

ORIGINAL ARTICLE

Open Science, Closed Doors? Countering Marginalization through an Agenda for Ethical, Inclusive Research in Communication

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The open science (OS) movement has advocated for increased transparency in certain aspects of research. Communication is taking its first steps toward OS as some journals have adopted OS guidelines codified by another discipline. We find this pursuit troubling as OS prioritizes openness while insufficiently addressing essential ethical principles: respect for persons, beneficence, and justice. Some recommended open science practices increase the potential for harm for marginalized participants, communities, and researchers. We elaborate how OS can serve a marginalizing force within academia and the research community, as it overlooks the needs of marginalized scholars and excludes some forms of scholarship. We challenge the current instantiation of OS and propose a divergent agenda for the future of Communication research centered on ethical, inclusive research practices.

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In the past few years, a growing number of social scientists have advocated for a paradigmatic shift in research practices. The open science (OS) movement, described as a “revolution” or “Renaissance,” advocates for greater transparency in research and publication processes (e.g., Nelson, Simmons, & Simonsohn, 2018; Nosek et al., 2015). Recently, the movement has made inroads in the field of Communication. In 2020, the International Communication Association (ICA) announced it would abide by certain OS guidelines at its conference and journals, including the *Journal of Communication*.

Although we see value in some open science practices (OSPs) in safe and appropriate circumstances, we have serious concerns regarding the hurried embrace of OS in Communication. We present an urgently needed counterpoint considering people whom have been disempowered, discriminated against, ignored, or otherwise excluded from equitable participation in society. We believe current OS priorities and practices perpetuate, rather than resolve, such marginalization.

We agree with many OS advocates that the social sciences would benefit from a profound reconsideration of research practices. We diverge, however, in what we consider the most crucial ethical issues for Communication research, what values we believe should be prioritized, and how to enact a potential paradigm shift for our field. Here, we invite Communication scholars to reflect on the underlying principles and priorities that have informed the current OS movement in social science; the implications of OSPs for marginalized research participants and marginalized scholars; and the potential consequences for Communication, research, and society. We advocate for a people-centered approach rather than OS’s prioritization of transparency, and we offer a contrasting agenda to promote ethical, inclusive research in Communication.

Research ethics and values

Our analysis draws from several codes for research ethics that emerged in the 20th century, including the Nuremberg Code, the Declaration of Helsinki, and the Belmont Report. Recognizing the ongoing maltreatment of marginalized people, the Belmont Report (1979) elaborated three guiding ethical principles for human subjects research: respect for persons, beneficence, and justice. We adopt the Belmont principles as a lens for our critique given the centrality of marginalized groups and the inclusion of these principles in ICA’s Code of Ethics (Humphreys et al., 2019), and we apply them to both participants and scholars.

First, *respect for persons* entails treating people as autonomous while also considering that some populations warrant special considerations. People should be empowered with the ability to make informed, voluntary decisions about research. The research community must also recognize and accommodate the needs of diverse and disempowered participants and scholars. Second, *beneficence* is an obligation for research to not just minimize harm, but also provide benefits. We argue that benefits and harms must be weighed considering individuals, communities, and society as a whole. Finally, we conceptualize *justice* as fairness and equity in all facets of research. Individuals, communities, and social groups should have equitable opportunities to be participants, researchers, consumers, and beneficiaries of research. These three principles are fundamental to safe, humane, ethical research.

The Open Science movement

History and philosophy

Initiatives for data sharing and other OSPs have appeared across various disciplines for many years. The current OS movement in Communication emerged directly from Psychology. Over the past decade, several prominent cases of data fabrication and questionable research practices (e.g., *p*-hacking) were uncovered, and scientists declared a “replication crisis” after attempts to repeat seminal experiments failed. These incidents prompted greater skepticism about researchers and their findings (Nelson et al., 2018). In response, the Open Science Framework was launched online in 2012, and the Center for Open Science (COS) was established in 2013 to build infrastructure and promote OS adoption.¹ The COS is now a powerhouse, driving the priorities and agenda of the current OS movement.

The OS movement argues that openness is imperative to science: Mandated transparency can help thwart unethical research, reduce errors, enable replication, and promote greater access to resources (Nosek & Bar-Anan, 2012; Nosek et al., 2015). OS advocates claim transparency lowers barriers for participation in science by increasing accessibility to resources, which also facilitates a second priority of OS: efficiency. Easy access enables scientists to work faster and find solutions more quickly, ostensibly benefiting everyone (Munafò et al., 2017).

Practices

OSP encourages openness across several research processes and audiences, including other researchers, reviewers, funding agencies, taxpayers, and the public. Some OSPs have been formally codified and incentivized by the COS. For example, the COS’s (2020) Transparency and Openness Promotion (TOP) guidelines provide a ruleset and scoring for *pre-registration* (sharing hypotheses, variables, methods, sample size, and analyses before running a study), *open materials* (posting stimuli, measures, code, etc.), and *open data* (posting datasets online, such as participants’ survey responses or physiological data). Other OSPs are not included in the TOP

guidelines or incentivized by the COS. *Open access* makes published papers freely accessible rather than hidden behind journal paywalls (Nosek & Bar-Anan, 2012). *Open review* seeks to make the evaluation of research transparent and public rather than closed and private (Nosek & Bar-Anan, 2012). *Open workflow* suggests that researchers should be transparent at every stage from idea generation to execution, sharing their notes, plans, and progress (Nosek & Bar-Anan, 2012).

