Epistemic Oppression, Construct Validity, & Scientific Rigor: Commentary on ‘Bias, Fairness, & Validity in Graduate Admissions: A Psychometric Perspective’

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Abstract

In this commentary, I highlight flaws in the article by Woo and colleagues (in press, this issue) that undermine its credibility and utility as rigorous science that contributes to the field by discussing: 1) the concept of epistemic oppression (e.g., Dotson, 2014) regarding the glaring exclusion of multiple germane bodies of research; and 2) the importance of including construct validity within a psychometric article regarding the GRE (ETS, 2019). I conclude with a plea to the authors that the matter of anti-Black violence and murder, for which they reference, is one to be taken respectfully, seriously, and somberly.

Keywords: GRE; epistemic oppression; psychology graduate admissions; holistic review; construct validity

Epistemic Oppression, Construct Validity, & Scientific Rigor: Commentary on ‘Bias, Fairness, & Validity in Graduate Admissions: A Psychometric Perspective’

In “Bias, Fairness, & Validity in Graduate Admissions: A Psychometric Perspective”, Woo and colleagues (current issue) endeavor to provide a psychometric perspective regarding the use of the graduate record exam (GRE; Education Testing Service [ETS], 2019), alongside other common metrics in graduate admissions in psychology. They provide definitions of key terms, such as bias and fairness, and conduct a review on empirical research on admissions tests, including the GRE and personal statements. In addition to identifying gaps in the literature, the authors provide implications for admissions practices and directions for future research. In this commentary, I highlight flaws in the article that undermine its credibility and utility as rigorous science that contributes to the field of psychology by discussing: 1) the concept of epistemic oppression (e.g., Dotson, 2012) regarding the glaring exclusion of multiple germane bodies of research; and 2) the importance of including construct validity within a psychometric article regarding the GRE. I conclude with a plea to the authors that the matter of anti-Black violence and murder, for which they reference in their article, is one to be taken respectfully, seriously, and somberly.

Epistemic Oppression

The authors state their “central goal is to start an open and forward-looking discussion about how the validity and integrity of graduate admission decisions can be improved while also enhancing the diversity of those admitted to graduate programs” (p. 3). The primary problem with embarking on the beginning of such a discussion is that it ignores the vast research that already has been grappling with these very topics. Epistemic oppression (Dotson, 2012, 2014; Teo, 2008) refers to systemic exclusion of certain types of scholarship (*hereafter known as*

marginalized scholarship; e.g., research utilizing critical theory that interrogates systems of power, such as racism; research centered within marginalized populations, such as populations of Color). Such exclusion, including not citing marginalized scholarship (Bertolero et al., 2020; Chakravartty et al., 2018; Zurn et al., 2020), hinders knowledge production and progression in the field. As with all types of oppression, willful malevolence is not required; even without ill intent, however, people can still perpetrate oppression and systemic oppression can still exist (Bonilla-Silva, 2006). The authors engage in epistemic oppression in their article by not building their work upon highly relevant literature, including structural racism (e.g., Hicken et al., 2018) and holistic review in graduate admissions (e.g., Mathur et al., 2019). Though the authors' foci center on psychometrics, a psychometric approach should not preclude incorporating relevant literature. Similarly, rigorous science is not antithetical to critical, systems-level approaches that serve to understand and dismantle systems-level problems, such as systemic underrepresentation of scholars of Color in psychology (Boyd et al., 2017). In fact, a primary recommendation for tackling racial inequalities is to use theoretical and empirical models rooted in structural and cultural racism (Hicken et al., 2018). The matter of the role of the GRE in graduate admissions is one of racial inequality within academic contexts that are not race-neutral (Mills, 1997), thus the inclusion of models of structural and cultural racism is germane.

Examples of epistemic oppression in the article are numerous. First, *Part I: Clarifying Concepts* did not include relevant research on racism. For instance, the authors provide an example of race discrimination within a legal definition (p. 12) to bolster their objection to the GRE in graduate admissions being appraised as discriminatory (p. 13). The authors additionally acknowledge that "discrimination can (and should) be examined not only from a legal perspective but also from many other perspectives (e.g., history, sociology, psychology,

philosophy, politics)” (p. 13). Given this article is published within psychology, it is concerning that the authors do not cite racism research from psychology and other social sciences (e.g., Bonilla-Silva, 2006, 2021; Dressler et al., 2005; Harrell, 2000; Hicken et al., 2018; Ray, 2019), especially since U.S. law should not be the only mechanism to combat inequality (Yoshino, 2007). Such social science research understands that there are forms of discrimination, such as racism, that are structural (e.g., Bonilla-Silva, 2006). Meaning, a test, such as the GRE, can have a structurally discriminatory impact when it is used to justify systematic exclusion of URM students (e.g., Gómez et al., 2021). It is additionally problematic that the authors fail to cite the literature that provides arguments that the use of the GRE operates in a discriminatory manner against underrepresented minority (URM) students (e.g., Callahan et al., 2018; Gómez et al., 2021).

