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A Duoethnographic Exploration of What Peer Reviewing Teaches Us About Peer Review

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Abstract

Background: The peer review process plays a vital role in the advancement of engineering educational research because it is largely through this process that the field determines which knowledge claims are considered valid. Unfortunately, peer review processes may reinforce inequities when peer reviewers, as readers, are not reflective about the ways that their own experiences, as situated within power-laden and racialized sociohistorical contexts, shape how they evaluate manuscripts. **Purpose:** The purpose of this study was to describe the ways in which the authors experienced the same phenomenon–evaluating manuscripts–differently due to our racialized positionalities. **Method:** We reflected on the peer review process while participating in the *Journal of Engineering Education*'s Mentored Review Program. The reviewers met over the course of one year to write responses to each other regarding our experiences, and the tensions that arose during the process of peer reviewing manuscripts with race and oppression in mind. **Results:** Three central ideas emerged from analysis of our reflective dialogue; namely, situating our 'selves' within our review practice, reckoning with the

roots of the strain between our personal and professional lives, and taking affirmative actions to enact racial equity in knowledge production. **Conclusions:** This duoethnography calls for individual change among reviewers, as they seek to be more informed and introspective, as well as structural changes in standards that shape peer review culture.

Keywords: peer review, engineering educational research, equity, racism, duoethnography, written communication

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A Duoethnographic Exploration of What Peer Reviewing Teaches Us About Peer Review

Introduction

In encouraging engineering education research (EER) scholars to move toward deeper and more authentic considerations of racial equity, Coley et al. called for EER scholars to engage in new types of difficult discussions that require "moving beyond deep-seated and unacknowledged mindsets" that produce research which routinely ignores or misrecognizes structural causes and results of inequities (p. 9). We write this article as researchers who participated in the *Journal of Engineering Education (JEE)'s* Mentored Reviewer Program (MRP) and who reflected on the implications of Coley et al.'s call in our role as peer reviewers. The EER community is beginning to engage more substantially in different kinds of conversations about research quality. One unconventional addition that has become centralized within these conversations is the topic of eradicating epistemologies and sensemaking practices rooted in Eurocentric and/or White supremacist ideologies (Cross, 2020; Henderson, 2024;

Holly, Jr., 2020). In brief, "Eurocentrism is the notion that the epicenter of humanity is Western European values. White supremacy is an American idea that there are races and whites are better than the others" (American University, n.d.; Goikoetxea, 2022).

Even as more critical research approaches become more visible, our scholarly enterprise is compromised as we have yet to fully assess and redress the harm to individuals and our broader academic community resulting from the exaltation of positivist epistemology (Mejia et al., 2020). Kellam and Jennings (2021) provide a concise historical review on the origins of sense-making in EER, observing a partiality toward positivist logics (see also Baillie & Douglas, 2014). They state, "the preference for positivist or post-positivist studies can be directly linked to the development of the American academy within the context of settler colonialism and the institution of chattel slavery" (p. 81). Indeed, our participation in the knowledge economy and the specific role of assessing research quality is constrained by centuries old traditions. This background is essential for understanding the power-laden norms of evaluating intellectual contributions: first, that which can be framed as objective and generalizable is deemed superior, and secondly, the epistemic foundations of engineering education as an academic enterprise in the U.S. are rooted in racialized oppression.

While there has been previous discourse about the role of peer review in EER (Benson, 2019; Benson et al., 2021; Jensen et al., 2021), this inquiry focused on the implications of racial equity and perceived scholarship quality as it relates to the processes by which we are socialized to examine knowledge production. We define racial equity as the circumstance where people of all racial and ethnic backgrounds have a fair chance at successfully synthesizing, creating, and communicating knowledge through academic publishing. We believe achieving this circumstance is possible, but requires recognizing and rectifying the different challenges, needs,

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and histories of racially minoritized groups; along with the intentional and continual practice of changing academic publishing policies, practices, systems, and structures by prioritizing measurable change. Cutler et al. (2019) describe how one of the EER scholars they interviewed "felt that they had difficulty publishing their manuscript because it discussed issues related to diversity and inclusion in a way that challenged mainstream views on [racial] underrepresentation in colleges of engineering" (p. 5). The predominance of White scholars on journal editorial boards, and within the field in general, suggests that they bear the most responsibility for constructing the culture of peer reviewing and publishing. The maintenance of a White supremacist culture does not require intentionality or overt discrimination; rather, an unwillingness to deconstruct the epistemic origins of esteemed research methods in the engineering and social sciences sustains epistemic injustice. Similarly, a failure to adopt new perspectives and practices maintains the etiquette of marginalization that deems status quo scholarship as excellent.

Our central research question is: how did our racialized positionalities influence our ability to assess engineering education scholarship? As a sub-question, we examined: what tensions arose during the process of peer reviewing manuscripts with race and oppression in mind? The *JEE* is a prominent venue of scholarship within engineering education, thus, its publications are implicitly considered the standard for high quality scholarship in the field. Papers published in JEE are presumed to "[be] grounded in extant literature and theory, appl[y] robust research designs and methodologies, and advances the body of knowledge in engineering education" (Matusovich & Benson, 2022, p. 5). However, despite "engineering diversity and inclusiveness" being one of the five broad research areas of the journal (Matusovich & Benson, 2022, p. 5), some terms related to these concepts are virtually non-existent in publications prior

to 2020 (Benson, 2020). Such realities are manifestations of the dominant narrative regarding what scholarship is valid (Stanley, 2007), and our aim is to provoke greater discourse about the inherent limitations of any discussion about research quality that does not analyze the systemic inequities of the academy.

This duoethnography describes how we grappled with these considerations in our experiences with peer reviewing as we discussed our different perspectives on multiple manuscripts submitted for publication. We chose this method to reveal our sense-making practices in order to inspire more public discourse about how we as a disciplinary community assess the various epistemologies active within our communal scholarship. Duoethnographies constitute a qualitative research methodology in which researchers with different positionalities juxtapose their experiences to provide multiple understandings of a phenomenon—in this case, mitigating Eurocentrism/White supremacy in knowledge production—while inviting readers to enter the conversation about this topic (Norris & Sawyer, 2012). Due to its focus on transformation rather than replication of accepted beliefs, we selected this research method as appropriate for reimagining the role of peer review in upholding or disrupting epistemological inequities in engineering education (Coley et al., 2021). We did not intend for these research questions to result in a single set of verifiable answers with which readers could agree based on the evidence, which is inconsistent with the purpose and format of duoethnographies. Rather, our purpose was to elicit and foreground the effects of race and systemic oppression in peer reviewing to foster further dialogue about racially equitable knowledge production within the EER community. Baillie & Douglas (2014) noticed, while serving as JEE editorial board members, that qualitative research manuscripts were getting rejected too frequently due to what

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they considered an inability of some scholars to assess non-dominant epistemologies. We ask, a decade later, to what extent has this deficiency been resolved?

Interestingly, Baillie & Douglas–like Kellam & Jennings–named the prominence of positivist epistemologies because engineers view such logic as more rigorous. They also delineate the essential elements of research design in hopes that these clarifications will support the production of "better research papers and better reviews" (p. 1), we insert our own self-reflections to extend this discourse and contemplate to what extent these aspirations have been realized. One can hope reviewers recognize and appreciate different types of knowledge, but currently the power dynamics regulating which epistemic features are prominent in defining research quality remain latent. Furthermore, these power dynamics are reinforced through peer review (Stanley, 2007) and we lack accountability mechanisms when appreciation of diverse knowledge is suppressed or absent. By taking epistemic harm–hindering someone's ability to acquire or disseminate knowledge (Dunne & Kotsonis, 2024)–seriously, reviewers and editorial boards can shift the publishing economy away from one that is currently committed to maintaining the integrity of Whiteness, toward one that is committed to maintaining the integrity of science. The enterprise of scientific discovery is dysfunctional, but we are hopeful that it can be redressed through continued dialogue designed to foster introspection, through a collective commitment to equity and justice, and through relentless self-correction.

