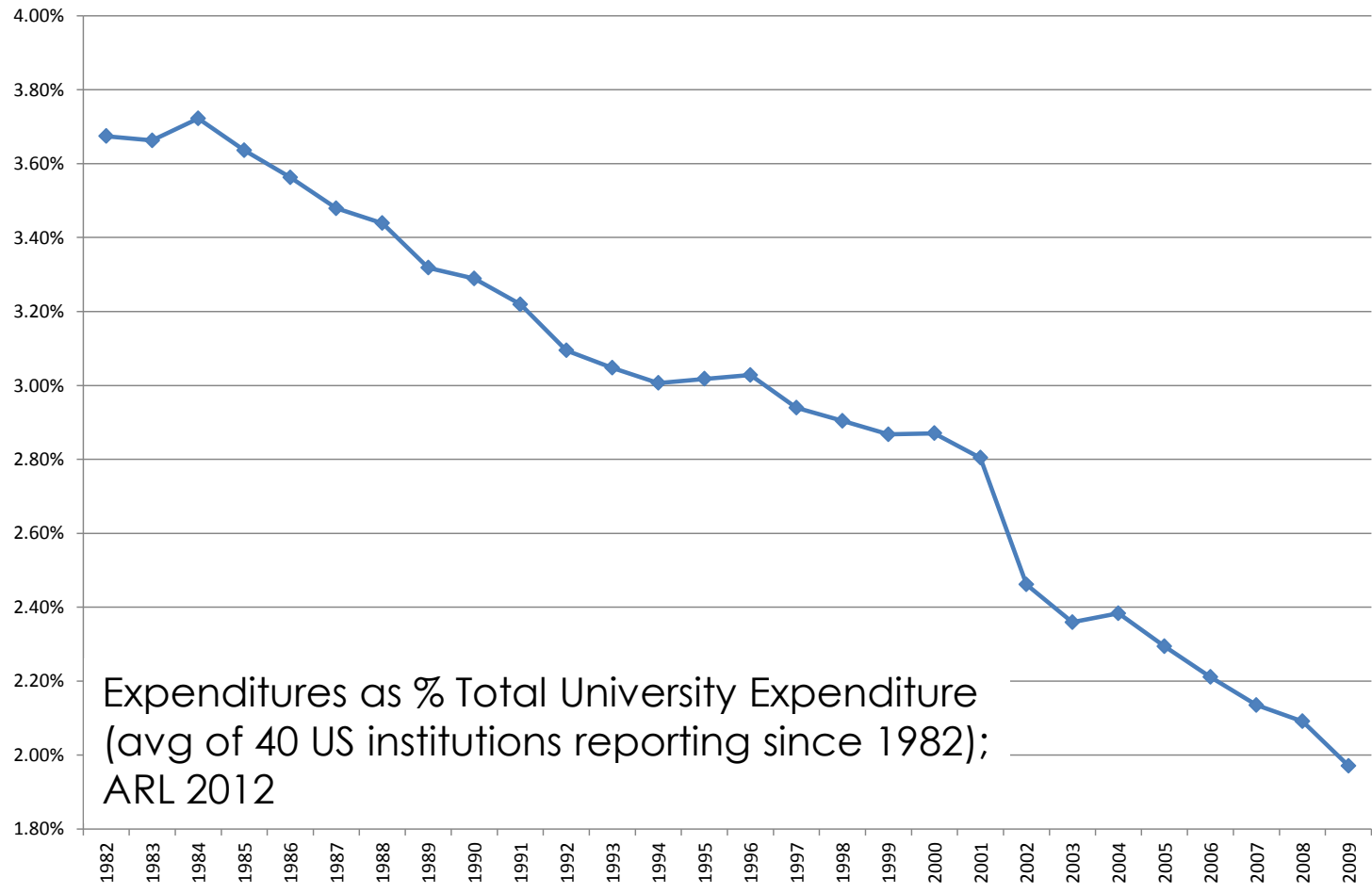


Scholarly Publishing is Big Business

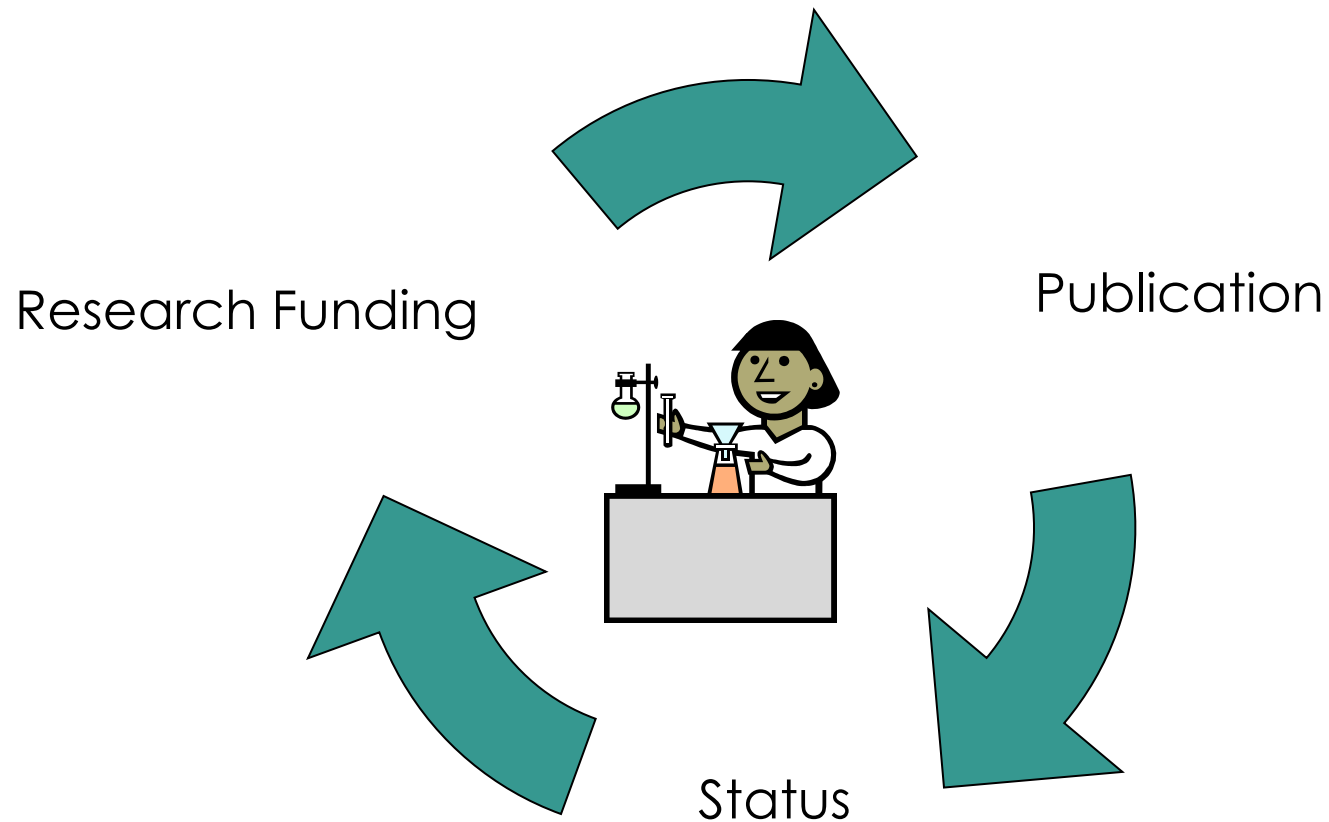
- Worth many **billions of dollars**
- More than **2,000 publishers**
- More than **25,000 journals**
- More than **1.5 million articles** published per year
- Publishers include:
 - ✓ Commercial: Elsevier, Springer, Wiley Blackwell, SAGE
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 - ✓ Scholarly societies/organizations: ACS, AIP, BMJ, AAAS
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- Secondary publishers index the work published by primaries
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Library Expenditures Down



Lifecycle of Research Funding



Magic Beans



Publisher

Copyright

Researcher

Publication Contracts

“They entirely determine what an author can do with his or her own work in the future. For many academics, signing such contracts is a very bad idea.”