In *Part 2: Critically Evaluating Alternatives to GRE*, two of the three search criteria for articles for the review involved relationship (e.g., citation) with articles by Kuncel and colleagues (p. 15). By definition, such search criteria would provide a biased sampling of articles, thus potentially resulting in a review that leads to conclusions that are incomplete, misleading, and/or inaccurate. Case in point: In the *Summary and Reflections* sub-section (p. 31), the authors state that “...large subgroup differences may discourage many underrepresented groups from...being admitted into graduate programs”, followed by “...any predictive bias is likely to benefit students from URM groups.” In addition to the apparent internal inconsistency within these statements, the authors also state that “...omitting or down-weighting GRE scores is likely to hurt qualified minority candidates relative to qualified White candidates” (p. 29). While this statement speaks beyond what can be known by the research reviewed, this assertion also was based on research that excluded recent empirical work by Gómez and colleagues (2021), who compared the impact of over-relying on the GRE quantitative score on qualified URM vs.

White and Asian psychology doctoral students. The study's findings were two-fold: 1) the GRE quantitative score (GRE-Q) is a poor predictor of relevant psychology doctoral student outcomes; and 2) overreliance on the GRE-Q in admissions (e.g., use of cut-off scores) can result in disproportionate exclusion of qualified URM students compared to their more highly represented counterparts. Therefore, epistemic oppression (e.g., Dotson, 2014) in the authors' search criteria highlights that true scientific rigor requires review of all relevant literature, not just that centered around a single author or research team.

In the interpretation of findings in the review regarding racial differences in undergraduate GPA in *Part 2*, the authors explain that such differences may be at least partially accounted for through differences in prior socioeconomic status (p. 17). Such a simplistic and colorblind approach can produce race-neutral paradigms that are antithetical to diversity, equity, and inclusion (Bonilla-Silva, 2020). For instance, diversity science approaches (Buchanan et al., in press; Miller et al., 2019), including theoretical and empirical models that center racism and other forms of inequality (Buchanan & Wiklund, 2021; Plaut, 2010a, 2010b; Miller et al., 2019; Syed & McLean, 2021; Zuberi & Bonilla-Silva, 2008) are key to anti-racist psychological science that moves the field forward (Buchanan et al., in press).

In the *Introduction*, the authors set up their article by stating that "...researchers...are not immune to the effects of a focusing illusion, whereby one erroneously assumes that *only* the GREs are flawed" (p. 3). The authors additionally ask questions about subsequent validity to graduate admissions if the GRE is removed, (p. 14). This idea is re-visited in *Part 3: Multiple Ways Forward*, where the authors identify the need for multi-level changes, including but not limited to graduate admissions, to increase the pipeline of URM students into psychology graduate programs. Stated as if it were a new idea, this assertion ignores that other authors have

previously cautioned about the futility of simply removing the GRE without other systemic changes in graduate admissions and beyond (e.g., Posselt, 2014). As such, a multitude of prior work provides multi-level implications (Callahan et al., 2018; Gómez, in press; Gómez et al., 2021; Hernández-Colón et al., 2021; Kent & McCarthy, 2016; Maton et al., 2006; Roberts & Ostreko, 2018; Mathur et al., 2019; Muñoz-Dunbar & Stanton, 1999; Rogers & Molina, 2006), including more standardization in the admissions process (e.g., Mathur et al., 2019; Miller & Stassun, 2014). The latter recommendation of standardization is included by the authors (p. 35), with no citation of prior work recommending the same. The authors also state that assessment methods of job-relevant constructs have not been mapped out in psychology (p. 36), which ignores landmark work regarding factors unrelated to the GRE as more important for success in graduate school (*see Toolkit at Fisk-Vanderbilt Bridge Program*, n.d.; Miller & Stassun, 2014). The authors' choice to build arguments *not* from the extant literature mischaracterizes said literature and is, again, epistemic oppression (e.g., Dotson, 2014) that slows the scientific discussion of admissions while rendering other scholars' work invisible.