Review of Relevant Literature

Hegemonic Whiteness in Engineering Education Research Knowledge Production

Arguably the most prominent social structures that shapes our experiential reservoirs in the United States (U.S.) is racism, or more specifically the power relations of White supremacy. As we previously mentioned White supremacy can be summarized as a belief in the superiority

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of White people over other racialized groups, but the social and political infrastructure of the U.S. have manifested that belief into material conditions regulated by this social hierarchy (Bell, 1992). Miller (2022) characterizes this system of racial domination as hegemonic Whiteness, suggesting it functions as a homogenizing force operating indirectly through culture and discourse. A key component of hegemony is how dominant groups exert power through consent, instead of by force, and we argue this is the central mechanism by which racial equity in EER knowledge production is quelled. In other words, the institution of academic publishing is a site of hegemonic Whiteness, and we will discuss its history within the EER scholarship.

As Miller (2022) expands Hughey's (2010) initial conception of hegemonic Whiteness, she provides some delineation of dominant White axiologies, epistemologies, and ontologies. Dominant means that people racialized as White established these values, ways of knowing, and ways of being as the highest standard by which others in this country should be evaluated via measures of civil and human worth. Describing these ideologies and practices as dominant and White does not mean all White people uphold them nor are they limited to adoption by White people. Instead, it denotes that when people operate in accordance with these standards they are more likely to improve their social status and gain social power. For example, Miller states dominant White axiologies "in the U.S. emphasize values such as consumerism, competitiveness, independence, individualism, and meritocracy" (p. 9). Meritocracy has long been a prominent topic within EER scholarship as scholars highlight it as a central value of engineering culture that has deleterious effects on non-White students' academic success and wellbeing (Cech, 2013; Godfrey & Parker, 2010; Rohde et al., 2020; Slaton, 2015). Regarding knowledge production, the ideology of meritocracy influences narratives and analyses about who

is deemed fit for engineering study as student struggles are individualized and detrimental educational structures are neglected (Secules et al., 2018).

Another aspect of dominant White axiologies is the avoidance of conflict (Miller, 2022; Okun, 2021), although JEE has published commentary describing harmful scholarship (e.g., Coley et al.'s guest editorial) it does not currently have a mechanism to retract such scholarship. A retraction is when an article is unpublished due to an issue where a major error invalidates the conclusions in the article, or where it appears research or publication misconduct has taken place. One could argue many retractions are necessary due to dominant discourses in EER which continue to characterize racially minoritized students as academically underprepared, unmotivated, and simply incapable of performing as well as White students. These discourses are epistemically violent (Dotson, 2011) as they neglect contextualized analyses of broader sociopolitical factors (McGee, 2020), though they are legitimized and even endorsed by their propagation in EER scholarship. Objections to the development of a retraction process primarily focused on the potential conflicts that would arise, which essentially preserves hegemonic Whiteness even while actions are taken to increase production of racially diverse scholarship in other ways.

Research on engineering epistemologies was a central part of JEE's 2006 research agenda, though it remains relatively neglected in relation to the other focal areas (Katz et al., 2023). We take delight in knowing the historic discrepancy between quantitative and qualitative research studies published in JEE is now nullified which makes space for non-dominant epistemological orientations (Katz et al., 2023); however, choice of research methods is essentially where the epistemological diversity stops. Miller (2022) asserts that dominant White epistemologies "prioritize ways of knowing that are binary, linear, logical, "objective", and

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"rational" as opposed to ways of knowing that are more nuanced and subjective" (p. 10). Like meritocracy, objectivity has long been identified as an esteemed cultural characteristic of how engineering teaching and research are evaluated (Riley, 2003, 2017). Yet, it has not explicitly been framed as a mechanism of hegemonic Whiteness. We do not intend to exaggerate the effect of these ideologies, but we feel the ways they have been described do not fully capture the systemic impact they have on constraining epistemological freedom, in addition to ontological freedom. Although the body of research on engineering epistemologies is growing, it could be greater if knowledge production in EER had not been made epistemically exclusive through the sustainment of dominant White epistemologies.

The main mechanism by which dominant White epistemologies have been sustained is through first-order epistemic exclusions, which can be called testimonial injustice. Testimonial injustice occurs when "prejudice causes a hearer to give a deflated level of credibility to a speaker's word" (Fricker, 2007, p. 35). Though described as happening during speech, it can be applied to writing or any form of discourse. This is perhaps the most common form of epistemic injustice presented in scholarship within EER (Burt et al., 2018; McGee & Martin, 2011; McGee et al., 2022; Mejia et al., 2024) as racially minoritized engineering students and faculty are hyper-aware of the reduced credibility they are afforded. For example, Henderson (2021) found within engineering student teams that even when racially minoritized students used Eurocentric epistemologies to justify their technical knowledge their contributions were still devalued.

We do not suggest people leading institutions of knowledge production within EER necessarily endorse White supremacy, but we are building on the work of EER scholars that have illustrated how systemic racism influences the conceptualization and conduct of engineering education research and teaching (Holly, Jr., 2020; Cross, 2020; Long III, 2020). This racism is

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embedded within the larger history of White supremacy that constructed research and academic publishing norms. Zuberi (2001), for example, traced the co-development of statistical analyses with the eugenics movement and concluded "that the founder of statistical analysis also developed a theory of [w]hite supremacy is not an accident" (Bonilla-Silva & Zuberi, 2008, p. 4). As sociopolitical contexts change, and particularly as we collectively strive to become better at making Whiteness visible (Holly, Jr. & Masta, 2021), we must also consider how we can shift our scholarly norms toward policies and practices that prioritize racial equity in evaluations of research quality. One vital area for reflexivity is a consideration of the role of hegemonic Whiteness in how we define research quality; and thus, in how we conduct research studies and how we review others' research in our roles as peer reviewers.

Quality in Engineering Educational Research

Quality itself as a measure is subjective and we agree that as a community we must determine shared evaluation measures. We briefly review some of the discourse about quality in EER scholarship as a specific context for our dialogic inquiry exploring the intersection of peer review, self, and systems of oppression. In particular, we are concerned that definitions of research quality, initially developed and promoted by White scholars in White supremacist historical contexts, continue to be positioned as objective and rigorous, whereas methods for ensuring quality developed by racially minoritized scholars, such as the importance of relational validity (Tuck & Kenzie, 2015), may be ignored or dismissed as subjective, not rigorous, or unscholarly (cf. Delgado Bernal & Villalpando, 2002). Definitions of research quality are consequential because they result in some knowledge claims being accepted as valid whereas others dismissed are invalid. In educational research, these knowledge claims result in recommendations for teaching approaches that ultimately result in materially significant

consequences for racially minoritized students. The EER community must therefore engage in reflecting on the ways in which racialized contexts have shaped what is defined as quality if we wish to move toward equitable teaching approaches and research studies that act against histories of racial oppression.

We conduct research primarily using qualitative methods, so we have been attentive toward recent scholarship seeking to provide a framework by which to evaluate qualitative work in EER (Walther et al., 2013; Walther & Sochacka, 2014; Walther et al., 2015). Walther et al. (2017) state "that people and context play a key role in achieving overall quality in a project" (p. 422), which implies we must tend to diverse ontologies in addition to diverse epistemologies. They share examples of researchers applying components of a qualitative research quality framework, which are: theoretical validation, procedural validation, communicative validation, pragmatic validation, ethical validation, and process reliability. The five constructs presented in this paper are helpful in framing research practice but appear to lack guidance on navigating the complexity of social analysis; for example, the methodological dilemmas of race research (Twine & Warren, 2000) or epistemic oppression (Dotson, 2014). While this paper does a good job of demonstrating how to apply their framework to research practice, there are two instances that expose the assumptions normalized within our shared academic enterprise.

Walther et al. (2017) present five cases of authors working through the application of the research quality framework, they refer to these analytical scenarios as practical explorations. One of the practical explorations centers two scholars as they examine the role of emotion and empathy in the lived experience of students they refer to as underrepresented in engineering. As an example of pragmatic validation, the authors suggest "that the questions asked yielded an authentic connection with the participants, was evidence of [the framework's] suitability for the

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study" (p. 409). Pragmatic validation is defined as the alignment between theoretical constructs and the empirical reality they are applied to analyze, and the authors assert the chosen theoretical framework was suitable because it prompted an emotional response from the research participant. When we consider the broader social context, specifically the devaluation of emotion and glorification of objectivity, the expression of emotion can have significant meaning but does not necessarily evidence legitimacy of theoretical constructs.

