CAMBRIDGE
UNIVERSITY PRESS

FOCAL ARTICLE

Is cybervetting valuable?

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Abstract

Cybervetting is the widespread practice of employers culling information from social media and/or other internet sources to screen and select job candidates. Research evaluating online screening is still in its infancy; that which exists often assumes that it offers value and utility to employers as long as they can avoid discrimination claims. Given the increasing prevalence of cybervetting, it is extremely important to probe its challenges and limitations. We seek to initiate a discussion about the negative consequences of online screening and how they can be overcome. We draw on previous literature and our own data to assess the implications of cybervetting for three key stakeholders: job candidates, hiring agents, and organizations. We also discuss future actions these stakeholders can take to manage and ameliorate harmful outcomes of cybervetting. We argue that it is the responsibility of the organizations engaged in cybervetting to identify specific goals, develop formal policies and practices, and continuously evaluate outcomes so that negative societal consequences are minimized. Should they fail to do so, professional and industry associations as well as government can and should hold them accountable.

Cybervetting, or using information drawn from the internet and social media websites to screen job candidates and make hiring decisions, is widely practiced by employers. Estimates of the prevalence of cybervetting as a means of screening job candidates range from 43% of human resources (HR) professionals in a 2015 survey (Society for Human Resources Management [SHRM], 2016) to 70% of hiring managers and HR professionals combined, as found by a more recent study conducted in 2018 (CareerBuilder, 2018). However, online screening of job candidates is more common in certain fields, such as IT, in which 74% of hiring managers and HR professionals report cybervetting (CareerBuilder, 2018). Its prevalence also varies with the position being filled. Cybervetting is more common when hiring for managerial and salaried than hourly or entry-level jobs. Research also suggests it may also be more common for "front stage" positions with high levels of customer interaction than for "back stage" roles (Chang & Madera, 2012; SHRM, 2016). The overall picture that emerges from scholarly and industry research is one of a widespread and growing hiring practice.

Cybervetting warrants researchers' attention not only due to its popularity but also due to its distinction from traditional hiring and selection procedures. Compared with traditional hiring

practices (such as application submissions, phone calls, and interviews), cybervetting affords job seekers less control over the information that hiring agents use to evaluate them (Hedenus & Backman, 2017) and offers hiring agents greater access to job candidates' personal information (Zhang et al., 2020). It occurs earlier in the hiring process and can be used to quickly scan larger numbers of people. Cybervetting also involves one-way vetting rather than two-way interaction, giving job candidates less say in the evaluation process.

The cybervetting literature is a developing arena that remains quite limited. Previous research has little to say about the potential consequences of cybervetting, especially from the perspective of job seekers who are subjected to and hiring agents who engage in this practice. How does cybervetting affect individuals' job search experiences and hiring agents' work activities? How does it influence organizational success and intersect with other social problems? We posit that the growing pervasiveness of cybervetting renders consideration of its consequences, as well as steps to minimize its potential harms, of utmost concern. We examine the implications of cybervetting for three key stakeholders: job candidates, hiring agents, and organizations. Based on a review of existing literature as well as our own research—an interview study of 77 hiring agents (human resource professionals, recruiters, hiring managers, and related market actors) in the Atlanta and Raleigh-Durham metro areas[1]—we discuss the consequences of current cybervetting practices for each stakeholder group and then outline steps that could be taken by each to minimize cybervetting's negative outcomes. In making recommendations for future practice, we emphasize the steps that organizations can take to ameliorate cybervetting concerns, given the relative power and sway of organizations as compared with individual job candidates and hiring agents. We also suggest actions that professional associations and government should take to ensure that business organizations are held accountable.

Job candidates: Perceptions and experiences of the cybervetted

Workers today face unprecedented demands to manage their public images. This stems largely from two concurrent shifts: the rise of internet-based communications and major transformations in the social contract that implicitly and explicitly governs employment relationships. The internet has spawned a variety of job posting boards, automated hiring applications, and social media platforms, which together have greatly increased the capacity of organizations to gather information about actual and potential job candidates (Ajunwa & Greene, 2019). At the same time, the new employment contract (Rubin, 2012) has transformed workers from stable employees into "free agents" who are responsible for continuously (re-)securing their own economic and social well-being (Gershon, 2017; Kalleberg, 2011; Smith, 2002). Increasing flexibility in terms of where, when, and for whom one works is a burgeoning expectation (Harvey et al., 2017; Kalleberg, 2011; Smith, 2002), and perceived employment insecurity is a rising issue due to shifting employment relations (Fullerton & Wallace, 2007; Kalleberg, 2011). Successful online impression management is one factor that can make it easier for individuals to obtain (and maintain) work (Roulin & Levashina, 2016). Online impression management is one form of "employment management work" (Halpin & Smith, 2017) that individuals engage in to manage how employers see them and thereby protect their present and future employment status (Roulin & Levashina, 2016). Individuals may undertake online impression management regardless of whether they are actively searching for jobs (e.g., Duffy & Chan, 2019; Hurrell et al., 2017; Scolere et al., 2018). Both employers and workers consider it a normalized expectation to which individuals must adhere in order to maintain a professional image (Berkelaar, 2014).

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[1]In-depth interviews were conducted by the second and third authors between 2014 and 2016. Participants were recruited primarily through HR meetings and events and supplemented with respondent-suggested referrals. They represented diverse organizations and industries. Further details can be found in (McDonald et al., 2021), which reported on 61 of those interviews.

Job candidates[2] *manage risk* via defensive strategies directed at preventing negative employment outcomes in the future. Concerns with risk management arise from perceiving "the scrutiny that *could* take place across the social media ecology and, consequently, *may* engender future risks or opportunities" (Duffy & Chan, 2019:121). Individuals may use privacy settings and aliases or pseudonyms to block potential employers from accessing content seen as "inappropriate" (e.g., drinking photos) and monitor the content posted on more widely accessible platforms in order to ensure that it is indeed "appropriate" (Duffy & Chan, 2019). Individuals may restrict "less appropriate" content to informal platforms where content is accessible only to close friends (e.g., Snapchat; Duffy & Chan, 2019) or simply avoid posting such content on social media at all (Roulin, 2014). Individuals are more likely to avoid posting "inappropriate" content on social media when aware of the employer monitoring that takes place (Roulin, 2014). Engaging in these risk-management practices enables job candidates to limit their feelings of uncertainty in an employment context that offers workers little protection against it (Smith, 2002).

Simultaneously, active job seekers in particular undertake a more offensive strategy of *managing fit* to maximize their chances of getting a job. Research illustrates the importance of portraying oneself as a "good fit" with a job or an organization in order to succeed in interviews (Barrick et al., 2009; Rivera, 2015). Job candidates portray their fit online by creating a unique but highly positive "personal brand" to sell themselves to potential employers (Gershon, 2017). Job seekers use platforms that they perceive as best suited for accomplishing their personal branding (Scolere et al., 2018), add personal touches (e.g., stories, images) to their profiles to foster a connection with hiring agents, and constantly tailor their online profiles to the next jobs for which they are interviewing (Sharone, 2014). The commonality of individuals' fit-management strategies (Hurrell et al., 2017) is unsurprising given the frequent use of cybervetting as well as employer's increasing emphasis on hiring "perfect" job candidates (McDonald et al., 2019).

Insecurities and identities online

Widespread societal pressures to engage in risk- and fit-directed online impression management have numerous negative consequences. Insecurity arises from uncertainty about the potential effects of one's online actions and the "best" way to portray oneself online (Duffy & Chan, 2019; Sharone, 2017). Job candidates have a general sense that someone might be looking at their profiles, now or in the future, but worry about who might be looking, when they might be looking, and what negative outcomes might happen as a result (Duffy & Chan, 2019). Due to the highly subjective process of interpreting online signals, as well as the lack of clear guidelines for maintaining a strong online persona (Gershon, 2017), candidates experience insecurity in deciding whether and how to manage their online professional identities. For example, individuals belonging to marginalized groups may be wary of posting profile pictures that could facilitate discrimination but may also worry that if they do not post a profile photo, they will be overlooked by hiring agents (Sharone, 2017).

Job candidates also experience anxiety arising from the difficulty of negotiating various identities online. Social networking sites complicate individuals' ability to maintain a personal identity distinct from their professional identity given that personal posts may be subjected to employer scrutiny and should therefore look professional (Duffy & Chan, 2019; Sharone, 2017). This creates unrealistic demands because people have multiple identities and often adjust their portrayal of self, depending on with whom they are communicating (van Dijck, 2013). For example, individuals are more likely to post "inappropriate" content when trying to impress their friends and less likely to post "inappropriate" content when trying to convey positive impressions to potential employers

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[2]Given the normalization of online impression management regardless of one's job search status (Berkelaar, 2014), in the following pages we use the term "job candidates" to refer to both seekers and nonseekers who may or may not be aware of being informally vetted online.

