December Summit Meeting

on aligning social justice & representation with open scholarship, rigor, & reproducible research

A Consortium of SPARK Society, SIPS, and FORRT

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Summit's Goal

The goal of this summit is to create frameworks and concrete resources on open scholarship specifically directed **at historically excluded scholars** of African American/Black, Latina/o/x American, and Native American heritage **in the United States**. This is intended to serve two purposes. *First*, as open science principles begin to be more commonly accepted and valued in our research communities, there is a risk that these scientists will face structural barriers to participating in the communities where these tools are developed and taught. *Second*, we firmly believe that some open science practices have enormous potential to benefit some researchers, and we'd like to ensure that researchers from currently underrepresented groups are among those who benefit from open science practices.

This Document

This is a google document that can be edited by anyone, and you are warmly invited to do so! Below, there is a list of specific topics, and we also encourage you to add more if there are thoughts you have that don't seem to fit into one section. You can also add thoughts using the "comments" function to respond if you would prefer to do that instead of (or in addition to) typing into the main document itself.

Right now, this document is available to all invitees of the Dec. 2nd Leader's Summit - we ask that you not circulate the link further at this time. For now, you can treat this as a 'brainstorming' format, without worrying about organization or how ideas flow together. After the summit meeting, **we plan to make this document public as a preprint**, as one product of our work together. Before it's made public, you will have opportunities to revise and will be asked to sign off on the final version.

What is Open Science (and Open Scholarship)?

Open science is an umbrella term reflecting the idea that scientific knowledge of all kinds, where appropriate, should be openly accessible, transparent, rigorous, reproducible, replicable, accumulative, and inclusive, all of which are considered fundamental features of the scientific endeavor. Open science consists of principles and behaviors that promote transparent, credible, reproducible, and accessible science. Open science has seven significant aspects: open data, open methodology, open source, open access, open peer review, open educational resources, and open collaboration.

Open scholarship is often defined synonymously with open science but extends to all disciplines, drawing in those that might not traditionally identify as 'science-based.' Open scholarship, in particular, makes explicit the importance of inclusion, diversity, equity, and accessibility as necessary conditions for improving the way we practice science. Open scholarship also includes all scholarly activities that are not solely limited to research, such as teaching and pedagogy. Like open science, it reflects the idea that knowledge of all kinds should be openly shared, transparent, rigorous, reproducible, replicable, accumulative, and inclusive (allowing for all knowledge systems).

Your Input

We would like to hear from you how researchers in your community have experienced open science, what has or has not worked to create welcoming environments, and what tools and practices might benefit scientists in your community. For this, we ask that you, **before the event**, please share your feedback and experiences, about any of the following topics:

open **data**	see definition	add comment
open **methodology**	see definition	add comment
preregistration	see definition	add comment
open **source**	see definition	add comment
open **access** *(preprints, open-access journal articles)*	see definition	add comment
replication	see definition	add comment
open **peer review**	see definition	add comment
open **educational resources**	see definition	add comment
open **collaboration** *(big team science, citizen science)*	see definition	add comment
anything else you'd like to share		add comment

Please add your comment as a new bullet point, including your name/affiliation if you wish.

1. open **data**
   [see definition]

- [Flavio Azevedo | University of Cambridge] This is an example comment!
- [Your name | Your institution] Your comment
- [Priya Silverstein | The Journal Editors Discussion Interface/Ashland University] From in-prep Easing Into Open Science guide for Journal Editors: There are some concerns over whether journals requiring open data will disadvantage early career researchers (ECRs) or underrepresented minorities (URMs), because they would no longer have sole access to or control over their data. It is true that the consequences of not having sole access to or control over your data will be different depending on career stage and other researcher identities. As a way around this, researchers can embargo their data if they want sole (or shared with a

specific group) access to it for a fixed period of time. In connection to a publication, the journal can require the researchers only publish openly the data required to verify the results (e.g., can omit other collected variables, especially if the research team intends to publish additional products). Data are citable products, and researchers who use others data should be citing the original authors. Publishing papers with open data may increase the impact for ECRs and URMs. ECRs and URMs may also benefit from other researchers providing open data, by giving them access to otherwise expensive to collect data, difficult to reach samples, or time intensive data that they would not otherwise have access to.

- [Sarah Brown-Schmidt | Vanderbilt University] I'd be curious to know how often shared data are used and cited in the future - are most open datasets eventually used or not? Separately, a concern based on observations I've made in my own field is that there may be inequities during the review process in terms of which authors are likely to have their data/analyses checked by reviewers.

