

ORIGINAL ARTICLE

Integrating Qualitative Methods and Open Science: Five Principles for More Trustworthy Research*

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Recent initiatives toward open science in communication have prompted vigorous debate. In this article, we draw on qualitative and interpretive research methods to expand the key priorities that the open science framework addresses, namely producing trustworthy and quality research. This article contributes to communication research by integrating qualitative methodological literature with open communication science research to identify five broader commitments for all communication research: validity, transparency, ethics, reflexivity, and collaboration. We identify key opportunities where qualitative and quantitative communication scholars can leverage the momentum of open science to critically reflect on and improve our knowledge production processes. We also examine competing values that incentivize dubious practices in communication research, and discuss several metascience initiatives to enhance diversity, equity, and inclusion in our field and value multiple ways of knowing.

Keywords: Qualitative Methods, Open Science, Validity, Transparency, Reflexivity, Ethics, Collaboration

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Responding to a crisis in replication that sent ripples of epistemological angst through psychology and related fields (Christensen & Miguel, 2018; Nelson, Simmons, & Simonsohn, 2018), open science initiatives have aimed to increase the transparency, reliability, and trustworthiness of the scientific enterprise. Dienlin et al. (2020) adapted general open science principles to an agenda for communication scholars with the aim of improving the quality of research in our discipline. However, because these principles were designed to attend to problems in hypothetico-deductive quantitative research, their 7-point agenda is limited in its utility for the constructionist and interpretive paradigms from which many

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qualitative communication researchers draw. In response, we address two questions that concern all communication scholars involved in empirical research: How shall we conduct *trustworthy* research? And how may we ethically convey that trustworthiness to other researchers, institutions, participants, and the public?

Communication, as a field, can be celebrated for its epistemic diversity (Craig, 1999; Waisbord, 2019). Our scholars draw from our own rich interdisciplinary history and engage with a wide range of other human-centered disciplines, from philosophy through psychology, rhetoric, political science, sociology, critical race theory, and feminist and queer scholarship. Whereas some interdisciplinary approaches can seamlessly integrate the methods outlined in the Dienlin et al. (2021) agenda, others cannot. Denzin and Lincoln's (2000) extensive qualitative methods anthology demonstrates a range of critiques of positivistic approaches to social sciences, including the limits of objectivity, the non-naturalistic and reductive strategies of experimental methods, the assumption of masculinist and white values in claims to the universal, and so on. This historical methodological discourse matters for the contemporary discourse around open science. Though "science" itself has a contentious history in parts of the discipline, there are many potential benefits of integrating open "research" approaches with qualitative methods that build trust while welcoming multiple ways of knowing.

Below, we develop Tracy's (2010) criteria for quality in qualitative research in conversation with Dienlin et al.'s (2020) agenda for open science in communication. We identify five principles of trustworthy research: validity, transparency, ethics, reflexivity, and collaboration. We acknowledge current barriers to some of these principles, and explore best practices for open research. We intend that these five principles to be more inclusive of the many approaches to communication problems that preoccupy our field.

Five research principles for open research in communication

Validity

A valid measure accurately measures what it intends to measure. Broadly, validity is "the quality of being logically or factually sound; soundness or cogency" (Oxford University Press, 2020). However, the epistemological approach used determines what constitutes validity. While Dienlin et al. (2020) do not explicitly mention validity in their article, the necessity for research to be replicable in order to be believable or credible is central to their arguments. Quantitative practices to check validity include developing scales to measure constructs (John & Benet-Martinez, 2014), conducting cognitive interviews to verify that participants interpret those scales in the ways researchers intended (Carbone, Campbell, & Honess-Morreale, 2002), and cross-validating them in multiple samples (Sakaluk, 2016). For qualitative research, which typically does not measure outcomes, validity can be defined as "the degree to which the finding is interpreted in the correct way" (Kirk & Miller, 1986, p. 20).

Thick description where researchers engaged in detailed observational notetaking, member checks where researchers share their findings with participants to check their interpretations, triangulation where researchers draw on multiple sources and/or kinds of data to provide different lenses or perspectives into a phenomenon, and prolonged engagement within a community can all enhance the validity of qualitative research (Maxwell, 2013).