(Roulin, 2014). The obligation that individuals portray their one "true" identity on social networking sites—an assumed obligation built into the layout and features of sites such as Facebook and LinkedIn—creates further complications during the job search process (Sharone, 2017; van Dijck, 2013). On LinkedIn, individuals are allowed only one profile, which can pose difficulties for those attempting to tailor their profiles to different jobs for which they are applying (Sharone, 2017). Facebook's timeline feature imposes a similar limitation by synthesizing all of the information users have ever posted on the site and sharing these data with the public by default (van Dijck, 2013).

For active job seekers who are unable to find work, the demand to manage one's online persona can also encourage self-blame. When the burden of illustrating job "fit" hinges on the candidate, repeated rejection leads job seekers to believe that their inability to obtain a job is due to some inherent personal flaw (Sharone, 2014). Individuals who are unable to find a job may begin to question their personal deficiencies or lament their past decisions (Lopez & Phillips, 2019). These feelings of self-blame, shame, and inadequacy can plague the job search experience and discourage individuals from continuing with the process (Lopez & Phillips, 2019; McDonald et al., 2019; Sharone, 2014). Given that rejection and continued unemployment is more common among marginalized groups, such as racial minorities (e.g., McBrier & Wilson, 2004; Pager et al., 2009), individuals with marginalized identities likely experience intensified self-blame arising from pressure to portray oneself as a good "fit" with jobs and employers.

Job candidates' perceived lack of privacy

Individuals also tend to perceive cybervetting as a violation of privacy or as unjust (Berkelaar, 2014; Hurrell et al., 2017; Madera, 2012; Stoughton et al., 2015; Suen, 2018). Cybervetting is associated with lower levels of perceived procedural justice among job candidates (Bauer et al., 2006; Madera, 2012; Stoughton et al., 2015; Suen, 2018), and this relationship persists regardless of the hiring outcome (Stoughton et al., 2015).[3] Perceived lack of privacy and procedural justice further encourage the previously discussed anxieties that job candidates experience. Perceiving a lack of privacy online makes online impression management seem especially important (Duffy & Chan, 2019), whereas perceiving a lack of procedural justice may feed worries about discrimination.

The relationship between online screening and perceived procedural justice may be moderated by individual characteristics (Stoughton et al., 2015), perceived transparency of the data collection process (Black et al., 2015; Suen, 2018), and perceived relevance of the collected data (Alge, 2001). Candidates who are able to manage their online presence may be less worried about cybervetting constituting an invasion of privacy. Employees involved in the design or operation of surveillance tend to perceive less invasion of privacy and greater procedural justice (Alge, 2001). Candidates who tailor their online profiles to potential employers (Hurrell et al., 2017) and who expect to receive a favorable evaluation as a result of employer screening (Kuhn & Nielsen, 2008) perceive employers' use of screening as more fair and acceptable than those who do not. Among candidates with greater confidence about their personal ability to control their online presence, there is a weaker relationship between employer use of online screening and candidates' perceived violation of privacy (Suen, 2018). This suggests that increased individual agency and control may help to ameliorate, but not necessarily cancel out, the negative privacy implications of cybervetting. As Hedenus and Backman (2017) have observed, the maintenance of online employability in the form of a sanitized and professionalized digital identity is an exercise in self-reflection, which may be viewed as empowering for employees or as an instance of coerced adaptation to organizational norms.

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[3]Procedural justice refers to the fairness of selection procedures (Gilliland, 1993).

Discriminatory effects for job candidates

A third potential implication of cybervetting for job candidates is objective and subjective discrimination. Extensive research documents discrimination targeting individuals with marginalized social identities during the hiring process. Audit studies show that Black job applicants are less likely to receive callbacks than White job applicants (Gaddis, 2015; Pager et al., 2009; Pager & Quillian, 2005), queer women are less likely to receive callbacks than straight women (Mishel, 2016), and socioeconomically privileged and high-achieving women are less likely to receive callbacks than their male counterparts (Quadlin, 2018; Rivera & Tilcsik, 2016). Such discriminatory hiring decisions are shaped by stereotypical beliefs about which categories of individuals are the "most appropriate" for certain jobs (Abrams et al., 2016; Heilman, 2012; Koch et al., 2015; Moss & Tilly, 1996; Waldinger & Lichter, 2003). For example, the stereotype that socioeconomically privileged women are "less committed" to demanding careers harms their prospects on the job market (Rivera & Tilcsik, 2016). Given that information about an individual's social group identities, such as race and gender, is widely available on social media (Zhang et al., 2020), cybervetting is likely to exacerbate the influence of stereotypical and discriminatory decisions in the hiring process.

Despite some research on the effect of formalized organizational policies (e.g., Balser, 2002; Hirsh & Lyons, 2010; Kaiser et al., 2013), we are unable to find any literature examining how perceived discrimination is affected by the largely informal practice of cybervetting. This promises to be a fruitful avenue for future industrial-organizational psychology research. Although perceived procedural justice is a primary focus of the cybervetting literature, it is only one of the factors that could lead to perceived discrimination and is therefore a narrower concern (Harris et al., 2004). To the extent that cybervetting leads to perceived discrimination more broadly, it can have a wide range of negative outcomes for job candidates. Perceived discrimination is associated with increased physical and psychological health problems and has negative consequences for work-related outcomes such as job satisfaction and organizational citizenship behavior (Ensher et al., 2001; O'Brien et al., 2016; Triana et al., 2019). It also has implications for individuals' job search patterns and outcomes. For example, African Americans who perceive having been subject to discrimination in the workplace are more likely to apply for a wider range of jobs, which expands their likelihood of finding a new job but also leads to reduced wages (Pager & Pedulla, 2015). Given the potential objective and subjective discriminatory effects of cybervetting, future research examining cybervetting and perceived discrimination is needed in order to address implications of cybervetting for job candidates more comprehensively.

Hiring agents: Perceptions and experiences of the cybervetters

For hiring agents, cybervetting consists of searching for information about job applicants on social media sites and via search engines (CareerBuilder, 2018; SHRM, 2016). Among social media, they use LinkedIn most often, followed by Facebook, Twitter, and professional or industry sites (Caers & Castelyns, 2011; McDonald et al., 2021; SHRM, 2016). Hiring agents may cybervet at any stage of the hiring process but often do so early on, after job applications are received but before interviews are conducted (Chang & Madera, 2012; Sameen & Cornelius, 2013; SHRM, 2016). Their searches are generally unofficial and casual, as few organizations have any formal cybervetting policies, procedures, or trainings (Caers & Castelyns, 2011; Hoek et al., 2016; McDonald et al., 2021; SHRM, 2016). HR personnel are less likely to cybervet than recruiters from other professional fields (Berkelaar & Buzzanell, 2015; Gershon, 2017), likely because they have more training and occupational socialization in standard procedures and legal compliance. But why do hiring agents engage in cybervetting at all, and what are their concerns about the practice? Here we examine their subjective perceptions, motives, and doubts, highlighting the ambivalence that surrounds cybervetting even among regular practitioners.

Hiring agents' motivations for cybervetting

Hiring agents most commonly cite risk management as the reason for cybervetting (e.g., Carr 2016; McDonald et al., 2021). They see this form of screening as a way to minimize uncertainty about candidates, the possibility of making poor hires, and associated fallout such as negligent hiring claims (Carr, 2016; Chauhan et al., 2013; Davison et al., 2016; Schmidt & O'Connor, 2016). Online risk screening takes several forms. Recruiters may search applicants' LinkedIn profiles to see whether they have mutual connections that can serve as "back door references," individuals who can comment on candidates without the latter's knowledge or influence (McDonald et al., 2021, interview notes). They also use LinkedIn to see whether candidates have received any endorsements or recommendations, how many connections they have, or whether they are connected to prominent members of their professional fields (Berkelaar & Buzzanell, 2015; McDonald et al., 2021; Zide et al., 2014). Another common practice is consistency checking or searching to see whether LinkedIn or Google information matches resumes and applications (Hoek et al., 2016; McDonald et al., 2021). Among SHRM's (2016) survey participants, 50% cite the ability to "easily verify information from an applicant's resume, cover letter, or CV" (p. 20) as a reason for social media screening. Searches for backdoor references and information (in)consistencies arise in part from hiring agents' mounting distrust for traditional job resumes, which are seen as untrustworthy due to candidate impression management, and formal references from prior employers, who often provide very little information due to libel concerns (Berkelaar, 2014).

A third form of risk-management screening is the search for "red flags," or online traces of poor judgment, unprofessionalism, or potentially destructive workplace behavior—things like posts and pictures depicting alcohol use, overt sexual content, expletives, racism, or badmouthing of employers. Some recruiters claim that red flags do not automatically rule candidates out but instead prompt discussion during interviews (Hedenus & Backman, 2017; Hoek et al., 2016; McDonald et al., 2021). Still, SHRM (2016) reports that 36% of employer organizations have disqualified candidates due to concerning posts or search results, whereas CareerBuilder (2018) offers a higher estimate of 57%. Numerous studies find that cybervetters tend to weigh negative online content (e.g., posts indicating heavy drinking or self-absorption) more strongly than benign content (e.g., Becton et al., 2019; Zhang et al., 2020). Common explanations for this pattern, also found in in-person job interviews, include risk management and fundamental cognitive processes (Becton et al., 2019; Chang & Madera, 2012; Tews et al., 2020). Hiring agents rarely check the veracity of online information, negative or positive, via other sources (Berkelaar & Buzzanell, 2015). Even those who are skeptical of risk-management cybervetting may feel pressured to do so. Once enough peers adopt the practice, the perceived costs of not doing it are simply too high (Kuhn, 2015).

