



Scholars are on MARS:

Scholarly communication in the 21st century

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Library Systems Office

Things change; so what?

- How much research can you access?
- Who else can access your research?
- Will your research make the biggest possible impact on your field?
- Will you achieve tenure and promotion?
- Knowledge is power! Learn about the system!

The “Big Deal”

Between 1986 and 2000

The consumer price index rose **57%**

The unit cost for books increased **66%**

Faculty salaries increased **68%**

Health care costs increased **107%**

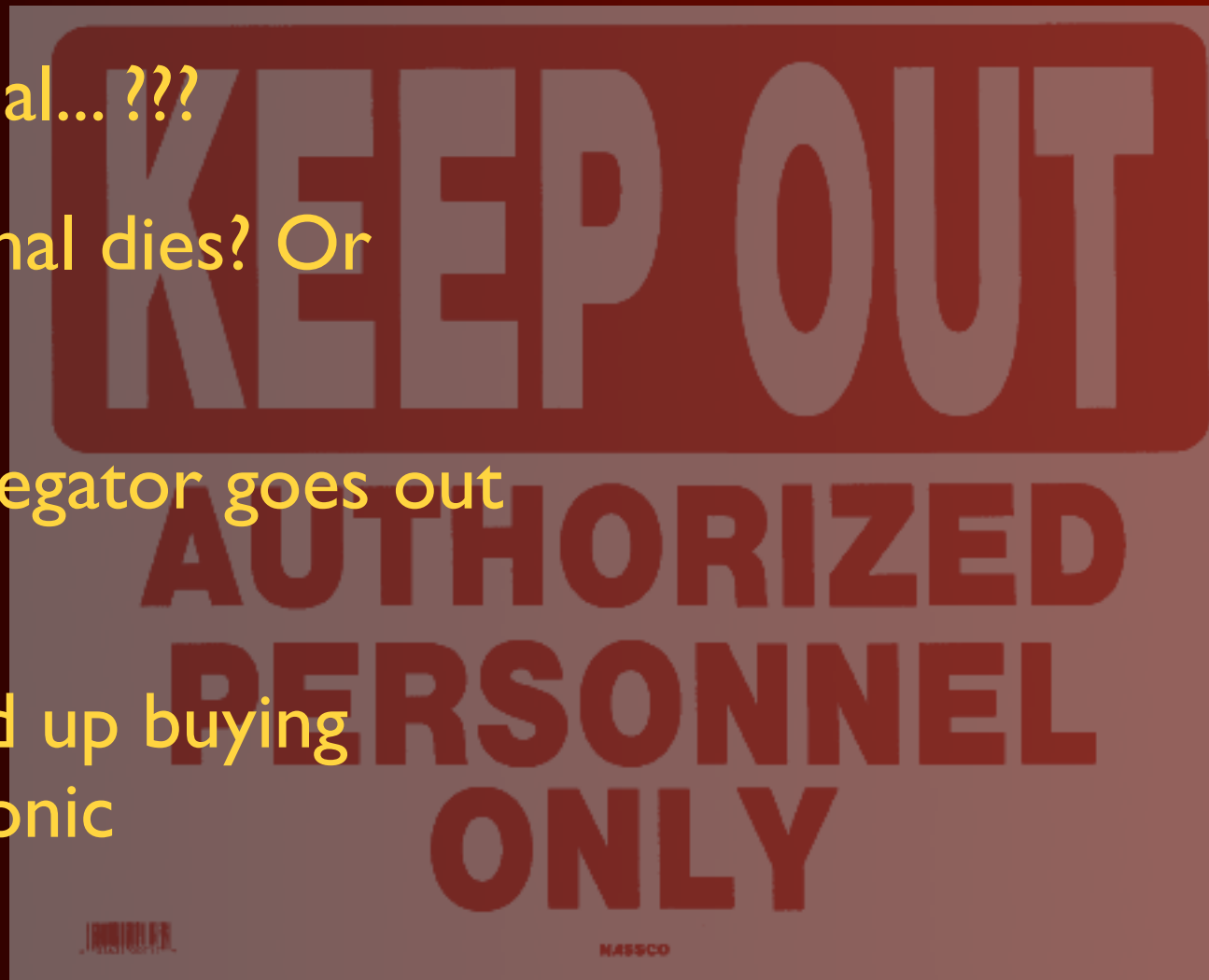
The unit cost for journals increased 226%

How?