Such exclusion also presents an erroneous state of the field: the absence of relevant scholarship regarding implications and future directions creates a strawman out of what has been detailed, scientific, and nuanced arguments that centralize the problem: discriminatory exclusion of qualified URM students from psychology graduate programs (e.g., Gómez et al., 2021) contributing to a racially homogenous field (Boyd et al., 2017) that continues to purport narrowly defined scientific arguments that ignore the vast marginalized scholarship in the area (Buchanan et al., in press). For instance, absent from reference in the current article, Callahan and colleagues (2018) identify 10 steps to increasing diversity in psychology graduate programs, including but not limited to the use of the GRE, program-level articulation of diversity objectives, holistic review

in graduate admissions, broadening curricula to include marginalized scholarship, mentoring, and departmental climate. This epistemic oppression, (e.g., Dotson, 2012), though not uncommon, is particularly costly when interrogating arguments as important as systematic exclusion of qualified URM students in the pipeline of the psychology profession.

Construct Validity

In the authors' discussions of validity regarding the GRE (e.g., criterion-related validity, p. 7), measurement bias (p. 8) and content contamination and deficiency are mentioned (p. 9). However, construct validity is conspicuously absent. Construct validity is the extent to which the test itself measures what it is purported to measure (Hinkin, 1998). Construct validity further includes specifying and operationalizing the construct of interest (Nunnally, 1978) and "...is not to be identified solely by particular investigative procedures, but by the orientation of the investigator" (Chronbach & Meehl, 1955, p. 282). Another way of defining the 'orientation of investigator' is what the investigator *thinks* the test measures. Construct validation is particularly important for criterion-related validity, the latter of which is discussed by the authors. Plainly, there must be agreement among assessors that the test is both measuring what it is supposed to be measuring (construct validity), while being related to outcomes that it should be associated with based on theory (criterion-related validity). Because of what Mills (1997) termed the 'racial contract,' White people—as well as those URM students granted partial membership in the epistemic community due to mastery of White Western culture and ideals—will "take for granted the appropriateness of concepts legitimizing the racial order" and deny "its actual racial structuring" (p. 95). Thus, construct validity is central to examine, particularly within the context of an academic system that benefits White scholars.

Relatedly, the authors object to terminology that frames standardized tests, including the GRE (ETS, 2019), as discriminatory, stating that doing so is “...analogous to calling COVID medical tests discriminatory because ‘there is evidence that some racial and ethnic minority groups are being disproportionately affected by COVID-19’ (CDC, 2020)” (p. 13). However, this is a faulty comparison given that standardized tests and COVID medical tests are not being accused of the same problem. To my knowledge, there are no accusations that COVID medical tests are valid for X racial group, but invalid for Y racial group (*see CDC, 2021a, for information on COVID testing*). Instead, COVID medical tests seemingly operate the same across populations, identifying the presence or absence of SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2) with the same level of accuracy/error across populations. Thus, differences in rates of COVID-19 are not due to the test itself, but rather indicate real differences in rates across populations (*see CDC, 2021b, for discussion on COVID-related health inequity*). Conversely, labeling the GRE as a highlighter of disparities—as the messenger, not the cause—is true *only if* the GRE has construct validity. If the test measures what it is supposed to measure, and there are racial inequalities, then that is not the GRE’s fault. However, what if the GRE is not measuring what it is supposed to be measuring (Croizet, 2008; Kalsbeek et al., 2013; Miller & Stassun, 2014; Vasquez & Jones, 2006)? Then, when there are racial inequalities, the GRE is not the messenger, it is the perpetrator because, unlike COVID medical tests, the GRE is operating differently among different populations.

As an inanimate object, the GRE does not operate in isolation, but with faculty who over-rely on the GRE (e.g., Gómez et al., 2021; Hernández-Colón et al., 2021), confusing this test score with merit (Au, 2016; Stewart & Haynes, 2016). This ‘orientation of investigator’ (Chronbach & Meehl, 1955) relates to the question Gómez and colleagues posed in an empirical

study of the role of the GRE in psychology graduate admissions: “...regardless of whom the GRE...is working for, a question that directly relates to equity and diversifying psychology is whom is the GRE...systematically working against?” (Gómez et al., 2021, p. 213). In line with other empirical work (e.g., Callahan et al., 2018), the GRE is systematically and discriminatorily working against URM students. The persistent use of the GRE amidst such evidence relies on the fundamental denial of equal intellectual ability of URMs compared to White people (Mills, 1997). This denial fuels an epistemology of ignorance that functions upon narrow White Western definitions of what counts as knowledge and intellect (Mills, 1997), which divorces the GRE from its investigator orientations. Specifically, an assumption of the GRE’s sound construct validity—without psychometric interrogation—is likely predicated on explicit or implicit assumptions of intellectual inferiority of URMs. Such thinking could sound like this: *Despite no evidence, the GRE must be measuring what we think it’s measuring. Therefore, lower scores by URMs are due to true differences across races and not the test itself.* As such, the GRE’s construct validity, or lack thereof, is central to rigorous scientific discussions of the psychometric properties of the GRE.

