



Balancing Aspirations and Outcomes: A Critical Look at Open Access Policies and Their Evolution

Turning policy into practice – opportunities and
consequences for stakeholders in scholarly communication
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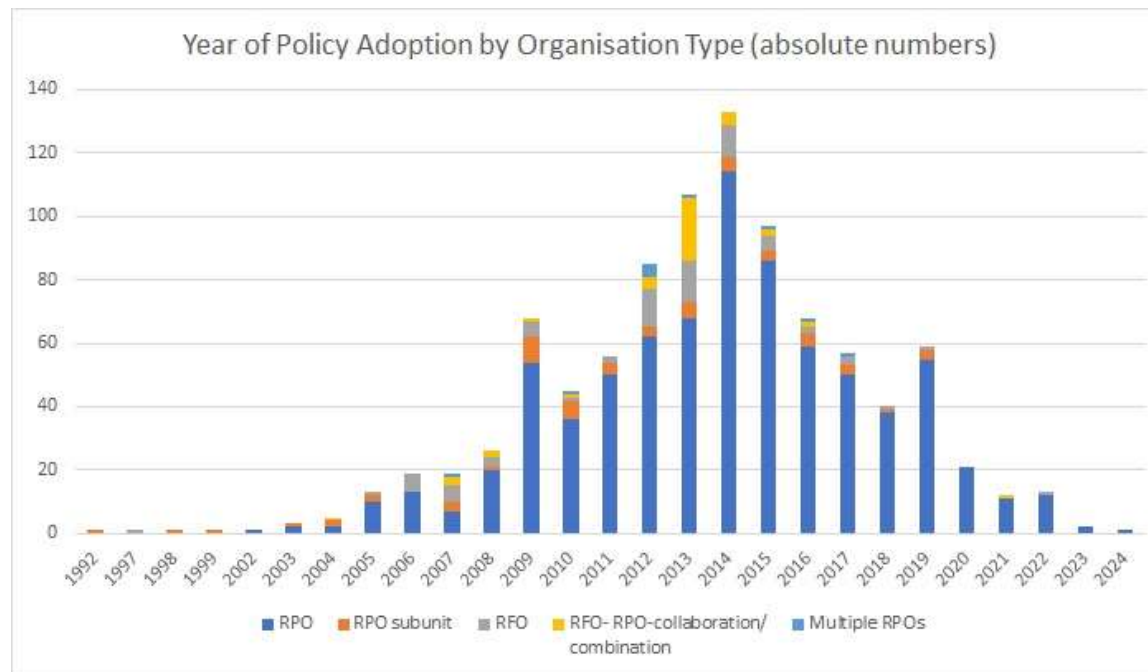
Typology

- **Governmental/National Policies**
often initiated by governments or federal agencies, like the NIH policy
- **Research Funder Policies**
issued by funders like the ERC
- **Institutional Policies**
Universities adopt Open Access (OA) policies to boost research visibility
- **Publisher Policies**
offer OA conditions impacting authors' options to comply with funder requirements, sometimes they got their own data/ software policies to raise through transparency credibility of published research.