Critiques

Several notable critiques of OS have come from scholars who support open science in principle, but express serious reservations about its inclusiveness. Albornoz (2018) noted that OS is often framed in terms of efficiency and competition rather than prosocial functions like addressing societal problems or helping citizens enact their rights. OS has been described as inaccessible to many (Bahlai et al., 2019) and only practicable by “a very narrow demographic” of privileged researchers (Whitaker & Guest, 2020, p. 34). Marginalizing discourse and aggressive behavior by some OS advocates have been referred to as “bropenscience” (Whitaker & Guest, 2020) and “open-splaining” (Bahlai et al., 2019). Collectively, these critiques illustrate how OS may further marginalize both participants and researchers. Although we recognize promise in elements of OS, our critique emerges from similar concerns. In short, we ask: Whom is open science really for?

Threats to marginalized participants and communities

One of our primary contentions with OS is the lack of consideration for participants. Despite ethical codes urging researchers to focus on participant needs and potential harms, the OS movement focuses on the benefits of transparency and efficiency for researchers, rarely mentioning associated participant risks (Cummings, Zagrodny, & Day, 2015). For example, the TOP guidelines do not mention transparency with participants (COS, 2020). Given the long history of marginalized groups being disenfranchised and harmed by researchers (cf. Belmont Report, 1979), we find this oversight concerning.

Researchers have an ethical obligation to understand a broad scope of risks involving the participants and communities they research, the topics they study, and the methods they use (Belmont Report, 1979). OSPs present a new set of risks, as putting information on the open internet increases its visibility, searchability, persistence, and accessibility to an unknown global audience (Trevisan & Reilly, 2014). Given the control and privacy of one’s information can be crucial to the well-being and even survival of marginalized people (Pearce, 2020), it is imperative that both participants and researchers understand how OSPs compound existing research risks.

Sensitivity, identifiability, and participant risks

The sensitivity of data can be assessed by the severity of possible individual, community, or group level harms associated with disclosure in a given context. The European Union's General Data Protection Regulation (2016) classifies identities such as a racial or ethnic origin, religious beliefs, sexual orientation, and health or disability status as sensitive because of the way aggregated data from a group of marginalized participants could be leveraged against a larger group sharing the same identity (e.g., creating a biased algorithm). Given the need to contextualize these assessments, it is unlikely a researcher can grasp the entirety of potential harms associated with marginalized participants' open data. The sensitivity of information can also vary over time. For example, an open dataset including individuals' political affiliations may not seem sensitive now, but would be accessible to a future oppressive regime seeking to imprison dissidents (Pearce, 2020).

In this scenario, the threat would be contingent on whether these data are identifiable and could be associated with specific individuals. Unfortunately, researchers hold many misconceptions about data, such as that they are protected as long as the participant's name is removed (i.e., data are "anonymous"; Sweeney, von Loewenfeldt, & Perry, 2018). Rather, data may be directly identifiable (e.g., videorecordings, photographs, or biospecimens with DNA or RNA) or indirectly identifiable (e.g., IP addresses, geolocation data). Other data at higher risk for identification include rich qualitative data (Bishop & Gray, 2018); dyadic, family, social network, and organizational data with linked ties (Joel, Eastwick, & Finkel, 2018); and social media data, given usernames, photos, and text may be public and easily searchable (Trevisan & Reilly, 2014). Combinations of information can increase identifiability (e.g., postal code plus demographic characteristics). As marginalized individuals are often a statistical minority in broader samples, they may be more identifiable than others (Sweeney *et al.*, 2018), especially in small or closed populations (e.g., a university's Communication students).

Many researchers may consider identifying the dissidents in this scenario unlikely, as surely these open data were de-identified. Current data de-identification practices are rarely sufficient, however (Sweeney *et al.*, 2018). Unfortunately, researchers are rarely trained on the de-identification procedures and safe handling required by open data (Joel *et al.*, 2018). Even if a single dataset lacks clear identifiers, participants' distinct attributes, such as intersectional identities, may be linked across multiple datasets to re-identify them. In a recent study, only a few variables were needed to identify most participants in a dataset through existing open data sources; with more attributes, they were able to re-identify 99.98% of participants (Rocher, Hendrickx, & De Montjoye, 2019). In this way, even nonsensitive open datasets increase risks for participants, as these could serve as a key to unlock sensitive data.

One last consideration is how these linkages extend the risks and potential harms beyond the participants of any particular study to their ties. If our

hypothetical dissidents are identified, linking to other data could threaten more than just the original study participants. Using public or government records (birth records, marriage records, addresses) or social media, the regime could identify and implicate family, neighbors, friends, or co-workers. For marginalized communities and groups, this networked outing could be devastating. Researchers must consider how the growing accumulation of open datasets increases both individual and collective risks.