The desire to assess candidates' "fit" with prospective jobs and employers also motivates hiring agents' cybervetting practices (Hoek et al., 2016; Roulin & Bangerter, 2013; Sameen & Cornelius, 2013). Personnel selection scholarship defines fit as "compatibility between an individual and work environment that occurs when their characteristics are well matched" (Kristof-Brown et al., 2005, p. 281). It is a dominant organizing concept but also an ambiguous one. Fit can refer to either similarity or complementarity between individuals and their jobs, organizations, work groups, or supervisors, in terms of skills, goals, values, or personality traits and is further complicated by different methods of measurement (Kristof-Brown et al., 2005). Practitioners also see fit as important but understand it in different ways. Hiring agents speak differently about fit when selecting candidates for different types of jobs and organizations (Berkelaar & Buzzanell, 2015). In addition, hiring agents may emphasize different aspects of fit for different jobs or at different stages of the hiring process (Barrick & Parks-Leduc, 2019). They use a variety of screening devices to assess fit. Personal interviews and telephone screens are dominant, but online screening is also significant.

When cybervetting, some hiring agents clearly focus on what researchers call "person–job" (P–J) fit. For instance, one of our interviewees searched Google to determine engineering candidates' "job experience and the different roles that they held, the different requirements that they would need in their job" (McDonald et al., 2021, interview notes). This is essentially an assessment of objective job qualifications. However, many hiring agents also look for "culture fit," a more amorphous and subjective quality, which they variously describe as ability to interact with others, sharing organizational values and goals (e.g., tolerance for diversity), personality and extracurricular activities ("If they've got pictures of them with their mom and dad … you just kind of get a feeling that they're the stablish type of person that we like"), or "professionalism," often judged by appearance in LinkedIn profile pictures (McDonald et al., 2021, p. 10; Zide et al., 2014). This seems to encompass two categories identified by researchers: person–group (P–G) fit (i.e., getting along with immediate coworkers) and person–organization (P–O) fit (i.e., similarity in the values held by an individual and an employer; Kristof-Brown et al., 2005). Some hiring agents use Google and social media searches to assess P–J, P–G, and P–O fit at once (Roulin & Bangerter, 2013; Sameen & Cornelius, 2013).

With or without mentioning "fit" specifically, many hiring agents describe cybervetting as a means of getting "more information," "a sense of," or "a little insight" about individual job candidates, to gauge "who they really are" or "get a feeling" for the person (Hoek et al., 2016; Kotamraju et al., 2014; McDonald et al., 2021, interview notes). As one HR professional put it,

> A resume … is the best professional version of you … Facebook is the reality—or Instagram, or whatever—that is the reality of you. My reality is that I am going to be working with you for hopefully the next five or ten years, so I want to know the person, not just the best professional version, but the person. Who am I going to be hiring? That's why I check that at all, really, is to find out more about them and what they like to do, and that kind of thing. (McDonald et al., 2021, p. 8)

Of course, some hiring agents recognize that social media profiles are forms of impression management and may not reflect the "real person" in this sense (Hoek et al., 2016). Still, SHRM (2016) finds that HR professionals' most frequent reason for cybervetting is "ability to obtain more information about an applicant than would be provided by just a resume, cover letter or CV" (p. 20). Though it does not correspond to any category of fit in the scholarly literature, hiring agents' use of online information to construct and evaluate images of "real" candidates can be seen as assessments of impressionistic or "fuzzy" fit.

Risk- and fit-based explanations legitimize cybervetting as a rational, instrumental practice. However, it is also involves less rational motivations. Davison et al. (2016) suggest that hiring agents may search candidates online in part because it is entertaining, and Kotamraju et al.'s (2014) Netherlands study reports curiosity as a common motive. There is also the role of habit: Hiring agents may cybervet partly because they are accustomed to using social media in their wider personal and professional lives. This is supported by evidence that regular Facebook and LinkedIn users are more likely than others to employ these platforms in recruiting and selection (Nikolaou, 2014) and that hiring agents who use LinkedIn regularly are especially likely to trust information found there (Caers & Castelyns, 2011). According to Berkelaar (2014), employers and job seekers take it for granted that cybervetting will occur, whether they like it or not.

Hiring agents' ambivalence toward cybervetting

Although motives for cybervetting range from perceived necessity to sheer curiosity, many hiring agents view the practice with ambivalence. Multiple studies find that about 30% of surveyed hiring agents claim to do no cybervetting at all (CareerBuilder, 2018; McDonald et al., 2021; Sameen & Cornelius, 2013), and one study of HR professionals estimates that as many as 50% purport refraining (SHRM, 2016). Even those who do cybervet often question the quality of the resulting

information, citing the possibility that much of it is inaccurate, irrelevant to the job at hand, and/or liable to misinterpretation (Hedenus & Backman, 2017; Hoek et al., 2016; Kotamraju et al., 2014; McDonald et al., 2021; SHRM, 2016). The issue of online impression management by candidates is also subject to varied interpretation. LinkedIn profiles may be seen as accurate reflections of professional accomplishments or as the products of candidates "positioning themselves in the best light and highlighting all the positives, and typically not giving as much history" (McDonald et al., 2021, interview notes). Similarly, LinkedIn's endorsements and recommendations are useful to some, whereas others do not trust them ("I mean my best friend was a vendor of ours; I could have her write something fantastic about me"; McDonald et al., 2021, interview notes). Some hiring agents view personal social media (Facebook, Instagram) as reflective of "the real person," whereas others suggest that candidates can and should edit that reality ("if you have like a glow stick around your head and cocktail in your hand, I mean, you might want to take that down while you're doing a job search") (Berkelaar, 2014; McDonald et al., 2021, interview notes). This last point highlights hiring agents' frequent slippage between three very different approaches to social media information. They take it at face value, question its veracity, and/or insist that candidates engage in artifice so as to display a professional character.

In addition to accuracy, hiring agents may worry about the efficiency of cybervetting. In the past it was assumed that cybervetting occurs because social media and search engines provide easier, cheaper, and more-convenient access to candidate information than traditional hiring tools (Chauhan et al., 2013; Davison et al., 2016). Today, cybervetting remains convenient, as the barriers to entry are low (Berkelaar, 2014). Otherwise, perceptions of its efficiency are mixed. Though 60% of Sameen and Cornelius's (2013) survey respondents said cybervetting saves money and time, only 38% associated it with "easy processing of data." Hoek et al. (2016) likewise found that hiring agents cite excessive time and resource requirements as important reasons for not cybervetting. Perhaps for this reason, reports of screening social media profiles because "it takes little time and effort" decreased from 63% in 2011 to 34% in 2016 (SHRM, 2016). The early convenience of cybervetting appears to have decreased over time due to technology churn (Carr, 2016), notably the proliferation of online platforms, features, users, and content (Ajunwa & Greene, 2019).

Hiring agents may also have qualms about the legality and ethics of cybervetting. Concern about legal action focuses mostly on the possibility of discrimination arising from the ease with which candidates' protected statuses may be observed online (Hoek et al., 2016; McDonald et al., 2021; SHRM, 2016). Hiring agents question not only the threat of litigation but also broader ethical and practical dilemmas around bias and fairness. For instance, some worry that viewing candidates' protected statuses early in the hiring process (before face-to-face interviews) could amplify the effects of bias, whereas others argue that cybervetting is fine at any stage because status information emerges prehire anyway (McDonald et al., 2021). Hiring agents also estimate their own ability to avoid discriminating very differently—some express complete confidence, whereas others worry about the effect of subconscious bias (Kotamraju et al., 2014; McDonald et al., 2021).

Doubts about cybervetting also stem from its potential to violate job applicants' privacy and personal/professional boundaries (Hoek et al., 2016). Given the United States' weak legislation in this area (Schmidt & O'Connor, 2016), HR professionals do not usually see privacy as a source of potential litigation. Instead, they worry about the ethics of "snooping" on candidates' online profiles and using them to gauge future professional conduct (Becton et al., 2019). However, even as they voice such concerns, hiring agents offer caveats and carve outs that restore cybervetting's ethical palatability. For instance, some hiring agents place the onus of privacy on individual job seekers, claiming that they waive privacy expectations when they post to social media (Chauhan et al., 2013) or that it is up to them to adjust their profiles and privacy settings to suit their own needs (Berkelaar and Buzzanell, 2015; McDonald et al., 2021). Others divide responsibility for privacy between applicants and hiring agents, suggesting that it is acceptable for employers to cybervet if job seekers have given prior consent (Hoek et al., 2016) or supplied relevant links

in resumes or applications, an increasingly common practice (SHRM, 2016). Hiring agents also manage privacy concerns by limiting cybervetting to LinkedIn, seen as a "professional" social networking tool and therefore fair game, but not Facebook, associated with personal life (Caers and Castelyns, 2011; Hoek et al., 2016; McDonald et al., 2021).