- [Sarah Brown-Schmidt | Vanderbilt University] A concern raised by [Fox Tree, et al (2022)](link) is that typical consenting procedures may not sufficiently prepare participants to make an informed judgment about whether they consent to their data being openly shared. To quote Fox Tree et al.'s post: "Latinx participants may be willing to participate in a study on visual working memory or attention, but they may be less likely to participate if they knew their data would be part of a data re-analysis project investigating links between race, ethnicity, and cognitive ability." This concern may disproportionately affect early career researchers or researchers from under-resourced institutions who may feel pressured to share datasets where this aspect of consent wasn't as explicit as it could be. This concern could also disproportionately affect the types of datasets that can be shared when full consent is given. It seems as if a broader conversation around what counts as consenting to having your data shared on the web needs to happen.

- [Sara El-Gebali | FAIRPoints] I echo the concerns raised above with regards to the secondary use of open data from vulnerable communities and the matter of revoking consent. Basis for discussion; South Africa the Protection of Personal Information Act (POPIA). Concerns with regards to openness need to be addressed at the same time as the benefits, otherwise the concept of openness can and will be weaponized in some cases disproportionately affecting vulnerable communities.

- [Sara El-Gebali | FAIRPoints] How do we empower researchers in vulnerable/restricted resources environments to share their data by providing a mechanism to report transgressions that might occur from misuse of their data? One of the biggest fears we encounter is fear of open data being scooped and reappropriated without proper citation or acknowledgement. What are the pragmatic ways of dealing with this? Along with reporting infringements whether to copyright, IP or license, or other forms of misuse? It is often not in the best interest

of journals to issue a retraction neither wealthy institutions to open investigations in case of reporting coming from an ERC from a LMIC← as an extreme example.

●

2. open **methodology**
   [see definition]

● [Your name | Your institution] Your comment
● [Organizing team] At the SIPS workshop on DEI and open science, Yuichi Shoda proposed a few vignettes that explore some possible tensions. This one discusses a possible downside scenario or challenge for openly sharing one's exact methods and analyses, if other scholars in your area are not doing the same - you may make yourself more vulnerable to scientific critique.
● [Karen Mitchell | S/JARMAC] In addition to possibly opening one's self up to critique, this process may disadvantage early career, female, and/or minoritized investigators who put enormous time into developing procedures and materials. They spent time perfecting the method, only to have someone else use it to collect data and publish without that time cost.
● [Sarah Brown-Schmidt | Vanderbilt University] I worry that some researchers may feel pressured into sharing materials that they don't have copyright for, and that individuals at under-resourced institutions may not have legal teams that can help them navigate whether or not their materials sharing is covered by fair use in the case of a complaint.
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3. **preregistration**
   [see definition]

● [Your name | Your institution] Your comment
● [Organizing team] At the SIPS workshop on DEI and open science, Yuichi Shoda proposed a few vignettes that explore some possible tensions. This one discusses a possible downside scenario or challenge for registered reports, a model in which a preregistation is peer reviewed by a journal before conducting the study - does this increase the chances of 'scooping' by a reviewer, especially one with more resources or in a more powerful position?
● [Annie Hill | American Psychological Association] Montoya, Krenzer, and Fossum (2020) https://doi.org/10.31234/osf.io/mbhrc note that power requirements, when specified, are often higher than they are for non-RR work, potentially excluding work with smaller or racial/ethnic minority populations.

- [Dana Basnight-Brown | USIU-Africa, PSA] In the context where I work (East Africa), preregistration is not something typically followed by faculty and students at my institution or at other local institutions. There is limited training on what it entails and on the benefits of preregistering studies (despite an openness to other open science practices). Interestingly though, when applying for IRB approval at our institution, one basically is required to submit a document that is similar to a preregistration in many ways (e.g., the full literature review must be completed, detailed methodology and analyses planned). This is different from the IRB process I have gone through at many Western institutions, so I have found this deviation to be interesting. I am not sure whether all IRBs in our region require this, as IRBs are still very new in some East African countries (and not required in others), but having researchers think about their studies in a more complete manner prior to getting ethics approval has been encouraging.