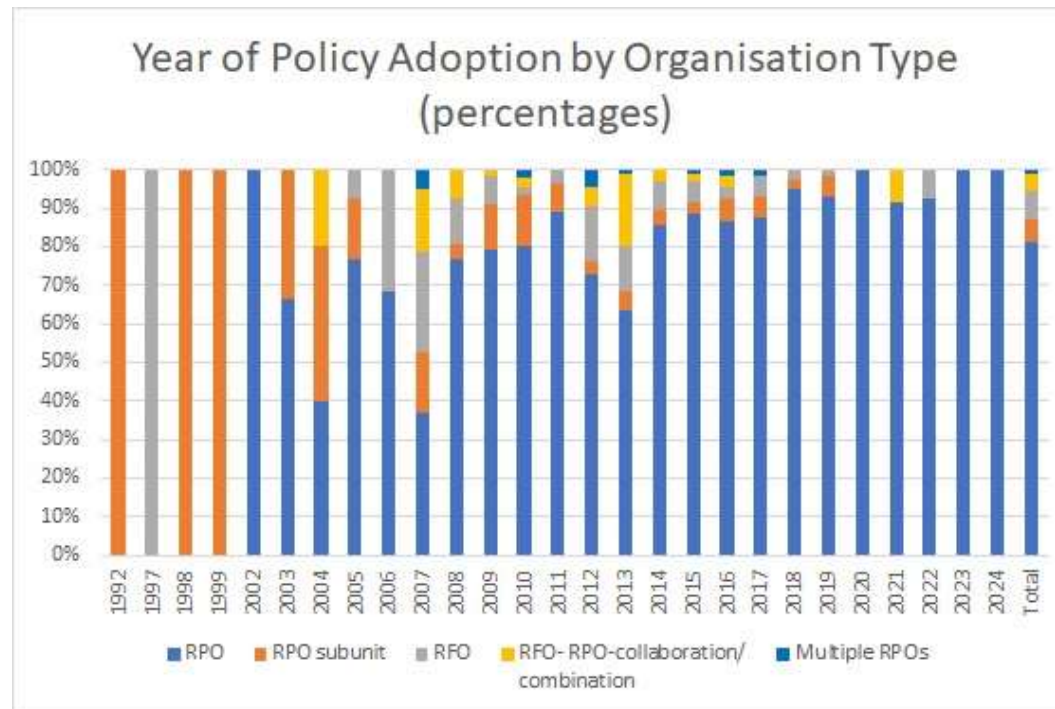
Some numbers on OA/ Science Policies

- ROARMAP: 1,131 policies have been registered, with highest peaks from 2013 to 2015.
- RPOs are the main drivers of policy adoption, accounting for 81% of policies.
- RFOs and RPO–RFO collaborations/ combinations contributed to 8% and 4% of the policies.
- RPO subunits and multi–Institution Collaborations account for a small share of the total policies (6% and 1%, respectively).
- Revisions were particularly frequent from 2012 to 2015.
- After 2015, there was a marked decline in policy adoption and revision activities, possibly indicating saturation or changes in the OA policy environment.

