

Identifying Gaps and Building Bridges Between Feminist Psychology and Open Science


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Women's experiences, voices, and perspectives have been systematically excluded in psychological science. The field was built upon a masculine foundation, with early researchers, participants, and professors of psychology being almost exclusively male (Cheryan & Markus, 2020; Crawford & Marecek, 1989; see also Ledgerwood et al., in press). This androcentrism in psychology resulted in the generation and dissemination of scholarship that depicted women as fundamentally different than men and perpetuated stereotypes about women as intrinsically subordinate, inherently maternal, and naturally domestic. Further, the purportedly rational and objective nature of this scholarship helped to legitimize women's social oppression (Eagly et al., 2012; Shields, 1975), with their underrepresentation in positions of power and lack of freedoms scientifically justified and, therefore, inevitable.

Feminist psychology emerged out of a necessity to challenge established findings, systems, and methods to ensure that psychology did not remain a “womanless” science (Crawford & Marecek, 1989, p. 149). While feminist psychology has many definitions, it can be understood as psychological research that “dismantles dominant knowledge production by employing subversive methods and asking subversive questions” (Warner et al., 2016, p. 173). Feminist psychologists have worked to challenge descriptive and prescriptive stereotypes about women (e.g., Fine, 2010; Hyde, 2005), highlight the social contexts that shape women's lives and livelihoods (e.g., Fredrickson & Roberts, 1997; Ryan & Haslam, 2007; Sanchez-Hucles & Davis, 2010), naturalize and dissect aspects of women's lives that have historically been ignored or stigmatized (e.g., Caplan, 1996; Fahs, 2019), and shed light on the ways that misogyny overlaps and intersects with other forms of social oppression (e.g., Cole, 2009; Fikkan & Rothblum, 2012). Feminist psychologists have also critiqued the assumed universality of psychological findings, noting that the psychology of young, White, wealthy, cisgender men does not generalize to all categories of people. Indeed, in recent years, there has been a call for the recognition and integration of intersectionality into psychological research (Cole, 2009; Else-Quest & Hyde, 2016; Warner et al., 2016; see Crenshaw, 1991), with many scholars underscoring the need to develop a more comprehensive understanding of the ways that various social oppressions—such as misogyny, ableism, racism, and weightism, transphobia,

homophobia—work in tandem to restrict and restrain women's lives and the social roles available to them (see also Kitzinger & Wilkinson, 1997).

Critical feminist psychologists (and feminist scholars broadly) have also disparaged the epistemological and methodological foundation upon which much of psychological science has been built. While there is no single feminist methodology (Harding, 1987), many feminist psychologists position their research outside of the confines of empiricism and operate within a post-positivist epistemological framework, challenging the notion that researchers are value-free and politically neutral observers of science. In fact, as Harding (1985) has articulated, without a fundamental valuation and appreciation of the ways that our positionality as scholars affects the ways that data is generated, analyzed, and presented, our scholarship remains weakly objective at best and opaquely biased at worst. There is a recognition that the scholar cannot be stripped from the scholarship, and that reflecting on and transparently addressing the ways that this positionality to the work affects the research process, can strengthen all scholarship.

Feminist scholars have always viewed psychological science and its advances through a critical lens. As such, it is only fitting that the focus of this special issue is feminist perspectives on *open science*, the movement that has become a cornerstone of scientific progress in recent years. Open science has been defined in many ways, but it can best be understood as “transparent and accessible knowledge that is shared and developed through collaborative networks” (Vicente-Saez & Martinez-Fuentes, 2018, p. 434). Open science refers to a broad range of practices, tools, and techniques geared toward enhancing the transparency and reproducibility of data-driven research. Some of these methods include sharing anonymized

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data on open source repositories, pre-registering the hypotheses of research studies, posting pre-prints of research prior to acceptance for publication in peer-reviewed journals, publishing open access (i.e., not behind a paywall), and attaching one's name to reviews (Fecher & Friesike, 2014). Some proponents of open science claim work that is conducted using the tools and practices of the open science movement is more transparent, honest, ethical, and accessible, compared to work without such openness (see Düwell, 2019; Lupia, 2021). Given that feminist psychologists often use experimental and reflexive methodologies that cannot be evaluated using the same standards as mainstream research, some of the advances of open science may provide scholars doing feminist work with new tools to enhance the legitimacy of their work in the eyes of the academic community.