In summary, although most hiring agents engage in cybervetting, some do so reluctantly and others avoid it outright. We suspect that it is additionally complicated in situations involving time pressure or high-stakes hires and for hiring agents whose roles emphasize procedure and accountability, notably HR professionals. Overall, it appears that for hiring agents, the biggest challenge of cybervetting is ambiguity and ambivalence arising from the uncertain quality of information found online, the unclear legality of seeking it out, and the murky ethics of including it in candidate evaluations.

Organizations: Cybervetting benefits and liabilities

Prior to the internet, organizations screened job candidates by verifying credentials, checking references, and conducting interviews, or they outsourced this work to headhunters or executive search consultants (Finlay & Coverdill, 2007). Today these practices have not gone away (Coverdill & Finlay, 2017), but they are increasingly superseded by extended candidate screening carried out easily via internet tools, within employer organizations. The ability to tap into the vast crowd-sourced landscape of internet data to evaluate job candidates has thrived because it aligns well with the organizational imperative to identify evidence-based solutions (Fourcade & Healy, 2017). Cybervetting is different, though, in that it involves not simply the collection and evaluation of more data but a unique form of data. This new form of data offers a chance to reveal insights for improving hiring decisions, but questions about its veracity abound. As noted earlier, many in the HR community want to obtain further information such as social media posts and pictures to reduce hiring uncertainty and claim that they can effectively draw pertinent inferences from these data (Carr, 2016; McDonald et al., 2021; Zide et al., 2014). Researchers have expressed greater skepticism (Davison et al., 2011, 2016; Gershon, 2017).

Organizations vary in the extent to which they rely on cybervetting. Previous research shows substantial differentiation in these activities by organizational size, sector, and form. According to SHRM (2016), cybervetting is more common among privately owned, for-profit employers than publicly owned, for-profit or nonprofit employers. Based on our own research (McDonald et al., 2021), cybervetting tends to be more common among small to medium for-profits and third-party recruiting firms than among large for-profits, nonprofits, and government entities. HR recruiters in government and nonprofit organizations express the most skepticism toward cybervetting. These organizations are more likely to have policies and training materials in place to guide and/or limit these practices. Cybervetting is most prevalent among third-party recruitment and staffing agencies, which rely heavily on gathering online information to screen job candidates prior to putting them forward to the firms with whom they are contracting. For-profit organizations fall in the middle of this continuum. Their HR staff express both enthusiasm and skepticism for cybervetting. They attempt to limit the problematic aspects of cybervetting but rarely have formal policies in place.

Why do we see variation along these lines? Several factors seem to be especially important. First, organizations tend to operate with distinctive goals and motivations depending on sector (Chua, 2011; Cobb, 2016). Government and nonprofit organizations express a greater commitment to equity, universalism, and transparency. This sensitizes their HR staff to concerns about bias, discrimination, and privacy. By contrast, for-profit organizations are more committed to efficiency and revenue generation. In these contexts, cybervetting is viewed as a means toward those ends. Second, organizations respond to different institutional pressures across sectors. Legal institutions loom especially large. Government organizations, large for-profit firms, and

federal contracting firms are held to the highest standards in terms of employment equity. Regulatory context therefore heightens the risks posed by cybervetting. Third-party contracting agencies are the furthest removed from these risks, as they are consultants to the hiring process rather than final hiring authorities. Finally, the plentitude of information available online poses organizational challenges, but as tools for data access have expanded, so too have tools for data processing, including applicant tracking systems, advanced search functions, and algorithmic data processing (e.g., machine learning). Advanced techniques and software are more accessible for large organizations and for third-party staffing firms that specialize in applicant sourcing and screening. However, organizational capacity has varied implications. Larger and more bureaucratic organizations are also most likely to have policies and regulations governing cybervetting.

Dubious effectiveness and negative effects of cybervetting

Cybervetting is touted as a way to improve hiring outcomes, but whether it actually does so is rarely subject to empirical evaluation. Research on personality assessments of online content offers the clearest insights. Digital footprints are modestly correlated with personality characteristics. Kluemper et al. (2012) showed that trained human evaluators are capable of developing reasonably reliable estimates of personality characteristics based on social media content. These estimates of specific personality traits are significantly correlated with measures from self-reported personality surveys, though only in the range of about $.20 < r < .40$ (Kluemper et al., 2012; see Davison et al., 2016, for similar estimates). Stoughton et al. (2013) obtained self-reported personality estimates from college students, which they found to be correlated with their self-reported negative online behaviors (like posts about substance abuse and badmouthing others). However, personality differences only explained about 7% to 8% of the overall variation in posting behaviors. Moreover, the link between these personality estimates and job performance is much less certain. According to the Kluemper et al. study, the average correlation between other-reported personality scores and job performance one year later ranged $.11 < r < .15$. In Van Iddekinge et al. (2016), expert personality assessments of Facebook content offered no significant contributions to the prediction of subject job performance or turnover.

The relatively low correlations among social media content, personality, and job performance address the problems of faulty inferences and overinterpretation of social media data. The quintessential example is the "red cup" photo in which a person who is holding a red Solo-brand cup is often assumed to be an alcohol abuser. We have also observed examples where a Halloween costume gives off the wrong impression about a person's lifestyle (McDonald et al., 2021). The lack of correspondence between online content and performance could also be due to a lack of relevance. Zide et al. (2014) report interview responses with HR recruiters that reference an affinity for specific hobbies: "I love skiing. If I see a candidate belongs to skiing groups or has anything on their profile related to skiing, I'm not going to lie, I would be pretty excited" (590). It is not clear how this hobby translates into worker performance for the sales/marketing job that the recruiter typically filled.

Potential for bias in cybervetting is substantial (Ruggs et al., 2016). In the aforementioned Van Iddekinge et al. (2016) study, the personality assessments that failed to predict performance indicators instead correlated with race and gender characteristics, revealing a preference for White and female applicants. Audit studies show how even subtle signaling in resumes (based on race, gender, age, social class, and religion) can lead to different applicant evaluations for otherwise identical candidates (e.g., Acquisti & Fong, 2015; Bertrand & Mullainathan, 2004; Gaddis, 2017). These types of sociocognitive biases are certain to be apparent as part of cybervetting evaluations (Ruggs et al., 2016). Our own research (McDonald et al., 2021) shows that biased evaluations of job candidates as part of cybervetting are often justified by the desire to assess "fit." The signals that HR staff typically use to make that determination are filtered through a culturally and cognitively biased lens. Examples of ideal candidates who displayed active lifestyles (hiking, camping, skiing,

and going to a ball game) reflect an age, race, and class-specific habitus—that is, young, White, and upper middle class (McDonald et al., 2021; Zide et al., 2014).

Screening on these types of signals biases evaluations toward dominant social groups and can lead to the homogenization of an organization's workforce. Previous research demonstrates that a lack of diverse workplace relationships can be detrimental to creativity, adaptability, and innovation (DiTomaso et al., 2007; Reagans & Zuckerman, 2001; Reagans et al., 2004). Workforce diversity has also been linked to increased sales, market share, and profits (Herring, 2009; but see Stojmenovska et al., 2017). Consequently, although cybervetting is often promoted as a means of improving individual hires, its effect on aggregate organizational hiring may be less salutary. Beyond organizational interests, cybervetting has the potential to undermine the broader goal of equal employment opportunity. Many cybervetting strategies contribute to the bifurcation of the workforce into "haves" and "have nots," in ways that fail to align with meritocratic ideals (McDonald et al., 2019).

Organizations must also grapple with the fact that cybervetting violates applicants' and employees' beliefs about privacy and procedural justice (McDonald et al., 2016; Stoughton, 2016). When applicants learn that their online social media has been screened, it significantly reduces their attraction to an organization, increases feelings of privacy invasion, and increases litigation intentions (Stoughton et al., 2015). These findings are consistent with other research showing that perceived procedural justice tends to be positively correlated with organizational attraction (Bauer et al., 2006; Madera, 2012), willingness to reapply to jobs within the organization, and recommendations of the organization to others (Konradt et al., 2013). A lack of perceived procedural justice is associated with intentions to withdraw, as well as actual withdrawal, from the hiring process (Griepentrog et al., 2012; Suen, 2018). This reveals a central paradox of cybervetting: although the practice is often viewed as a means of reducing risk, organizations take on additional risks by engaging in it.

Minimizing the consequences of cybervetting

Given the potential negative outcomes of cybervetting for job candidates, the ambivalence toward cybervetting felt by hiring agents, and the oft-downplayed complications of cybervetting for organizations, we now consider how each stakeholder can improve existing cybervetting practices and outcomes. We also consider how government and professional associations may help to regulate cybervetting. We summarize the following recommendations and other important aspects of our argument in Table 1.