In another practical exploration intended to exemplify communicative validation–the soundness of meaning-making activities throughout the interpretation process–a scenario is presented where a scholar discusses training a new scholar to participate on a research team. The senior scholar presents the narrative, but the actual content detailing the novice scholar's growth are their own reflections, which do not express what role the senior scholar played in the training process. We suggest a deeper analysis is necessary to critically evaluate the role of power in determining (i) how much credit the senior scholar deserves for the novice scholar's skill development and (ii) to what extent the senior scholar should be included in authoring the narrative.

These are just a few examples within the EER literature on quality evaluation that reveal a particular need for more public discourse on the community's standards for research quality, and how we collectively implement such standards. We present this discussion understanding the JEE has recently completed a comprehensive revision of its author guidelines, in addition to the ongoing MRP and community conversations. Nevertheless, there remains a scarcity of scholarship helping us acknowledge and think critically about the structurally inequitable policies and practices that Coley et al. exclaim. We aim to build upon the current literature by making tacit review norms explicit and leaning into the possibilities of co-constructing new

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practices. To be clear, our desire is not to define what is considered good scholarship ourselves. Rather we encourage more dialogue within our scholarly community to reveal the logics we employ to make sense of research quality, as a step towards improving our communal standards of assessing the diverse epistemological perspectives shaping our work.

Theoretical Framework: Transactional Theory of Reading

Peer review is a core activity through which White supremacy and other forms of oppression can be disrupted or maintained. According to Stanley (2007), non-reflexive peer reviewing is damaging to White women and racially minoritized scholars whose experiences and epistemologies have been marginalized by the academy, and by editorial review boards and peer reviewers in particular. Drawing from philosophers Lyotard (1984) and Giroux (1993), Stanley described the ways that dominant narratives functioned during peer review by stating "master narratives are often mental models of how voices of the dominant culture have justified systems and rules in educational research, in such a way that makes these models 'the standard'" (p. 15). In the context of peer reviewing, dominant narratives include definitions of processes for ensuring validity or quality. While these processes can be useful when offered as possible heuristics for consideration, they become hegemonic when prescribed as the only method for establishing quality, and as the standard against which all research should be judged to be accepted by peer reviewers. To counter dominant narratives in peer review, Stanley called for editors and reviewers to work toward a deeper understanding of multiple research epistemologies and to reflect on the ways in which invisible and normalized White privilege works to disempower the methods and epistemologies of marginalized groups.

As we proceed, we turn to dialogic theories of reading to consider how we, as peer reviewers, interpret written discourse, such as manuscripts submitted for publication.

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Historically, many theories of reading (e.g., Holmes, 1953) have assumed that reading is objective in the sense that two readers should be able to read the same text and come to essentially the same understanding. The dialogic Transactional Theory of Reading (Rosenblatt, 1994), by contrast, suggests that objective readings are impossible. In describing this theory, Rosenblatt used the metaphor of an iceberg to explain the difference between public and private meanings of a word or phrase. The public meaning of a phrase—for example, the phrase 'randomized experimental research' in the social sciences—is what we might find in a textbook. In this case, the public meaning of 'randomized experimental research' might be something like, 'studies in which researchers assign participants to conditions and manipulate those conditions to observe varying outcomes, requiring variation in treatments, post-treatment measures, and a mechanism for inferring the outcome without treatment' (e.g., Shadish et al., 2002). Public definitions represent only the tip of the iceberg of meaning that we as readers attach to each phrase.

In contrast to public meanings, private meanings are the connotations that have been shaped by our "linguistic-experiential reservoirs" (Rosenblatt, 1994, p. 1368), and these private connotations form the rest of the iceberg of meaning attached to a given word or phrase when we interpret it. For example, Amy recently participated on a committee in which a scholar, who identified as a refugee and Person of Color, stated that experimental research designs hurt her community because they resulted in deficit-oriented conclusions about immigrants and contributed to justifications for inferior instruction. This person further stated that these research methods were an expression of whiteness. By contrast, Amy also interacted with former grant developers whose doctoral programs in educational psychology emphasized statistical methods. These people, who did not identify their race/ethnicity, stated that randomized experimental

designs were the gold standard of research and that qualitative approaches were 'just a bunch of handwaving.'

These examples illustrate that, although the public meaning of randomized experimental research may be shared by multiple readers, the private meanings we attach to this phrase, as core to a research manuscript's meaning, are vastly different and shaped by our experiential reservoirs. In accordance with this view, meanings do not reside within a text, such as a manuscript submitted for publication. Meanings only come into being during the dialogue or transaction between the reader (who brings with them their linguistic and experiential reservoir as the basis for interpretation) and the text. By implication, then, when we as peer reviewers recommend rejection or acceptance of an article, this recommendation says as much about who we are as reviewers as it does about the quality of the manuscript.

Importantly, we should also be aware that our linguistic-experiential reservoirs are situated within, and shaped by, power-laden sociohistorical systems and their associated structures, which can result in a set of shared experiences among people based on how they are positioned and treated within these systems. For example, the word 'police' has the public or dictionary definition of "the department of government concerned primarily with maintenance of public order, safety, health, and enforcement of laws" (Merriam-Webster, n.d.). In the United States, police officers are far more likely to baselessly surveil and inflict unnecessary force on Black people as contrasted with white people (Tate et al., 2022) as a continuation of laws and law enforcement systems that have not recognized the full personhood of Black Americans. Accordingly, although both Black and white people may both summarize a dictionary definition of police in similar ways, whites are more likely to have the shared private connotation of the word 'police' as trusted protectors (cf. Gramlich, 2019).

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We use this example to highlight that our linguistic-experiential reservoirs, which form the basis of our interpretations as we read, are not divorced from the larger structures that result in different sets of lived experiences for people at the intersections of race/ethnicity, gender, class, dis/ability, linguistic practices, sexual orientation, and more. Our educational experiences, including our doctoral programs or other experiences that taught us how to evaluate research, are also inevitably situated within these larger structures characterized by asymmetrical distributions of power. To act ethically as peer reviewers, therefore, we must actively seek to be aware of, and own up to, the ways in which our experiential reservoirs, and their associated private meanings, shape how we interpret and evaluate manuscripts.

We connect Stanley's description of dominant narratives in peer reviewing to Rosenblatt's description of warranted assertibility within interpretive communities, such as the EER community. Dominant narratives determine whether an interpretive community recognizes a particular knowledge claim as a warranted assertion or not. Rosenblatt (1994) offered a hopeful view on the potential for interpretive communities to change how they define warranted assertibility. In her words,

> The emphasis on making underlying or tacit criteria explicit provides the basis not only for agreement but also for understanding tacit sources of disagreement. This creates the possibility of change in interpretation, acceptance of alternative sets of criteria, or revision of criteria. Such self-awareness on the part of readers can foster communication across social, cultural, and historical differences between author and readers, as well as among readers (p. 1384).

As implied by this quotation, when tacit criteria are made explicit and public, interpretive communities can reconsider these criteria and actively decide whether to retain or change them.

This quotation also calls for readers to develop self-awareness as they reflect on how their own experiences may shape their interpretations relative to the evaluative criteria.

To summarize, there are two central elements to Rosenblatt's Transactional Theory of Reading: (i) reading is a transactional process between a reader and a text through which the meaning of the text is constructed, and (ii) the purpose, or stance, a reader approaches a text with determines how they will interpret the text. Rosenblatt grew to reject notions of meaning existing solely within the text itself or primarily in the reader's perspective. In essence, viewing reading as transactional makes the reader agentic in the process of meaning-making, rather than simply extracting meaning from the text. Moreover, suggesting a reader acknowledge their stance enacts accountability for the subjective interpretations we draw from the text. Rosenblatt (1969) suggests our reading stance can manifest along a "continuum of potential attitudes" (p. 41) that exist between efferent reading and aesthetic reading.