Open to harm

The ICA Code of Ethics states that scholars have a “social responsibility to enhance the public good,” including considering “the ways our research might get taken up by organizations, industries, and politics” (Humphreys *et al.*, 2019, p. 3). Researchers must acknowledge that government agencies, corporations, and other actors may capitalize on freely available data for malicious purposes (Bishop & Gray, 2018; Pearce, 2020). Individuals could be targeted for social engineering, outing, blackmail, or identity theft (Rocher *et al.*, 2019). Collective information about a marginalized group may also facilitate harm. Open data could be used to surveil (Rocher *et al.*, 2019) or attack historically targeted groups such as queer communities, subnational minorities, or Indigenous peoples (Carlson & Frazer, 2020). They could inform algorithms that governments use for discriminatory profiling or predictive policing (Bishop & Gray, 2018). In authoritarian regimes, open data could inform targeted efforts to curtail civil and political rights through hate speech, harassment, imprisonment, and even death (Pearce, 2020). Even well-intentioned researchers or journalists could increase risks: With limited or no awareness of the context surrounding marginalized groups, these parties may re-use open data in a way that inadvertently endangers participants.

Although some risks may be apparent now, researchers must also anticipate future risks. What data might appear safe in the present may endanger participants later given sociopolitical shifts. In one case, authorities in a dictatorial regime used archived social media data to examine connections among users and contrive a conspiratorial association years later (Pearce, 2020). Recent studies have demonstrated that the range of data that should be considered identifiable is expanding, including web browsing history, expenditures, and body movement (e.g., Rocher *et al.*, 2019). If data are freely available to any internet user and we later learn these data have become identifiable or dangerous, it is too late; it would be impossible to recover and destroy this information. Unbridled openness means researchers lose control of data and place participants at undeterminable and indefinite risk.

Potential effects on research

Social science hinges on people being willing to participate in research studies. Making participants feel comfortable and safe enough to share their experiences

with researchers is crucial, particularly for marginalized groups (Campbell, Goodman-Williams, & Javorka, 2019; Carlson & Frazer, 2020). Knowing that researchers will post their information, responses, or behaviors publicly on the internet may magnify participants' self-censorship or socially desirable behavior, leading to response bias, skewed data, and misrepresentations of phenomena (e.g., stigmatized behavior, prejudice). This may affect marginalized people especially when participating in research concerning their social identity or community.

Alternatively, if marginalized participants have concerns about openness and their safety, they may decide not to participate in research. Although it warrants further study, there is preliminary evidence that researchers' adoption of OSPs may discourage participation (Campbell *et al.*, 2019). Some studies have shown that people, including members of marginalized communities, are not comfortable with their data being shared widely or being re-used for purposes outside of the study (Albornoz, 2018; Cummings *et al.*, 2015). Participants have expressed concern about many of the risks we have outlined, including being identified or governments, corporations, and other entities accessing their data (Albornoz, 2018; Cummings *et al.*, 2015). There is also a long history of the maltreatment of marginalized groups in scientific research (Belmont Report, 1979). If OS is practiced ethically and marginalized participants are informed about additional risks engendered by OSPs, this knowledge may further reduce their interest in participating in research and possibly their trust in researchers.

In sum, researchers should be concerned that OSPs may increase participants' self-censorship or deter people from participation due to greater risks, particularly if they are from marginalized groups. Samples will be less representative, data will be more biased, and scientific findings will be diminished in both accuracy and generalizability. A researcher's preeminent goal must be to maintain the respect for persons, beneficence, and justice that all research should be offering participants and the greater community. Although some goals of OS merit pursuit, it is incumbent upon researchers not to overlook the people from whom research evidence is derived and for whom the ultimate benefits should be directed. OS must be approached with due deference to, and in collaboration with, the stakeholders assuming the risks of participating in Communication research.

Threats to marginalized researchers and research

Extensive research over decades has demonstrated the systemic and relentless mistreatment of marginalized scholars in academia: their expertise and capability are questioned; their work is subject to greater scrutiny and exiled from mainstream journals; they are subject to bullying and harassment; they are less likely to be tenured and promoted; and they must manage emotional labor and safety labor daily in response to these inequities (see reviews in Ferber, 2018; Hendrix, 2005). As a field, Communication should foster equitable participation among diverse scholars employing diverse methods to research diverse topics and populations; however, we

are falling short of these goals (e.g., Afifi & Cornejo, 2020; Chakravarty et al., 2018; Hendrix, 2005). In 2019, the ICA Executive Board acknowledged ongoing disparities, affirmed that “promoting mechanisms to enhance inclusion, diversity, equity, and access in ICA is *intrinsic to our mission*,” and launched several initiatives (p. 1, emphasis theirs).

