need to demonstrate in order to advance, and the preparatory resources at their disposal” (Bhaskaran et al., 2022, p. 14).

Citing Expeditors and the U.S. Air Force as examples, Fuller and Raman suggest (as noted in Section 6) that strategies to support workers in lower-wage jobs, such as mentoring and skill development—to “grow one’s own”—could be the most effective way for employers to improve performance on diversity, equity, and inclusion, as these disproportionately workers of color represent immediately available talent that can be nurtured. The previously mentioned CTI study found that when employees have mentors or sponsors (senior-level advocates who support their career advancement), the likelihood they will perceive bias is 90 percent lower (Hewlett et al., 2017).

Example: Technology-Enhanced and Crowd-Sourced Training

New technologies are being used to improve access to training for workers of color and other marginalized workers. These technologies can be used by individual workers or workplaces, providing open access to all interested. They also can be customized and personalized for different learning styles, offer experiential learning, and integrate ongoing assessment (Batti, 2021). Rather than one-size-fits-nobody training, technology-enhanced training programs can place employees in custom learning pathways based on individual needs and enable them to learn at their own pace.

Importantly, some training apps enable companies to assess bias in the training program itself. Employers can disaggregate trends by demographic subgroups (e.g., race, ethnicity, age, gender) to assess biases and redesign if necessary. Digital adoption platforms also allow employers to easily track learning progress and understand how effective the training and development is at both the individual and organizational levels. Some apps integrate training into an employee’s workflow, helping them to learn as they work, instead of forcing them to stop working to train.

In bringing technology-enhanced training tools to workers in lower-wage jobs, experts suggest a minimalist design that is accessible via mobile phone, to which the majority of workers of color have access (Dillahunt et al. 2016; Smith, 2015a; also see Section 2). DreamGigs is an example of an app designed with the input of workers in lower-wage jobs to support their training needs (Dillahunt & Lu, 2019).

Another avenue for bypassing workplace barriers to training is through participation in online communities within a profession (Convertino et al., 2007; Ibarra, 1993; Kou & Gray, 2018). These communities can help workers gain skills needed to excel in their current positions as well as advance on the job. Examples include online career mentoring programs, such as Crowd Coach, which facilitates peer coaching while at work (Chiang et al. 2018) and [MentorNet](#), a program that pairs women college students with professionals in engineering and science. Further, marginalized workers reported that online forums could be helpful in accessing multiple ideas and opinions when it was difficult to discuss work-related topics with people who might be biased against them or not interested in or knowledgeable enough to provide a satisfactory answer (Tomprou et al., 2019).

- Developing a work culture that supports workers of color through diversity, equity, and inclusion initiatives and related policies.** Intentional efforts and initiatives by employers can disrupt racial bias and its effects within work cultures. Many of the recommendations for disrupting work culture bias and the discrimination, harassment, and microaggressions that can result center on employer-based diversity, equity, and inclusion initiatives and related employer policies and staff training. To increase inclusivity and reduce perceived bias, an employer’s managers/supervisors can “ensure all voices get heard; make it safe to propose novel ideas; give actionable feedback to [their] team; take advice from [their] team (and implement it); empower decision-making among team members; [and] share credit for team success” (Caprino, 2017).

That CTI study found that when employees have leaders who promote an inclusive, “speak-up” culture on their teams, the likelihood that they will perceive bias is 87 percent lower (Hewlett et al., 2017). This work culture is one in which workers of color feel valued for their uniqueness, have a sense of belonging to a team, and are comfortable taking risks (Dnika & Thorpe-Moscon, 2018). It is a work culture supported by employer policies and staff training that facilitate honest conversations on inclusivity, trust-building, and speaking up against exclusionary behavior (Dnika & Thorpe-Moscon, 2018). The CTI study (2017) suggests that employers should map out where bias exists in their companies, including in lower-wage hourly jobs, and then try and test solutions to address this bias.

6. Advancement and Termination

The final set of employment processes are those affecting employee advancement or termination, both of which are influenced by performance assessments. Employers assess workers' performance using a variety of processes, both structured and informal. Performance assessment processes are consequential for employees because assessments inform decisions on advancement, wage increases, and sanctions, including termination. Yet, according to a 2020 survey of workers in lower-wage jobs by the Project on Managing the Future of Work at the Harvard Business School (2022), many workers in lower-wage settings are rarely informed of how their compensation, job duties, or job status could change based on a performance review or told the criteria on which they will be evaluated.

The timing of performance assessments varies across employers and jobs. In some jobs, performance metrics are collected in real time; in other jobs, employees are reviewed annually; and in others, formal assessments are nonexistent. Importantly, employers vary in whether the primary purpose of the assessment process is to reward good performance with the goal of retaining workers, or to discipline with the goal of terminating underperforming workers. The processes employers use to assess performance can exhibit racial bias, which can ultimately restrict the advancement of workers of color within a company as well as when they move to a different employer.