Rosenblatt (2005) explained that during an efferent reading experience, the reader "pays more attention to the cognitive, the referential, the factual, the analytic, the logical, and the quantitative aspects of meaning" (p. 12). At the other extreme, "[t]he aesthetic reader pays attention to—savors—the qualities of the feelings, ideas, situations, scenes, personalities, and emotions that are called forth and scenes as they unfold" (p. 11). Though Rosenblatt does not rate one of these ends of the continuum as better or more desirable than the other, one can easily see how engineering culture's diminishment of emotional expression and overemphasis on logic (Godfrey & Parker, 2010) would support a predilection toward efferent readings and interpretations of text. This has tremendous implications on how we evaluate scholarship as peer reviewers, and while there has been greater focus on naming one's research positionality this does to necessarily mean we are equipped to honor evolving, and ethically necessary,

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considerations of racial equity as a component of quality. In accordance with this theory, we conducted this study with the purpose of making our thought processes during peer review more explicit, public, and transparent, thereby opening opportunities for our interpretive community to reimagine criteria for research quality in a movement toward visions of equity and justice in engineering education.

Method of Inquiry

We selected duoethnography as a methodology because its purpose is to achieve "dialogic change and regenerative transformation" (Norris & Sawyer, 2012, p. 18; cf. Fowler & Allen, 2021). Specifically, in this duoethnography, we describe our experiences in participating in JEE's MRP, and we reflect on how our (at times, divergent) evaluations of each article were shaped by our respective and differing linguistic-experiential reservoirs. Duoethnographies fundamentally disrupt dominant narratives due to their polyvocality. They do not present one dominant view of the phenomenon with the purpose of convincing readers to align with this view, for example, by persuading readers to agree that their claims are justified, and their research conclusions should be accepted. Instead, duoethnographies reject notions of objectivity by fundamentally foregrounding how life histories shape the meanings that we make of phenomena. Because they juxtapose multiple perspectives, they discourage the reader from adopting a position of alignment or agreement; instead, they foster further heteroglossia–the presence of multiple voices and viewpoints–by inviting readers to (re)consider the phenomenon in light of their own life histories and experiences.

Duoethnographies foster heteroglossia through dialogue between researchers of difference, but they also foster heteroglossia through dialogue with empirical, theoretical, and other works of literature, which become partners in the conversation. This literature constitutes

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"living dialogue threads" whose ideas are woven into the duoethnographers' utterances, which are shaped in response both to each other and to these larger bodies of work (Bahktin, 1986, p. 286). Duoethnographies do not require archived artifacts—for example, our written reviews of the manuscripts submitted for publication in JEE—as data sources that should be revisited and analyzed. Rather, instead of seeking for stable meanings within fixed artifacts, duoethnographies seek to portray knowledge and knowing as continually in transition, fluid, and subject to change as part of the process of self-reflection and dialogue.

Research Design

In accordance with this commitment to polyvocality and fluidity, we did not analyze data with the purpose of achieving a degree of interrater reliability, which would indicate agreement. Instead, we sought to highlight points of difference and disagreement, consistent with our theoretical framework that our different life experiences would result in unique transactions with each manuscript. As a mentor-mentee triad we co-reviewed four manuscripts during the MRP, we felt a tension—that of shifting the social context of the interpretive community toward equity while accounting for existing methods of establishing quality—and decided to frame a research study around our experience. At the time one member of our triad was experiencing a life transition and did not have the additional time to participate in this project, so we present the dialogue of two members of the triad. Between August 2021 and April 2022, we had five hour-long verbal conversations through a video conferencing platform, which comprised dialogic threads that wove their way into our writings.

After identifying our initial research question, theoretical framework, and methodology, we began the written dialogue by reflecting on what motivated our interest to participate in the MRP. We did not develop specific guiding questions, but encouraged each other to think about

what ideas, resources, or experiences shaped: our approach to reviewing, our perspective on the role of peer review within the larger knowledge production process, and resonant experiences within the MRP. Amy provided the first written reflection, James responded with his own reflections, and the conversation continued by responding with reactions to each other's writing as we sought to make sense of the broader implications of the topics within our discussion. We provide extensive sections of our reflections to support the reader's insight into our thinking processes, represent the conversational flow of our interactions, and demonstrate the power of storytelling, as the conversation is the story in duoethnography.

Data Collection

After the initial verbal conversation, we began communicating through written responses via email (see Example 1) and a Microsoft Word document, composing medium-length reflections about our experiences during the MRP and reactions to what the other had written.

> Hi James,
>
> Thanks for the conversation this morning. When I rewrite my narrative, I think I want to say this more clearly,
>
> *When we read the article that may have been written by a Black author about [racial minority-serving institutions], I felt like, as a white person, that I might be re-inscribing colonialism if I imposed my racialized cultural norms of interpretation upon this article. What right do I, as a white person, have to pass judgment on a work by a Black author about issues facing the Black community? If I had recommended rejection, I thought I would be re-enacting a long history of white colonizers dismissing the ideas of "othered" cultural groups as invalid based on the cultural norms from my (our) own, implicitly white supremacist, educational upbringings. So then my inclination was to recommend "revise and resubmit" even though I saw many of the same problems you saw, which caused you to recommend rejection. Which I ultimately do think was the fairer call.*
>
> Thanks and have a wonderful and rejuvenating break with family.
>
> Amy. [Email sent 12/10/21]

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After finalizing our written responses to each other, we held other verbal conversations in which we each reflected on how participating in the MRP and duoethnography affirmed or transformed our prior beliefs about peer reviewing. We also reflected on what we personally took away from the experience and how these take-aways might foster further conversation about growing our capacity as reviewers of EER. Our dialogue did not occur as straightforwardly as presented here, the duoethnographic process is essentially "a series of declarative and interpretive hermeneutic circles through which insights and stories coemerge" (Norris & Sawyer, 2012, p. 29). Thus, although we present the expositions as a conversation they did not actually occur in this exact manner. Consider Amy's message in Example 1 where she stated a desire to rewrite her narrative, this is not to correct any inaccuracies or present a more publicly acceptable narrative. She wanted to clarify her reflection after reading James' response to enhance the meaning-making that could be drawn from the experience(s) she described.

Description of Format and Content

We situated ourselves as the sites of the research to deepen the EER interpretive community's understanding of this critical phenomenon known as peer reviewing. This socially constructed process is very consequential, yet many aspects of the process are taken for granted; therefore, we engaged in duoethnography to heighten consciousness about this process as a form of social analysis. This method of research is atypical for EER and can be challenging to engage. The manuscript requires the reader to mentally flexible, self-aware of positionality, and willingness to engage in reflection for the purpose of managing tensions. Therefore, we present Fowler and Allen's (2021) concise descriptions of agreed upon tenets for duoethnography in Table 1; we consider these to be core facets of the duoethnographic process.

Table 1

Tenets of Duoethnography	Quotes from page 4 of Fowler & Allen (2021)
Self-study	Duoethnography supports the notion that life is a curriculum and the duoethnogra process is the sharing of learnings in dialogue with another.
Polyvocal	Duoethnography is polyvocal and each author's voice is distinct within the text.
Disrupts Metanarratives	Through a dialogical process, each author is intended to challenge their existing assumptions and ideas and to consider counter-narratives.
Difference	The authors of a duoethnography must have differences between them, which allo explicit expression of how the same phenomenon can be understood differently.
Regenerative Transformation	The duoethnographic process is meant to be transformative for the authors as they consider new perspectives on their life experiences through dialogical engagemen
Validity Claims	Knowledge is open and fluid within a duoethnography and duoethnographers do n assert claims to validity.
Audience Accessibility	Duoethnographic texts are accessible to their readership; rather than assert specifi arguments, the authors pose questions, encouraging readers to participate in the p of applying theory to practice.
Ethical Stance	Duoethnographers do not make conclusive arguments and seek to change one anc instead, they engage in dialogue to challenge themselves and to learn.
Relationality of Trust	Duoethnographies are conversations between authors who have trust between the and their dialogue fluidly incorporates relevant literature.