In 2020, ICA announced the adoption of some of the COS’s recommendations for promoting OS. Although ICA (2020) has acknowledged that some concerns have been raised, the potential harms to scholars and to the field remain unaddressed, and the adopted COS policies remain in place. Here, we explain how elements of OS present new risks and exacerbate potential harms to researchers experiencing identity-based marginalization (IMR) based on their social identities or scholarship-based marginalization (SMR) based on their research methods or topics.

Open review

Open review has been referred to as “a cornerstone of the OS agenda” (Ross-Hellauer, Deppe, & Schmidt, 2017, p. 1). There is no consensus on how open review should function; proposed models vary in the layers of transparency they employ. One layer, *open identities*, makes authors and reviewers known to each other; in *open reports*, peer reviews are published alongside articles. Advocates claim that these layers of transparency increase fairness and collegiality. Further, Nosek and Bar-Anan (2012) suggest that open reports could incentivize reviewers, as they can be recognized as good reviewers, earn a publication for their critique, and even garner citations. A third layer is *open pre-review*: for example, Nosek and Bar-Anan (2012) propose a Yelp-like, crowdsourced platform where any scholar could review a manuscript before publication and a cumulative score would be displayed. A final layer offers *open final-version commenting*, wherein the public can comment on published articles, and authors are expected to engage with commenters to promote public communication about science (Ross-Hellauer et al., 2017).

All four of these layers present new risks that are higher for IMRs or SMRs. Masked review has been employed to reduce bias and discrimination; open identities may increase bias and discrimination against IMRs (Bahlai et al., 2019). As reviewers, IMRs may more likely face retaliation if their review is strenuous or unfavorable, forcing them to self-censor (Bahlai et al., 2019). Open reports present similar risks and would further disadvantage masked IMRs, as they would lose out on the reputation, publications, and citations available to those who have the power to publish their reviews unmasked. In open pre-review, IMRs and SMRs cannot avoid reviewers who are unduly hostile toward them or their work; in traditional reviewing, they can indicate nonpreferred reviewers or appeal to the editor. In the worst case, motivated parties could brigade to harass IMRs and SMRs with hostile reviews, diminish a paper’s score, or discredit the work. Even without deliberate efforts, crowdsourced scores mean that majority groups and perspectives are further

empowered over marginalized ones by this model. Open final-version commenting is particularly disturbing. Given that IMRs and SMRs are targeted for harassment (Ferber, 2018), forcing them to make public commentary visible alongside their publications or interact with commenters as a condition of publication is inconceivable.

Openness to harassment

A significant concern with the demand for transparency is that it may put researchers and their research at greater risk, as some IMRs and SMRs have been targeted for harassment by people who take issue with their social identities, the topics they study, or their findings (Ferber, 2018). Harassers have attacked researchers on social media, doxed their private information, and interfered with their research and employment (Ferber, 2018; Massanari, 2018). Openness may amplify these risks. For example, Communication scholars were targeted by the Gamergate harassment campaign, which uncovered a Google document shared from a conference session on diversity and games research and then worked to identify each of the session's participants and connect them to a "social justice warrior" conspiracy (Chess & Shaw, 2015). This example illustrates how open workflow or open data can be used in unintended ways, such as identifying participants, enabling harassment, and undermining the credibility of IMRs and SMRs.

It is not just explicit harassment that IMRs and SMRs may face; they may also be disproportionately targeted by organized efforts to undermine or discredit their research (Ferber, 2018). OSPs could make researchers vulnerable to malicious actors who may use open workflow, open materials, or open data to allege misconduct or malfeasance. Alternatively, these parties could identify study procedures through open workflow or pre-registration and sabotage recruitment or data collection. Dealing with harassment and discrediting campaigns can have considerable costs for IMRs and SMRs: lost time, drained financial and institutional resources, and hindered or ruined research projects (Ferber, 2018). Such incidents may affect both researchers' productivity and their mental health, exacerbating existing disparities (Ferber, 2018).

OS incentives and the gamification of research: Rankings, rewards, and reputation

Many OS initiatives create new quantitative rankings and rewards that OS advocates argue will incentivize researchers and journal editors (e.g., Dienlin *et al.*, 2021; Nosek & Bar-Anan, 2012). The COS's journal ranking system awards points based on how strictly journals adhere to the TOP guidelines.² In 2020, ICA announced their journals would join the rankings and enforce TOP guidelines more strictly in the future (ICA, 2020). ICA also adopted COS's badge system for its conference and

journals. Authors may earn badges for three OSPs: preregistration, open materials, and open data.

Another structure proposed by OS advocates is a comprehensive online research platform designed to “quantify the credibility of scientific findings” (LeBel, McCarthy, Earp, Elson, & Vanpaemel, 2018, p. 389). CurateScience,³ which has received funding from the COS, allows researchers to search articles based on their “credibility” metrics: how many COS badges they have, whether they posted preprints for public comment, and if analyses are “robust” enough. CurateScience also calculates scores for individual researchers and categorizes them as “compliant” or “noncompliant.” This platform echoes the desires of Dienlin *et al.* (2021), who argued that adherence to OS is a “quality indicator” of scholars and should be used to determine their hiring, tenure, and promotion.⁴ ICA has not indicated whether they plan to integrate their journals with CurateScience, require authors to join, or otherwise encourage its members to create profiles and be scored publicly on their “quality.”