As job candidates have little power over or say in employers' cybervetting practices, monitoring online social media posts in order to conform to the new norm of cybervetting is a central concern (Black et al., 2015; Roulin, 2014; Zhang et al., 2020). Job candidates should remove and avoid posting any information that potential employers might evaluate negatively (Roulin & Levashina, 2016) including any information regarding any religious affiliation, sexual behavior, alcohol or drug use, profanity or violence, illegal activity, or negative attitudes regarding work (Zhang et al., 2020). They may also consider using privacy settings on social media websites to limit the information that potential employers can access online (Black et al., 2015; Zhang et al., 2020). Although these are realistic recommendations, we are also aware that they are problematic because they reinforce the expectation that the onus for managing online employment security is on job candidates rather than employers. Therefore, we stress the responsibility of hiring agents and organizations to reshape cybervetting practices instead.

Hiring agents typically make cybervetting decisions with little organizational guidance. A few considerations can help minimize the negative consequences of the practice. First, instead of cybervetting out of habit or curiosity, hiring agents should subject the practice to more careful consideration. For instance, given that hiring agents expect candidates to manage impressions

Table 1. Primary Considerations

	Motives	Risks	Recommendations
Job candidates	Online impression management to minimize future risk to employment and portray oneself as a strong job candidate	Anxieties relating to managing online identity Self-blame among unsuccessful job seekers Privacy violation Objective and subjective discrimination	Avoid posting information that may be judged negatively Use privacy settings to limit employers' ability to view personal information
Hiring agents	Perceived reduction of risk in hiring Assessment of candidate fit Other motives: entertainment, curiosity, habit Evidence-based approach to hiring decisions	Uncertainty about accuracy of online information Ambiguity about legality of cybervetting Ethical dilemmas regarding bias and privacy Inefficient use of resources	Consider the utility of cybervetting on a case-by-case basis Collaborate with researchers to develop and apply empirical knowledge regarding cybervetting
Organizations	Increased efficiency	Inaccurate or misleading information Bias, hiring discrimination, and threat of litigation Workforce homogenization and inequity Reduced applicant attraction and withdrawal from selection process	Identify goals of cybervetting Determine how to evaluate fit Carefully assess utility of technological tools Develop formal cybervetting policies Develop cybervetting training programs Continually assess and adjust practices to ensure goals are met
Labor market institutions			Create federal guidelines to regulate cybervetting Construct standards of practice within professional associations (and, where relevant, unions)

online, can social media profiles, posts, and photos still be taken as face-value indicators of "real" personalities or qualifications? What is the goal of seeking a "sense" of the "whole person"? Is this a valid, relevant, and justifiable hiring criterion? To what aspect of job performance is it connected? These questions should be answered not only in general but also with consideration of the roles, skills, and organizational levels of specific hires (Davison et al., 2016; Hoek et al., 2016), as cybervetting may have value in some cases but little in others (Chang & Madera, 2012; Weidner et al., 2016). Furthermore, hiring agents in the HR field can engage with their profession to ensure that cybervetting practices are grounded in solid evidence. At the moment, the gap between practitioners' casual approach to online screening and the decidedly mixed reviews it receives in the scholarly literature (e.g., Carr, 2016; Chauhan et al., 2013; Davison et al., 2016; Schmidt and O'Connor, 2016; Tews et al., 2020) is rather stark. Closing this gap requires collaboration, with researchers becoming more engaged with the problems and realities faced by hiring agents, and hiring agents becoming more attuned to mounting scholarship on the validity of online information, its influence on bias, and the legality of cybervetting, among other important concerns (Tkachenko et al., 2017).

Organizational leaders should reconsider the potential value of cybervetting relative to the many costs it imposes. In most instances, it is advisable to avoid these practices altogether and instead rely on other formalized procedures for recruiting, screening, and hiring new employees. However, it is unreasonable to expect all firms to adopt this position. If cybervetting must be done, we encourage organizations to consider the following recommendations. First, organizational leaders and hiring agents should *collectively develop a clear set of goals*

defining what they want to accomplish through cybervetting and what means are most appropriate for doing so. Organizational actors should consider what risks they are most concerned about and what cybervetting does to aid that risk assessment. For example, a history of criminal activity is a reasonable concern for an employer to have, but this risk might be better assessed through criminal background checks. Concerns about how a new hire might interact with clients or customers might be better addressed through reference checks or vignette-style questions as part of the interview process. To the extent that cybervetting may be helpful in assessing risks, hiring agents should contemplate how they can do so accurately and which signals of risk are most important to evaluate or emphasize.

Likewise, organizational actors should come to a collective decision on how to evaluate fit. We encourage organizational actors to focus exclusively on P–J fit, assessed via concrete employment qualifications and/or knowledge, skills, and abilities. Research is far less clear about the benefits of P–O fit assessments, particularly as used in hiring.[4] We strongly encourage employers to avoid assessments of organizational fit and what hiring agents call "culture fit," as well as impressionistic "fuzzy" fit, in cybervetting and throughout the hiring process in general. Hiring on P–O and cultural fit is linked to race, gender, and other forms of bias, which may lead recruiters to select based on similarity to self (Kristof-Brown et al., 2005; Rivera, 2015), to assess different forms of fit for applicants of different ethnicities (Wolgast et al., 2018), and to accommodate coworker prejudices, even against their own beliefs and group identities (Vial et al., 2019). Emphasizing these forms of fit in hiring could lead to suboptimal candidate selections, increase organizations' exposure to litigation, and promote innovation-stifling "group think" (Kristof-Brown et al., 2005).

In identifying what they would like to accomplish through cybervetting, organizational actors might also evaluate alternative technologies that could be used as part of this practice. In addition to human evaluators, researchers have attempted to use word counts (Alsadhan & Skillicorn, 2017) and machine learning algorithms (Philip et al., 2019) to measure personality traits from large amounts of social media data. Hiring organizations are able to contract with consulting firms to use these techniques to obtain personality profiles on their applicants. However, skepticism is warranted when considering these technologies, as their veracity with respect to performance outcomes—much like human coding of online signals—has yet to be demonstrated. Furthermore, automated evaluations of this sort are not bias free. The mathematical models that underlie quantitative decision making tend to be opaque and rely on proxies that are not causally related to behavioral outcomes (O'Neil, 2016). They are often based on stereotypical assumptions that are particularly damaging to members of disadvantaged communities. In hiring, algorithmic tools are often based on biased assumptions about "fit," which can reproduce rather than ameliorate discriminatory outcomes (Ajunwa and Greene 2019).

After clearly defining the goals of cybervetting, organizational actors, and particularly HR professionals who are responsible for hiring procedures, should *develop formal policies* outlining acceptable cybervetting practices—policies that are currently lacking in over 60% of employer organizations (SHRM, 2016). Such policies should detail who will be cybervetting, what online sources of information will be used, what signals will be evaluated, when this activity will occur,[5] and for which portion of the applicant pool. To ensure that managers follow new formal policies, research suggests engaging managers in goal-oriented projects and increasing the transparency of

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[4]Even enthusiastic proponents of P–O fit as an analytic concept and as an ingredient in organizational well-being concede that its prehire assessment is only weakly linked to employee subsequent job performance (Barrick & Parks-Leduc, 2019; Kristof-Brown et al., 2005). When modest associations have been found, they have mostly been based on perceived (applicant) rankings of fit rather than objective measures (Kristof-Brown et al., 2005).

[5]For example, cybervetting as late in the hiring process as possible, when resulting biases will have less influence on applicant pool composition and are more likely to be countered by information on candidates' job-relevant abilities, is desirable (Davison et al., 2016; Weidner et al., 2016). In addition, consistent screening across all applicants, steps to avoid irrelevant or protected information (e.g., attractiveness, race, religion), and documentation of the process are also important (Brown & Vaughn, 2011, Chauhan et al., 2013, Davison et al., 2016, Schmidt & O'Connor, 2016).

their efforts rather than attempting to regulate their behavior and limit their autonomy, which often provokes resistance and ultimately backfires (Dobbin et al., 2015). Therefore, organizational actors working to implement these new policies might reduce problematic cybervetting activities by engaging managers and other actors in discussing principles and establishing cybervetting practices appropriate to the employer and to local departments or teams.

Organizations should also *develop training programs* focused on appropriate cybervetting practices and integrate this training into the onboarding process for new hiring agents. Formal training programs are rare: In our study of nearly 60 different employers in the Raleigh and Atlanta metro areas, only a single organization that had explicit training materials (McDonald et al., 2021). Cybervetting training should reflect previously discussed concerns such as which types of risk and/or fit should be the core evaluative focus, which positions hiring agents should cybervet for, and so forth in order to socialize new hiring agents into organizational norms and expectations. Such training and its focus would necessarily vary across organizations and specific roles.