We categorized each tenet into three groups to explain how these worked together within this study. The *practice of duoethnography* describes aspects of the study we embodied, it includes self-study, polyvocal, difference, validity claims, and relationality of trust. The *impact of duoethnography* describes aspects of the study that influenced our perspectives, it includes disrupt metanarratives, regenerative transformation, and ethical stance. The *contribution of duoethnography* describes the aspects of the study that we hope influences you–the reader–and by extension the broader EER community, it includes audience accessibility. As a reminder our central research question is how did our racialized positionalities influence our ability to assess engineering education scholarship? Our sub-question is what tensions arose during the process of peer reviewing manuscripts with race and oppression in mind?

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The convention of ethnographic writing is different from how data, results, and analysis are typically presented in JEE and other journals where EER is published; specifically, analysis is typically woven into narratives or heavily descriptive writing. We follow such conventions here by presenting portions of our reflections and then doing analysis within the same section. Beyond convention, immediate analysis supports the reader's ability to make sense of what the narratives demonstrate. This proximal analysis of narratives becomes even more critical to highlight insights about undertheorized topics in EER like White supremacy, evaluating research quality, and epistemic hierarchies.

The following is our dialogue with each other which reflects differences in how we engage in assessing manuscripts, which were shaped by our own racialized subjectivities and educational experiences. The reflections are presented in a condensed form for space considerations, the resulting excerpts were perceived to be the most relevant to our research questions. This set of reflections include vulnerability about personal circumstances, so we want to remind readers that our analysis is limited to what *we* observe and how *we* interpret those observations. We acknowledge our analyses may provoke negative emotional reactions, or even discomfort, within readers and welcome additional dialogue to make sense of what we present here. We also want to remind readers that given the scope of this paper, we focus our analysis on the racialized power dynamics in knowledge production, though we notice implications on other aspects of our identities.

Dialogue

Section 1 of Reflections

Amy: I identify as a white woman. My original reflections on peer reviewing did not name my race/ethnicity or gender. This absence stood in stark contrast to your reflections in which you explicitly and immediately described how your

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experiences as a Black man related to the experiences you had in reading and evaluating manuscripts.

I wonder now if, by not naming my race/ethnicity, I was promoting color-blindness in peer reviewing. I wonder if I was perpetuating white supremacy by naturalizing my position as an unmarked, and therefore objective or neutral, place from which to evaluate articles.

At the same time, the fact that I am white maintains a prominent place in my consciousness when I am reviewing and writing. I also wondered if when I, as a white person, turned the spotlight to my own experiences, I might reinforce white supremacy by drawing attention toward myself and away from the experiences of People of Color. At the same time, I should not ignore the fact that I am white, and that my racialized experiences influence how I interpret manuscripts. I should be up front about this fact. It is within this tension that I situate this exposition.

However, based on our dialogues surrounding peer review, I now wonder if this stance is a further reflection of me claiming objectivity or neutrality—aka, "unmarkedness"—as a white person whose educational experiences were steeped in ideas and methods largely developed and shared by white educators and researchers. Just because a methodology has a tradition of acceptance and a large following, that doesn't mean this methodology is ethical, in the sense that it results in insights that contribute to equity in education or society.

I'm thinking here of a presentation you recently gave in which attendees questioned why it would be racist to acknowledge deficits. My question is, Who defines deficits? *Where* we look and *how* we look determines *what* we see. As a researcher, particularly as one who is white, I must be willing to consider the possibility that the 'problem' lies not with the participant but with my own eyes: with where and how I am looking.

I raise these questions as part of larger questions about peer review, inspired for me by an editorial on making Whiteness visible: How long will we allow Whiteness—including but not limited to White definitions of success or competence, or pedagogies and assessments enacted through the linguistic practices of the White middle class—to remain invisible and unmarked as the unquestioned norm in engineering educational research? Does quality engineering educational research require that researchers make Whiteness visible in pedagogies, assessments, and research methods? Conversely, is it fair for me as a reviewer to use theories of Whiteness, or tenets of similar theoretical frameworks that address structural inequities, to evaluate articles written under other theoretical and methodological traditions and assumptions?

In previous drafts of this exposition, I kept on trying to develop answers to similar questions. These answers ultimately ended up feeling arrogant or overly simplistic. There are many questions and complexities that surround the disruption of White supremacy through peer review, and my one conclusion is the need for continued education and reflection for myself as a White reviewer. This need requires a continued commitment to developing self-awareness as I strive to see whiteness and to make it visible, first to myself. As you have noted in your presentations, this continued education must include reading the equity-oriented work of Scholars of Color, especially because many of my prior educational experiences did not equip me to think and act with deep understandings of equity.

James: I am a Black man with bachelor's and master's degrees in mechanical engineering, and a doctoral degree in engineering education. I spent two years as an Assistant Professor in a Teacher Education program and currently I'm in a Mechanical Engineering (ME) department. My research is on racial equity in engineering education, and I teach courses in the undergraduate ME program and in the graduate engineering education research program. The opportunity to work in a College of Education and work and study in Colleges of Engineering has afforded me a rich perspective on teaching and learning.

As a Black man I did not question my physical presence in engineering, my undergraduate education at a Historically Black College/University helped me establish a sense of belonging while studying engineering; however, I was very insecure about my intellectual presence. I understood my role as a tenure-track faculty member is to produce new knowledge, but I was not confident the engineering education community valued the expertise and knowledge I hoped to contribute. When reviewing manuscripts there is a certain level of confidence one must have in their own expertise and belief in their ability to evaluate the scholarship of others. Ideologies of objectivity and depoliticization have long shaped engineering education, and I felt pessimistic that critiquing research that did not reckon with the racialized elements of engineering teaching and learning, would not be viewed as appropriate. Your affirmation of our intellectual presence reassured me of my agency in participating in and reshaping the scholarly contributions of the field.

My lack of confidence in my ability to review during my doctoral program is what inspired me to participate in the JEE Mentored Reviewer Program (MRP). This was the first formal training program I had seen that proclaimed to assist junior scholars in developing the skills to contribute to the field by providing high-quality reviews. Other benefits of the program included learning more about the authorship expectation of JEE and building a relationship with peer scholars in the field of engineering education research. In addition to being excited about admission into the program, I was particularly delighted to be matched with you as my mentor. We had met recently during another professional experience which caused me to read some of your

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> scholarship, and I admired the interdisciplinary nature of your work and your asset-based approach.
>
> As a Black man with a focus on scholarship that prioritizes the needs of Black students, not simply how our performance can be improved, but how does the academic context need to be reconstructed to affirm our humanity and relinquish itself as a site of suffering; I always felt like an outsider in the discipline. Much of the work I read on the experiences of Black students in engineering appeared erroneous; beyond deficit-based research questions, methodologies, and such, the conclusions drawn did not align with decades of scholarship about Black people's existence within this nation and the education system in particular. But this work was published. So, I presumed my analyses would be questioned and perhaps even rejected as legitimate. The fear I had in graduate school due to my self-efficacy has shifted to a fear of professional rejection. The MRP orientation materials did not assuage this uneasiness. In my research and teaching practice I argue who we are influences everything we do, and I did not have any way of reconciling how who I am and the how/why I do what I do influences my evaluation of the work of others. I never saw reviewing as value-free or apolitical, but now I am much more aware of the ways in which our subjectivities regulate this critical process. And unfortunately, our subjectivities remain unregulated because they are allowed to be invisible in the guidelines often provided for peer reviewing.

Exposition

Racial identity is central to how we make sense of the world, and more specifically for our scholarship, it is important for how we acquire and synthesize knowledge (Harding, 1986). EER scholars have discussed the role of identity in forming one's research positionality to enact a reflexive research process (Hampton et al., 2021; Martin et al., 2022; Secules et al., 2021), yet there remains an absence of discourse on the fundamental implications of our racial identities on intellectualism. As a community we have not discussed how the ways we are racialized through hegemonic Whiteness shapes what we are capable of knowing, and who is most capable of knowing certain things (i.e., epistemic privilege). Said differently, we need to examine how our socialization constructs our perspectives and its limitations. We can see consciousness about the influence of racialization on epistemology being raised in this first section of reflections.