This section addresses four types of employment processes that can introduce racial bias and thus affect who advances in or is terminated from the workplace: (1) those affecting whose performance is assessed to reward; (2) those affecting whose performance is assessed to discipline; (3) those affecting who advances in the workplace; and (4) those affecting who is terminated from employment.

6.1 *Processes Affecting Whose Performance Is Assessed to Reward*

The human resource management literature documents the benefits of establishing performance appraisal systems that recognize employees' past and ongoing accomplishments, assess their career goals, and plan for skill development. Much of the literature focuses on performance appraisals for salaried professional, technical, and managerial staff. Many software vendors offer systems to facilitate employee assessments.

Recognition of the high cost of low retention in hourly jobs has grown, as has employers' interest in implementing meaningful performance appraisal systems that can improve retention among hourly employees (Society for Human Resource Management, 2017). Software vendors of performance assessment systems have responded to this demand by expanding into industries with large hourly workforces with high turnover, such as retail, food service, and transportation. These vendors emphasize that well-designed performance assessment systems reduce turnover by strengthening the employee-manager relationship and improving employee satisfaction. Although the systems incorporate conventional appraisals of past performance on a semi-regular basis (annual or quarterly), many provide a platform for gathering ongoing information on performance. Many offer options that enable managers to offer frequent rewards and recognition to individual employees, such as "employee of the week" awards, performance-based gift cards, or simply thank you emails. Multiple metrics are created so that managers can offer rewards for different types of performance, such as "fewest errors," "best customer service," or "most reliable."

Although our review did not uncover research on the extent to which these systems result in higher satisfaction and retention among workers of color, the survey of workers in lower-wage jobs conducted by the Harvard Business School suggests misalignment between the percentage who want feedback and the percentage who receive it: 27 percent of Black and 21 percent of Hispanic/Latino workers in lower-wage jobs reported that their supervisor rarely or never talks with them about their performance, even though 40 percent of Black and 31 percent of Hispanic/Latino workers said that this would be helpful to their upward mobility (2022, slide D16).

Managers' implicit and explicit racial bias can undermine the potential positives of performance appraisals. Many of today's performance systems evaluate employees on their "engagement," defined by Gallup (2022) as employees who are involved, enthusiastic, and committed to their work and workplace. Research comparing survey responses of employees and employers provides evidence that employers are likely to underestimate engagement among workers of color. Comparing the views of employers and employees in lower-wage sectors in the United States, the United Kingdom, and Germany, Fuller et al. (2021) show that contrary to commonly held beliefs, including those of surveyed employers, workers of color, people with disabilities, and other groups marginalized in the labor market report levels of commitment and satisfaction at least equal to their White counterparts without disabilities. For example, among workers in lower-wage jobs, 54 percent of Black workers, 60 percent of Hispanic/Latino workers, and 60 percent of White workers report that one reason they have stayed at their current company is because they enjoy their job. The researchers conclude that each country has a large "hidden" workforce that is an untapped pipeline of talented workers for hard-to-fill middle- and higher-level jobs, arguing that employers would be wise to shift some of the resources they use to recruit workers of color for middle- and higher-level positions to developing career pathways for the workers of color in entry-level positions already at their firm, workers who are already committed and seek advancement there.

6.2 Processes Affecting Who is Disciplined

Employers can also assess performance to identify departures from established and preferred work procedures, often termed "workplace surveillance." Surveillance involves daily or real-time employee performance monitoring and is more often used to discipline than to reward workers. A 2021 policy brief, *Workplace Surveillance Is Becoming the New Normal for U.S. Workers*, argues that surveillance of workers, whether working onsite or remotely, is widespread in the United States (Zickuhr, 2021). Close monitoring is particularly common in the low-paid jobs in which workers of color are overrepresented.

For example, Van Oort's (2019) qualitative study of surveillance in fast-fashion retail (trendy, low-cost apparel) reveals how surveillance reinforces historic inequalities, both gendered and racialized. In her 2015 book *Dark Matters: On the Surveillance of Blackness*, Browne (2015) explains how the racialized roots of surveillance show up in contemporary applications in many institutions, from airports to workplaces. Poster's (2011) research on international call centers illustrates how surveillance is used to discipline workers of color to conform to White standards of "pleasantness," such as never showing anger or irritation. These studies document how surveillance creates a new form of emotional labor that takes a toll on workers' health. As Zickuhr (2021) observes, "the consequences of worker surveillance are concentrated and compounded [for workers of color] due to occupational segregation" (p. 12).

The literature on workplace surveillance distinguishes two types of monitoring (Levy & Barocas, 2018): *Dyadic surveillance* is the monitoring of employee performance by an employer through direct observation with or without the aid of technology. *Refractive surveillance* is the monitoring of employee performance through a third party; for example, the employer makes decisions about employee performance based on customer behavior and reviews.