4. open **source**
   [see [definition]]

- [Karen Mitchell | S/JARMAC] Ditto my comment above about who is spending time creating source code, etc. vs who is using it later to efficiently advance their career.
- [Lisa Levinson | University of Michigan] Similar to the concerns cited in the open methodology section above and discussed in Yuichi Shoda's vignettes, sharing open source scripts and software potentially exposes researchers to greater critique/scrutiny. Code might also be used/adapted by other researchers (or AI tools) without attribution, even if a license is used which prohibits this. On the other hand, open sharing of code/software has the potential to enable researchers to use methods that they wouldn't otherwise have the resources or time to implement themselves.
- [Dana Basnight-Brown | USIU-Africa, PSA] In many LMICs, open source software is vital for advancing research in those locations. Many institutions simply do not have the resources to purchase expensive software to be used in conducting experiments or in analyzing data, so researchers (primarily younger ones) have turned to open source options. Despite that, the training on how to use those is very limited at many universities, meaning that students rely on online options to learn how to use many of the open software options (primarily R).
- [Sara El-Gebali | FAIRPoints] Some concern that might be more relatable in open source as well as open hardware is the lack of diverse representation from gender and demographics wise. Considering the above statement of popularity/need/reliance of LMICs on open source, support for gender participation is not on par (on a global level) and we are missing a whole

category of the population! How does openness contribute to alleviating the barriers of participation specifically within open source and hardware?

5. open **access** (preprints, open-access journal articles)
   [see definition]

- [Karen Mitchell | S/JARMAC] With respect to DEIJ, I think we need to really think about who is most able to afford to pay to have their paper published open access in an established (prestigious?) journal that charges for this.
- [Annie Hill | American Psychological Association] Seconding Karen – a major concern is options for authors who don't have access to APC funding or who are not affiliated with institutions that can afford to allocate funding to read-and-publish agreements (and not building a system that offers advantages to those who are able to publish open access). This concern is attracting broad attention; the European Commission-funded ON-MERRIT Recommendations for Maximising Equity in Open and Responsible Research, for example, include developing OA models that do not require authors to pay APCs and facilitating self-archiving with rights retention.
- [Melissa Kline Struhl | SIPS/MIT] Ijeoma Opara wrote a Nature column about the experience of being scooped, and the use of public preprinting as a way to establish credit for your ideas earlier in the research process: https://www.nature.com/articles/d41586-022-03750-0
- [Annie Hill | American Psychological Association] Another suggestion by Lui et al. (2022) is to embargo or restrict access to preregistrations to avoid scooping.
- [Ayanna K. Thomas | Spark Society/Tufts] https://twitter.com/IjeomaOparaPHD/status/1518288646109114371?s=20&t=fT6gVcOug K3QzDP2zScA3A for Ijeoma Opara's thread on being scooped.
- [Priya Silverstein | The Journal Editors Discussion Interface/Ashland University] From in-prep Easing Into Open Science guide for Journal Editors: You can leave your publisher and/or start a new open access journal independently from the publisher. For example, the editorial team from the journal Lingua broke off from Elsevier and launched a fully open access journal: Glossa. A similar step was also taken by the editorial team of Journal of Informetrics, who launched the open access journal Quantitative Science Studies.
- [Dana Basnight-Brown | USIU-Africa, PSA] The points on APC fees and scooping are important, but based on my experience working/living in an LMIC, open access publishing is often perceived as advantageous and essential by many researchers. Most local institutions (my own included) do not have resources to subscribe to some of the traditional journals, therefore, colleagues and students constantly encounter issues in conducting their research, as

they cannot access most of the papers they need. As a result, we rely heavily on open access papers, so much so that some local governments have implemented national regulations requiring OA (e.g., Ethiopia was one of the first in our region to do so). In terms of annual review and other forms of assessment, open access publishing is often viewed more favorably by institutions, something that I did not experience to the same degree when I lived in the U.S. Despite that, institutions do not have funds to pay for APC fees, but since some OA journals waive those fees for LMICs, it makes it feasible. That is an option that helps in terms of diversifying authorship, but I recognize it does not help scholars in all parts of the world who would still need to cover those fees (and of course, not all journals waive those fees).