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Amy recognizes that James foregrounds his racial identity as being relevant to his ability to assess scholarship (Amy, stanza 1), then uses this to identify a potential gap in how she reads and interprets research, stating: "I must be willing to consider the possibility that the 'problem' lies not with the participant but with my own eyes: with where and how I am looking (Amy, stanza 5). Additionally, Amy mentions "many of my prior educational experiences did not equip me to think and act with deep understandings of equity" (Amy, stanza 7). On the other hand, the predominant discourse about Black people in engineering focuses on their representation and sense of belonging, but here the root of James' insecurity is not within himself but the scholarly community (James, stanza 2). Specifically, he is worried about his epistemic agency, which is "the ability to utilize persuasively shared epistemic resources within a given community of knowers in order to participate in knowledge production and, if required, the revision of those same resources" (Dotson, 2014, p. 115). Consequently, we ask how does this lack of trust in the EER community hinder the full range of knowledge that would otherwise be disseminated? The hegemony of Whiteness need not reject anyone directly, one can feel indirectly rejected through observing the knowledge practices and traditions embodied by the premier venues for knowledge dissemination.

Through studying ourselves we noticed some tensions that Amy revealed, and we consider one emblematic of the broader epistemic culture within EER. James desires to actualize racial equity in knowledge production, but she expressed confusion on whether her neglect to name her racial identity contributes to sustaining White supremacy (Amy, stanza 2). Although it is not reflected in the excerpts we present, we can attest that James does not comment on Amy's omission of naming her racial identity; however, he does express gratitude for the way Amy affirmed his expertise and ability to assess the quality of another scholar's research. While Amy

worried about naming Whiteness, James found how she behaved–which contradicted the demeanor of the broader scholarly community–far more helpful. We spotlight this instance to suggest that naming one's racial identity and/or research positionality is insufficient; moreover, zeal to pursue racial equity is nice but can be dangerous without actually understanding the roots of inequities. The danger is one can outwardly project ambition to pursue racial equity but act in ways that unwittingly contradict that ambition–what can be referred to as dysconscious racism (King, 1991; Miller, 2022).

As we analyzed these reflections in regard to our research questions, it became clear the political implications of racism on knowledge production showed very prominently. Reviewers, especially those whose experiences have been shaped by privileges afforded from being white, can actively adopt a stance of historicity instead of a stance of objectivity when evaluating research. In other words, rather assuming that our interpretations are objectively based in an unbiased evaluation of accepted 'rigorous' research methods, we can acknowledge that both these methods, and our own interpretations, have been developed within (and are inextricably connected with) sociopolitical, historically situated systems characterized by hierarchies that exist at the intersections of race/ethnicity, language, class, gender, and more. By actively acknowledging the ongoing ramifications of these histories, rather than ignoring them, we may be more likely to redress harm caused by some types of educational approaches and educational research. A stance of historicity declares the need for reconstructed standards of quality scholarship considering a social structure that renders epistemologies outside the White mainstream as inferior. A stance of historicity would also foster self-awareness and humility, specifically one's propensity for ignorance due to an embrace of color-blind ideology and/or being at the top of the hierarchy in a racialized system. The norms of peer reviewing are socially

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constructed though they are deeply ingrained, and understanding this historical infrastructure is critical to developing new practices and values.

Section 2 of Reflections

Amy: My second response is to be completely struck by your statement that, "Unfortunately, our subjectivities remain unregulated because they are allowed to be invisible." This statement is what prompted me to go back to my initial exposition and rewrite it completely because I had not named or substantially engaged with my positionality as a white reviewer.

For me, your statement also raises the question: What aspects of my positionality should I explicitly make visible to authors and editors? If the review process is strengthened through visibility or transparency, then how, where, and when should I be transparent about how my subjectivities have influenced my reviews?

I see a few different methods for rendering my subjectivities visible. First, I can identify my positionality and its potential impacts in my actual review given to authors. Second, I might only disclose my positionality to the editors in the "confidential comments to editors" box so they can consider how it affected my review. Third, I could write personal notes to the side of my reviews as I compose them, and/or to the side of the manuscript as I read it. The purpose of these notes would be for me to pose questions to myself as I reflect for myself regarding how my racialized, gendered, and classed life experiences, as well as other factors, influence how I interpret and evaluate the article. I have tried these methods for ensuring transparency to some extent, but after reading your response, I realize I could be much more reflective and purposeful in how I move toward this type of transparency in the future. As part of this self-reflective process, as a reviewer, I should also tell the editor when I am unable to write a fair review and recuse myself from the process.

Your statement also raises other questions for me: Are all of the ways in which I identify myself (e.g., white, cisgender, female, able-bodied, middle class) relevant to every manuscript I review, or only to some manuscripts? For example, is my subjectivity as a cisgender person relevant even when I am not reviewing an article in which gender is identified as a relevant construct? Is my subjectivity as a white person relevant when the article does not identify race/ethnicity as a focal construct? Is my subjectivity as middle class relevant even when socioeconomic status is not a focal construct? If the answer to these questions is yes, which I think it is, then what are the implications for me as a reviewer?

I again return to the implications that I have the responsibility to ongoingly educate myself regarding racism, linguicism, sexism, classism, and ableism, especially as I read EER manuscripts in which researchers work with people who have experienced

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minoritization along these domains, whether the researchers have acknowledged this minoritization or not.

At the same time, I consider my experiences of participating in the MRP during the pandemic as a mother of two young children. Due to health reasons and school district policies, I had to cobble together my own home school curriculum for my six-year-old and teach her while my two-year-old was sitting on my lap trying to grab everything because he did not want to be left out. I was resigned to the fact that, by a very long stretch, I could not get done what needed to be done each day, a feeling which was very familiar to me from the decade during which I was pregnant, nursing, or caring for chronically-ill family members. I think here of a fellow academic whose appointment was not renewed due to "lack of productivity" for the year, even though she was a single mother who also had to home school a young child during the pandemic, and even though the pandemic significantly slowed the publication process.

All to say, I experience a tension between the need for developing my capacity for critical self-reflection in reviewing, and the need to maintain productivity in already severely time-constrained circumstances. When we discuss reviewing, I think these constraints should be considered. We should also acknowledge the fact that academia, as a culture, does not value writing reviews as a form of capital that significantly advances one's case for tenure, promotion, or merit pay.

I wonder if there are ways we might shift academic cultures toward valuing reflective, quality reviewing more. JEE has done this to some extent, for example, by giving awards for reviewing. I wonder if other journals or conferences might also think creatively about how reviewing, as a service, might more fully serve to advance people's trajectories in ways that can be recognized by tenure and promotion committees, deans, and others. This, in turn, might provide a broader culture that would support people in being more introspective, thoughtful reviewers.

James: I appreciate your reflexivity and your presentation of three ways all of us can be more explicit about our subjectivity in reviewing. I will seek to practice your suggested methods in future reviewing experiences myself. Though I wonder to what extent can the policies and procedures of the journal editors mitigate these issues. Editors have access to reviewers and authors' publication record (e.g., conference proceedings, journal publications, etc.) and stated research interests. How is this information used to contextualize feedback from reviewers about manuscripts? Editors can serve as an external point of verification for alignment between reviewers' self-confidence and demonstrated performance. Additionally, I am grateful for your commitment to educating yourself on various forms of oppression within the scholarly production ecosystem, and again I contemplate the need for journal venues to institutionalize mechanisms to redress the effects of these forms of oppression in past scholarship and eradicate them for the present and future. While each of these marginalizing structures can operate at an interpersonal level, it is their operation at a systemic level that

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override an individual's intention to disrupt, enforce, or be nonchalant about them. I commend publication venues that have recently made commitments to anti-racism, JEE has even revised its author and reviewer guidelines to be responsive to these issues. Notwithstanding, scholars like those included in Zuberi & Bonilla-Silva's (2008) book explicate the trajectory of dehumanizing research which begins long before a manuscript is under peer review. Alternatively, there is a lot of research that never makes it to peer review because scholars have deciphered the messaging about what scholarship is valued in EER (Benson, 2020).

