

Supplement to DIAC position statement, outlining three specific concerns.

1.) *Threat regarding equitable access.* AI-enabled recruitment and selection instruments are increasingly hosted on web-based applications that may be inherently inaccessible to IWDs. For example, some IWD applicants use screen readers to access web-based material. If a screen reader cannot access embedded text in an AI-enabled recruitment or selection tool, or if the tool relies on visual scenes (e.g., an AI-based gamified assessment), then applicants with visual disabilities may be inherently excluded at disproportionately higher rates from the outset, based merely on the mode of technology used to complete assessments. Further, attempts to accommodate an IWD applicant with an equivalent measure may not be feasible to ensure equitable access.

Also, note that the issue of access is not always binary: if an AI-enabled recruitment or selection tool loses fidelity or is otherwise not equivalent across all applicants, this uneven playing field stands to disadvantage IWDs and their hiring outcomes. Similarly, applicants with cognitive processing and related disabilities may be unfairly disadvantaged if an assessment has time limits that have been calibrated to those without disabilities. As such, AI-enabled recruitment and selection instruments may inherently present differential and inequitable access to IWDs, and by doing so, reduce access to hiring opportunities. Moreover, research documents that because AI technology is based upon past attributes that have been used to predict outcomes, they may be relying on biased (job-irrelevant) indicators that tend to replicate past outcomes (e.g., Amazon; Meyere, 2018; Tambe et al., 2019). For example, if people with disabilities were unable to reliably complete web-based assessments in the past, then continuing to use this mode of assessment will only replicate and compound past disparities (Brown et al., 2022). Few organizations closely evaluate whether their measures follow professional guidelines (e.g., the aforementioned SIOP *Principles* or AERA/APA/NCME *Standards*), or take proactive steps to universally design their job recruitment and application systems (Taylor, 2021), but both can be done.

2.) *Threat regarding disparate impact.* In an employee selection context, there is the concern that a machine learning algorithm trained to decide which metrics best predict job performance could be trained on data from individuals who are homogenous or lack the full range of diversity. Additionally, there is a worry that one may rely upon job incumbents and not the full range of potential applicants, or on people who are otherwise non-representative of the job in question, when training an algorithm – thereby artificially limiting the pool of applicants to be selected.

In addition to the issue of (a) inadequate people in the data set (e.g., small numbers, lack of representation), (b) the data themselves can be idiosyncratic (e.g., social media data), and (c) the machine learning algorithms used can be opaque, or a ‘black box’ (e.g., random forests, relying on a multitude of decision trees, simultaneously). Putting these three together

compounds the issue, meaning that it could be impossible to understand and intervene on the causes of disparate or adverse impact for IWDs. With psychometrically well-developed assessments of job-relevant constructs (e.g., job knowledge, motivation), then one can isolate, estimate, understand, and compare the measures' adverse impact and validity for predicting outcomes (see DeCorte et al., 2007; Schmidt & Hunter, 1998). Prior to selection, note that employer recruitment efforts, might similarly discriminate against IWDs. If IWDs are disproportionately excluded from recruitment then they will never be considered a job applicant. The adverse impact ratio (4/5ths Rule) does not capture such disparities in recruiting (Bauer et al., 2020).

3.) *Threat regarding accessing private information without consent.* Recent research in industrial/organizational (I/O) psychology and human resource management (HRM) documents that protected information (e.g., disability status, contained in 7% of social media profiles; Zhang et al., 2020) may be discoverable online, without the knowledge or permission of the owner of that information (Roth et al., 2016; Pu et al., in press; Van Iddekinge et al., 2016). Depending on the type of AI employed, this publicly available information can be scraped (Tippins et al., 2021) and fed into a prediction algorithm with little screening or exploration by a human attentive to employment fairness, all in the sole interest of adding additional predictive validity to hiring algorithms when assessing job applicants. Yet it is not always the case that increases in prediction are job-relevant increases. Moreover, research documents that this practice of cybervetting or using social media in assessment can increase stigma and bias against individuals with mental health impairments and reduce the likelihood that they will receive an interview (Pu et al., 2022). Thus, the use of unfettered information in selection, without the knowledge or consent of the applicant, is not only difficult to disentangle and check, may not have consistent reliability and validity data, yet may be used in ways that further and systematically disadvantage IWDs. Issues of invasion of privacy, and likely discrimination against IWDs in particular, create a range of ethical concerns here.

In conclusion, SIOP supports the U.S. DOJ and EEOC in their efforts to raise awareness of these threats and to identify, combat, and prevent potential discrimination against IWDs when employers use AI to make employment decisions. In particular, SIOP supports increased oversight to the accessibility of web-based, AI-enabled recruitment and selection instruments, cautioning users regarding the potential for disparate impact, and avoiding the inclusion of job-irrelevant, disability-related information in algorithms. Each of these threats have the potential to unintentionally disadvantage or exclude IWDs in selection.

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