Finally, in adopting and maintaining these practices, organizations must continuously *assess the extent to which cybervetting goals have been met and adjust their practices as needed*. Clark and Roberts (2010) have argued that if organizations want to use cybervetting, they need to demonstrate an empirical link between those practices and outcomes of interest. We agree that maintaining reflexivity through an explicit emphasis on evaluation and assessment is critical. To what extent are cybervetting practices generating added value to hiring decisions over and above traditional screening procedures? What information sources and signals correlate with turnover and worker performance? To what extent does cybervetting contribute to the homogenization or diversification of the workforce? Although addressing these questions would require resources, it would help to mitigate significant liabilities brought on by unreflective engagement in cybervetting. Moreover, university researchers are interested in answering these questions, too, and would be happy to partner with organizations at very low cost to assist with these assessments.

Beyond these organizational decisions, we can consider a broader set of strategies for ensuring fair and equitable application of cybervetting. First, greater federal guidance is needed to clarify the conditions under which cybervetting is an acceptable tool. The Equal Employment Opportunity Commission (EEOC) states that selection procedures cannot intentionally discriminate, must be job related and job appropriate, and that procedures with the lowest likelihood of screening out protected groups are preferred (U.S. Equal Employment Opportunity Commission, 2007). Although they have held hearings on the use of online data as part of recruitment and screening practices (U.S. Equal Employment Opportunity Commission, 2016), they offer no official guidance or policy statements on cybervetting per se.[6] We think some formal guidance would be helpful in order to clarify which types of cybervetting practices are most problematic and help steer those organizations that choose to engage in cybervetting toward better practices. Federal and state legislatures could also intervene by setting explicit guidelines for employers to follow. Although there are no federal statutes to prevent employers from reviewing social media information of applicants, 20 states have laws that prevent employers from requiring passwords to social media accounts (Schmidt & O'Connor, 2016). States could also extend privacy protections to a larger range of online content. In most states, information on social media websites is considered to be public even if privacy controls are applied (Schmidt & O'Connor, 2016).

Standards of practice should also be developed separately within industries. Professional associations could publish standards that clarify whether cybervetting is permissible when hiring individuals who engage in their specific type of work. If it is deemed permissible, those standards could

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[6]Our own interviews and informal discussions with EEOC investigators reveal that they typically offer informal advice to employers to simply avoid cybervetting rather than recommending best practices.

point to specific sources of online data that may be evaluated and what type of conduct may be assessed. This could help provide greater clarity to workers and employers as to how and what online content is to be assessed. We found in our research that third-party staffing and consulting agencies tended to be most enthusiastic about cybervetting while also providing the fewest restrictions on its practice (McDonald et al., 2021). Therefore, standards of practice would be most helpful for organizations involved in this work. They should develop a clear set of procedures with respect to how online information will be used as part of applicant screening and sharing that document with the hiring organizations with which they contract. Organizations that contract with third party hiring consultants should require this information as well.

Conclusion

Cybervetting is rapidly becoming a widespread practice (SHRM, 2013, 2016), which has serious implications for job candidates, hiring agents, and organizations. As new technologies that offer employers greater online access to job candidates' information arise, probing the challenges and limitations of cybervetting will become even more important. Employers must be mindful of their practices and consider whether it is possible to avoid cybervetting. If cybervetting is necessary, employers must develop formal cybervetting policies and training programs and continuously evaluate cybervetting practices to ensure their goal directedness. Professional associations and government must also take action to hold organizations accountable for "better practices" for cybervetting. We encourage organizational leaders to be transparent about how they are doing this work and to share their data so that more can be learned about the benefits, costs, and consequences of online screening.

For now, cybervetting is typically a routine, unreflective activity undertaken by individual hiring agents within organizations that alternately ignore or encourage it. This casual approach at the microlevel of everyday practice belies the serious repercussions that emerge from its widespread use. The best argument for cybervetting is that it can improve the quality of individual hires. But this is untested; it is equally possible that cybervetting produces idiosyncratic, uneven, and false information, leading to suboptimal choices. For individual employers and employees, the result of cybervetting is disaffection and turnover. For the economy as a whole, this translates to dampened productivity. Moreover, cybervetting can also facilitate both conscious and tacit discrimination based on protected (e.g., race) or unprotected (e.g., physical appearance) statuses. Organizations may miss out on talent, become less diverse and innovative, and run the risk of litigation as individual job seekers face reduced employment options.

Perhaps the most insidious implications of cybervetting stem from its ethical deficiencies. Cybervetting has the potential to substantially undermine equal opportunity in hiring, exacerbating the already gaping income and racial inequalities that have recently been exposed anew by the ravages of COVID-19 and institutionally racist violence. As a form of surveillance that erodes personal/professional boundaries, cybervetting also promotes privacy invasion. Among individuals, this encourages constant impression management, self-censorship, and anxiety. For organizations, it contributes to employee distrust. At the societal level, it limits freedom of expression and curtails open discussion of public issues.

We worry that organizational leaders have not fully considered these implications. For example, in testimony to the EEOC, industry experts in the area of algorithmic cybervetting admitted that the companies using it rarely considered implications beyond efficiency and return on investment: "Around the diversity question . . . , that's something that we weren't often asked to speak to . . . . Very few asked us, is this also promoting diversity?" (U.S. Equal Employment Opportunity Commission, 2016). If online screening continues to proceed uncritically, then we must reject it. Extensive transformation of cybervetting could lead to progress, but only if organizational leaders and hiring agents commit to asking difficult questions about its value.

References

Abrams, D., Swift, H. J., & Drury, L. (2016). Old and unemployable? How age-based stereotypes affect willingness to hire job candidates. *Journal of Social Issues*, **72**(1), 105–121.

Acquisti, A., & Fong, C. M. (2015). An experiment in hiring discrimination via online social networks. *Social Science Research Network* Scholarly Paper 2031979. https://papers.ssrn.com/abstract=2031979

Ajunwa, I., & Greene, D. (2019). Platforms at work: Automated hiring platforms and other new intermediaries in the organization of work. In S. P. Vallas & A. Kovalainen (Eds.), *Work and Labor in the Digital Age* (pp. 61–91). Emerald Publishing.

Alge, B. J. (2001). Effects of computer surveillance on perceptions of privacy and procedural justice. *Journal of Applied Psychology*, **86**(4), 797–804.

Alsadhan, N., & Skillicorn, D. (2017, November 18–21). *Estimating personality from social media posts*. 2017 IEEE International Conference on Data Mining Workshops, New Orleans, LA, United States. https://doi.org/10.1109/ICDMW.2017.51

Balser, D. B. (2002). Agency in organizational inequality: Organizational behavior and individual perceptions of discrimination. *Work and Occupations*, **29**(2), 137–165.

Barrick, M. R., & Parks-Leduc, L. (2019). Selection for fit. *Annual Review of Organizational Psychology and Organizational Behavior*, **6**(1), 171–193. https://doi.org/10.1146/annurev-orgpsych-012218-015028

Barrick, M. R., Shaffer, J. A., & DeGrassi, S. W. (2009). What you see may not be what you get: Relationships among self-presentation tactics and ratings of interview and job performance. *Journal of Applied Psychology*, **94**(6), 1394–1411.

Bauer, T. N., Truxillo, D. M., Tucker, J. S., Weathers, V., Bertolino, M., Erdogan, B., & Campion, M. A. (2006). Selection in the information age: The impact of privacy concerns and computer experience on applicant reactions. *Journal of Management*, **32**(5), 601–621.

Becton, J. B., Walker, H. J., Gilstrap, J. B., & Schwager, P. H. (2019). Social media snooping on job applicants: The effects of unprofessional social media information on recruiter perceptions. *Personnel Review*, **48**(5), 1261–1280.

Berkelaar, B. L. (2014). Cybervetting, online information, and personnel selection: New transparency expectations and the emergence of a digital social contract. *Management Communication Quarterly*, **28**(4), 479–506.

Berkelaar, B. L., & Buzzanell, P. M. (2015). Online employment screening and digital career capital: Exploring employers' use of online information for personnel selection. *Management Communication Quarterly*, **29**(1), 84–113.

Bertrand, M., & Mullainathan, S. (2004). Are Emily and Greg more employable than Lakisha and Jamal? A field experiment on labor market discrimination. *American Economic Review*, **94**(4), 991–1013.

Black, S. L., Stone, D. L., & Johnson, A. F. (2015). Use of social networking websites on applicants' privacy. *Employee Responsibilities and Rights Journal*, **27**(2), 115–159.

Caers, R., & Castelyns, V. (2011). LinkedIn and Facebook in Belgium: The influences and biases of social network sites in recruitment and selection procedures. *Social Science Computer Review*, **29**(4), 437–448.