I hear you on the difficulty of navigating the pandemic while participating in the MRP, and I was grateful for your, Bea's, and JEE's patience with me in fulfilling my reviewing tasks during that time. My daughters were in pre-school at the time and formal schooling was not a major concern for us, but I felt like most days that year was a struggle to do anything, not just work-related tasks. Watching reports about Black people dying in large numbers from the novel coronavirus while simultaneously watching reports about Black people being murdered by white law enforcement officers and vigilantes was devastating. I suffer still…and as you suggest the academy does not make space for processing these petrifying tragedies. It is in fact the academy's unwillingness to make space for my anguish that fueled my ambition to renovate peer reviewing through critical praxis (reflective evaluation of thought with action and theory) (Kridel, 2010).

Participating in the MRP exposed me to how the peer review process is organized, as it is socially constructed, which demonstrated how those who are willing to get involved in the process have tremendous power in shaping the field. This experience has reframed my perspective on the value of reviewing, and Black epistemologies both reveal the devaluation of reviewing as a mechanism of whiteness and seek to humanize this form of (academic) community service. Research disseminated through journal publication is highly esteemed because of its matriculation through peer review, viewed as a verification of high-quality, even though participation in this process is not esteemed in regard to promotion to tenure. You highlight quite a serious quandary. Moreover, once papers are published their successful matriculation through peer review can itself become a defense of the rigor of the work which guards it from public critique (Leslie, 1990). Nevertheless, I follow in the tradition of other Black scholars that acknowledge the power of reviewing to support or suppress the contribution of Black intellectualism (Stanley, 2007; Coley et al., 2021), and thereby the careers of Black scholars. In this way, the MRP was empowering as I became enlightened on how to constructively assess the work of fellow scholars, and how to enact agency by asserting the value of neglected literature and harmful research practices.

In your reflection you move us to consider a culture shift in peer reviewing, while this is new to EER, we can learn from scholars in other disciplines (Lee et al., 2013). Scholars have initiated discourse around race-consciousness in research (Milner, 2007) and the broader systemic model of scholarly publishing (Cope & Kalantzis, 2009), among other deliberations in the literature. It is clear that more intentionality is necessary in

> preparing researchers to evaluate the scholarship of their peers, this multifaceted process is often limited to being framed by how well someone can write. Yet the latent power dynamics embedded in this process go unnamed, and the extent to which it inhibits the scholarly production of our field is depleting. This generates another thought for me, how do you think the intellectual paradigms prominent in engineering constrain reflexivity in reviewing? While I see value in more education about reviewing, it's important to recognize the epistemic norms in engineering that we must confront.

Exposition

Amy poses questions that resonate for many people who have been trained to exclude their subjectivities when doing research. Once we open ourselves to acknowledging the influence of our subjectivities, she wonders to what extent they are relevant for assessing the scholarship of others (Amy, stanza 4). Shortly thereafter she laments "the need to maintain productivity in already severely time-constrained circumstances" (Amy, stanza 7) when it is well-known that writing reviews is under-appreciated in regard to career advancement. Taken together we can see how those without adequate knowledge of non-dominant epistemologies are likely to forgo the additional intellectual work of diversifying their epistemic resources because that is not what hegemonic Whiteness requires. At an individual level this is reasonable, but at a systemic level this leaves hegemonic Whiteness, which emphasizes independence and individualism, intact.

James mentions the need for systemic level action not to critique Amy, but to ponder whether journals and their editors are doing enough to combat epistemic oppression (James, stanza 1). Most of the discourse about reviewing focuses on individual scholars serving in the role of peer reviewer. What exactly is the agency of editors, and how can this be leveraged to advance racial equity? Well, we saw some of this potential when Lisa Benson made space in volume 109, issue 4 of JEE for Black scholars to articulate the ways White supremacy is deadly physically (Laster Pirtle, 2020) and professionally (Cross, 2020; Holly, Jr, 2020; Long III, 2020).

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Both Amy and James mention work-related stressors that were exacerbated by the novel coronavirus pandemic (Amy, stanza 6; James, stanza 3), but race-related stressors have a distinct impact (Meyer, 2007). Brownlow (2023) explains "Black Americans are often required to cope in ways that are unique to their cultural experience of persistent systematic oppression due to the chronicity and structural nature of racialized stressors" (p. 577).

Despite stated suffering, perhaps unintuitively, James mentions he is driven by these stressors to impact peer reviewing (James, stanza 2). One's identity and experience, which shapes their positionality, can be nuanced and dynamic enough to be a motivator rather than a one-dimensional descriptor. Our theoretical framework seems to suggest our identity and experience is always relevant. We inherently adopt a reader stance to make meaning from text, but what we must determine is whether the stance is authentically our own or driven by the ideas of our larger scholarly community and accepted public meanings. The pressures of tenure-track faculty positions can cause scholars to view peer reviewing as little more than service to support one's own research dissemination, but a more classical view, albeit idealistic, is that peer reviewing's "ultimate purpose is to maintain the integrity of science by filtering out invalid or poor quality articles" (Wiley, n.d.). In our dialogue, we consider the severity of how society's racism infiltrates peer reviewing and complicates the careers of White and racially minoritized scholars.

Section 3 of Reflections

Amy: My immediate reaction is to appreciate your reminder of the systemic nature of white supremacy, and therefore the need for systemic solutions, including in peer reviewing. Solutions must move beyond us as individual reviewers being reflexive. Instead, the EER community as a whole should develop policies or standards that prevent dehumanizing research from being published, as well as policies and standards that promote and encourage humanizing research grounded in the epistemologies and goals of the people who are being researched.

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I love your idea of the EER community learning from scholars in other disciplines, and your statement that journal venues should institutionalize mechanisms that redress oppression. In reading this idea, I thought it would be great if journal editors and editorial review boards could form networks or alliances in which they shared how they are each engaging in different practices for promoting equity in research and practice. JEE, for example, held webinars on anti-racist reviewing, whereas *Science Education* began a new section dedicated to 'Critical Perspectives in Science Education.' The *Journal of Research in Science Teaching* (n.d.) recently published a Diversity, Equity, and Inclusion statement, which includes the sentence: "We encourage all authors to engage with and cite sources by scholars and other writers from groups that are often excluded or ignored within academia" (para. 1).

These approaches all have different strengths, but I wanted to highlight the phrase "by scholars and *other writers*." During an independent study this semester, I was grateful to read *Po Fananga: Folk Tales of Tonga* (Posesi Fanua, 1975) with a doctoral student who is developing a theoretical model of community cultural wealth (cf. Yosso, 2005) with and for Tongan American students, as informed by the deep wisdom from these folk tales. Ideas from "other writers," including people whose work has been excluded from peer-reviewed journals as non-scholarly, should be welcomed if we as a field genuinely seek to combat a legacy of colonialism in which only limited theoretical frameworks, methods of knowledge construction, and methods of knowledge presentation are considered valid. An institutionalized mechanism for redressing the effects of colonialism might include review criteria that consider the epistemic rights of participants in defining what counts as knowledge (Campano et al., 2022): what is studied, how it is studied, for what purpose it is studied, how it is framed, and how and where it is communicated.

In reflecting on systemic factors related to white supremacy in peer reviewing, I am also reminded that the EER community is small as compared with larger educational research communities and as compared with academia and society as a whole. EER can influence these larger systems, but these larger systems also influence EER. In response to your question, "How do you think the intellectual paradigms prominent in engineering constrain reflexivity in reviewing?"—I think that intellectual paradigms in academia and society as a whole constrain reflexivity in reviewing. Academia constrains introspective reflexivity in reviewing through forcing us to publish at breakneck speeds if we want to keep our jobs. Many educational systems constrain reflexivity for white people like myself through eliminating ideas that challenge white supremacy from the time we enter Kindergarten.

These are big issues, but institutionalized mechanisms that draw peer reviewers' attention toward equity in substantial ways can be one place where we start to redress the effects of white supremacy in peer review. White people, such as myself, can strive to be relentlessly self-correcting regarding the review process, both at the level of

writing our individual reviews, and also at the level of advocating for structural change in the ways that criteria for warranted assertibility are defined.

