

OPEN SCIENCE





Inclusivity

"Look, science is like building a house. This is not something that you can do alone."



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FAIR

"Findable, Accessible,
Interoperable, and Reusable"



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Transparency

"Transparent research practices and processes also serve to demonstrate more rigorous methodologies or experimental protocols and to strengthen public perceptions of research quality, integrity and trust in the results, claims, conclusions and assertions derived from research activities."



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Cat Memes

"Publish or Purrrish"



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Capitalism

"[The] appropriation of traditional knowledge, privatization of the intellectual commons, commodification of teaching materials, scholarship, scientific research, and scientific publications [...]."



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Judicious Connections

"[A] process-oriented epistemology of science that recognizes the situated, embodied and goal-directed nature of communication and collaboration among researchers"



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Commercial Publishing

**"Is the staggeringly profitable
business of scientific publishing
bad for science?"**



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Digital Sovereignty

"[The] ability to have control over your own digital destiny: the data, hardware, and software that you rely on and create - is paramount for universities and other academic institutions as a prerequisite for equitable and open research and teaching"



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Beyoncé

"Okay, ladies, now let's get
in-formation."



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Preprint

"Sharing preprints is a way to receive feedback and attract attention to your research at an early stage, which positively benefits the quality and impact of your research."



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Precarity

"Open Science is primarily a labour issue, not an epistemological one."



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Value-driven Procurement

"Open-source solutions and providers sharing core academic values should be preferred. [Also], higher education institutions should be transparent in their decisions."



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Epistemic Justice

Open and Responsible Science
that seeks justice in access to
knowledge puts equity between
forms of knowledge and ways of
knowing at the very centre of
knowledge acquisition.



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Democracy

"[Knowledge] that has been created by public funding should be available to everyone and [should go] beyond the walls of the academic system."



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Invisible Labour

"Open research practices represent a novel type of academic labour with high potential to be mismeasured or made invisible by workload models, raising expectations to even more unrealistic levels."



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Retraction Watch

A website and blog that monitors
and reports on retractions of
scientific research articles,
founded by Ivan Oransky and
Adam Marcus



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Storytelling

"Research in neuroscience has found that oral storytelling triggers different cognitive processes than facts, thus reducing the incidence of negative thoughts and feelings that are often generated when presented with new and challenging information."



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University Rankings

"Rankings put too much stress on scoring and competition... it is almost impossible to capture the quality of an entire university... Also, the makers of the rankings use data and methods that are highly questionable."



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Plan S

A consortium of research agencies and funders from 20 countries who state that "research funded by public or private grants must be published in open access journals or platforms."



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Open-Washing

"[Data] publishers that are claiming their data is open, even when it's not – but rather just available under limiting terms."



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Spaghetti Code

"[Research] is increasingly reliant on technology, so it's important that researchers have access to the support and education they need to develop and use high-quality code."



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Pirate Care

"[Increasingly] present forms of activism at the intersection of care" and "piracy", which in new and interesting ways are trying to intervene in one of the most important challenges of our time, that is, the "crisis of care" in all its multiple and interconnected dimensions."""



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PIDs

"A persistent identifier is a long-lasting reference to a digital resource."



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APCs

"Article Processing Charges
(APCs) and the new enclosure of
research"



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Surveillance Publishing

"our behavior — once alienated from us and abstracted into predictive metrics — will double back onto our work lives. Existing biases, like male academics' propensity for self-citation, will receive a fresh coat of algorithmic legitimacy."



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Metadata

"Metadata about data provides answers to questions concerning the person creating the data, the subject of the data, the type of file(s), geographic information and other aspects."



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Privilege

"Failing to address structural inequalities directly means that the advantages of those who are already privileged will grow, especially given that they have the most influence over how open science is implemented."



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Alexandra Elbakyan

"[She] landed on an internet forum where a bunch of scientists were all looking for the same thing: access to academic journal articles that were behind paywalls. That's the moment the very simple, but enormously powerful, website called Sci-Hub was born."



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Climate Crisis

"Scientists Call out Publisher's
Ties to Fossil Fuel Industry"



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Globalisation

"Shifting from a local to a global viewpoint ought to mean multiplying viewpoints, registering a greater number of varieties, taking into account a larger number of beings, cultures, phenomena, organisms, and people."



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Data Management Plans

"much more than a formal requirement by funders or research institutions: they can be reflection tools to help researchers manage and plan their activities around data."



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Team Science

"[We] leverage the strengths of diverse research teams, recognising that we cannot solve the significant challenges of our time through isolated endeavours"



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Stochastic Parrots

"[A] system for haphazardly stitching together sequences of linguistic forms it has observed in its vast training data, according to probabilistic information about how they combine, but without any reference to meaning"



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Digital Competence Centers

"Digitising research requires expertise, which is scarce. Digital Competence Centres (DCCs) gather that expertise. Moreover, they make it easier for institutions to share knowledge and develop services together. It turns out, needs in this area appear to be widely shared."