Some numbers on OA/ Science Policies

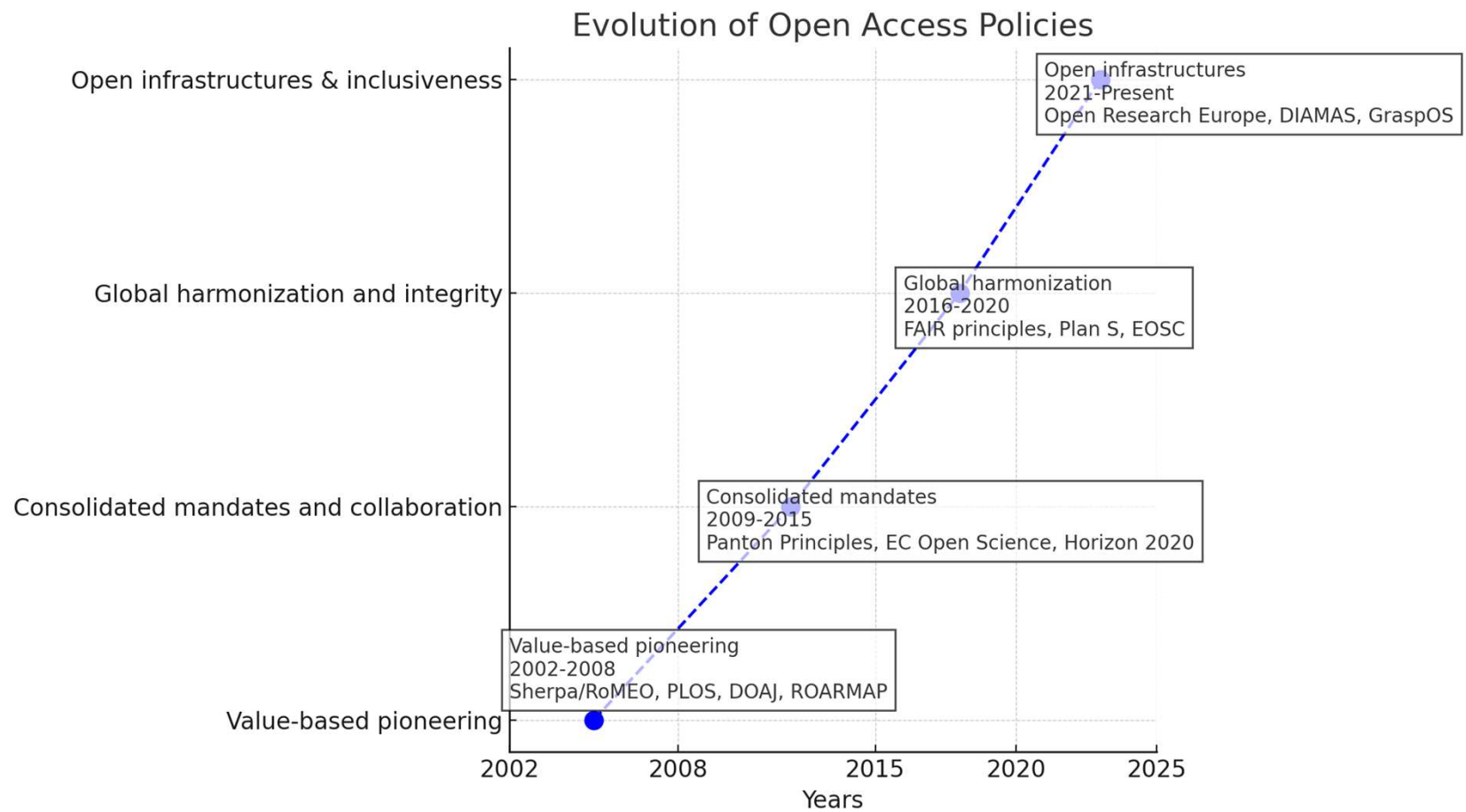


Some numbers on OA/ Science Policies

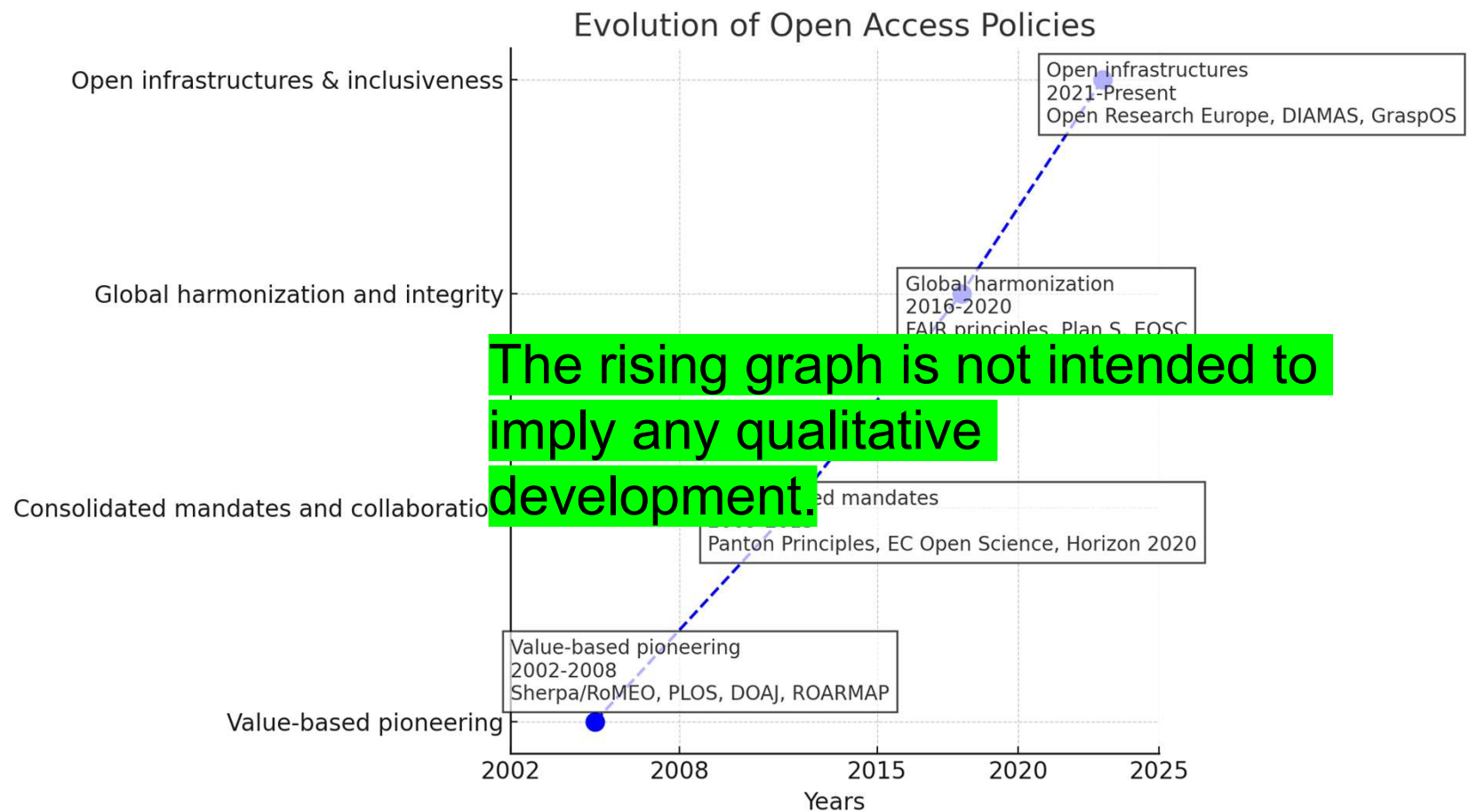


Phases

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Phase I

Value-based pioneering

2002-2008

Value-based pioneering 2002–2008

Significant developments

- 2002: Sherpa/RoMEO database was launched
- 2002: PLOS launched its first two journals
- 2003: DOAJ (Directory of Open Access Journals) was launched
- 2004: ROARMAP (Registry of Open Access Repository Mandates and Policies) was launched
- 2005: Among other policies the NIH Policy (mandatory in 2008), policies by University of Zurich, Wellcome Trust (mandatory right from the start) were adopted
- 2006: OpenDOAR (Directory of Open Access Repositories) was launched
- 2006: Sherpa/JULIET was launched

Value-based pioneering 2002–2008

- Early 2000s: Focus = transition from traditional publishing to **accessible** scientific practices
- Development phase (mid to late 2000s): Emphasis on increasing **transparency** and **trust**.
- OA principles gained attention, primarily through **non-binding declarations** such as the Budapest Open Access Initiative (2002) or the Berlin Declaration (2023), policies were largely **non-mandatory**.
- Focus: Raising **awareness** and acceptance of OA among scientists, the first institutional repositories were established.

Value-based pioneering 2002–2008

Adressees

Scientists, RPOs (responsible for infrastructures, policies), **publishers** (adoption of Gold OA, Green OA).