Within naturalistic and interpretive paradigms, credibility is often used in place of validity (Lincoln & Guba, 1985), focusing on the plausibility of findings: whether something is convincingly trustworthy (Tracy, 2010). Validity and credibility not only relate to how researchers develop questions and collect data, but how they interpret and analyze these data. Transparency in methods and analyses allows others to assess how researchers arrived at their knowledge claims and conclusions.

Two key distinctions between validity and credibility are relevant to open research. First, credibility is assessed according to the success with which researchers offer rich, nuanced analyses that do justice to the experience of the constructed multiple realities of participants (understanding and representing their worldviews). Whereas quantitative researchers often draw on previously validated methods to enhance the validity of their studies, practices such as triangulation, prolonged time in the field, and thick description enhance the credibility of qualitative research. Second, in experimental approaches validity is often constructed in spite of research participants, typically involving checks to prove the measure is correct and that participants are not gaming the study. In contrast, in qualitative paradigms, credibility is often produced in conjunction and collaboration with participants, with formal and informal member checks being one approach to gauge the accuracy of the account.

The difference in the agency and role of research participants matters not just for validity, but for how we think about openness in communication research. Very often ethnographic and qualitative researchers involve communities as co-developers of the research process and the knowledge generated (Kirk & Miller, 1986). This is a very different paradigm than one concerned with extracting information or data from subjects, where informing participants about the true nature of the research experiment risks completely invalidating the study (Klein et al., 2012). As we consider best practices of enhancing validity and credibility of social science research in communication, it is important to recognize that differences in method call for different kinds of validity- and credibility-enhancing research practices.

Experimental and survey communication research has historically been more transparent about methodological decisions in research articles than has naturalistic and interpretive communication research. Qualitative research may mention a “grounded theory approach” but fail to describe sampling procedures or specific analytical processes. We want to stress the importance of explicit reflection and discussion of credibility and/or validity in all empirical research. For example, Laura Grindstaff’s ethnography *The Money Shot* (2008) includes an excellent methodological section that demonstrates the interdependency between credibility, transparency,

and reflexivity. Her thick description of her research processes, experiences, and challenges reveals her careful approach to fieldwork and enhances the credibility of her research.

In an interdisciplinary field such as communication, we cannot take for granted shared methodological practice or expertise. We need to be explicit about how and why our methods are robust and trustworthy. A truly open communication research framework calls for more explicit engagement with discussions of validity and credibility within our research, which will in turn enhance the research process, research outcomes, and research community. Moreover, we call on researchers, advisors, editors, and reviewers of all communication research to engage in greater and more explicit discussion of validity and credibility in research, while acknowledging the epistemological differences in our field.

Transparency

Discussions of validity and credibility depend on transparency. Transparency in open science in its simplest form requires researchers to share information about their methods, the data they use, and the analyses they conduct so that the larger research community can not only reproduce their research but also help to ensure its replicability. Quantitative research approaches have developed a range of strategies for transparency that bring to light decisions that can consciously or unconsciously distort the conclusions that the researcher and, later, their audience draw from the data. Tools that Dienlin et al. (2020) recommend, such as preregistration and registered reports, are intended to facilitate this documentation, although there are ongoing debates about their utility (Szollosi et al., 2020).

While transparency is intended to allow the skeptical the means to satisfy themselves about the researcher's claims, it is also meant to aid the researchers and their scholarly communities. Researchers must formally articulate their process and their predictions, from communicating basic information (e.g., What units did you use for your measurements?), to helpful details necessary for replication (e.g., What code did you use for your analyses? Where can we find a copy of your stimulus video?), to disclosures that are meant to ensure the integrity of the research process (e.g., How did you decide when to stop collecting data? What were your original hypotheses, and what were exploratory research questions?). In this view, transparency primarily operates on the researcher-to-researcher level. The researcher's documentation of their work allows the research community to "check the work" of the individual researcher, identify flaws, and even find new insights using open data. Individual researchers get credit for their good practices, and benefit from the community's collective wisdom. Providing more open datasets can potentially level the playing field for those with fewer resources for data collection. The community benefits from reliable research and access to data that can be turned to other uses.