Aside from the academic objective of enhancing the scientific study of psychology, there are various additional incentives for scholars to adopt open science practices (see LeBel et al., 2017). Notably, some funding bodies now mandate that research conducted by grant recipients must have open science components (see Bahlai et al., 2019). Further, some journals, such as *Psychological Science*, *Analyses of Social Issues and Public Policy*, and the *Journal of Social Psychology* now offer “badges” for papers to encourage and praise the adoption of open science techniques—such as open data, open materials, and preregistration—in published research (Grahe, 2014). Research that is published open access, a way to engage in open science, also benefits from a citation advantage, with open access papers being cited nearly 20% more often than papers behind paywalls (Langham-Putrow et al., 2021; Ottaviani, 2016).

However, the roots of the open science movement and the pockets of derision and bullying within the movement, have given some scholars pause (see Bahlai et al., 2019). The open science movement, much like the field of psychology, was founded and led primarily by men doing mainstream experimental and quantitative research. Replicability and reproducibility are regarded as essential for scientific progress (Open Science Collaboration, 2012); yet, this stance assumes a positivist relationship with knowledge. There are not yet universal standards in place for sharing interview-based qualitative research in data repositories (but see Tamminen et al., 2021 for recommendations), and it remains unclear how methodologies such as arts-based inquiry and participatory action research can sensitively and safely be made open and transparent (see Bennett, 2021, this issue). In essence, the epistemological principles of open science are not necessarily compatible with the methodological decisions made deliberately by feminist psychologists. Feminist research is already a marginalized area (see Rooney, 2011). An obligatory and compulsory engagement with open science principles and practices would only seem to create a climate that further marginalizes and delegitimizes this scholarship.

Further, while some women have found success and collaboration through their engagement with open science (rather

than reproducibility; Murphy et al., 2020), others have found that the “chilly climate” that exists for women within academia has manifested within the open science movement. Bullying within the movement has become such a common part of women's experiences that a term and hashtag was born to name it: #bropenscience. According to Whitaker and Guest (2020), #bropenscience refers to the behaviors of a group of usually-male psychologists (“bros”) who “will often be condescending, forthright, aggressive, overpowering, and lacking kindness and self-awareness” regarding women's open scholarship. As Academic Twitter becomes an increasingly popular platform for scientific communication, this criticism has become increasingly public and increasingly vitriolic. Others have noted that several aspects of open science may further marginalize historically excluded and vulnerable scholars (Bahali et al., 2019). For example, financial limitations may make it impossible for scholars from institutions without financial support to engage in open access publishing, and open peer review may open early career researchers (ECRs) up to retaliation from senior scholars (Bahali et al., 2019; Pownall et al., 2021, this issue).

As psychological science, and science more broadly, shifts to an open science model, we believe it is time to take pause and ask several questions: Who benefits from open science practices? What are the challenges of engaging with open science? How does feminist scholarship fit within an open science framework? How does open science fit within feminist scholarship? Are there possibilities for reimagining open science to be truly inclusive and fulfill feminist objectives? And what can open science learn from feminist psychology? We are not the first to ask questions such as these. Indeed, this issue is meant to serve as a complement to other writings and perspectives on the subject (for examples, see Bahlai et al., 2019; Fox et al., 2021; Ledgerwood et al., in press; Mirowski, 2018; Syed & Kathawalla, in press).

The Special Issue

In this special issue, we present a series of articles that highlight, problematize, and seek to resolve the tension inherent to the juncture between feminist psychology and open science. The authors present a range of positions on a variety of tensions. The first two articles in the issue share the common thesis that feminist psychology and open science can work in harmony to achieve their respective objectives. In the first article, Matsick et al. (2021) highlight commonalities between the goals of open science and feminist psychology, delineating the ways that the open science movement may help to support the goals of feminist psychologists by emphasizing generalizability, representation, reflexivity, collaboration, and dissemination. In turn, the authors note the ways that feminist science can help to support and refine the goals of the open science movement, suggesting that the two seemingly contradictory paradigms share a common core and can only achieve their aims by listening to and learning from one

another. The second article (Gervais et al., 2021) highlights how the specific tools of the open science movement (e.g., open data and materials, preregistration and registered reports, large samples, multiple studies, etc.) can help to legitimize the work done by and for women. The transparency afforded by the tools of open science can demonstrate that feminist psychology is rigorous and scholarly, which can benefit feminist psychologists aiming to publish their work in academic journals. Both articles articulate the ways that open science can promote diversity and improve psychological science, largely by drawing from the work of feminist scholars. However, they also make specific note of the ways that the open science movement, if left unchecked, may ultimately exacerbate the extant inequities in psychological science, and recommend strategies for supporting women and other historically excluded scholars in science reform.