These gamified systems are presented as objective ways to judge the quality of journals, articles, and researchers themselves, yet these badges and high “credibility” scores are less accessible for IMRs and SMRs given the risks of compulsory transparency (e.g., Schwartz-Shea, Yanow, & Hamburger, 2016). If people start using badges as a quality heuristic, IMRs’ and SMRs’ audience, citations, press coverage, collaboration opportunities, and visibility in the field are in jeopardy. They may feel forced to sacrifice their safety or their participants’ safety; otherwise, they will lose.

OS incentives are also problematic in the research practices they encourage and those they exclude or may inadvertently discourage. For example, there is no badge for evaluating beneficence and choosing *not* to share participants’ data because the risks outweigh the benefits. There is no badge for openness with participants, yet practices such as informed consent reflect respect for persons. There is no badge for promoting justice by employing inclusive sampling, reaching understudied populations, or providing direct benefits to marginalized groups. In general, we question why OS promotes gamification, competitive framing, and artificial hierarchies as desirable solutions given the drawbacks of cultivating envy, hostility, and shaming; alienating and demoralizing those who cannot improve their rank; and inspiring people to “game the system” to receive rewards (Schell, 2014). Collectively, OS’s gamification reflects the broader cultural values of its creators (competition, capitalism) and is designed to reward similar researchers (see Dutta, 2020).

Research methods and topics marginalized by OS

Finally, it is critical to note that OS represents certain ontological and epistemological assumptions that marginalize entire areas of research (Schwartz-Shea *et al.*, 2016). OS assumes the existence of an objective truth revealed by an objective researcher, which is reflected in foci such as replicability and pre-registration (Dienlin *et al.*, 2021; Nosek *et al.*, 2015). Other approaches argue that truth is subjective, and

findings do not necessarily replicate across studies or even across researchers analyzing the same data. OS advocates also define “quality” and “credibility” in ways that are exclusive to quantitative research (e.g., [Dienlin et al., 2021](#); [LeBel et al., 2018](#); [Nosek et al., 2015](#)).

In these ways, OS discounts and excludes approaches that are integral to Communication. Notably, the approaches typically overlooked by OS (qualitative, participatory, and critical methods) are central to research that challenges the White, male, elite, and Western bias of academia ([Dutta, 2020](#); [McMillan Cottom, 2015](#)). Furthermore, these approaches often seek to acknowledge the lived experiences of marginalized people and empower their voices ([McMillan Cottom, 2015](#)), promoting justice and respect for persons. By marginalizing these approaches to research, OS further marginalizes these perspectives.

The relentless push for transparency also threatens to dissuade investigation into certain topics central to Communication and essential to marginalized groups. Due to the elevated risks of openness, scholars may be hesitant to study controversial topics (e.g., health, economic, and other disparities); aggressive or defensive communities like hate groups, conspiracy groups, and extremists; or populations that are in danger of being “outed” in some way. As a result, scholarly growth and knowledge in these areas could decline. Crucial societal problems, especially those that impact marginalized communities, are at risk of being understudied and underserved by Communication scholarship.

Altogether, we fear many aspects of OS will hamper the diversity and inclusiveness of Communication as a field, both in terms of scholars and scholarship. A recent statement by ICA’s Executive Committee (2019) claimed: “We strive for a discipline in which all are equally able to participate and be recognized for excellence” (p. 2). Yet, as we have demonstrated, many elements of OS refute these goals by prohibiting equal participation by IMRs and SMRs, creating new hierarchies and inequities, and introducing reward systems that are inaccessible to many scholars and types of scholarship rather than fostering equal participation and recognition.

An agenda for ethical, inclusive research

In light of existing recommendations by OS advocates (including [Dienlin et al., 2021](#); [Munafò et al., 2017](#)), we offer a significantly different lens for the future of research. Rather than prioritizing transparency, we resituate it within an agenda wherein respect for persons, beneficence, and justice are superordinate. Within our agenda, we highlight ethical research practices (ERPs) tied to these principles, including some OSPs modified to offer a more inclusive and flexible approach to transparency (see [Table 1](#)). We offer six recommendations for Communication research wherein research participants are humanized instead of datafied, and the diversity of participants, scholars, and scholarship is valued.