Black Americans’ Humanity

Following objecting to characterizations of the GRE (ETS, 2019) as discriminatory in the *Fairness* sub-section of *Part I*, the authors state: “We wholeheartedly join the public outcry and the numerous community-based, institutional, and policy-level efforts toward greater racial equity (i.e., equal opportunities for all), which is now being culminated into worldwide anti-racism movement in the year 2020 onward (e.g., George Floyd and Black Lives Matter)” (p. 13-14). On a purely academic level, I am puzzled that the authors can state general efforts, such as “policy-level efforts” and specific work, such as the Black Lives Matter movement, without any

citation. These efforts, including those done within academia (e.g., *From Black Lives Matter to Black Liberation*, Taylor, 2016), do not simply appear, but are individuals' and collectives' work, research, scholarship, and intellectual property (e.g., Black Lives Matter Global Network Foundation, Inc., n.d.).

Perhaps even more importantly, language matters (Buchanan et al., in press). With courageous vulnerability, I plead to the authors the following: making reference to public events, including murder, callously and without context or citation—seemingly to bolster oneself as equity-minded—is inappropriate, irresponsible, and disrespectful. Mr. George Floyd is not a token to display to show how not-racist one is. He is a human being who is now dead because police officer, Derek Chauvin, murdered him in 2020 (BBC, 2021). That murder is part of a long history of government-sanctioned violence and murder against Black Americans (e.g., Mills, 1997; Taylor, 2016). Naming those systems of oppression is vital (Buchanan et al., in press; O'Reilly, 2020). Citing the resistance in the U.S. and abroad following Mr. Floyd's murder is necessary context (e.g., Dreyer et al., 2020) for readers who utilize the article after the case is no longer a part of public discourse. Finally, invoking Mr. Floyd's name, memory, and soul to haphazardly make a point is a painful mirror of the very devaluation (e.g., Mills, 1997) that puts Black Americans at risk for all kinds of discrimination—from unequal and inequitable access to education (e.g., Gómez et al., 2021) to our untimely deaths (Proctor, 2020; Wrigley-Field, 2020).

Concluding Thoughts

In “Bias, Fairness, and Validity in Graduate Admissions: A Psychometric Perspective” (this issue), Woo and colleagues embarked on an ambitious endeavor, with the authors hoping their “article serves as a catalyst for meaningful conversations that engender appropriate changes to graduate admissions process—changes that are anchored on robust and rigorous science.” (p.

39). Unfortunately, the authors did not meet their burden of presenting rigorous science in their article: epistemic oppression (e.g., Dotson, 2012) resulted in major areas of germane research being excluded, while a key type of validity—construct validity—went unexamined. As such, the article contains interpretations that are contrary to relevant scholarship (*see* Ray, 2019), excludes entire bodies of research, and regurgitates prior arguments that have been previously made much better (*see* Callahan et al., 2018). If the authors instead had built their article—including the methodology and interpretation of findings from the literature review—from the extant literature, the article could provide a logical, scientific next step that had both basic and applied implications for psychology graduate admissions.

Ironically, the article having succeeded through peer review in *Perspectives on Psychological Science* demonstrates a point that the authors and I do agree on: It is vital for there to be more diversity, equity, and inclusion in the field of psychology. Peer-review processes can be majority White (Greco et al., 2016) and dominant in identity, culture, and/or expertise. Therefore, due to the context of Whiteness as a set of power relations (Mills, 1997), token inclusion of URMs without cultural shifts that disrupt the racial hierarchical power structure may operate similarly to groups of all-White identity peer reviewers. As such, the peer review process may result in research dissemination that oppresses, silences, and excludes marginalized scholars and their work (Bertolero et al., 2020; Chakravartty et al., 2018), while simultaneously hindering progress in the field, ostensibly in the name of science (e.g., Bunchanan et al., in press). Such epistemic oppression (Dotson, 2012; Teo, 2008) is costly to the rigor, robustness, and trajectory of psychological science and its relevance in society (Buchanan et al., in press; Buchanan & Wiklund, 2020; Osbeck, 2018).

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