The OECD "Declaration on Access to Research Data from Public Funding" of January 30, 2004, laid the foundation for OA mandates by **RFOs**.

Value-based pioneering 2002–2008

Summary/ Goals

- Creating **awareness** of the OA concept and highlighting its benefits for science and research.
- The global declarations on OA are **not binding**, more concrete policies were driven by RPO-subunits.
- Self-evident benefits of OA are supposed to lead to adoption **without coercion**.
- Establishment of (mostly technical) **infrastructure**, such as institutional repositories, OA journals, information services (e.g., the SHERPA services).
- **Information resources** (e.g., RoMEO, DOAJ, ROARMAP) are seen as the main guarantors of adoption.
- OA is largely a **non-commercial** endeavor.

Phase II

Consolidated mandates, obligations, collaboration
and technology

2009–2015

Significant developments

- 2010: Declaration of the Panton Principles.
- 2012: European Commission recommendation to promote Open Science, urging member states to implement policies with clear, measurable goals for knowledge dissemination and OA.
- 2014: European Commission Horizon 2020 Open Access Mandate – OA became mandatory for all EU-funded research, covering publications and research data.
- 2014: Higher Education Funding Council of England announce their OA framework for the post-2014 REF, requiring researchers applying for funding under the Research Excellence Framework (REF) to publish in OA (active 2016).