Kevin Smith, J.D. “Setting the Record Straight on Elsevier”
Scholarly Communications @Duke. January 28, 2014

Takedown Notices

“Elsevier... is using the Digital Millenium Copyright Act, an American law that lets copyright holders demand the removal of anything posted online without their permission, to require individual scientists to eliminate from their websites papers published in its journals”

Economist Jan 11, 2014

Because Publishers Hold Restrictive Copyrights

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- Full text is not initially (or ever) available outside of major institutions
- Full text is not available for data mining and other applications
- Opportunities for data sharing are missed
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Open Access



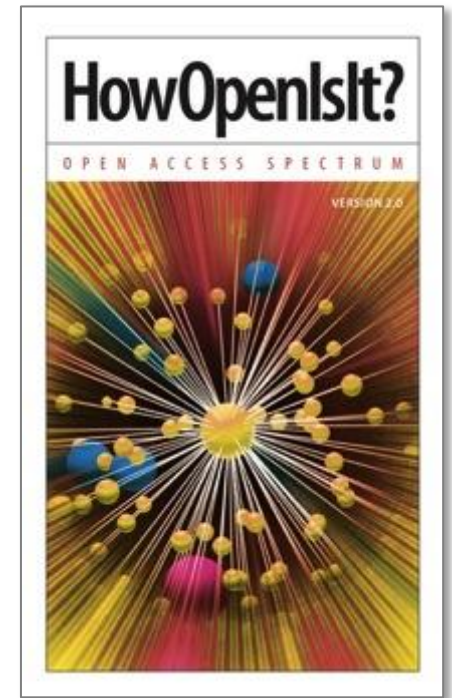
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- **Bethesda Principles, April 2003**

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Standardized Terminology for Open Access

- Illustrates a continuum of more open versus less open
- Broadens the understanding of Open Access
- Enables anyone to compare and contrast publications and policies
- Determines how open a publisher and/or publication is by using the grid



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Archived Repository Model: Green OA

- Publication in a non-gold OA journal then → deposition in a repository
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 - Subject specific
 - More general (e.g. PubMed Central)
- Embargo periods seen as critical to profitability of subscription-fee model

Open Access Reduces Influence of Competing Interests

- No incentive toward reprint sales
- No disincentive against strong competing interest policies pertaining to content and review
- No disincentive to promoting data transparency and availability

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- The **scope** of a journal
- The **quality** of a journal
- The **review process** of a journal
- Whether the publishing organization is **for profit or nonprofit**