Dyadic surveillance is often imposed on workers in lower-wage jobs via wearable devices, video cameras, and GPS locators to track employee productivity and performance. Employers such as Amazon continually collect information about its employees' productivity by having them wear trackable devices and monitoring their use of hand-held scanners, and these metrics contribute to surveillance-driven management practices in jobs in which workers of color are overrepresented (Alimahomed-Wilson & Reese, 2021; Greene, 2021; Mateescu & Nguyen, 2019). West (2021) states that "companies have the legal ability to use keylogger software on business computers; deploy video surveillance cameras; monitor worker attentiveness; track physical movements through geolocation software; compile lists of visited websites and applications; monitor emails, social media posts, and collaboration tools; and compile productivity data on how workers are spending their time and how long it takes them to finish

particular tasks.” Information collected through these means is used to inform decisions that affect the well-being of workers, including work schedules, pay raises, and employment status in both blue-collar and professional workplaces. These surveillance practices also have been used to scrutinize and discipline workers who attempt to organize for improved working conditions (Alimahomed-Wilson & Reese, 2021).

Refractive surveillance assesses performance indirectly through a third party. Increasingly, the tracking of customers’ experiences in service settings plays a significant role in an employee’s workplace experience. In one example, a restaurant collected dine-in customer feedback at the end of their dining experience via tablet. If an employee received a star rating below a certain standard from the customers they were serving, the rating reflected negatively on the employee’s performance. Those performance ratings were later used to determine the employee’s shift schedule, restaurant section assignment, and employment status (O’Donovan, 2018). In that example, not only did the implicit biases of customers about the personal characteristics of their servers affect performance ratings, but questions within the customer survey also included aspects of the dining experience that were out of the employee’s control (e.g., taste of the food, atmosphere of the restaurant).

Restaurants and franchises across the country, including Chili’s, Olive Garden, TGI Friday’s, Red Robin, Uno Pizzeria & Grill, and Applebee’s, use tools such as [Ziosk](#) and [PrestoPrime](#) with the goal of increasing restaurant efficiency by allowing customers to order drinks, appetizers, and desserts and to pay their bill from the table without talking to a server. Yet, these tools also ask customers to evaluate the server, even those who only bring an order to the table (O’Donovan, 2018). Basing assessments of worker performance on customer ratings can lead to service workers losing hours, pay, and often their jobs, especially for workers of color who are most likely to be negatively stereotyped by customers (O’Donovan, 2018). One study found that both White and Black restaurant customers discriminate against Black servers by tipping them less than White servers despite no difference in customer service skills (Brewster & Lynn, 2014).

Uber and other ride-sharing companies also use this type of refractive surveillance. Riders’ star ratings about their experiences are used to inform the hiring status of drivers. If a driver’s star rating drops below a certain threshold, they can be put on probation and ultimately terminated (Allyn, 2020). The problem with this kind of automated management, again, is that customer biases that have nothing to do with the performance of an employee can affect that employee’s ratings. In one lawsuit, an Asian Uber driver claimed that he was terminated after his star rating dropped below a 4.6 out of 5 during the height of the pandemic in 2020. He noticed riders canceling ride requests after he had already accepted the ride and the rider was able to view his picture. He also experienced riders asking where he was from in an “unfriendly way” (Allyn, 2020).

The company also uses this same star rating system to offer select drivers guaranteed hourly pay at higher rates if they opt-in (“RSVP”) to work during a “guarantee” (peak) period. According to Rosenblat et al. (2017), “while the criteria Uber uses to select drivers who are ‘invited’ to participate in higher earning shifts [are] not disclosed by the company, drivers are required to maintain a high rating during the ‘guarantee’ periods that they participate in, or they lose the guaranteed amount” (p. 6). Labor advocates have offered survey evidence indicating that Uber’s use of this system results in racially biased driver terminations and wages (Rosenblat et al., 2017), but so far, the courts have not been convinced by the evidence (Chiem, 2022).

The lack of transparency in the use of surveillance is a growing concern for policymakers and labor advocates troubled by declining job quality and for governance scholars seeking to protect the right to privacy (Kerry et al., 2020). Although surveillance could be readily visible to workers if their performance is tracked via a wearable device or on a display, software that monitors keystrokes and cameras that gauge emotions and movement are often hidden. Employees might not know they are under surveillance until they are reprimanded. And even then, how managers use surveillance metrics to reward

and punish are subject to the same forms of implicit and explicit bias evidenced in other performance systems (West, 2021; Zickuhr, 2021).

6.3 *Processes Affecting Who Advances in Their Workplace*

Bias within performance assessment processes also can result in racial disparities in career advancement. Researchers have found that workers of color are less likely to be promoted than White workers (Wilson & Roscigno, 2016; Wilson et al., 1999; DeVaro et al., 2018; Giuliano et al., 2011; Fuller & Raman, 2022). Promotions are among the largest inequities in the workforce. Coqual (2021) found one in three Black and Hispanic/Latino men surveyed reported that their time to promotion was longer than their peers'. Because seniority is a cornerstone for job advancement, the overrepresentation of workers of color in high-turnover industries such as hospitality, retail, and tourism is a source of structural racism that limits advancement regardless of performance assessments (Langston et al., 2020).