Objects

- New object type: **data**
- Publications besides journal articles: policies for **monographs** and **edited volumes** spread (Horizon 2020) , fostered by initiatives like OAPEN (Open Access in European Networks, 2010).
- Introduction of **submission deadlines** in OA policies to shorten the time between publication, deposit and public availability.

Addressees

- **Scientists:** Some policies, like the UK's 2014 REF OA Policy, **require** OA (even with deposit **deadlines**).
- **RPOs** are expected to provide infrastructure (increasingly as **advisory services**) to **promote compliance**.
- **RFOs** integrate **OA requirements into their programs** and are **offering incentives** for OA publishing (= paying the invoices for Gold OA/ hybrid OA).
- **Publishers** were indirect addressees of many policies, as they had to adapt their business models to enable OA.

Summary/ Goals

- Emphasis on societal benefit, equality, **research quality, reproducibility and transparency**
- Open Science was promoted as a **global public good**, moving beyond mere access.
- OA as an effort to boost visibility, **impact** and **citation rates** to enhance the **recognition** of researchers and institutions.
- Rise of mandates that **required** funded **research** to be **published (increasingly under Open Licenses)**, including data.
- Importance of **Research Data** – deemed essential for global **collaboration** and **innovation**, facilitating new **applications** and **services** (influenced by initiatives like the 2003/98/EC directive on public sector information).
- Tools to achieve compliance: funding of article fees (a new **financial element** in OA implementation), deposit **deadlines**, linkage between OA and **research assessment** (UK REF considered only OA publications) & **citation counts**
- Coercion works: Countries with strict OA policies (NL, UK) show higher OA rates compared to others like Australia.

Phase III

Global harmonization and scientific integrity

2016–2020

Global harmonization and scientific integrity 2016–2020

Significant developments

- 2016: FAIR principles became the standard for managing and sharing research data
- 2016: Open innovation, Open Science, open to the world, A vision for Europe (European Commission 2016)
- 2018: Plan S mandated immediate OA for publicly funded research, promoting transformative contracts.
- 2018: EOSC (European Open Science Cloud) is launched

Global harmonization and scientific integrity 2016–2020

Objects

- Data, **software**, **methods**, texts, **reviews**.
- Copyrights and licenses: Policies demanded researchers to **retain copyright** while publishing under Open Licenses (e.g., CC-BY).

Global harmonization and scientific integrity 2016–2020

Addressees

- **Researchers:** Policies like Plan S and Horizon 2020 require publication in OA journals or repositories, while **retaining their copyrights** and **using Open Licenses**.
- **RFOs:** Organizations like the European Commission ensured **policy compliance** by developing **monitoring** systems.
- **RPOs:** Responsible for **supporting** researchers to achieve **policy compliance**.
- **Publishers:** Need to adapt business models to meet Plan S demands, offering hybrid or full OA options and ensuring immediate accessibility.

Global harmonization and scientific integrity 2016–2020

Summary/ Goals

- Continuation of collaboration and technology phase (EOSC) .
- Policies became more **unified** and mandatory, with initiatives like Plan S requiring immediate OA for publicly funded research (via green, transformative, gold or diamond OA).
- Strong connection between Open Science/ OA and **scientific_integrity**.
- OA is increasingly seen as part of a **broader Open Science approach**, including Open Peer Review, Open Methodology, Citizen Science, and the reuse of Research Data and Software.
- Development of **incentive systems**, mostly through **monitoring** and sanctioning non-compliance.

Phase IV

Open infrastructures & inclusivness

2021-?

Open infrastructures & inclusivness 2021-?