Although open science practices require additional time, and thus bear costs, especially for early career researchers, they also may increase opportunities for

visibility and collaboration. Documenting and rewarding all parts of the research process can help recognize the contributions of researchers who develop and share code. For example, the CRediT taxonomy designates specific roles that different people play on a research project (Brand, Allen Altman Hlava, & Scott, 2015). These methods and values are especially useful for training new researchers, and are particularly helpful in collaborative work, as we discuss below.

However, the expectations of the public, policymakers, and funders that research should be transparent and replicable at times comes into conflict with the needs of participants. Publicly funded research by default mandates data sharing, although exemptions can be made. While quantitative data are, in theory, easier to anonymize than qualitative data, concerns about anonymity have arisen with sensitive data such as tracked movements (Bailenson, 2018) and brain imaging data (Salles et al., 2017). Further, some of the most important data come from less empowered populations who have greater privacy risks (D'ignazio & Klein, 2020). Although Dienlin et al. suggest techniques for anonymizing quantitative raw data, even a small number of categories of demographic data can be used to deanonymize datasets (Rocher, Hendrickx, & Montjoye, 2019). Any participant data made public should not only be part of an explicit informed consent process, but should consider the work of ethnographers who have had to engage in longer term processes of informed consent. Rather than a one-time question before the research is conducted, informed consent for ongoing public data use could include multiple options and stages for ongoing consent. The ongoing privacy concerns of participants must be weighed against the benefits for scholarly communities (Meyer, 2018).

The role of transparency and its relationship with trustworthy research is often configured very differently in qualitative approaches. The sharing of qualitative data (e.g., fieldnotes, interview transcripts, etc.) is far less common in interpretive research where data are highly contextualized and harder to anonymize. Thus, the emphasis is less toward sharing data with the research community and other interested stakeholders (funders, the public, and so on); within constructionist paradigms of qualitative research (Denzin & Lincoln, 2000), and especially symbolic interactionism (Blumer, 1986), the research process is more attentive to transparency with participants. Interpretive and field research relies upon building trust and rapport with communities (Lofland, Snow Anderson, & Lofland, 2006). However, qualitative research may sometimes prioritize transparency with research participants while neglecting transparency with their scholarly communities (Chancer & Jacobson, 2016). Transparency is thus multifaceted, contextual, and cannot be decided by a single measure.

Truly informed consent depends on transparency with participants about their risks and benefits. Consent forms are insufficient for ensuring participant understanding of risks and benefits listed (Pedersen, Neighbors, Tidwell, & Lostutter, 2011). Whether researchers fairly present risks and respect participant preferences and boundaries can be weighed by Institutional Review Boards (IRBs), but these boards must oversee a broad range of research and cannot know specific research

areas as well as the researchers do themselves. IRB approval or exemption does not guarantee research is necessarily trustworthy or ethical. Researchers need to be honest with themselves, as well as their participants, about risks and benefits, especially how transparency in data sharing can seriously interfere with individual and group claims to privacy. This can be challenging when there are strong motivations for the researcher to share data. Openness that is a badge of honor for the researcher may become a burden, or a risk, for research participants.

Some researchers have advocated for transparency in the peer review process (see [Wolfram, Wang Hembree, & Park, 2020](#)). Currently, many communication journals anonymize authorship during the review stage, and often reviewers remain anonymous even after publication. Other social science fields take different approaches; for example, by appending the names of editors and reviewers to accepted papers, as in the *Frontiers* journals (<https://www.frontiersin.org/>). This approach increases accountability for reviewers and could be a first step to finding ways to reward reviewers for their uncompensated but crucial work. However, the lack of anonymity could discourage “frank commentary” from reviewers, especially given the hierarchical nature of academia ([Lee, Sugimoto, Zhang, & Cronin, 2013](#), p. 10). Thus, the power differentials of existing systems of hiring, promotion, and tenure have to be taken into account when designing new best practices.

Ethics

These power differentials, and more, create ethical challenges for the discipline. Although formal ethics codes reflect expectations for researchers across areas of professional life, including research, teaching, and practice, in practice questions of ethics in research focus primarily on harm to participants. To build more trustworthy research though, it is important to engage with the broader principles of ethics outlined in formal ethics codes—beneficence and nonmaleficence, fidelity and responsibility, integrity, justice, and respect for people’s rights and dignity ([Grzanka & Cole, 2021](#))—and consider how those principles might be conceptualized by a broader range of actors in the research enterprise. Ethics can either be invoked to perpetuate existing hierarchies or to shine a light on injustice, depending on whose perspectives on ethics are centered in the discourse ([Grzanka & Cole, 2021](#)).