Table 1 Agenda for Ethical, Inclusive Research

Agenda item	Ethical, Inclusive Research Practices	Benefits
1. Cultivate ethical, inclusive research practices early and often	Ethics training	Early exposure and mandatory training establish ethics as foundation of research
	Ongoing ethical reflection & growth	Continuous learning improves research; up-to-date on evolving issues
2. Practice reflexivity	Recognizing positionality	Acknowledge power and privilege relative to others
	Reflexivity	Become aware of how power, privilege, and biases shape our research
3. Respect and empower people	Accessible informed consent	Transparency with participants about procedures and how their data will be handled
	Inclusive study design	Meet participants' needs, diversify samples, improve validity of research
	Inclusive reviewing	Respect the diversity of participants and approaches when evaluating research
	Inclusive dialogue	Building community among researchers; greater trust in research by public
4. Promote ethical transparency	Disclosing contributions	Make everyone's roles and responsibilities visible, ensure appropriate credit
	Conflicts of interest disclosure	Audiences can assess potential bias and interpret research accordingly
	Ethics sections in research articles	Inform audiences about ethical criteria, procedures, and decision making
5. Handle data responsibly	Responsible data handling	Needs of participants and marginalized groups are considered in collecting, storing, de-identifying, and sharing data
	Safer data sharing	If sharing, researchers err on the side of protecting participants' information (e.g., closed repositories);

Continued

Table 1 Continued

Agenda item	Ethical, Inclusive Research Practices	Benefits
6. Share resources and knowledge	Data sharing disclosures	data are reviewed before sharing; de-identification standards Justification for why it is ethical and safe to share data
	Truly open access	Journals do not have paywalls for audiences or authors
	Open materials	Increase accessibility of stimuli, measures, guides, coding schemes, research tools, etc.
	Resource sharing	Share research-related resources with collaborators in need to foster equity
	Equitable collaboration	Exchanging a variety of research goods (knowledge, experience, resources) to benefit and enrich the group
	Public communication of research	Perform outreach and share knowledge in accessible formats; facilitate change through press and policy makers

Note: Some OSPs are excluded as they were deemed to have limited utility (open workflow) or unresolvable ethical issues (open review, gamification/incentives/rankings).

Cultivate ethical, inclusive research practices early and often

Some scholars embrace a procedural approach to learning and practicing ethics (Ellis, 2017): As long as they passed ethics training or have received ethics board approval for a project, they feel they have met their ethical obligations. We endorse formal *ethics training* but also believe a crucial ERP is *ongoing ethical reflection and growth* as promoting the safety and well-being of participants and other stakeholders is a continuous process (Ellis, 2017).

We advocate for research ethics to be a mandatory, pervasive component of the Communication curriculum to train graduate and undergraduate students to be more critical readers and conductors of research. We believe this effort should

include ethical and inclusive study design; ethical issues surrounding certain topics and samples, particularly regarding marginalized participants and communities; and ethical considerations and dilemmas across diverse methods and topics. Researchers should pursue additional training as their methodological skills and topics of interest broaden. Furthermore, researchers must understand that training cannot possibly cover the needs of specific populations. Researchers must listen to marginalized people to identify and address ethical concerns.

Continuing education is also necessary to stay current on evolving ethical issues. Developing technologies present continual new questions and challenges including new types of data and new ways data may be re-identified (Rocher *et al.*, 2019), as well as introducing new risks to marginalized populations. Historical events and sociopolitical forces may change which populations are at risk or what those risks entail (Ganann, 2013; Pearce, 2020). Ongoing learning and ethical deliberation are necessary for researchers to continue to promote respect for persons, beneficence, and justice in an everchanging world.

Practice reflexivity

A second recommendation is to *recognize one's positionality* and *practice reflexivity*—that is, a reflection about how researchers' social identities, power, context, and experiences influence their research topics, approaches, and interpretations. Researchers should evaluate their power and privileges, asking themselves how the theories they employ, the hypotheses they make, the research questions they ask, and the methods they use affect their research and the people they study. They should interrogate how their positionality also affects the jobs they are offered, the journals they can publish in, the reviews they receive, and the opportunities that are open to them. Practicing reflexivity may pose uneasy challenges, such as questioning the appropriateness of a scholar conducting some types of research.

Reflexivity may also help researchers recognize the ways their positionality is different than their participants' or their colleagues' and challenge their existing assumptions. For example, researchers may consider how their experiences shape their perceptions regarding the sensitivity of a topic, the likelihood of risks, or the severity of potential harms, and how these evaluations may differ for participants. Or, they may consider how power and positionality govern existing research systems, including what values are prioritized, who benefits, and who is overlooked (Dutta, 2020).

Respect and empower diverse people

Despite the emphasis on transparency, we are surprised by how frequently OS advocacy fails to mention openness with research participants as well as the lack of participant-oriented OSPs (e.g., COS, 2020). We believe respect for persons is essential and that OS practitioners must address this oversight. Consistent with the ICA Code of Ethics (Humphreys *et al.*, 2019), researchers should employ thorough, clear,

and *accessible informed consent*. This process should include an explanation of how participants' data will be handled, who will be able to see it, and what risks may result. We advise researchers to provide modular consent to empower people with choices, such as agreeing to participate, but opting out of data sharing. Generally, researchers should also consider consent a process rather than a static one-time event. For example, participants may wish to withdraw their consent to open data sharing when they learn more about the research and its objectives.