Significant developments

- 2021: Open Research Europe Platform is launched, Diamond OA platform for Horizon 2020 projects.
- 2021: Knowledge Rights 21 is launched.
- 2022: Agreement on Reforming Research Assessment (CoARA), calling for a fundamental reform of research assessment practices to value quality, inclusivity, and societal impact.
- 2022: DIAMAS Project, enhancing the quality and sustainability of Diamond Open Access publishing in Europe.
- 2023: GraspOS: next Generation Research Assessment to Promote Open Science.
- 2023: The Flemish funding agency (FWO) uses Open Science Compliance Metrics for research evaluation.
- 2024: Barcelona Declaration on Open Infrastructures.

Open infrastructures & inclusivness 2021-?

Objects

- Data, Software, Methods, Reviews, Metrics, Texts, **Infrastructures (including Diamond OA vernues)**
- Copyright and Licenses, **Rights Retention**
- **Research Assessment**

Open infrastructures & inclusivness 2021-?

Addressees

- **Scientists:** affected by **rights retention**
- **RPOs:** responsible as providers/sponsors of **Open Infrastructures** and in the **implementation of the RA reform**
- **RFOs:** responsible in the **implementation of the RA reform**, partly implementing/exploring **Open Science compliance indicators**
- **Publishers:** affected by **rights retention**

Open infrastructures & inclusivness 2021-?

Summary/ Goals

- Open Science principles are considered crucial for addressing complex, medical (COVID) or interconnected challenges as climate change.
- In addition to participation in science, **inclusivity** in its production is now also being emphasized.
- Focus: no longer on research outputs alone, but also on Open **Infrastructures**, necessary to produce, store, share, publish, process scientific (meta-)information.
- Fostering the uptake of **non-commercial Diamond OA** platforms.
- Opening up **Research Assessment**.
- Development of **incentive systems**: Growing focus on creating systems that reward and promote Open Science practices.

Summary

Summary

- Progress from awareness-raising to binding mandates and an increasingly inclusive approach.
- Emphasis is not only on the openness of research results but also on the creation of Open Infrastructures.
- Open Science principles are more readily accepted for data and software than for texts, as financial and reputational aspects are less important here.
- Unclear success criteria: OA rate? Awareness raising? Citation counts? Innovation impulses? Economic effects?
- Like it or not: Mandatory policies with strong monitoring and payment of article fees foster compliance.
- On its way: Incentives to reward Open Science compliance.

Challenges

Challenges

- Sustainability of scientific infrastructures
- Focus on inclusive science
- Development of incentive systems

Sustainability of scientific infrastructures?

- Do publicly funded infrastructures lack the incentive for innovation? Do they lack the strategies to sustain innovation on the long term?
- Can publicly funded infrastructures compete with with commercial services given their the internal logic/conditions (grant applications, reports, milestones defined years in advance, non-competitive salaries for IT personnel)?
- Are these services fully functional equivalents (for DOA in terms of dissemination, archiving, certification, and reputation building) to proprietary services?
- Starting in 2025, the annual budget of Open Science NL will be halved from 20 million euros to only 10 million euros.
- Bill and Melinda Gates Foundation (BMGF) revised its OA policy.

Focus on inclusive science?

- Is inclusivity a value in itself?
- Should inclusiveness be understood as proportional representation of groups/views/biographical backgrounds?
- Should individuals from different social/ethnic groups, with different views and biographical backgrounds, be enabled to attain sufficient qualifications to have excellent prospects to participate in the production of scientific knowledge?

Development of incentive systems?

- Is the adoption of Open Science practices a value in itself?
- Would the implementation of Open Science metrics indeed promote the adoption of Open Science by individuals or research-performing organizations (RPOs), but simply replace questionable metrics (such as impact factor or publication count) with another?

Some theses

- As long as proprietary services remain more functional, scientists will only adopt Open Infrastructures if they are forced to do so (e.g., through funder mandates).
- Utilization / adoption of Open Sciences practices/ infrastructures (including Diamond OA) will be strongly rewarded in communities where Open Science is considered a value in itself.
- In other communities Open Science compliance comes with mandatory policies (at the price of monitoring) and/or exhaustive funding for commercial OA.
- Even though Open Science contributes to scientific integrity, it is not advisable to conflate the willingness to practice OA/ Open Science with research assessment.

Goodhart's Law: When a measure becomes a target, it ceases to be a good measure.



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Thanks for your attention!

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