Receipt of merit increases also highlights racial bias in performance assessment processes. According to the Federal Reserve Board's 2017 Survey of Household Economics and Decisionmaking, a greater proportion of White men (56 percent) than Black men (44 percent) received a raise in the past 12 months even though a greater proportion of Black men (21 percent) than White men (16 percent) had asked for one (Kaplan, 2019). This disparity is supported by the results of a survey of more than 160,000 diverse workers by PayScale. That study found, after controlling for factors such as experience, tenure, job type, job level, industry, education, and demographics, that no single gender or racial/ethnic group was more likely to have asked for a raise from their current employer than any other. However, workers of color were less likely (19 percent for women of color and 25 percent for men of color) than White men to have received a raise (PayScale, 2018). Among workers in lower-wage jobs specifically, of the 2,000 frontline workers surveyed by Bhaskaran et al. (2022), more than 70 percent had applied for advancement opportunities; however, only 40 percent of those who applied received a raise or increased responsibility, and only 25 percent secured a promotion or new role. And, as discussed earlier, workers of color are disproportionately disadvantaged by pay bands in lower-wage positions that constrain wage growth.

Many employers' approach to advancement is one of "meritocracy," intended to evaluate workers based on their merit alone, without consideration of gender, race, or other identities, and relying on managers to be objective in making assessments. Yet meritocratic policies and related practices such as pay-for-performance can facilitate greater bias. A study of 9,000 support staff at a large service-sector employer that used a merit-driven compensation system to equitably reward performance found that women, workers of color, and non-U.S.-born workers received smaller increases in compensation than did White men, despite holding the same jobs, having the same supervisors, and receiving the same performance scores (Castilla, 2008). Castilla terms this the "paradox of meritocracy," where a commitment to meritocratic principles gives evaluators a false sense that they are impartial and do not need to guard against the reality that stereotypes are "filters through which we evaluate others, often in ways that advantage dominant groups and disadvantage lower-status groups" (Cooper, 2015).

For workers in lower-wage jobs, lack of information about career advancement acts as an indirect bias affecting their opportunities to move up. Among the frontline workers surveyed by Bhaskaran et al. (2022), only 17 percent reported that they had frequent discussions with their manager about their career advancement. Further, of the workers in lower-wage jobs participating in the survey conducted as part of the Harvard Business School's Project on Managing the Future of Work, only 23 percent of Black workers, 25 percent of Hispanic/Latino workers, and 18 percent of White workers strongly agreed with the statement "I am confident that I know what I need to do to move up from my current role to one with higher pay and responsibility at my company" (2022, slide E2). About 10 percent of the workers in lower-wage jobs in that study reported that they did not know whether their company communicates pay ranges for different levels of progression; regardless of race, more than a quarter said this information is rarely provided at the time of hire (slide D9).

6.4 Processes Affecting Who Is Terminated from Employment

Racial bias in the workplace can affect not only the advancement opportunities of workers of color but also their job retention. Like job separations due to worker quits (see [Who Quits](#) box, *below*), job separations due to employer layoffs or termination display racial bias. According to analyses by the Federal Reserve of the 2017 Survey of Household Economics and Decisionmaking (Kaplan, 2019), Black workers were significantly more likely to have been laid off or fired than were White workers (9 percent compared to 3 percent). This is consistent with other studies showing that White employees are less likely to be laid off or fired than are both Black and Hispanic/Latino employees and that this disparity persists across the labor market in lower-wage and higher-paying jobs (Elvira & Zatzick, 2002; Cunningham-Parmeter, forthcoming; Byron, 2010). One study of the racial patterning of job displacement (permanent involuntary layoffs) found that the Black/White disparity in rates of displacement has doubled for Black women and tripled for Black men from the 1990s to 2017 (Wrigley-Field & Seltzer, 2020). The study further found that during the 1990s, lacking a college degree was replaced by being Black as the better predictor of job displacement. As discussed above, workers of color are at higher risk of forced exits due to their overrepresentation in industries that use surveillance to assess performance (Zickuhr, 2021).

Processes Affecting Who Quits Their Job

Most workers in the United States who leave a job are not formally fired by their employer: they quit. For example, in June 2022, 71% of the almost six million job separations were the result of workers quitting their job (U.S. Bureau of Labor Statistics, 2022). The quit rate (number of quits during a month as a percentage of total employment) increased from 1.6 in June 2012 to 2.8 in June 2022 (U.S. Bureau of Labor Statistics, 2022), signaling what some are calling “The Great Resignation” (Parker & Horowitz, 2022).