6. **replication**
   [see definition]

- [Your name | Your institution] Your comment
- At the SIPS workshop on DEI and open science, Yuichi Shoda proposed a few vignettes that explore some possible tensions. This one discusses a possible downside scenario or challenge for replication studies: Will replications that use participants from diverse backgrounds and contexts be evaluated fairly, whether the replication does or does not show the same effect as previous studies?
- [Your name | Your institution] Your comment

7. open **peer review**
   [see definition]

- [Priya Silverstein | The Journal Editors Discussion Interface/Ashland University] From in-prep Easing Into Open Science guide for Journal Editors: [Open peer review (identities)] Won't reviewers be treated unfairly for giving unfavorable reviews? There is evidence that reviewers are less likely to express criticism (Mulligan et al., 2013; Ross-Hellauer et al., 2017) and are less likely to reject articles (Bravo et al., 2019; Bruce et al., 2016; Sambeek & Lakens, 2021; Walsh et al., 2000) if their identity is known to authors. If you're worried about this, you could consider implementing a single-masked system with the option for reviewers to choose to also identify themselves. If you decide this is a good enough reason to keep reviewer identities anonymous, you can still consider making the reviews themselves open. If author identities are open, doesn't this open up the option for bias or retaliation (e.g., Steltenpohl, 2020)? There is evidence that open author identities can be biased towards papers

with famous authors and from high-prestige institutions (Huber et al., 2022; Tomkins et al., 2017). If you're worried about this, you could consider a double-masked system, with the option for reviewers to self-identify if they wish to. However, with the open scholarship movement becoming more prominent, double-masked reviewing is becoming less enforceable as reviewers may search preprints, open data, open code, measures and discover the identities of the authors. Note that masked review is not intended to ensure, at all costs, that reviewers are not aware of the authors identities, rather that journals are simply not providing this information as part of the review process. Open peer review allows the process to be evaluated (Godlee et al. (2002) in many ways, including for potential bias or retaliation, as the content is accessible. This may in fact offer peer reviewers some protection – if they are accused of bias, the review content can be scrutinized, or the reviewer record can be checked independently, and the reviewer can be protected with the review record being open.

- [Matt Goldrick | Northwestern University] Reviewer Zero has been examining the consequences of the normative negativity of interactions between reviewers and authors during peer review. Previous work (e.g., Silbiger & Stubler, 2019) has suggested that this disproportionately harms members of historically excluded scholars in STEM fields. We conducted a survey in 2020 of early career researchers in psychology / neuroscience that confirms this previous work. Among other results, we found that: cis-male persons of color reported receiving significantly less helpful feedback than white cis-males; and female / non-binary respondents were significantly more likely (relative to cis-males) to report that peer review reduced their sense of belongingness in science. In response to an open-ended question about memorable peer review experiences, under-served trainees reported receiving: harsh feedback (e.g., the worst a reviewer has ever seen); racist reviewer comments; and feeling so demotivated that they permanently abandoned research topics. Given these experiences, it would be unsurprising that historically excluded scholars might be hesitant to participate in an open review process. Dr. Colleen Murphy summed this up in a tweet responding to eLife's move to drop accept/reject decisions:

  Dr. Coleen Murphy
  @ctmurphy1

  Some of you seem to have never received (from a competitor, one presumes) a deeply flawed, misogynistic review aimed at you and your all-women author research team that would tank your career if anyone actually read and believed it - and it shows

  1:56 PM · Oct 20, 2022 · Twitter Web App

  Without a deliberate effort to change peer review culture, it is likely that open review will serve to perpetuate – in a very public way! – the broken system currently in place.

- [Kristi Multhaup | Davidson College] I agree with Matt Goldrick that negative review culture needs to be changed, but I am unsure that open peer review is the best solution.. Priya

Silverstein's comments reminded me of a graduate school seminar in which an editor of a journal had us review an article and then shared reviews sent to him about that manuscript. One reviewer wrote that, "if {famous scientist} were not a co-author on this paper, I would not have taken the time to separate the wheat from the chaff.." That experience led me to favor double-blind reviews, although I understand that a motivated reviewer could track down who authors are, particularly given pre-prints and the like. Another approach, either supplementary or alternative, could be journals requiring reviewer training. Years ago I reviewed something for *Teaching of Psychology* and the editor asked for my permission to share the review with future reviewers. Perhaps the kinds of examples Reviewer 0 shared at Psychonomics be used as part of the training that could be done with modules along the lines of what CITI training requires. Ethical reviews should be prioritized, just as ethical data collection is. I understand that it is already hard to get people to review so we may need to require at least one review before an author can submit to a journal, for example.

- [Matt Goldrick | Northwestern University] Thanks Kristi Multhaup for bringing up the reviewer training. We are in the process of developing an online system based on our in-person workshops (like the one at the 2022 Psychonomics meeting). To provide more context for others, the training (1) introduces a conceptual framework for thinking about peer review culture (2) provides data showing the negative consequences of current culture (3) provides a framework for less biased, fairer, and more constructive reviews and (4) uses interactive role-playing to workshop how authors, reviewers, and editors can facilitate a new reviewing culture. Just to emphasize this point: we are still working at implementing this – we have not made any moves to an online format yet. We are excited to get input from journals and other organizations on this project as it develops, and think about how we could best deploy this to reach the greatest number of people.