James: I know we need to bound our dialogue for the sake of presentation, but I feel compelled to briefly ruminate on your final reflection. The othering of "other writers" stands out to me. Not everyone is a scholar but how do we determine who is? I don't assume these "other writers" desire to be recognized as scholars, but could their writings be deemed scholarship? I don't ask simply for the sake of provocation, but these epistemic limitations seem to be self-sustaining even as they appear to be expanded.

Decision-makers that influence the publishing domain with EER are now considering mechanisms to support scholarship being disseminated in non-traditional ways, but even if supported, how will this work be valued? To what extent is there really an infrastructure to truly reconstruct the peer review process, particularly when the social structure in which peer review exists remains unchanged? I hear you on the constraints of academia, but there is an abundance of educational researchers engaged in radically reflexive scholarship. Of course, education is a much older discipline than engineering education, but when I think about my experiences during the MRP and opportunities I have had to participate in peer review since, I sense an unwillingness to supplant the intellectual paradigms prominent in engineering as researchers take up educational research. Some of our colleagues are proclaiming to do, or support, critical scholarship while exhibiting historically oppressive logics. I reckon warranted assertibility is indeed warranted, and hopefully this dialogue furthers the discourse in EER on reconstructing our standards for validating knowledge contributions to be more racially equitable.

Exposition

Reflecting on our research questions, we realized the mentorship model of co-reviewing manuscripts was helpful for creating interactions to delve into the tacit aspects of peer reviewing. When we read manuscripts submitted for publication, our interpretations often remain tacit in the sense that we as readers may not actively reflect on our own evaluative processes or implicit beliefs about what constitutes valid knowledge. Amy demonstrates that we hold positionalities as research practitioners as well as research advisors, and her position as an instructor/research supervisor of burgeoning critical scholar and participant in other knowledge production communities led to a suggestion for affirming the intellectual contributions of a racially minoritized people group (Amy, stanza 3). It is fitting that within the final section of reflection

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an idea is shared to counteract the central problem of hegemonic Whiteness we have been critiquing throughout. Amy's suggestion demonstrates how larger educational research communities can positively influence EER, despite her reasonable anticipation of the opposite (Amy, stanza 4). Racially minoritized people groups have traditions of including writers excluded from the mainstream canon in their understanding of themselves, their work, and the world. Racial equity in knowledge production is not just about including the intellectual contributions of the so-called traditionally excluded and penalizing harmful actors; it includes activating and elevating new (humanizing) policies, practices, and norms.

Closing Thoughts

We conclude by briefly discussing overarching themes within our reflections and the potential implications of these themes on reviewing practices, policies, and norms. We consider the central idea of the first section of reflections to be situating the 'self' in how we assess the scholarship of others. While some have discussed the peer reviewing process as a tool for development (Gardner & Wiley, 2019; Jensen et al., 2021), we encourage greater self-awareness of the positionalities we bring to the review process. Given the broader sociopolitical context of our nation, academia, and engineering–each being bastions of hegemonic Whiteness–we must be focused on what we should unlearn just as much as, if not more than, what we should learn. Reviewing a manuscript is transactional so it would be advantageous to have political clarity on (i) the ways we influence meaning-making of the text, and (ii) the ideologies that influence us. Holly, Jr. et al. (2023) has discussed ways we can increase our awareness of how a culture of White supremacy is embedded in how we are socialized to conduct research within EER, along with recommendations on how we individually and collectively enact more humanizing ontologies.

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In the second section of reflections the central idea was navigating stressors between our (intellectual) work and life. Auby et al. (2024) mention the volunteerism of peer reviewing as a core concern regarding its integrity, as they spotlighted some of the cracks in ensuring high quality knowledge production. We accentuated hegemonic Whiteness throughout this project to suggest the flaws of the knowledge production ecosystem are not accidental nor inevitable, they are the consequences of capitalist ideologies governing academia. Münch (2020), when discussing academic capitalism, warns "there is the danger of the autonomy of science coming to suffer from this situation so that it will be increasingly unable to meet its genuine function of advancing progress of knowledge, because it lacks the necessary institutional requirements" (p. 13). Indeed, more time and group dialogue would improve the quality of peer reviews; but more importantly we need to determine how we establish 'the necessary institutional requirements' to ensure peer reviewing is appreciated in proportion to its stated importance in advancing knowledge.

Our third section of reflections is the shortest, but perhaps the most powerful with its central idea being affirmative action. We mean affirming epistemically oppressed people by bringing their work from the margins to the fore. Put simply, considering unyielding and ubiquitous disenfranchisement of non-White people we advocate for academic enfranchisement of non-White people. Understandably, we cannot assume everyone is interested in eradicating racism within EER knowledge production, or even agrees with its presence and predominance. Nonetheless, too often the discourse of racial equity in knowledge production ends with deconstruction of problematic practices and policies, and we are left without vision and enactment of reconstructive actions. In addition to ongoing professional development opportunities like the MRP, we encourage engineering education doctoral programs, as

centralized hubs for training future scholars in the field, to embed educational experiences for their students to learn how to produce and review scholarship with a racial equity lens.

As the EER community grows, there will be many difficult discussions that shape the future of the field. We present our dialogue about peer reviewing to extend recent discourse about essential features of our knowledge production economy within the EER community (Knight & Main, 2023, 2024a, 2024b; Main & Knight, 2023; Martin et al., 2022). However, we consider our emphasis on analyzing the functions and mechanisms of hegemonic Whiteness a unique contribution to this discourse. Our shared experience brought more questions than answers about our individual and collective responsibility when evaluating the scholarship of others.

Despite the critical tone of our conversation, our aim is to be (re)constructive in highlighting inconsistencies between the ideals of peer review and its implementation. Our theoretical framework and methodology were chosen to model the diverse approaches necessary to adequately appreciate the diverse perspectives shaping the scholarship submitted for dissemination. We both possess a genuine desire for transformation, so we offer vulnerability by exposing our inner thoughts to inspire critical praxis in peer reviewing, not simply to be heard or engage in faultfinding. Rather we implore scholars dedicated to equity to reject doing business as usual and take up the messiness of rehabilitating our procedures for assessing quality research practice.

In our dialogue we have acknowledged the efforts led by Lisa Benson, JEE's previous editor, to advance equity; still, we hold hope for the new co-editors to build on this recent foundation. In addition to journal editors, other stakeholders within the EER ecosystem can take leadership in establishing more equitable norms in peer reviewing. For example, there is a

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resource entitled “Anti-Racist Scholarly Reviewing Practices: A Heuristic for Editors, Reviewers, and Authors” (see reference list). We cannot endorse this resource as we have not implemented or studied it, but we mention it with respect for the effort of these authors to enhance academic publishing. Such efforts build capacity within our scholarly community across levels of expertise since peer reviewing extends beyond journal venues. The structural inequities that uphold our current peer review and publishing culture require a structural solution; thus, peer reviewing deserves greater attention to ensure excellence in intellectual production within our scholarly community.

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A Duoethnographic Exploration of What Peer Reviewing Teaches Us About Peer Review

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We do not have any conflict of interest.

Table 1

Tenets of Duoethnography	Quotes from page 4 of Fowler & Allen (2021)
Self-study	Duoethnography supports the notion that life is a curriculum and the duoethnographic process is the sharing of learnings in dialogue with another.
Polyvocal	Duoethnography is polyvocal and each author's voice is distinct within the text.
Disrupts Metanarratives	Through a dialogical process, each author is intended to challenge their existing assumptions and ideas and to consider counter-narratives.
Difference	The authors of a duoethnography must have differences between them, which allow explicit expression of how the same phenomenon can be understood differently.
Regenerative Transformation	The duoethnographic process is meant to be transformative for the authors as they consider new perspectives on their life experiences through dialogical engagement.
Validity Claims	Knowledge is open and fluid within a duoethnography and duoethnographers do not assert claims to validity.
Audience Accessibility	Duoethnographic texts are accessible to their readership; rather than assert specific arguments, the authors pose questions, encouraging readers to participate in the process of applying theory to practice.
Ethical Stance	Duoethnographers do not make conclusive arguments and seek to change one another, instead, they engage in dialogue to challenge themselves and to learn.
Relationality of Trust	Duoethnographies are conversations between authors who have trust between them, and their dialogue fluidly incorporates relevant literature.

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