Another way researchers can promote this aim is through the ERP of *inclusive study design*. For every study, researchers should evaluate how they can recruit participants equitably, how they will accommodate people with diverse needs, how accessible materials are, and how they will address inequities that may emerge (Afifi & Cornejo, 2020; Ganann, 2013). Researchers should ask participants about their experiences in the study to inform future design. One inclusive approach is participatory research, which requires collaborative reflection on the research process at all stages, including recognizing local forms of knowledge and decision making, involving participants as co-researchers in making sense of data, and sharing research results with the marginalized communities under study in a form accessible to them (Ganann, 2013). Such involvement helps promote justice, maximizing benefits to participants and the community.

Scholars should also engage in *inclusive reviewing*, respecting the diversity of participants and scholarship when evaluating research rather than serving as a marginalizing force (Chakravartty et al., 2018). Reviewers and editors must avoid "othering" groups, such as suggesting that a study on marginalized groups or a non-WEIRD (Western, educated, industrialized, rich and democratic) sample belongs in a specialty journal or requires comparison to "normal" groups (Hendrix, 2005). Although OS considers diversifying samples less effective for conducting replications, researchers should recognize the value to scientific and societal progress.

We should also elevate marginalized scholars and approaches to scholarship rather than questioning and alienating them. Unfortunately some aspects of OS appear to erect, rather than erode, barriers for participation. Forcing researchers to request exemptions or defend their reasoning for not engaging in OSPs positions them as lesser scholars (Schwartz-Shea et al., 2016). Labeling those who practice OS "high quality" and "credible" scholars (e.g., Dienlin et al., 2021; LeBel et al., 2018) implies that other scholars are deficient or untrustworthy. Hostile discourse surrounding OS makes scholars feel unwelcome (Schwartz-Shea et al., 2016; Whitaker & Guest, 2020). We can do better to foster *inclusive dialogue* and a healthy, diverse research community in Communication.

Promote ethical transparency

We believe some OS guidelines are helpful in promoting greater ethical transparency by authors, including *disclosing individual contributions* to an article (COS, 2020), but we believe existing recommendations fall short. For example, conflict of

interest policies are often specific to disclosing funding, giving authors leeway to omit affiliations that may illuminate existing power structures (e.g., their current editorial role at the journal) and potential sources of bias (e.g., founder of a startup related to the research). Readers can then assess how these affiliations shape the questions that are being asked or create competing interests (e.g., being less willing to run a study or publish results that would challenge their startup's claims). Reviewers should also be required to make such disclosures for editors' consideration. We thus advocate for a broader scope of *conflict of interest disclosures*.

Researchers should also provide, and Communication journals should mandate, an *ethics section* for papers involving participants or their data. Merely noting ethics board approval is insufficient for demonstrating beneficence, respect for persons, and justice through every step of the research process; indeed, ethics boards may lack the expertise to fully evaluate a project, particularly if it involves a marginalized group they do not understand. Researchers should value the opportunity to be transparent regarding how the study was designed in an inclusive fashion, which factors informed risk–benefit assessments, how they ensured people were making informed decisions about participation, or how the study addressed justice. Such reflections may improve researchers' own practices as well as educate others regarding ethical considerations.

Handle data responsibly

OS's approach to data requires a major revision. Openness should not be the priority; the safety of participants should be. Moreover, researchers should not be incentivized to put participants' information on the open Internet. Rather, Communication should be encouraging *responsible data handling* and, if appropriate, *safer data sharing*. First, researchers should consider whether it is ethically appropriate to share data. Whereas [Dienlin et al. \(2021\)](#) argue that authors should be required to explain why they are *not* sharing data, we argue *data sharing disclosures* should be required for authors to justify why they *are* sharing data and why they think it is safe and ethical to do so: what participants were told, who will have access to the data, what efforts were made at de-identification, and what the additional or increased risks are for participants, particularly marginalized groups (Chapter III of the GDPR, 2016, clarifies several criteria). Second, closed repositories with data use agreements should be the default for any data sharing rather than openly posting participants' information on the internet (see [Dienlin et al., 2021](#), p. 17, for other solutions). Unfortunately, few closed repositories exist ([Joel et al., 2018](#)); ICA could play an important role in addressing this need. An ideal repository would require all users to complete annually updated training on data handling; give researchers the option to control who can access data they submit (e.g., allow university affiliated researchers by default, but require approval for other requests) and how it may be used; and require a data use agreement. Third, if data must be shared openly, we recommend that they meet established standards for de-identification (e.g., HIPAA

requirements in the United States⁵), although this should only be a starting point given these lists may be insufficient for some datasets (Sweeney et al., 2018).

Just as data analyses are reviewed for their suitability and appropriate execution, we believe shared datasets should undergo review by experts who (a) understand the topic, the method, the marginalized populations under study, and their intersections and (b) have up-to-date training in data de-identification and risk assessment—perhaps something ICA could sponsor for members, editors, and reviewers. Datasets should be reviewed in careful consideration of the participants' characteristics, sensitivity of the data, the extent to which data are identifiable, current risks, and potential future risks. Consent forms should also be reviewed to ensure researchers informed participants how their data would be handled and shared, as well as what the risks were. These processes will help uphold respect for persons, beneficence, and justice for participants through the handling of their information. We must acknowledge, however, that this may present more labor if data require translation for review in a different language.