CareerBuilder. (2018, August 9). *More than half of employers have found content on social media that caused them not to hire a candidate, according to recent Careerbuilder survey* [Press release]. http://press.careerbuilder.com/2018-08-09-More-Than-Half-of-Employers-Have-Found-Content-on-Social-Media-That-Caused-Them-NOT-to-Hire-a-Candidate-According-to-Recent-CareerBuilder-Survey

Carr, C. T. (2016). An uncertainty reduction approach to applicant information-seeking in social media: Effects on attributions and hiring. In R. N. Landers & G. B. Schmidt (Eds.), *Social Media in employee selection and recruitment: Theory, practice, and current challenges* (pp. 59–78). Springer.

Chang, W., & Madera, J. M. (2012). Using social network sites for selection purposes: An investigation of hospitality recruiters. *Journal of Human Resources in Hospitality & Tourism*, **11**(3), 183–196.

Chauhan, R. S., Buckley, M. R., & Harvey, M. (2013). Facebook and personnel section: What's the big deal? *Organizational Dynamics*, **42**(2), 126–134.

Chua, V. (2011). Social networks and labour market outcomes in a meritocracy. *Social Networks*, **33**(1), 1–11.

Clark, L. A., & Roberts, S. J. (2010). Employer's use of social networking sites: A socially irresponsible practice. *Journal of Business Ethics*, **95**(4), 507–525.

Cobb, J. A. (2016). How firms shape income inequality: Stakeholder power, executive decision making, and the structuring of employment relationships. *Academy of Management Review*, **41**(2), 324–348.

Coverdill, J. E., & Finlay, W. (2017). *High tech and high touch: Headhunting, technology, and economic transformation.* Cornell University Press.

Davison, H. K., Bing, M. N., Kluemper, D. H., & Roth, P. L. (2016). Social media as a personnel selection and hiring resource: Reservations and recommendations. In R. N. Landers & G. B. Schmidt (Eds.), *Socia media in employee selection and recruitment: Theory, practice, and current challenges* (pp. 15–42). Springer.

Davison, H. K., Maraist, C., & Bing, M. N. (2011). Friend or foe? The promise and pitfalls of using social networking sites for HR decisions. *Journal of Business and Psychology*, **26**(2), 153–159.

DiTomaso, N., Post, C., & Parks-Yancy, R. (2007). Workforce diversity and inequality: Power, status, and numbers. *Annual Review of Sociology*, **33**, 473–501.

Dobbin, F., Schrage, D., & Kalev, A. (2015). Rage against the iron cage: The varied effects of bureaucratic personnel reforms on diversity. *American Sociological Review*, **80**(5), 1014–1044.

Duffy, B. E., & Chan, N. K. (2019). "You never really know who's looking": Imagined surveillance across social media platforms. *New Media & Society*, **21**(1), 119–138.

Ensher, E. A., Grant-Vallone, E. J., & Donaldson, S. I. (2001). Effects of perceived discrimination on job satisfaction, organizational commitment, organizational citizenship behavior, and grievances. *Human Resource Development Quarterly*, **12**(1), 53–72.

Finlay, W., & Coverdill, J. E. (2007). *Headhunters: Matchmaking in the labor market*. Cornell University Press.

Fourcade, M., & Healy, K. (2017). Seeing like a market. *Socio-Economic Review*, **15**(1), 9–29.

Fullerton, A. S., & Wallace, M. (2007). Traversing the flexible turn: US workers' perceptions of job security, 1977–2002. *Social Science Research*, **36**(1), 201–221.

Gaddis, S. M. (2015). Discrimination in the credential society: An audit study of race and college selectivity in the labor market. *Social Forces*, **93**(4), 1451–1479.

Gaddis, S. M. (2017). How Black Are Lakisha and Jamal? Racial perceptions from names used in correspondence audit studies. *Sociological Science*, **4**, 469–489.

Gershon, I. (2017). *Down and out in the new economy: How people find (or don't find) work today*. The University of Chicago Press.

Gilliland, S. W. (1993). The perceived fairness of selection systems: An organizational justice perspective. *Academy of Management Review*, **18**(2), 694–734.

Griepentrog, B. K., Harold, C. M., Holtz, B. C., Klimoski, R. J., & Marsh, S. M. (2012). Integrating social identity and the theory of planned behavior: Predicting withdrawal from an organizational recruitment process. *Personnel Psychology*, **65**(4), 723–753.

Halpin, B. W., & Smith, V. (2017). Employment management work: A case study and theoretical framework. *Work and Occupations*, **44**(4), 339–375.

Harris, M. M., Lievens, F., & Hoye, G. V. (2004). "I think they discriminated against me": Using prototype theory and organizational justice theory for understanding perceived discrimination in selection and promotion situations. *International Journal of Selection and Assessment*, **12**(1–2), 54–65.

Harvey, G., Rhodes, C., Vachhani, S. J., & Williams, K. (2017). Neo-villeiny and the service sector: The case of hyper flexible and precarious work in fitness centres. *Work, Employment and Society*, **31**(1), 19–35.

Hedenus, A., & Backman, C. (2017). Explaining the data double: Confessions and self-examinations in job recruitments. *Surveillance & Society*, **15**(5), 640–654.

Heilman, M. E. (2012). Gender stereotypes and workplace bias. *Research in Organizational Behavior*, **32**, 113–135.

Herring, C. (2009). Does diversity pay? Race, gender, and the business case for diversity. *American Sociological Review*, **74**(2), 208–224.

Hirsh, E., & Lyons, C. J. (2010). Perceiving discrimination on the job: Legal consciousness, workplace context, and the construction of race discrimination. *Law & Society Review*, **44**(2), 269–298.

Hoek, J., O'Kane, P., & McCracken, M. (2016). Publishing personal information online: How employers' access, observe and utilise social networking sites within selection procedures. *Personnel Review*, **45**(1), 67–83.

Hurrell, S. A., Scholarios, D., & Richards, J. (2017). "The kids are alert": Generation Y responses to employer use and monitoring of social networking sites. *New Technology, Work and Employment*, **32**(1), 64–83.

Kaiser, C. R., Major, B., Jurcevic, I., Dover, T. L., Brady, L. M., & Shapiro, J. R. (2013). Presumed fair: Ironic effects of organizational diversity structures. *Journal of Personality and Social Psychology*, **104**(3), 504–519.

Kalleberg, A. L. (2011). *Good jobs, bad jobs: The rise of polarized and precarious employment systems in the United States, 1970s-2000s*. Russel Sage Foundation.

Kluemper, D. H., Rosen, P. A., & Mossholder, K. W. (2012). Social networking websites, personality ratings, and the organizational context: More than meets the eye? *Journal of Applied Social Psychology*, **42**(5), 1143–1172.

Koch, A. J., D'Mello, S. D., & Sackett, P. R. (2015). A meta-analysis of gender stereotypes and bias in experimental simulations of employment decision making. *Journal of Applied Psychology*, **100**(1), 128–161.

Konradt, U., Warszta, T., & Ellwart, T. (2013). Fairness perceptions in web-based selection: Impact on applicants' pursuit intentions, recommendation intentions, and intentions to reapply. *International Journal of Selection and Assessment*, **21**(2), 155–169.

Kotamraju, N. P., Allouch, S. B., & van Wingerden, K. (2014). Employers' use of online reputation and social network sites in job applicant screening and hiring. In J. E. Katz (Ed.), *Living inside mobile social information* (pp. 247–268). Greyden Press.

Kristof-Brown, A. L., Zimmerman, R. D., & Johnson, E. C. (2005). Consequences of individuals' fit at work: A meta-analysis of person-job, person-organization, person-group, and person-supervisor fit. *Personnel Psychology*, **58**, 281–342.

Kuhn, K. M. (2015). Selecting the good vs. rejecting the bad: Regulatory focus effects on staffing decision making. *Human Resource Management*, **54**(1), 131–150.

Kuhn, K. M., & Nielsen, M. L. (2008). Understanding applicant reactions to credit checks: Uncertainty, information effects and individual differences. *International Journal of Selection and Assessment*, **16**(4), 307–320.

Lopez, S. H., & Phillips, L. A. (2019). Unemployed: White-collar job searching after the great recession. *Work and Occupations*, **46**(4), 470–510.

Madera, J. M. (2012). Using social networking websites as a selection tool: The role of selection process fairness and job pursuit intentions. *International Journal of Hospitality Management*, **31**(4), 1276–1282.

McBrier, D. B., & Wilson, G. (2004). Going down? Race and downward occupational mobility for white-collar workers in the 1990s. *Work and Occupations*, **31**(3), 283–322.

McDonald, P., Thompson, P., & O'Connor, P. (2016). Profiling employees online: Shifting public–private boundaries in organisational life. *Human Resource Management Journal*, **26**(4), 541–556.

McDonald, S., Damarin, A. K., Lawhorne, J., & Wilcox, A. (2019). Black holes and purple squirrels: A tale of two online labor markets. In S. P. Vallas & A. Kovalainen (Eds.), *Work and labor in the digital age* (93–120). Emerald Publishing.