The third and fourth articles pose epistemological questions regarding the nature of open science and its (in)compatibility with qualitative (Bennett, 2021) and ethical (Brabeck, 2021) scholarship. In Bennett's article, the author specifically focuses on feminist, qualitative research, including artistic and voice-based methodologies such as photovoice and poetry, and considers how the principles of open science would operate outside of a positivist epistemological framework. This article also points to the ways in which the mandates for open science and rewards for open science practices may systematically work to further marginalize feminist methods and feminist voices. Then, drawing from feminist scholarship and the American Psychological Association's code of ethics, Brabeck directly challenges the ethics of open data methods and sharing, particularly as these practices often violate established principles of feminist ethics, including the centering of women and women's experiences, understanding and valuing of subjective knowledge, attending to those who have been excluded, analyzing power and power dynamics, and action directed at achieving social justice. Brabeck offers suggestions for how scholars can tailor their open science practices to conduct feminist ethical science, as well as structural changes necessary for science to be truly open to all.

The next set of articles critically examines open science in practice. Sabik et al. (2021) provide an analysis of the reproducibility project, which comprises replications of 100 experimental and correlational studies from leading psychology journals. Their analysis examines the 100 studies replicated in the Reproducibility Project on the basis of representation (i.e., who is included in the studies), research design (i.e., how the study was conducted, in what population, and why), interpretation of findings (i.e., number of studies that "successfully" replicated and discussion about potential alternative explanations), and context (i.e., recognition of how external factors, such as sociodemographic factors and point in time, can affect results). Their findings illuminate the systemic biases, gaps, and inequities in psychological science and the knowledge it produces when deliberate care is not taken to ensure that replication attempts are contextualized. They, too, offer a series of

recommendations for how to make open science more rigorous and intersectional.

Next, Persson and Pownall (2021) narrow the focus to propose open science as a tool for dismantling neurosexism specifically, which refers to the practice of claiming "hard-wired" brain differences between women and men that reify and legitimize oppressive gender roles and norms in the absence of actual evidence of these differences. This article considers how open science may serve to actively undermine neurosexism and raise consciousness around sexist research and conclusions, thereby aligning with the goals of feminist psychology and helping to produce better science. O'Callaghan and Douglas (2021) also narrow in on the use of open science principles within social media research and large, openly available datasets, specifically online disclosures by survivors of sexual assault and harassment. Academic papers on these topics have proliferated since the #MeToo movement gained popularity in recent years. In this article, the authors articulate the major gaps in ethics protocols for sharing survivors' data through open science platforms and how to prevent re-traumatizing and further exploiting survivors of sexual assault when using open science practices.

Finally, Pownall et al. (2021) provide an analysis of feminist psychology and open science through the lens of early career researchers (ECRs) ECRs. In this article, the authors draw attention to the precarity faced by ECRs that can be alleviated or exacerbated by the tools of open science, depending on the nature of their scholarship, their career goals, and the culture they experience within the open science movement. They highlight how open science provides opportunities for collaboration, creativity, recognition, and publications, all of which are necessary for ECRs to build their CVs and be competitive for tenure track positions. However, ECRs may face barriers to engaging in open science that may prevent them from reaping these benefits. Pownall et al. (2021) also provide recommendations for engaging with open science in a way that is meaningful and safe for ECRs.

Overall, in this special issue, we provide an overview of feminist perspectives on open science, particularly as it relates to the objectives and ethics of feminist psychology. We hope this special issue will inspire dialogue and discourse on the uncomfortable intersections identified, and that all scholars can benefit from the recommendations of the authors of these articles. If the feminist psychology and open science communities can listen to one another, they may benefit from shared wisdom and ultimately facilitate their shared goals.

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