We raise this point because it matters for how we think about the ethics of the open science movement. The modern scientific enterprise often operates as an exclusive guild in which privileged members (e.g., university researchers) ask questions of interest to them, design studies that extract information from often less privileged individuals, interpret the data they extracted through their own privileged lenses, and share them with those of their peers who can afford to pay for access to the communities and events (academic societies and conferences) and exclusive modes of communication (academic journals and books) in which that knowledge is shared.

From an open science perspective, this exclusive guild model is unethical, and thus, open science advocates have argued for expanding access, albeit mostly for other researchers. Advocates have argued for open data, open materials, preprints, and open access publishing (Dienlin et al., 2020). While these efforts address the ethical issue of who benefits from research, they raise other serious ethical challenges. Specifically, encouraging sharing of data and materials makes the assumption that these belong to the scientists and are theirs to share.

For an open research agenda, we must consider not only our ethical commitments to our peers and institutions but also the question of care for our research participants and their communities. Who owns and is entitled to share data and materials generated in the discovery process? What are the benefits and costs associated with adopting open science practices—and are those benefits and costs shared across groups and levels of power? Does adopting such practices reinforce longstanding patterns of inequality in which privileged groups benefit at the expense of the already marginalized? Meyer's (2018) tutorial of practical tips for ethical data sharing provides a helpful starting place for lab-based experimental work, including what to say and not to say on consent forms. Community-based participatory research (CBPR) principles (Israel et al., 2017) offer a generative framework for ethical considerations of working with marginalized communities.

The power dynamics within the scientific enterprise—at least in the quantitative social sciences—are such that participants' experiences are filtered through the lenses of researchers; that is the only side of the story that gets told (see Hegarty & Rutherford (2019) for a longer discussion on the problem of speaking for others). Open science practices are intended to address this problem by creating opportunities for more parties to enter the so-called “marketplace of ideas” and share their perspectives. But because it is a marketplace, powerful market dynamics can emerge and reinforce hierarchical systems of inequality, as they often do when they are left unchecked. Therefore, we must be mindful of those dynamics as communication embraces more open research practices.

The relationship between researcher and research participants in qualitative research is something that interpretive social scientists have long had to account for. If part of the goal of interpretive research is to represent the worldviews of participants, then participants ultimately know more than researchers, thus flipping traditional researcher/research subject power relations. In CBPR and action research (Israel et al., 2017; Stringer, 2013), participating communities are considered to be more collaborators than merely participants.

Another vital ethical consideration for communication researchers is the question of the public good. Most public and private research universities in the United States, as well as professional scientific societies (e.g., the International Communication Association) are nonprofit organizations (501c3s), meaning that they must not serve private interests but instead the public good. Educational institutions can meet this requirement with teaching. Research endeavors of universities meet nonprofit status requirements of scientific organizations when research is

made public and serves the public interest. Research for the public good can be broadly defined as research not driven by profit or private interest. However, in a field like communication that is so central to many of today's pressing concerns regarding democracy, equity, globalization, mediated technologies, and work, we are ethically obligated to seriously consider the public good in all aspects of the research process. Open research initiatives recognize this value in both the publicness of our research process as well as the openness of our research findings.

Reflexivity

Dienlin et al.'s (2020) open science agenda argues for methodological and disciplinary reflexivity. The agenda promotes thoughtfulness about the implications of certain types of statistical operations, or about how pressures to publish abundantly can incentivize dubious research practices. Such quantitative approaches to reflexivity often attempt to excise the personal and relational levels, in contrast to reflexive qualitative approaches, where "the personal is celebrated as a strength by qualitative researchers, a source to be exploited in order to enrich the quality of analysis" (Gough, 2008, p. 22): the researcher is the instrument. Sender describes reflexivity as "the ability to see a phenomenon (the self, social structures, a text, a method) in context; to consider the possible influences this context has on the phenomenon; and to be attentive to processes, not only outcomes, because phenomena are always contingently situated in time and space" (2012, pp. 19–20). Reflexivity came to U.S. communication studies through a crisis in epistemology that resulted from the confluence of American critical sociology and anthropology (Marcus, 1994; Pillow, 2003); feminist, queer, and postcolonial theory (Butler, 2006; Haraway, 1988; Spivak, 1987); poststructuralism (Clifford & Marcus, 1986); and British cultural studies (Hall, 1993; Hebdige, 1973; McRobbie, 1991).