Share resources and knowledge

We fully support disseminating published research as widely as possible. However, we note that most “open” access journals force authors to pay hefty publishing fees, which creates inequity and makes publishing inaccessible to many marginalized researchers. Thus, we support *truly open access* where paywalls do not block audiences or authors. We also support *open materials* in most cases, although researchers must scrutinize potential harms to themselves or others associated with openness. For example, if experimental stimuli successfully promoted dangerous misinformation, these open materials could be repurposed by political operatives or trolls.

The ERP of *resource sharing* can help promote justice and equity within the research community. Scholars with greater resources can help support others in small ways (e.g., responding to a #ICanHazPDF request and sharing a requested article) or larger ways (e.g., inviting collaborators onto projects that would otherwise be cost-prohibitive). Similar to Albornoz et al. (2017), we encourage *equitable collaboration*, wherein scholars can exchange resources, knowledge, and experiences with other scholars or participants as co-researchers.

It is crucial for scholars to engage in the *public communication of research*. Although open access makes publications available, they are not comprehensible to many audiences. If feasible, researchers should consider more inclusive and accessible forms communication, such as blog posts, lay abstracts, data visualization, or videos. We also strongly encourage communicating research to the press and policy makers when possible. Sharing findings with those who can implement evidence-based policies to make structural change is critical; circulating white papers and responding to requests for comment when prompted by policymakers are important ways to optimize the public benefits of research. Accepting media appearances with

credible outlets and public speaking engagements with stakeholders can also help reach broader audiences and the people that may benefit most from scholarship.

Conclusion

Overall, we believe that Communication research is ready for a re-evaluation of its priorities and practices; however, we do not believe that conversation should be centered around the values and practices advocated by the current OS movement. We do not believe it is inclusive of or welcoming to marginalized people and communities. We do not feel it supports the diversity of scholars and scholarship that comprise and enrich our field. Instead, we encourage scholars to direct this energy and desire for change toward a commitment to ethical, inclusive research that we hope will elevate all stakeholders and challenge marginalizing forces both in our field and in our world. We hope the ethical practices and recommendations in our agenda spark crucial conversations about how we can continue to improve Communication research.

Authors' contribution

The seeds of this article originated in a panel presented at the 2020 ICA conference organized by K.E.P. (J.F., A.L.M., L.S., C.R.R.S., F.T., and J.V. participated). For the paper, J.F. was the main wrangler; K.E.P., A.L.M., and J.F. wrangled three writing groups responsible for the bulk of the paper. J.F., K.E.P., A.L.M., J.M.R., L.S., Y.S.R., F.T., C.R.R.S., J.V., and P.A. were involved in writing, editing, and revising the draft throughout the process. S.J.A., M.A., A.G., C.G., T.L., & L.D.W. (listed in alphabetical order) helped generate ideas, offered feedback, and/or suggested revisions on the full draft. A.L.G. was the compass and managing editor who oversaw editing, rewriting, and revising throughout.

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We would like to acknowledge some of our various identities for further context. We compiled these in a way to reduce identifiability and are not suggesting these identities are monolithic or not intersectional. Our identities include, in random order: BIPOC, neuroatypical, woman, LGBTQ, bi-ethnic/racial, spoonie, migrant, Global South scholar, immigrant, Indigenous, man, Asian, Black, U.S. American, queer, Asian-American, able, White, heterosexual, pansexual, Jewish, cisgender, disabled, straight, and first generation.

Notes

1. The Open Science Framework allows researchers to share data and materials and post their study plans (i.e., preregistration). The COS is a nonprofit organization founded by Brian Nosek and Jeffrey Spies, two Psychology researchers who had spearheaded collaborations to replicate studies. They struggled to find funding until billionaire and former

- Enron employee John Arnold took an interest in the project (<https://www.wired.com/2017/01/john-arnold-waging-war-on-bad-science/>). Arnold's philanthropic efforts have been controversial, including funding a Baltimore police aerial surveillance project and developing an algorithm to determine whether arrestees should be released on bail (<https://theintercept.com/2020/04/09/baltimore-police-aerial-surveillance/>). Arnold's foundation has remained the COS's primary donor, although the COS has secured funding from several other sources, including NIH and DARPA. The COS is open about its sponsorship and discloses funding at <https://www.cos.io/about/our-sponsors>
2. On its homepage, CurateScience advertises its purpose to universities: "Ensure your professors' published research meets accepted minimum transparency standards and survives follow-up scrutiny. . .Base hiring and promotion decisions on researchers' transparency track record and impact. . .Our Curate University product makes universities accountable to their stakeholders: (a) tuition-fee paying students, (b) the government/taxpayer (for public universities), and/or (c) private/corporate donors" (Curate Science, 2020, n.p.).
 3. <https://www.topfactor.org/>.
 4. <https://curatescience.org/app/home>.
 5. <https://www.hhs.gov/hipaa/for-professionals/privacy/special-topics/de-identification/index.html>.

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