- [Karen Mitchell | S/JARMAC] I have a couple of thoughts here: (1) Lots of comments on "famous" authors, but what about "famous" reviewers? Do editors weight reviews from famous (senior) folks more than those from young investigators? From men more than women? From one ethnic group over another? We also need editor training. (2) I worry about open review becoming a popularity contest, with an ever-decreasing circle of like-minded investigators reviewing each others' work and/or bashing "others". This might seem extreme, but I wonder.

- [Annie Hill | American Psychological Association] I wonder whether an explicitly antiracist approach, with specific questions reviewers must answer addressing, say, the treatment of race in a manuscript, might be another way of trying to address reviewer bias. APA's EDI Toolkit for Editors suggest that editors ask reviewers to address whether the research actively promotes psychological knowledge that contributes to the wellbeing of all communities, reinforces racial or ethnic stereotypes of superiority/inferiority and the possible contributions

of bias in the research methods, has the potential to be misused to cause harm, for example, and I'm sure others have ideas.

- [Katie Corker | SIPS] It might be useful to distinguish between open peer review and transparent peer review. Open peer review typically refers to practices involving signing reviews (unmasking reviewers from authors). Transparent peer review refers to publishing the peer reviews themselves, whether signed or not. Transparent peer review is in place at AMPPS and Collabra, in addition to a growing number of generalist outlets. We believe there are benefits to the community to be able to see and evaluate the process of peer review (including editorial decision letters), as well as to benefit from the points the reviewers raise alongside the published articles themselves.
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8. open **educational resources**
   [see [definition]]

- [Your name | Your institution] Your comment
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9. **open collaboration** (big team science, citizen science)
   [see [definition]]

- [Karen Mitchell | S/JARMAC] This is a very interesting topic, and I think this might be one area with the potential to very directly help create equity with respect to who gets to sit at the big kids' science table. But, it also raises the concern for me of who's driving the bus. Big teams usually require big money (e.g., "Centers", etc.), which might limit who can spearhead the collaboration. How do we make sure that, even if this must be true for the system to work, we are inviting scientists from minoritized groups to the table?

10. **anything else** (other topics regarding equity and open scholarship)

- [Your name | Your institution] Your comment
- [Melissa Kline Struhl |SIPS/MIT] [This preprint] discusses some 'myths about open science', including the question of whether open science and diversity are at odds with one another. The section on what 'open data' is and how it should be balanced with compelling concerns about participant privacy and how data may be reused might be especially interesting to take a

look at: Syed, M. (2022, November 18). Three Myths about Open Science That Just Won't Die. Retrieved from psyarxiv.com/w8xs2

- [Annie Hill | American Psychological Association] To frame efforts, it might be useful to look at Fuentes et al. (2022)'s call for open science to be explicitly antiracist. They point out that white supremacy and racist practices must be explicitly named in attempts to rectify racist norms and practices; that diversification of editorial boards is necessary if open science aims to share power; and that decolonizing research means incorporating reflexive and contextual approaches in open science.

- [Annie Hill | American Psychological Association] Lui et al. (2022) also offer a number of insights. They point out that the OS movement has not explicitly addressed issues like ethical concerns when working with historically excluded populations that are important to diversity researchers and hasn't really focused on diversity in samples or in researcher representation. They point to the conflation of generalizability with reproducibility as a problem for diversity researchers who are looking at excluded groups themselves – rather than attempting to extrapolate results to socially/politically dominant populations and argue that qualitative and mixed methods can also aid in reproducibility as they support "explicit articulation of the boundaries of results' generalizability to new and different populations, beyond the emphases on internal validity and replicability." Some of their other recommendations are to frame open-science practices less narrowly (e.g., they're not just for experimental replicability but also for observational, qualitative, and mixed methods; they can further equitable access for those with few resources); clearly delineate what can and cannot be done with participant data; include positionality and contribution statements to help contextualize study conclusions; and require authors to report on sample demographics and address cultural diversity in their design and interpretation of study results.

Summit Attendees

This section will include a table of summit attendees and contributors to this document. Please RSVP to the invitation email, and we'll add your name & bio to the link above.