

Are all voices heard in the transition to open science?

Lessons from the scientific reform community

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No

open science has **barriers**
to participation

Traditional inequality structures are **inherited** (from the 'parent' community of traditional academia)! Think about traditional science as being the parent community, and OS as being a faction that has 'broken free' of the parent and its rules and codes. While reform science has many good qualities, it still retains some of the trappings of its origin in traditional science. We as OS and reform people need to critically look at how we can rid the movement of those trappings and move to create a culture that is truly better than that of the parent.

Who's **dominant** in open science?

- Wealthy institutions – they're behind most of the big conferences, workshops and networking events
- Global North – closely linked with above
- Positivist disciplines
- White people
- Men
- Straight people

These traditions **structure** the
knowledge co-production
system in OS (just like they do in
traditional science)!

Traditional inequality structures are **inherited!**

Who's **peripheral** in open science?

All of these elements are crucial in considering whose voices we are missing out on in OS but I am not qualified to discuss the nuances of the last three as much so I will focus on the first three points in bold.

- Wealthy institutions
- Global North
- Positivist disciplines
- White people
- Men
- Straight people
- **Poorer institutions**
- **Global South**
- **Interpretivist**/constructivist approaches - for instance, qualitative
- People of colour
- Women
- LGBTIQ people

Who's peripheral in open science?

- Poor institutions/global South
 - **Journal APCs**
 - Nature OA - €9500
 - BMJ Open - €2300
 - JEP: General - €3100
 - Royal Society Open Science - €1440
 - Collabra: Psychology - €1009

These high costs mean it's harder for global South/poorer institutions' members to 'trade' in the currency of academia (and OS by extension), and so they miss out on being able to participate; have their voices heard!

Who's peripheral in open science?

- Poor institutions/global South

- **Conferences**

- SIPS
 - 2016/2017/2018 – USA
 - 2019 – Rotterdam, NL
 - 2022 – BC, CA
- Metascience Symposium 2019 – CA, USA
- Reproducibility, replicability & trust in science – Cambridge, UK

These locations are far away for many scientists with access to few resources and they may not be able to participate and reap the benefits of participating if they can't attend. This means that the voices of these people are not present in the OS discourse.

Who's peripheral in open science?

- Interpretivist/constructivist approaches
 - Focus on positivist practices
 - Replication
 - Preregistration and registered reports
 - Data/code sharing

These all are applicable to quantitative methods but are hard to apply to qualitative sciences. Replication isn't especially meaningful for qualitative research, prereg is hard to get right for qualitative studies, and data sharing is a nightmare for a lot of qualitative researchers.

validity and reliability (focuses in OS) tend to be interpreted through a quantitative lens, giving little space to qualitative researchers – OS in qualitative disciplines looks a lot different, and few OS practices are a one-size fits all thing!

Inequalities are everywhere in science;
many of them are structural

Open science has **inherited** them from the
parent community of traditional science

*To hear more voices, we need to work to
dismantle these inequalities*

Why = opening science to improve its quality

How = methods and practices

Open science must prioritize
the **why** rather than (just) the **how**!

That is, don't lose sight of the means (how we achieve OS and culture change) because you're focusing on the end (the wish to achieve change in science) - don't put all your energy into reification of OS values and ignore the participation that must also happen! Check out Etienne Wenger's community of practice scholarship, or my doctoral thesis for more on that fun topic!

What are we doing about it?

- **Structures** must change

- Evaluations – restructure how we reward and incentivize research
- Dissemination methods – move away from the article being the currency in science, and look at alternatives like Research Equals. Diamond OA is great, but there's still the issue of money, and at some point, someone has to pay for that diamond OA... Let's take money out of the picture!
- Conferences/networking – the pandemic showed us how hybrid/virtual conferences can be a great way to make science more accessible. Let's not go back to all in-person! At least make hybrid the norm so that participation is more open!

- **Perspectives** must change

- Flexibility – expecting people to go all-in on OS isn't reasonable or feasible.
- Resetting perspectives on 'contributorship' – Bergmann (and later Guest and Whittaker) have developed the idea of an OS buffet. Take what you want and what you can do and leave the rest. OS is a buffet!

- **We** must change!

- Reflexivity – We need to get comfortable with interrogating what we are doing and why – take a closer look at our role in perpetuating inequity in science.
- Individual and collective – Interrogating your own role should take place at the level of the individual and at the level of the group!

Thank you!

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