A fundamental question for both qualitative and quantitative research approaches in social sciences is: How does the context of our research—including researchers' roles within that context—shape the knowledge we produce? We expand Wilkinson's (1988) feminist perspective to argue that communication research benefits from reflexive considerations at five levels:

1. Personal: researchers' identities, social positions, cultural capital, and motivations shape the research process and its outcomes. Personal reflexivity involves a consideration of researchers' intersecting identifications and investments as they influence all stages of the research process, from choice of topic, forming research questions, field relations, through analysis to the question of voice in writing.
2. Relational: researchers' presence shapes the process of gathering, or co-creating, data. Relational reflexivity considers the power differentials between researchers and participants when "studying up" (Nader, 1982); the degree of equity in the research exchange; and who has the last word about a community: the participants or the researcher (Stacey, 1988).

3. **Methodological:** decisions at every step of research shape the findings. Methodological reflexivity includes how research methods frame questions; how data are gathered; the analytic tools used; and the geographical and historical specificity of research. Finlay argues that methodological reflexivity enables public scrutiny of the integrity of the research (2008, pp. 16–17). More emphatically, [Haraway \(1988\)](#) advocates a reflexive approach that acknowledges the “situated knowledges” of all research.
4. **Contextual:** the context in which the research occurs also requires reflection. Socio-cultural, political, and economic factors shape what we research and how we conduct that research. Quantitative approaches usually attempt to control the context such that it either becomes an outlying parameter of the study or an independent variable. In contrast, qualitative approaches consider the specificities of the context as offering important insights. As [Gajjala \(2020\)](#) demonstrates, even being denied entry into a field site offers much information about the sense of privacy, risk, and control valued by the members of that site.
5. **Disciplinary:** ideologies and conventions structure fields of study. [Bourdieu and Waquant \(1992\)](#) argue that we must be as reflexive about the assumptions of our disciplines—including the value of reflexivity itself—as we are about our own approaches to research. Disciplinary reflexivity considers what our field values in terms of research areas, theory, questions, and methods; what is considered publishable; the role of institutional review or ethics boards in shaping research; and how these preceding questions shape tenure and promotion outcomes.

Communication scholars, as with colleagues in other human-oriented sciences, have had to wrestle with questions of power at each level of reflexivity. Personal reflexivity may reinforce existing inequities, as [Pande \(2020\)](#) argues when white scholars name their whiteness as a reason not to address race in their studies of fan cultures. Relational reflexivity can become a new form of exploitation, as [Stacey \(1988\)](#) argues in her critique of feminist approaches to ethnographies with women. Methodological and contextual reflexivity can so profoundly unseat the idea of objective truth that we end up with an extreme relativism from which no social or political claims can be made. Disciplinary reflexivity requires that even as we recognize the power of academic institutions and processes, we nonetheless have to work within them. Moreover, disciplinary reflexivity is important when working on interdisciplinary research teams, which may bring together different values and objectives (Linabary, Corkle, & Cooky, 2020). While researchers might claim that reflexivity enhances the “transparency, accountability and general trustworthiness of qualitative research” ([Gough, 2008](#), p. 28), there is a risk that this becomes a new power move: my research is *more* objective, because I acknowledge that it is partial, situated, invested, and so on.

Within the field of communication, two related subfields have long engaged in reflexive processes to examine the meanings and understandings participants make from their communicative exchanges, technological engagements, and media consumption. In audience studies, Bird (2003) devised a creative focus group method to circumvent white participants' expressed anti-racism in order to investigate the limited tropes of Native Americans circulated in mainstream media. Fan studies have explored the relationship between the roles of the fan and the scholar. Jenkins (2011) argues for the legitimacy of the "acafan," a scholar whose experience of both rigorous intellectual enquiry and passionate fandom brings a more comprehensive analysis to the fan group and genre in question. Authors in Lewis's (1992) anthology challenge the disparagement of so-called "women's genres" in fan studies. Stanfill (2018) challenges the lack of reflexivity in the "unbearable whiteness" of fan studies. And Pande (2020) argues that fan studies purview would fundamentally shift if scholars reflexively centered race as an analytic category.