Employee exits that are not initiated by employer termination, often labeled “voluntary exits,” might be motivated by work culture; daily discrimination; or lack of advancement opportunities, supports for nonwork responsibilities, or mentoring and support. Employee exits might be the result of inherently biased workplaces and daily experiences of harassment that Black, Hispanic/Latino, and other marginalized workers face. A Pew Research Center survey finds that about a quarter of adults with low incomes quit a job in 2021; a larger proportion of Hispanic (24%) and Asian (24%) workers than Black (18%) and White (17%) workers quit at least one job (Parker & Horowitz, 2022). The top reasons U.S. workers gave for leaving their job in 2021 were low pay, no opportunities for advancement, and feeling disrespected at work (Parker & Horowitz 2022). These were key reasons for quitting a job regardless of race, but workers of color were more likely than their White counterparts to say they quit because they lacked input into their work schedule, wanted to relocate, or worked too few hours. Although framed as voluntary exits, many workers are in essence pushed out of jobs by untenable conditions.

The discrimination and disrespect experienced by largely Black, Hispanic/Latino, and Asian workers can ultimately motivate them to leave their current employment and seek a more welcoming work environment (Travis & Thorpe-Moscon, 2018; Deitch et al., 2003). As discussed in Section 5, bias can create an overtly hostile or subtly discriminatory work culture, which can spur an employee to leave a job. In the national study by the Center for Talent Innovation (now Coqual) of diverse workers at multinational corporations, employees who perceived bias in the workplace were about three times more likely (31% to 10%) to report they were planning to leave their jobs within a year (Hewlett et al., 2017). Another study found that workers of color who experience a sense of being constantly on guard against racial and gender bias in the workplace were much more likely (38%) to frequently consider leaving their jobs than were workers of color with lower levels of feeling on guard (11%) (Dnika & Thorpe-Moscon, 2018).

Lacking opportunities to access training, advancement, and wage increases can contribute to racial disparities in sustained employment. Employers that view workers in lower-wage jobs as disposable commodities often place little value in retention efforts and training opportunities, a mistake that likely contributed to high resignation rates in 2021 (Fuller & Raman, 2022). Ultimately, voluntary exits can be affected by multiple occurrences of implicit and explicit bias in the workplace.

Black men are at highest risk of discriminatory firing and, in turn, poor employment outcomes, because seniority is often necessary for promotion (Dias, 2021). Race and gender gaps visible in employment exit data show that discrimination by employers often keeps workers of color and women in “positions of lower occupational status” (Dias, 2021, p. 2). The acceptance of seniority-based layoffs— “last hired, first fired”—is another example of how seemingly neutral human resources policies can create indirect biases that disadvantage workers of color. Discriminatory firing can be more difficult for workers to prove than other forms of explicit bias that occur in the workplace, but it affects workers to the same extent as discriminatory hiring practices in dampening long-term employment opportunities and upward mobility.

The Importance of Monitoring Why Workers Leave

Unlike other employment processes, exits from lower-wage jobs are not actively monitored by employers (Elvira & Zatzick, 2002). About a quarter of workers in lower-wage jobs (23% Black, 27% Hispanic/Latino, 31% White) in the Project on Managing the Future of Work survey said their company never tracks why workers at their pay level quit or take jobs elsewhere, and fewer than 20% (15% Black, 13% Hispanic/Latino, 11% White) said that their company always holds exit interviews when workers at their pay level are leaving (Harvard Business School, 2022).

Lack of oversight of employee exits could lead employers to misattribute exits to problems with the worker rather than workplace, enabling manager biases to persist in determinations affecting job retention, and thus seniority. As indicated earlier, not only are customer-driven evaluations an issue when used to rate employee performance, but subjectivity by managers when conducting performance evaluations can be racially biased, as well (Mong & Roscigno, 2010).

6.5 *Strategies for Disrupting Racial Bias in Employment Processes Affecting Advancement and Termination and Directions for Future Research*

The literature suggests a variety of strategies for disrupting racial bias in employment processes affecting employee advancement and termination. Retaining workers and promoting their advancement can be a win-win strategy for both employers and employees. Specific strategies, primarily for employers, that could be adopted include:

- **Assessing performance to reward and retain employees.** Human resources literature makes clear that performance reviews are best when used to reward rather than reprimand workers (Society for Human Resource Management, 2017). As discussed above, many workers of color rarely receive meaningful feedback on their performance. Systematically implementing “best practices” performance appraisals for hourly workers, including those in part-time jobs, is a first step toward reducing racial disparities in access to advancement.
- **Implementing strategies such as standardized and “blind” assessments to make performance assessments less biased.** Beyond using assessments to reward and develop workers in lower-wage jobs, employers can take steps to make assessments less biased. The authors of “Why Most Performance Evaluations Are Biased, and How to Fix Them” (Mackenzie et al., 2019) suggest that bias within assessments often emerges in employers’ use of an “open box”—asking evaluators to fill in blank spaces in assessment forms in response to broad questions about employee performance. When provided with little guidance or structure, evaluators are more likely to rely on stereotypes when completing assessments. The authors suggest employers work to remove this source of bias by creating a rubric of criteria to assess all employees and reference specific examples to show the extent to which the employee is meeting the criteria. The rubric can be complemented by creating prompts that elicit specific, measurable outcomes and by requiring all employee assessments to be reviewed for consistency. In addition, online platforms such as [GapJumpers](#) can be used by managers to make advancement decisions based on “blind” assessments, giving workers mini assignments to test their specific skills for higher-level work (Cooper, 2015).