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Early Career Researchers

"The Future is Open!"



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University Governance

"[The] system by which faculty, administrators, the board, and sometimes — but rarely — students work together to accomplish the academic mission of the institution."



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Heroes

"Does science need heroes or does it need to reform? Idolizing heroes can worsen bias, inequality, and competition in science. Yet, it does require good leadership to ignite structural change."



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The Right To Research

"[The] capacity to systematically increase the horizons of one's current knowledge, in relation to some task, goal or aspiration"



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The Library

"Libraries as Open Innovators and Leaders"



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Research Software Engineer

"[A] professional who combines expertise in software development and methodology with deep knowledge of one or more research fields."



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Transformative Agreements

"[Transformative agreements] are also known as read-and-publish, publish-and-read, and offsetting agreements. It's a contract where an institution pays for (1) a subscription to a publisher's bundle of journals and (2) for their author's articles to be made open access in some of those journals."



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Testimony

"Research outputs are a form of testimony with researchers serving as expert testifiers. Research outputs align with philosophical understandings of testimony, as research represents an everyday, informal communicative act."



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The Commons

"[A] practice of cultivating and caring for the relationships that exist around the production of shared resources"



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Worms

"How a worm showed us the way
to open science



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Disruption

"Recent decades have witnessed exponential growth in the volume of new scientific and technological knowledge, thereby creating conditions that should be ripe for major advances. Yet contrary to this view, studies suggest that progress is slowing in several major fields."



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Aaron Swartz

"We need to take information, wherever it is stored, make our copies and share them with the world... But sharing isn't immoral — it's a moral imperative. Only those blinded by greed would refuse to let a friend make a copy."



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Gender

**"Undoing Gender in Academia:
Personal Reflections on Equal
Opportunity Schemes"**



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Modular Publishing

"[Modules] of research outputs are communicated along the way and are directly linked to each other to form a network of outputs that can facilitate research evaluation"



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Scaling Small

"[The] idea that scale can be nurtured through intentional collaborations between community-driven projects that promote a bibliodiverse ecosystem while providing resilience through resource sharing and other kinds of collaboration"



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Failure

"[Academia] should embrace failure: It is a community built on the twin pillars of education and research using the scientific method, with failure playing a vital role in both"



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Scientific Reform

"[Reform] foregrounds values that never were strangers to science such as honesty, transparency and accountability, yet seeks to embed them into changed or improved scientific processes and instruments"



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FOSS – Free and Open Source Software

"Developing software in the open enhances opportunities to improve transparency, security, and innovation, and even establish a competitive advantage."



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Independence

"[Research] draws on the work of the community of researchers and should develop independently of pressure from commissioning parties and from ideological, economic, or political interests."



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Reclaiming The Internet

"We need alternative platforms that serve society instead of listed companies."



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Dual-Use

"Dual-use research of concern (DURC) describes research that is intended to provide a clear benefit, but which could easily be misapplied to do harm."



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Data Privacy

"We need to enact data privacy laws that require data companies to be more transparent about how they are collecting and using our data, and more accountable for it."



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Knowledge Security

"(1) the undesirable transfer of knowledge and technology that may pose a threat to national security, (2) covert influence and interference by or from other states, and (3) ethical and integrity issues"



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Creativity

"[Even] though the creative act requires considerable effort, in the end you will be contributing to the vast network of love that supports human existence"



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JASP

"Unlike SPSS, which can appear cluttered and overwhelming to beginners, JASP's simplicity helps students focus on learning statistical concepts without being bogged down by complex menus and options. [...] JASP is open-source and free [...] There are no complicated installation issues or licensing costs."



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Papercheck

"[Papercheck] leverages text search, code, and large language models to extract and supplement information from scientific documents [...] and provides automated suggestions for improvement."



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Open Science Communities

"Through the wide variety of backgrounds and scientific expertise of their members, bottom-up networks create a learning environment where scholars can acquire the skills to conduct open, transparent, and reliable research [...]."



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PhD-Level AI

"[For] better and for worse, we are far from seeing the end of AI advancement. What's remarkable isn't just the individual breakthroughs [...]. It's the pace and breadth of change."



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Vendor lock-in

"[We] demonstrate that if 'lead' researchers are able to establish a norm of contribution to the public good, a better outcome can be achieved, and we show that the general public license (GPL) used in the provision of open source software is one such mechanism."



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CODECHECK

"CODECHECK tackles one of the main challenges of computational research by supporting codecheckers with a workflow, guidelines and tools to evaluate computer programs underlying scientific papers."



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Evidence-based Policy

"Timely access to good quality and relevant research evidence, collaborations with policymakers and relationship- and skills-building with policymakers are reported to be the most important factors in influencing the use of evidence."