Advantages of Open Access



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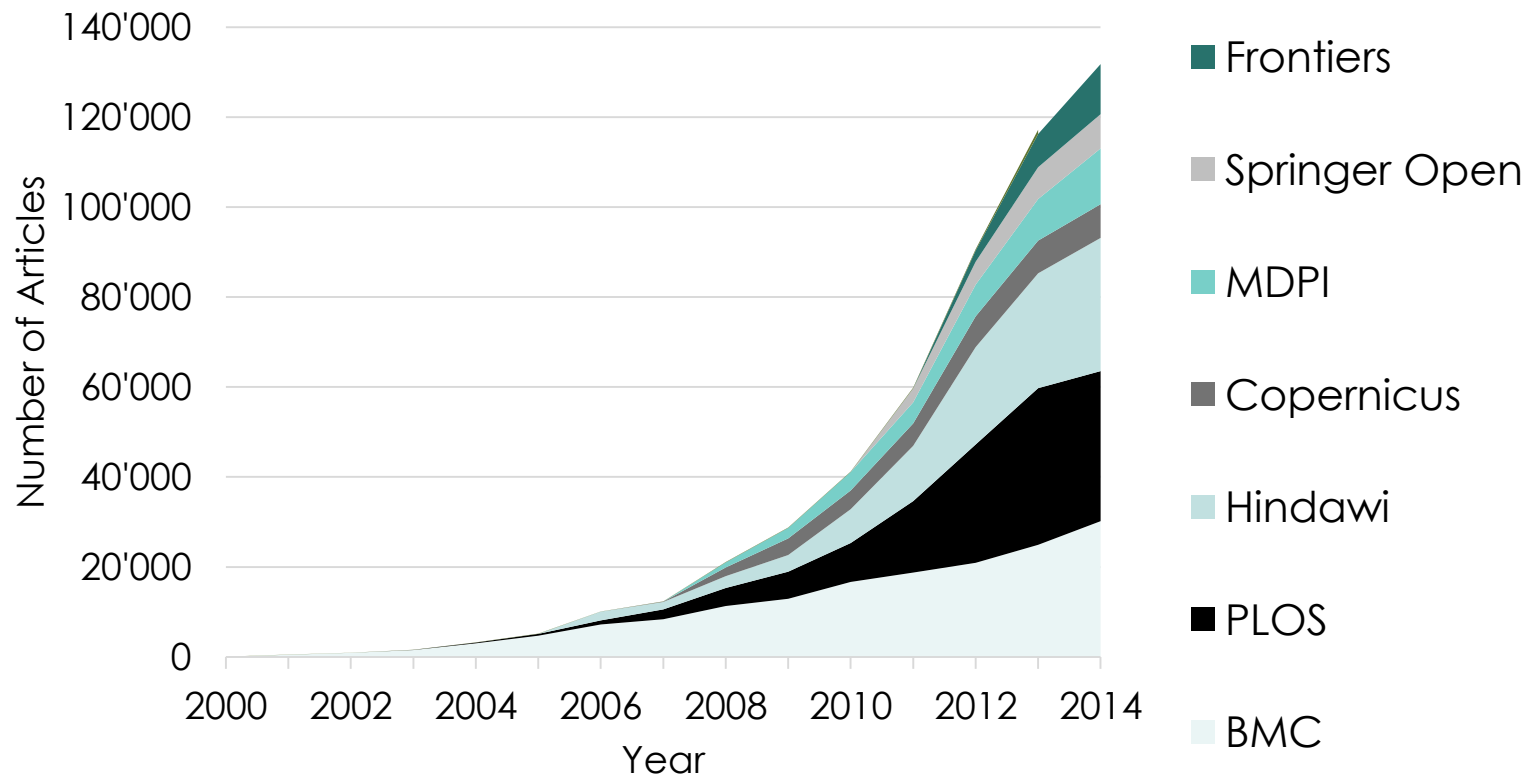
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*Bethesda Principles, April 2003



Momentum of Open Access

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Data from OASPA
oaspa.org/growth-of-oa-only-journals-using-a-cc-by-license/

A Revolution in Thought

Why is it, a growing number of people are asking, that anyone can download medical nonsense from the Web for free, but citizens must pay to see the results of carefully conducted biomedical research that was financed by the taxes? The Public Library of Science aims to change that.

Rick Weiss, *The Washington Post*
August 5, 2003

For All PLOS Journals in 2014

Category	Totals
Pre-submission inquiries	7,400
Full submissions	65,000
Research articles published	33,000
Academic Editors	6,900
Unique reviewers	93,700
Total completed reviews	161,700



150 submissions per month
Each editor has at least 30 papers to look after
More papers come all the time

Commission
Podcasts / advocacy
Conference
Meetings

Thoughtful cover letter
Well written abstract
Think of what Editors are looking for
Providing all the required information will
expedite initial decision of whether to referee