- **Minimizing and making more transparent the use of surveillance.** As discussed above, the common use of surveillance in today's jobs in which workers of color are overrepresented makes clear that surveillance in the workplace is racialized. Several policy organizations are calling for the curtailment of these systems, given their toll on workers' health and quality of employment (West, 2021; Zickuhr, 2021). From legal scholars and labor organizers to industry associations and policymakers, there is growing consensus that workers have the right to be informed of their employer's monitoring systems and how data from the systems are used. Transparency is needed for workers and their representatives to take action to reduce monitoring and racial bias in how the information is used in disciplining workers (Zickuhr, 2021).
- **Clarifying and supporting pathways to advancement for workers in lower-wage jobs.** Employer practices are a large contributor to unclear advancement opportunities in the lower-wage labor market (Bhaskaran et al., 2022). Employers' bias can lead them to assume that workers in lower-wage jobs have less initiative and drive to advance, harming these workers' chances of earning higher wages and promotions. Fuller and Raman (2022) demonstrate that within the lower-wage labor market, employers can address issues of limited advancement, high turnover, and worker dissatisfaction by providing pathways for job mobility and creating awareness of these career pathways. The authors found in their survey of workers in lower-wage jobs that those who achieved upward mobility were aware of available career pathways, with more than half reporting this information contributed to their ability to succeed.

Employers can implement best practices for improving awareness of career pathways by (1) communicating success stories of employees who start as workers in lower-wage jobs and advance within the company; (2) describing career pathways on the company website, within job postings, during job interviews, during on-boarding, and in performance reviews; (3) communicating pay ranges and compensation changes for different levels of progression; (4) communicating what soft/technical skills and credentials are required to advance and how these can be obtained; and (5) holding supervisors and mentors accountable for the upward mobility of employees with lower wages (Fuller & Raman, 2022).

Like transparency in worker surveillance, transparency in advancement opportunities is necessary to address the overrepresentation of workers of color in lower-wage positions, as well as to address worker dissatisfaction with low-quality pay and the lack of skills development.

- **Auditing advancement and job separations to better understand which workers in lower-wage jobs are being promoted, terminated, or quitting and the reasons why.** Tracking advancement and job separations (both quits and terminations) is essential to disrupting racial bias in the processes that shape these outcomes. Surveying workers as to why they stay and why they left or are considering leaving is common in many firms, but surveys often target only full-time, salaried workers. Extending human resources assessments to hourly workers, including part-time workers, as the Project on Managing the Future of Work did, can provide corporate leaders with insights into the barriers workers of color face in moving up to better jobs in their companies. In another example of the value of tracking, the company cited in Castilla's (2008) "meritocracy" study referenced above was able to close its demographic pay gap within five years of making key changes to its career advancement policies. These changes included increasing transparency by using data to track inequity in pay and increasing accountability through monitoring of supervisor decisions to award pay increases (Cooper, 2015).

7. Summary and Areas for Future Research

Racial bias can undermine employment outcomes for job seekers and workers of color in the lower-wage labor market in all employment processes, including those affecting the composition of the applicant pool; who is hired from the applicant pool; the quality of employees' initial job assignment; employee development and support; and employee advancement and termination. Bias may manifest through various modalities, such as an individual manager's decision-making (e.g., about whom to hire or promote), use of technology (e.g., to screen applicants or assign work schedules), employer policies (e.g., types of employment arrangements, benefit eligibility requirements), and an employer's work culture.

As discussed, employers design their employment processes to meet a variety of often conflicting goals. For example, employers seek to hire and retain qualified staff, while at the same time containing, and even curbing, labor costs. Employers frequently try to balance conflicting goals by drawing on information with limited predictive power, leaving managers to make their own decisions, sometimes with incomplete or inaccurate information. The intentions of employers are often laudable; as indicated in this report, many are adopting new technologies with the stated purpose of improving racial and gender equity, including in lower-wage jobs. At this moment, though, evidence suggests that racial equity in employment processes is a far distance off.