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AI Race

"Major AI companies demonstrate minimal public engagement in responsible-AI research, indicating that speed is prioritized over safety in AI development. The AI products reaching the market show limited influence from responsible-AI research findings."



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Qualitative Data

"The open science movement and the research community in general can benefit from many of the practices qualitative researchers use to maintain rigor and transparency – namely, attention to providing a high level of contextual detail and reflexivity practices for mitigating bias."



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Predatory Journals

"Predatory journals and publishers
are entities that prioritize
self-interest at the expense of
scholarship."



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Workload

"[There is] a high chance that, without intervention, increased expectations to engage in open research practices may lead to unacceptable increases in demands on academics."



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Permissive license

"When you make a creative work (which includes code), the work is under exclusive copyright by default. Unless you include a license that specifies otherwise, nobody else can copy, distribute, or modify your work without being at risk of take-downs, shake-downs, or litigation."



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Software citation

"Citation helps software developers be recognized for their work. Additionally, citation is an integral part of scientific accountability and reproducibility [...]. CodeMeta and the Citation File Format were specifically designed to enable citation of software and will likely meet your needs."



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Nanpublications

"Nanpublications are a formalized and machine-readable way of communicating the smallest possible units of publishable information."



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Enshittification

"[In the final step the] scholarly system is overwhelmed by quantity, distorted by profit motives, and is stripped of its purpose of advancing knowledge."



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Science Done Right

"Ideally, open science is just science done right. That means that you are managing all of your work right from the start, managing your data, thinking about licences, your own rights, about connecting with others."



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Silly Card Games

"The GHOST collective is a group of Open Science enthusiasts from universities across the Netherlands. We make Open Science games that can be used as training materials or just for fun."



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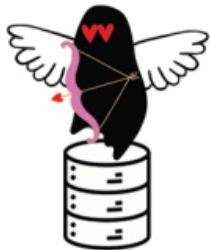




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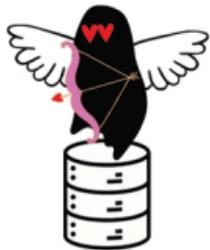




Open Access



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Research Software



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Research Data Management



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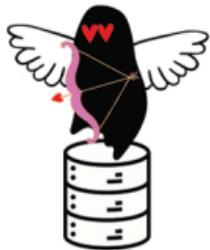




Recognition and Reward

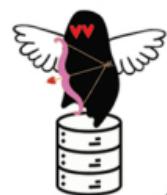


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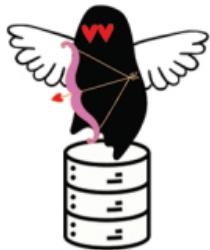




Reproducibility

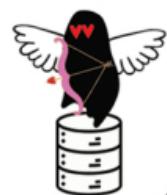


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Science Communication



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Open Educational Resources



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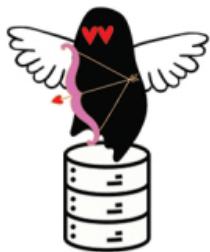




Artificial Intelligence

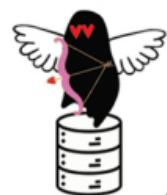


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Open Infrastructure



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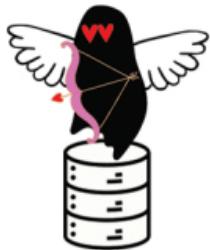




Peer Review



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Academic Integrity



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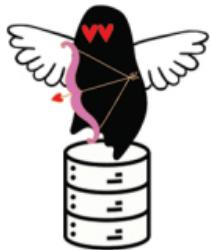




Research Ethics



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Data Stewardship



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Citizen Science



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Digital Sovereignty

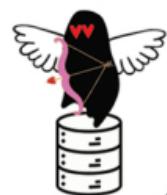


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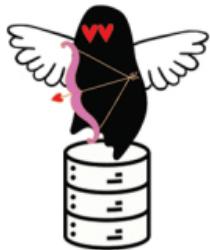




Geopolitics



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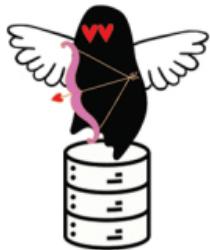




Data Privacy



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Open Source

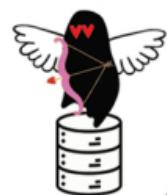


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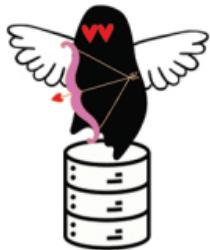




Politization



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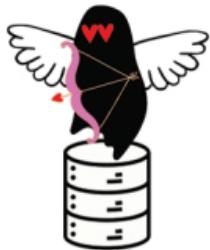




Funding



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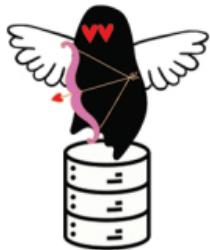




Community



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Research Quality Assessment