McDonald, S., Damarin, A. K., McQueen, H., & Grether, S. T. (2021). The hunt for red flags: Cybervetting as morally performative practice. *Socio-Economic Review*, mwab002. https://doi.org/10.1093/ser/mwab002

Mishel, E. (2016). Discrimination against queer women in the U.S. workforce: A résumé audit study. *Socius: Sociological Research for a Dynamic World*, 2. https://doi.org/10.1177%2F2378023115621316

Moss, P., & Tilly, C. (1996). "Soft" skills and race: An investigation of Black men's employment problems. *Work and Occupations*, **23**(3), 252–276.

Nikolaou, I. (2014). Social networking web sites in job search and employee recruitment. *International Journal of Selection and Assessment*, **22**(2), 179–189.

O'Brien, K. R., McAbee, S. T., Hebl, M. R., & Rodgers, J. R. (2016). The impact of interpersonal discrimination and stress on health and performance for early career STEM academicians. *Frontiers in Psychology*, **7**, Article 615.

O'Neil, C. (2016). *Weapons of math destruction: How big data increases inequality and threatens democracy*. New York: Crown Books.

Pager, D., Bonikowski, B., & Western, B. (2009). Discrimination in a low-wage labor market: A field experiment. *American Sociological Review*, **74**(5), 777–799.

Pager, D., & Pedulla, D. S. (2015). Race, self-selection, and the job search process. *American Journal of Sociology*, **120**(4), 1005–1054.

Pager, D., & Quillian, L. (2005). Walking the talk? What employers say versus what they do. *American Sociological Review*, **70**(3), 355–380.

Philip, J., Shah, D., Nayak, S., Patel, S., & Devashrayee, Y. (2019). Machine learning for personality analysis based on big five model. In V. E. Balas, N. Sharma, & A. Chakrabarti (Eds.), *Data Management, Analytics and Innovation* (pp. 345–355). Springer.

Quadlin, N. (2018). The mark of a woman's record: Gender and academic performance in hiring. *American Sociological Review*, **83**(2), 331–360.

Reagans, R., Zuckerman, E., & McEvily, B. (2004). How to make the team: Social networks vs. demography as criteria for designing effective teams. *Administrative Science Quarterly*, **49**(1), 101–133.

Reagans, R., & Zuckerman, E. W. (2001). Networks, diversity, and productivity: The social capital of corporate R&D teams. *Organization Science*, **12**(4), 502–517.

Rivera, L. A. (2015). *Pedigree: How elite students get elite jobs*. Princeton University Press.

Rivera, L. A., & Tilcsik, A. (2016). Class advantage, commitment penalty: The gendered effect of social class signals in an elite labor market. *American Sociological Review*, **81**(6) 1097–1131.

Roulin, Nicolas. (2014). The influence of employers' use of social networking websites in selection, online self-promotion, and personality on the likelihood of faux pas postings. *International Journal of Selection and Assessment*, **22**(1), 80–87.

Roulin, Nicolas, & Bangerter, A. (2013). Social networking websites in personnel selection: A signaling perspective on recruiters' and applicants' perceptions. *Journal of Personnel Psychology*, **12**(3), 143–151.

Roulin, Nicolas, & Levashina, J. (2016). Impression management and social media profiles. In R. N. Landers & G. B. Schmidt (Eds.), *Socia media in employee selection and recruitment: Theory, practice, and current challenges* (pp. 223–248). Springer International.

Rubin, B. A. (2012). Shifting social contracts and the sociological imagination. *Social Forces*, **91**(2), 327–346.

Ruggs, E. N., Walker, S. S., Blanchard, A., & Gur, S. (2016). Online exclusion: Biases that may arise when using social media in talent acquisition. In R. N. Landers & G. B. Schmidt (Eds.), *Social media in employee selection and recruitment: Theory, practice, and current challenges* (pp. 289–306). Springer.

Sameen, S., & Cornelius, S. (2013). Social networking sites and hiring: How social media profiles influence hiring decisions. *Journal of Business Studies Quarterly*, **7**(1), 27–35.

Schmidt, G. B., & O'Connor, K. W. (2016). Legal concerns when considering social media data in selection. In R. N. Landers & G. B. Schmidt (Eds.), *Social media in employee selection and recruitment: Theory, practice, and current challenges* (pp. 265–288). Springer.

Scolere, L., Pruchniewska, U., & Duffy, B. E. (2018). Constructing the platform-specific self-brand: The labor of social media promotion. *Social Media + Society*, **4**(3), Article 205630511878476.

Sharone, O. (2014). *Flawed system/flawed self: Job searching and unemployment experiences*. The University of Chicago Press.

Sharone, O. (2017). LinkedIn or LinkedOut? How social networking sites are reshaping the labor market. In S. Vallas (Ed.), *Emerging Conceptions of Work, Management and the Labor Market* (pp. 1–31). Emerald Publishing.

Smith, V. (2002). *Crossing the great divide: Worker risk and opportunity in the new economy*. Cornell University Press.

Society for Human Resources Management. (2013). *Social networking websites and recruiting/selecting*. https://www.shrm.org/hr-today/trends-and-forecasting/research-and-surveys/Pages/shrm-social-networking-websites-recruiting-job-candidates.aspx

Society for Human Resources Management. (2016). *SHRM Survey Findings: Using Social Media for Talent Acquisition—Recruitment and Screening*. https://www.shrm.org/hr-today/trends-and-forecasting/research-and-surveys/pages/social-media-recruiting-screening-2015.aspx

Stojmenovska, D., Bol, T., & Leopold, T. (2017). Does diversity pay? *A replication of Herring (2009). American Sociological Review*, **82**(4), 857–867.

Stoughton, J. W. (2016). Applicant reaction to social media in selection: Early returns and future directions. In R. N. Landers & G. B. Schmidt (Eds.), *Social media in employee selection and recruitment: Theory, practice, and current challenges* (pp. 249–264). Springer International.

Stoughton, J. W., Thompson, L. F., & Meade, A. W. (2013). Big five personality traits reflected in job applicants' social media postings. *Cyberpsychology Behavior and Social Networking*, **16**(11), 800–805.

Stoughton, J. W., Thompson, L. F., & Meade, A. W. (2015). Examining applicant reactions to the use of social networking websites in pre-employment screening. *Journal of Business and Psychology*, **30**(1), 73–88.

Suen, H.-Y. (2018). How passive job candidates respond to social networking site screening. *Computers in Human Behavior*, **85**, 396–404.

Tews, M. J., Stafford, K., & Kudler, E. P. (2020). The effects of negative content in social networking profiles on perceptions of employment suitability. *International Journal of Selection and Assessment*, **28**(1), 17–30.

Tkachenko, O., Hahn, H.-J., & Peterson, S. L. (2017). Research–practice gap in applied fields: An integrative literature review. *Human Resource Development Review*, **16**(3), 235–262.

Triana, M. del C., Jayasinghe, M., Pieper, J. R., Delgado, D. M., & Li, M. (2019). Perceived workplace gender discrimination and employee consequences: A meta-analysis and complementary studies considering country context. *Journal of Management*, **45**(6), 2419–2447.

U.S. Equal Employment Opportunity Commission. (2007). *Employment tests and selection procedures*. https://www.eeoc.gov/laws/guidance/employment-tests-and-selection-procedures

U.S. Equal Employment Opportunity Commission. (2016, October 13). *Big data in the workplace: Examining implications for equal employment opportunity law*. https://www.eeoc.gov/meetings/24068/transcript

van Dijck, J. (2013). "You have one identity": Performing the self on Facebook and LinkedIn. *Media, Culture & Society*, **35**(2), 199–215.

Van Iddekinge, C. H., Lanivich, S. E., Roth, P. L., & Junco, E. (2016). Social media for selection? Validity and adverse impact potential of a Facebook-based assessment. *Journal of Management*, **42**(7), 1811–1835.

Vial, A. C., Brescoll, V. L., & Dovidio, J. F. (2019). Third-party prejudice accommodation increases gender discrimination. *Journal of Personality and Social Psychology*, **117**(1), 73–98.

Waldinger, R., & Lichter, M. I. (2003). *How the other half works: Immigration and the social organization of labor*. University of California Press.

Weidner, N., O'Brien, K. E., & Wynne, K. T. (2016). Social media use: Antecedents and outcomes of sharing. In R. N. Landers & G. B. Schmidt (Eds.), *Social media in employee selection and recruitment: Theory, practice, and current challenges* (pp. 79–101). Springer.

Wolgast, S., Björklund, F., & Bäckström, M. (2018). Applicant ethnicity affects which questions are asked in a job interview. *Journal of Personnel Psychology*, **17**(2), 66–74.

Zhang, L., Van Iddekinge, C. H., Arnold, J. D., Roth, P. L., Lievens, F., Lanivich, S. E., & Jordan, S. L. (2020). What's on job seekers' social media sites? A content analysis and effects of structure on recruiter judgments and predictive validity. *Journal of Applied Psychology*, **105**(12), 1530–1546.

Zide, J., Elman, B., & Shahani-Denning, C. (2014). LinkedIn and recruitment: How profiles differ across occupations. *Employee Relations*, **36**(5), 583–604.