7.1 Summary of Evidence of Racial Bias in Employment Processes

As outlined in the first section of this review, racial bias within employment processes can be **direct**, where racist beliefs are engrained in an individual's actions or in business processes, policies, and systems. Such bias can be **explicit**, where the actor is aware of their racial bias, or **implicit**, where the actor is unaware of their racial bias. Racial bias within employment processes can also be **indirect**, where an individual's actions or business processes, policies, and systems are neutral—or at least not overtly racist—yet there is a disproportionate adverse effect on certain racial/ethnic groups. Often, indirect bias results from the interplay of employment processes with existing structural racism within U.S. society that affects where people live, who is in their social networks, their educational attainment, prior criminal legal system involvement, and access to technology.

Whether racial bias is direct or indirect, explicit or implicit, is not always clear or mutually exclusive. In recognizing these diverse sources of bias, it is important to expand the understanding of the possibilities for disrupting racial bias in employment processes beyond direct, explicit types of discrimination. Our analysis unpacks each employment process into subprocesses to reveal multiple possibilities of intervention. **Exhibit 2** below summarizes evidence that biases, both direct and indirect, can manifest in employment processes.

7.2 Directions for Future Research on Ways to Disrupt Racial Bias in Employment Processes

This review highlighted some initiatives that leaders in business and nonprofit organizations are adopting with the goal of increasing equity in employment. But few of these initiatives have been rigorously evaluated. Without rigorous evaluation, it is unknown whether well-intentioned efforts are ineffective or even have unintended negative consequences. Such rigorous evaluation includes careful descriptive analyses of how bias occurs, workers' experiences of bias, and how strategies to disrupt bias are implemented, as well as causal research on the effects of bias and the impact of anti-bias strategies.

Exhibit 2. Summary of Direct and Indirect Biases in Employment Processes

Direct Bias (both explicit and implicit)

Applicant Pool Development: Language used in job postings can be coded or otherwise biased against job seekers of color and toward White job seekers. Job ads that use predictive technologies (e.g., to determine which online ads are shown to which website users) tend to target job seekers of certain races, ethnicities, or genders for certain types of jobs.

Hiring from Applicant Pool: Once an application is submitted, company staff (e.g., hiring managers, supervisors) can look at “Black or Hispanic names” in applications less favorably than “White names” and can interpret gaps in employment histories differently. Using artificial intelligence to screen resumes and recorded video interviews is falling short of reducing racial bias in hiring because many incorporate algorithms normed on applicants who are White.

Job and Schedule Assignment: Employers and staffing agencies can segregate workers into certain job types, with workers of color often funneled into lower-paid jobs with less customer interaction and into part-time and contingent arrangements that lack steady hours and benefits. This practice is a key driver of wage inequality. Manager decisions about shift and hour assignments as well as schedule changes can preference White workers. Even when software creates work schedules automatically without the direct involvement of the manager, racially biased criteria can be structured into the algorithm used.

Employee Development and Support: Workers of color, particularly Black workers, can experience bias within their work cultures in the form of discrimination, harassment, and microaggression. Everyday acts of discrimination can manifest in objective ways, such as unfair negative evaluations or denials of promotions and raises, or in less quantifiable ways, such as differential treatment, task assignments that provide fewer opportunities for skill development, and acts of harassment that lead to stress and undermine well-being.

Advancement and Termination: Workers of color are less likely to be promoted than White workers. This is true even though workers of color are as likely to request consideration for promotion. Employers more often use surveillance to assess the performance of workers of color, including to discipline them to conform to “White standards” in how they interact with customers. Black and Hispanic workers are more likely to be laid off or fired than White workers in both lower-wage and higher-wage jobs.

Indirect Bias: Intersection of employment processes with broader structural racism

Geography: Job seekers and workers of color tend to live farther away from employers and jobs than do White job seekers and workers, such that the former have less information about and access to job openings and greater difficulties with scheduling (e.g., getting extra hours, adjusting transportation when their schedule changes).

Social Networks: Because networks tend to be racially homogeneous and localized, job seekers of color often do not hear of or get referred to better jobs in higher-income, predominantly White areas.

Educational Attainment: Job seekers of color have lower educational attainment, on average, than White job seekers, so they are more affected (e.g., do not apply or are screened out) when employers require higher levels of education than needed to perform job tasks.

Criminal Legal System Involvement: Black and Latino workers have significantly higher rates of criminal legal system involvement than White workers do. Employer prejudice, concerns about reliability and liability, and lengthy gaps in employment due to incarceration can lower these workers’ chances of being hired, the quality of their initial job assignment, etc.

Digital Access/Literacy: Job seekers and workers of color, on average, have less access to the internet, access to or familiarity with devices other than smartphones, and fluency in digital skills than do White job seekers and workers. This results in less knowledge about online job postings and fewer opportunities to submit online applications, participate in online interviews/testing, or access online work schedule information.

Indirect Bias: Disproportionate racial impact given occupational segregation patterns

Hours and Schedules: Lower-wage jobs are more often part-time and are characterized by volatility in the number and timing of hours, frequent schedule changes, and lack of employee schedule control. As a result, workers in lower-wage jobs experience more difficulty earning a family-sustaining income, accessing benefits such as employer-sponsored health insurance, and advancing in and retaining jobs (especially if they have challenges with transportation and childcare).

