

# The Ethical Blind Spots of Open Science

Examining the assumptions of neutrality, universality, and trust

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# How the talk unfolds

1

## The promise

Why open science is linked to quality, inclusion, democratization, and trust.

2

## Neutrality

How seemingly neutral norms privilege some methods, actors, and values.

3

## Universality

Why openness does not distribute benefits, burdens, or capacity equally.

4

## Trust

Why transparency alone does not guarantee legitimacy or public confidence.

5

## Examples

APCs, data extraction, status hierarchies, and marginalized epistemologies.

6

## Responsible OS

A reflexive alternative: from open by default to just by design.

# Open science is sold as an ethical upgrade

More responsive science for global challenges

Higher quality, efficiency, and productivity

Democratized knowledge and reduced inequality

Inclusion, epistemic justice, and stakeholder empowerment

More trust through transparency and openness



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PubMed Central (PMC) (.gov)  
<https://pmc.ncbi.nlm.nih.gov/articles/PMC6041740>

## Open Science Is Liberating and Can Foster Creativity - PMC

by WE Frankenhuys · 2018 · Cited by 92 — Open Science practices **can foster creativity** because they cultivate an open and flexible mind-set, create a more collaborative and constructive climate. [Read more](#)



KU Leuven  
<https://www.kuleuven.be/what-is-open-science/the-b...>

## The benefits of Open Science

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Springer Nature  
<https://www.springernature.com/open-science/about>

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Science | AAAS  
<https://www.science.org/News/ScienceInsider>

## Is 'open science' delivering benefits? Major study finds ...

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Itä-Suomen yliopisto  
<https://blogs.uef.fi/what-is-open-and-responsible-science>

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Center for Open Science (COS)  
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<https://ifera.org/Blog>

## The power of Open Science: unlocking knowledge for all

16 May 2024 — Speeding up advances: By removing barriers to access and promoting collaboration, **open science accelerates the pace of scientific discovery**, ... [Read more](#)



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# The EU's open science policy

Open Science is at the centre of European research policy. Policies, initiatives and structures are developed and implemented to open up European science and research to make them more efficient and productive, seamless, transparent and robust as well as responsive to policy and society needs and expectations.

The objective is to bring Europe to the best position to reap the benefits of Open Science by opening up the research system between scientists and between disciplines, as well as towards society as a whole. Open Science facilitates sharing and collaboration, thereby accelerating the discovery process, improving research quality, and making science more impactful and central to human and societal development.



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# The problem begins when promises are treated as automatic outcomes.

Open science research increasingly suggests that inequality, power, and epistemic barriers shape who can actually participate and benefit, and that its assumptions deserve closer ethical scrutiny.



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# Neutrality is not neutral



## Norms masquerade as facts

The presumed neutrality of open science should be treated as a problematic assumption rather than a settled truth.



## Methods get ranked

Mainstream standards such as reproducibility, preregistration, and data sharing are often tailored to quantitative and hypothesis-driven work.



## Pluralism gets squeezed

Qualitative, interpretive, and less-privileged epistemologies can be pushed to the margins by dominant open science norms.

"Neutrality is often just power with the labels removed."



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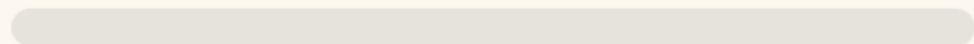


# Universality hides unequal burdens

## Three examples

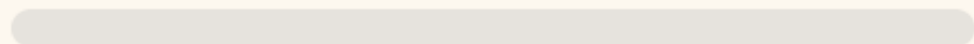
High APCs

publishing access



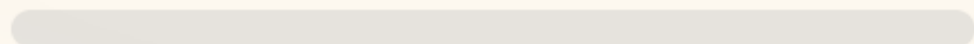
Infrastructure gaps

capacity divide



Invisible OS labor

career penalty



## Publishing is not evenly open

APC-based publishing models can privilege already advantaged researchers, groups, and regions, especially in the Global North.

## Capacity is uneven

Infrastructure, support staff, technology, and policy backing vary sharply across institutions, countries, and disciplines.

## Burden follows precarity

Open workflows often require relational and curatorial labor that remains undervalued in evaluation systems and may fall disproportionately on precarious or marginalized researchers.

BLIND SPOT 3

# Transparency does not automatically create trust

## What this critique highlights

The belief that transparency automatically generates trust deserves philosophical and ethical scrutiny.

## What lived experience shows

If openness is experienced as extractive, asymmetrical, or dismissive of local knowledge, it may reveal process without producing legitimacy.



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**Transparency can expose process, but trust depends on whether people see the process as fair.**



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# Where the blind spots show up in practice

## 0 Data colonialism

Openness can become extraction when data move out of communities without fair governance or benefit-sharing.

## 0 Deficit participation

Citizen participation may still leave agenda-setting power with professional researchers.

## 0 Status skew

Open practices such as open review can expose junior and marginalized scholars to retaliation risks.

## 0 APC inequality

Reader access may improve while author-side costs still block recognition and visibility.

## 0 Epistemic narrowing

Uniform OS standards can marginalize qualitative, phenomenological, and interpretive work.

## 0 Invisible labor

Metadata, stewardship, and public engagement often count less than final publications in career evaluation.



# From open science to responsible open science



## From neutrality to reflexivity

Ask whose assumptions, methods, and norms are built into “standard” openness.



## From universality to situated justice

Ask who bears the burden, who benefits, and what capacities are missing in context.



## From transparency to trustworthiness

Ask what governance, participation, and accountability make openness legitimate.

A reflexive approach shifts the question from “How do we make science more open?” to “What forms of openness are ethically defensible, for whom, and under what conditions?”



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**The task is not to abandon  
open science, but to stop  
treating openness as  
innocence.**



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