At their best, reflexive approaches to research intersect with the other principles outlined here: being reflexive requires transparency about our methods, fostering more credible research; reflexive collaborations capitalize on the various contributions of the research group to maximize members' unique contributions; and reflexivity is fundamental to ethical concerns in research. To be committed to personal, relational, methodological, contextual, and disciplinary reflexivity may contribute to producing more accurate, modest, and ethical outcomes in our research. As Haraway argues, our challenge is "how to have *simultaneously* an account of radical historical contingency for all knowledge claims and knowing subjects . . . and a non-nonsense commitment to faithful accounts of a 'real' world" (1988, p. 579), accounts that can communicate meaningful albeit partial knowledge that can contribute to making a better world.

Collaboration

In collaborating, researchers work together "to achieve the common goal of producing new scientific knowledge," (Katz & Martin, 1997, p. 7). The value of collaboration for diverse approaches to communication research is multiple. Collaboration can extend the theoretical, methodological, and analytical skills brought to a research project. Collaboration can serve pedagogical purposes, particularly when faculty collaborates with students. Collaboration can also serve as a check against personal biases, mistakes, or even allow researchers to observe differences in approaches that can affect conclusions (e.g., Silberzahn et al., 2018). Researchers can collaborate with the larger research community when they share their data and methods. Collaboration beyond the academy can extend the potential impact of our research to communities, organizations, and government (Levine, 2020). Finally, as Dienlin et al. (2020) suggest, collaboration can also be used as a means of creating larger research pools and conducting replication studies or to enhance the reliability of a study's results.

Despite these benefits, qualitative inquiry has historically been more resistant to explicit collaborative research (Gottlieb, 1995). There is a prevailing myth, borrowed from anthropology, of the lone ethnographer who conducts research in the field and then writes a monograph capturing key insights from the work. Some qualitative scholars have actively resisted collaboration, sometimes to avoid working on interdisciplinary teams who view qualitative research as merely a first step before conducting “real research” in the form of surveys or other quantitative work (Morse, 2008). Nevertheless, even the lone ethnographer seldom really works alone. Writing groups, research assistants, and colleagues often provide significant insights and feedback. Even spouses and partners may be fruitful, if often hidden, collaborators (Mazanec, 2017). Increasingly, there are outstanding examples of ethnographic collaborations, such as Mary Gray and Siddharth Suri’s book, *Ghost Work: How to Stop Silicon Valley from Building a New Global Underclass* (2019) or Diane Bailey and Paul Leonardi’s book, *Technology Choices: Why Occupations Differ in Their Embrace of New Technology* (2015). Qualitative research is socially embedded, and the field of communication should actively encourage collaboration in all its forms to maximize the benefits that can result.

Transnational collaborations in both qualitative and quantitative work illustrate the usefulness and challenges of collaborative research. Livingstone (2003) summarizes the potential gains of cross-cultural collaborative research as:

improving understanding of one’s own country; improving understanding of other countries; testing a theory across diverse settings; examining transnational processes across different contexts; examining the local reception of imported cultural forms; building abstract universally applicable theory; challenging claims to universality; evaluating scope and value of certain phenomena; identifying marginalized cultural forms; improving international understanding; and learning from the policy initiatives of others (p. 479).

Such collaborations, however, are not without their challenges. Practically, differences in language, time zone, internet and phone connectivity, and so on, slow down the processes of research and writing. Collaborations between scholars from more and less resourced institutions and countries risk reinforcing colonizing dynamics. Differences in funding and institutional support might privilege North American and European-based researchers, and inequalities can arise from “the common resort to English as the lingua franca” (Livingstone, 2003, p. 482). The epistemological frameworks scholars bring from their home countries may not align easily in any or all of the stages of conducting research, so that “comparative research often results in viewing ‘other’ nations through a western lens” (p. 482). Collaboration among transnational teams requires reflexivity about the differing resources and epistemological assumptions researchers bring to the project, explicit guidelines about the methods to be employed and the roles and responsibilities of all team members, additional resources to help administer large teams, and a foundation of trust and generosity. Engaging in such collaborations may require shifts to

more explicitly democratic research communities in which the entire research trajectory—from conception to completion—involves a diverse set of stakeholders from around the world (see [Moshontz et al., 2018](#) for one model of this approach).