Training and Mentorship: Workers in lower-wage jobs experience higher turnover and have fewer advancement pathways. They are offered fewer training opportunities and less mentorship, even though these supports are highly desired by these workers.

Advancement and Termination: Workers in lower-wage jobs are less frequently assessed for purposes of advancement and skill development; informed of how their compensation, job duties, or job status could change based on a performance review; or told the criteria on which they will be evaluated. Instead, these workers are more likely to have their performance assessed for disciplinary purposes, including close monitoring via systems of surveillance. Workers in lower-wage jobs also are provided less guidance on career pathways. Because workers of color are disproportionately represented at the lower tiers of organizations in jobs with restrictive pay bands, they are at higher risk of limited wage growth.

This section identifies four directions for research, based on their potential to yield actionable evidence for disrupting racial bias in multiple employment processes. The recommendations focus on approaches to improve the knowledge base needed to take action to reduce racial bias, but acknowledge that ongoing research on sources of racial bias is also required as bias takes different forms at different times. The suggestions also emphasize that partnerships among researchers, employers, workers, policymakers, and practitioners are needed to ensure the relevance and impact of research to disrupt racial bias.

7.2.1 Greater Transparency About Bias and Equity in Employment Processes

A theme throughout this review is that a first step employers can take to disrupt racial bias is gathering systematic information on potential inequities within employment processes and then establishing systems of accountability to address surfaced inequities. Researchers can partner with employers to develop feasible and meaningful metrics of equity, preferably employing information already collected through company systems. As discussed, several researchers have advanced frameworks defining dimensions of racial equity that can help guide efforts to measure and track racial bias in employment processes. By defining metrics of equity and providing examples of their operationalization in partnership with employers, researchers can build the evidence needed to disrupt racial bias in employment processes in diverse industries. Establishing metrics of equity for each employment process could also be useful to policy advocates and labor groups seeking to engage employers in establishing and maintaining equitable employment processes. Studying how managers and workers draw on equity metrics in decision-making processes could yield valuable lessons to inform the development of interventions to disrupt racial bias in specific employment processes and in different employment settings.

7.2.2 Equitable Use of Technology

Use of technology by employers holds promise for disrupting racial bias within employment processes by replacing human decision-making and its underlying explicit and implicit cognitive bias with potentially objective artificial intelligence. However, current research indicates that technology is falling short of this promise. Part of the issue is that algorithms used within the software structure in racial bias. Research to inform development of algorithms that disrupt, rather than exacerbate and conceal, bias continues to be needed given widespread use of technology in all employment processes. In addition, the extent to which new technologies disrupt or exacerbate racial bias in employment processes will depend on how they are integrated into everyday practice by frontline managers. This review suggests that technologies are implemented in racially biased ways, such as “tagging” of employees by managers for preferred hours in computerized scheduling systems. Studies of implementation of new technologies by employers seeking to disrupt racial bias could yield useful “best (and worse) practices” for employers and needed knowledge for workforce development organizations and workers themselves seeking to advance equitable employment processes.

7.2.3 The Interrelatedness of Bias in Employment Processes

An important question for future research is the extent to which increased equity early in the job search process results in less bias in the remaining employment processes and in employment outcomes. Although expanding applicant pools might be necessary for greater racial equity, it might not produce equity in outcomes if screening criteria are racially biased. Research already indicates that hiring managers’ racial bias at the point of hiring is limiting the success of “ban the box” initiatives in expanding opportunities for workers of color. And “open hiring” practices that reduce barriers to getting jobs might not result in greater equity in job retention unless workers of color are provided with needed support once hired. Research is needed to identify the constellation of conditions necessary (and sufficient) to deliver more equitable employment outcomes from promising initiatives.

7.2.4 More Deeply Incorporating Voices of Workers of Color

Workers of color are experts on the nature of racial bias in employment processes and have useful insights on how to disrupt it. Researchers can directly engage workers of color in a variety of lower-wage occupations to better understand their experiences of racial bias within different employment processes, as well as to gain deeper insight into the social, historical, and cultural contexts that shape these experiences. In addition, research that engages workers of color in evaluating and reinventing employment processes is needed to develop effective ways of intervening; otherwise, new efforts could reproduce rather than reduce racial bias in employment processes. In conducting these studies, researchers can consider taking a community-engaged or participatory approach, in which they collaborate with workers of color to inform their research planning, design, data collection, analysis, interpretation, and other evaluation decisions.

In sum, more is known about sources of racial bias in employment processes than about effective strategies to disrupt it. Researchers can play an important role in developing an evidence base about disrupting bias by partnering with employers, labor groups, and policy makers on studies that evaluate the benefits and limitations of existing efforts and, importantly, that suggest new ways to improve the effectiveness of those efforts.

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