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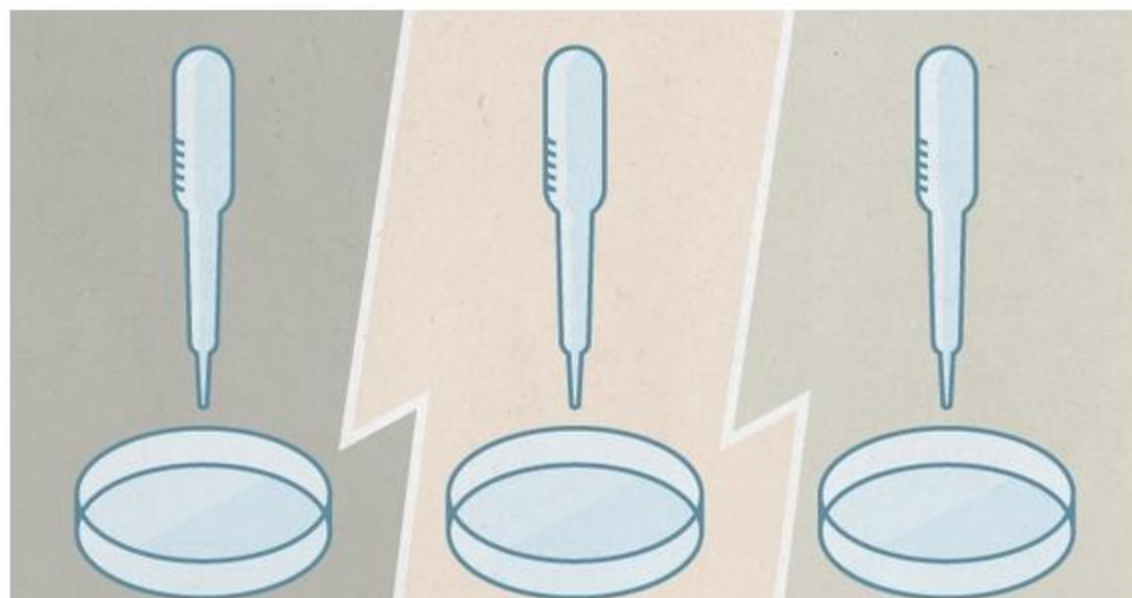
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The data policy was implemented on March 3, 2014. Any paper submitted before that date will not have a data availability

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There is growing alarm about results that cannot be reproduced. Explanations include increased levels of scrutiny, complexity of experiments and statistics, and pressures on researchers. Journals, scientists, institutions and funders all have a part in tackling reproducibility. *Nature* has taken substantive steps to improve the transparency and robustness

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Gene-editing patent

A Proactive Approach to Reproducibility with Evidence-Based Research on Research

Posted on [January 6, 2016](#) by [PLOS](#)

Discovery and reproducibility are cornerstones of the scientific enterprise. Without one, the other is hindered; new work is built on the foundation of previous results, for both breakthroughs and smaller advances, and the ability to reproduce published results expedites discovery.

Scientific research is increasingly technical, multidisciplinary and collaborative, bringing additional challenges to reproducibility and reliability. It is not new that there have been instances when published results were irreproducible, what is relevant in recent years – aided by Open Access – is the ability of motivated scientists to analyze not only data consolidated from multiple studies, in meta-analysis, but also to analyze the design, methods, reporting and evaluation of research, in meta-research studies.

Meta-research is the study of how science is conducted and reported. In recognition of the importance of this emerging field to bolstering public confidence in science and reducing unnecessary costs and efforts, [PLOS Biology](#) is taking a proactive approach to encourage reproducibility efforts with a new Meta-Research Section devoted to evidence-based research on research.

In expanding its scope to include this branch of scientific research, the journal aims “to provide a high-visibility home for research on research practices in the life sciences,” says *PLOS Biology* Senior Editor Stavroula Kousta. “By recognizing the importance of meta-research as a field, we hope to help reduce waste and restore the public’s trust in science,” she adds. In elevating the importance of data-driven meta-research, PLOS Biology ultimately aims to improve research practices.

Launch of this new section in *PLOS Biology* is accompanied by an [editorial](#) further detailing the motivation behind this addition (together with cited evidence)

Thank You

Clare Garvey

PLOS Medicine