How collaboration is recognized and valued is an important challenge for both qualitative and quantitative research. Junior qualitative researchers, especially those for whom books are their primary publication output, are often actively discouraged from collaborating on and co-authoring primary scholarship while on the tenure and promotion track. In contrast, lab-based communication research has traditionally been more inclusive of collaboration, often producing more scholarly outputs than scholars who work alone, but this authorship may be considered “diluted” ([Allan & Mehler, 2019](#)). On the other hand, collaborative work may be cited more often than solo work ([Thelwell & Maflahi, 2020](#)). While collaboration has a number of benefits, there are also concerns about collaborative relationships being exploited to “game” academic metrics (for a review, see [Marušić, Bošnjak, & Jerončić, 2011](#)). For example, in “predatory authorship” cases, senior authors add their names to the papers of more junior researchers in order to advance their own careers. To address this, more journals are now requiring submissions to list “contributions to authorship” for each author (e.g., [Brand et al., 2015](#)) and many academic organizations and publishers have added ethical guidelines regarding the appropriate attribution of authorship (e.g., [American Psychological Association, 2021](#); [Humphreys et al., 2019](#)); as well explicit guidelines about what constitutes authorship and what does not (e.g., [Baykaldi & Miller, 2020](#); [International Committee of Medical Journal Editors, 2021](#)).

Although large, grant-funded and multinational projects might be the most visible and rewarded forms of scholarly collaboration, there are many other productive examples that illustrate the flexibility and fruitfulness of collaboration. We encourage all communication researchers to survey the opportunities for collaboration among their professional networks, and promotion and tenure committees to recognize qualitative collaborative productivity.

The five principles we describe above are not isolated, but reinforce and intersect with one another. Credible and valid research can only be assessed through ethical transparency and reflexivity. Researchers must reflect on how they could be wrong in their findings and knowledge claims, not only justify how they are right ([Fidler, Singleton Thorn Barnett Kambouris, & Kruger, 2018](#); [Maxwell, 2013](#)). Transparency must take into account the ethics of what can and should be shared and with whom. Ethical considerations of how research was conducted must be considered important criteria for credible and valid communication research. Collaboration and reflexivity can become ethical principles to address power vectors and the invisible labor of research. Reflexivity involves transparency about self, relationality, and methods. Furthermore, reflexive considerations of contexts and privileges are necessary to engage in the ethical issues that arise in all research, and most especially in collaborative research relationships ([Linabary, Corple, & Cooky, 2020](#)).

Together, these five principles help us toward more trustworthy and open research in communication.

Institutional barriers and opportunities

To support and value more collaborative and transparent processes and quality publications (Edwards & Roy, 2017; Mountz et al., 2015; Stengers, 2018), institutional practices must be reframed. Like Dielin et al. (2020), we acknowledge conditions and practices that discourage more trustworthy and open research. Quantification narratives can overvalue metrics—the number of publications, h-index, impact factors, the open science “badge” system (Burrows, 2012; Kidwell et al., 2016)—over the quality of research. These professional statistics reflect ongoing inequities in our field: Communication scholars who are people of color and/or women are consistently underrepresented in our journals, in citations, and in editorial positions (Chakravarty, Kuo Grubbs, & McIlwain, 2018). Currently, prioritizing intellectual independence privileges the sole-authored monograph (Edwards, 2012) dissuading qualitative researchers on the tenure track from collaborating on books, although there may be increasing latitude for shorter works. When journals value particular approaches to scholarship, and work from already privileged scholars, subdiscipline-specific norms are enforced and a small—and homogeneous—number of senior scholars may become gatekeepers (Settles, Jones Buchanan, & Dotson, 2020).

Broadly considering openness in research allows communication scholars to appraise research processes and narratives that tell different stories about rigor, quality, and productivity. How can institutions and departments support strong practices of research within multidisciplinary programs? Some solutions might include changing norms around tenure and promotion (cf. Frank, 2019). Institutions can recognize for tenure and promotion productivity in modes and outlets outside of written scholarship in traditional communication journals. Conferences and journals can encourage more dialogue, debate, and juxtaposition of research across subdisciplines and methods. Mentorship, teaching, service (including reviewing), and public outreach should be prioritized in hiring and tenure and promotion decisions.

Open research initiatives highly encourage the openness of not just data and methods, but also research findings too. Open access research publications are a logistical obligation for most publicly funded research, and increasingly an ethical obligation which both qualitative and quantitative communication researchers are embracing. However, maintaining this infrastructure is expensive. Publication fees for open access journals can range from hundreds to thousands of dollars. Archiving data also come with costs; for example, the Open Science Framework has to raise its own funds to provide its repository for data. Individual researchers, especially those working on unfunded projects, require institutional help to meet this ideal. Code checking and archiving services can also range from hundreds to thousands of dollars per project. In addition to academic research institutions, funding

organizations and governments should further invest in open research and access infrastructures like MediArXiv.org which could help open our research to students, teachers, researchers, citizens, and policy makers alike.

While individual researchers are encouraged to seek funding to bear these costs, financial and social barriers can hinder participation in open science (Bahlai et al., 2019). This includes the increasing reliance on adjunct labor to support higher education (Jenkins, 2014), where trained researchers lack the time and resources to conduct open research. Those of us fortunate, as we are, to be employed as tenured and tenure-track professors at a well-resourced research university recognize how time, space, money, and intellectual environment shape our research values and practices. While expectations of research productivity for hiring, tenure, and promotion continually expand at elite research institutions, researchers at such institutions are afforded resources that others are not. This includes time to collaborate on endeavors such as this article and our doctoral methods courses. Indeed, it has been our collaborative and coordinated approach to teaching quantitative and qualitative research methods to our PhD students that laid the groundwork for this article.

One of the goals for these open research principles is to make space for different kinds of research and researchers to engage in open practices that enhance the trustworthiness of research but do not necessarily incur prohibitive costs. The open research principles described here can be applied more broadly to research in communication, regardless of resources or precarity of the researcher or research participants. The principles we outline expand the open science framework to accommodate a wide range of empirical approaches that comprise communication, as well as the social sciences more broadly. Our hope is to provide a framework for engaging in research practices that enhance the trustworthiness of research, but it must be applied reflexively and contextually and may not apply to all communication scholarship equally.

Moreover, collective methodological training and mentorship across the field could further strengthen these principles for communication research. Conferences could devote more program space to methodological discussions, reflection, and mentorship. Small steps such as recording and sharing methodological pre-conferences or sessions at annual conferences could help ensure that even those who cannot attend the conference can get access to collective training. Even when research is sole-authored, it still emerges from communal research practices. Acknowledging, reflecting on, and strengthening these practices will ensure the intellectual and methodological vibrancy of communication research.

Open research must engage with the breadth of epistemological, methodological, and ethical traditions that co-exist in the field of communication. It must wrestle with the hierarchy of knowledge production and the impacts of that hierarchy on incentives (Linabary, Corple, & Cooky, 2020; Nosek, Spies, & Motyl, 2012). It must address the pressure to endlessly publish novel and transformative studies (Davis, 1971, Nelson, Simmons, & Simonsohn, 2012), a pressure which hinders efforts to build cumulative knowledge (Forscher, 1963; Lewis, 2020). In so doing, it offers the

opportunity to address existing inequities. As Squire (2017) noted, historical exclusion often has a way of repeating itself as marginalized populations continue to be systematically silenced or erased. These are issues that must be resolved for communication to be truly open and inclusive, now, and in the future.

Conclusion

When we open communication research, sometimes competing responsibilities arise: to our academic community, to our research participants, to our funders, and to citizens. Openness itself is a value, which has great support within the academy. However, we should approach openness as an ongoing process and practice within research, not a blanket checklist of to-dos, since openness within the field of communication may look different depending on methodological and epistemological approaches. Many of the issues that we synthesize in this article are not unique to communication research. By integrating methods with broader programmatic development, communication can lead other social sciences in developing more progressive and inclusive research programs.

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