- Major for-profit publishers bought up thousands of sci-tech-med journals
- Journal publication moved electronic
- The amount of research skyrocketed
- Publishers offered libraries “bundles” of e-journals — the Big Deal
- Prices on the Big Deal rose uncontrollably
- Popular sci-tech-med journals became unavailable outside the Big Deal

Invisible access worries

- Cancel a print journal, keep back issues
- Cancel an e-journal... ???
- What if an e-journal dies? Or gets sold?
- What if a big aggregator goes out of business?
- Many libraries end up buying print AND electronic



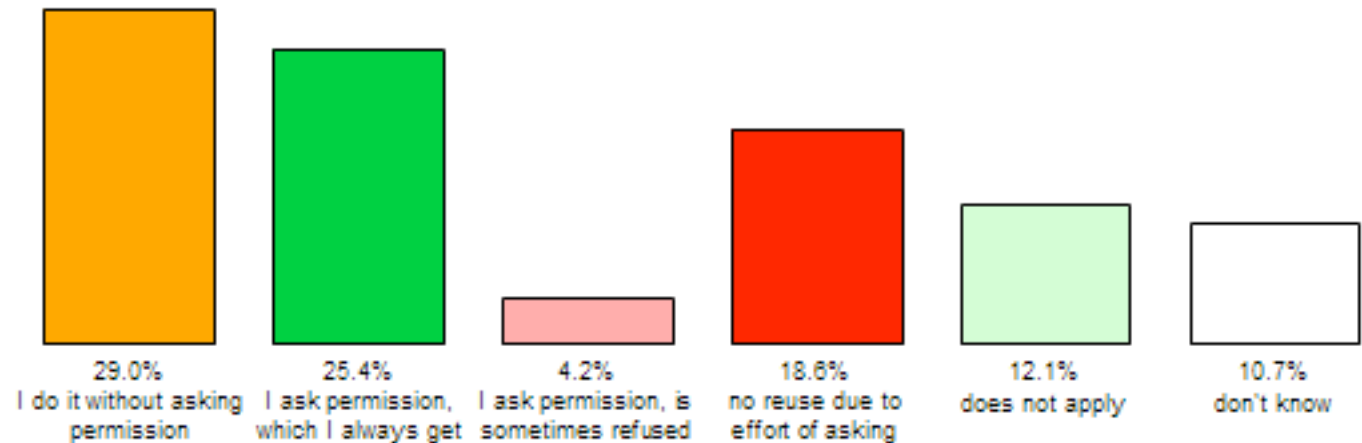
Pernicious effects

- Libraries hate it
 - Lose ability to choose the best journals
 - Strain budgets and systems to breaking
 - Worry about long-term access, preservation
- The humanities and social sciences hate it
 - The scholarly monograph dies
 - University presses fold
- Quality journals hate it
 - Small journals lose subscriptions
 - Lousy Big Deal journals survive
- Sci-tech-med researchers don't notice it...

... or do they?

One-fifth to one-third of authors surveyed feel uncomfortable reusing **their own work!**

In a traditional (subscription model) journal the copyright generally rests with the journal publisher. What do you do when you want to (re)use your article? (n=355)



Graph from Hoorn, E. and Van der Graaf, M. "Copyright Issues in Open Access Research Journals: The Authors' Perspective." D-Lib 12:2 (Feb. 2006). <http://www.dlib.org/dlib/february06/vandergraaf/02vandergraaf.html>

Other developments

Measures of cachet

- **Sciences**

- Impact factors
- The need for speed: preprints and preprint archives
- “Grey literature”

- **Humanities**

- Steadily harder to find monograph publishers
- Innovative electronic projects cannot find funding or support



Research in the classroom

- E-reserves hit the big time
 - Publishers lose course-packet royalties
 - Print reserves die on the vine in libraries
- University lawyers get nervous
 - “Fair use” under threat anyway
 - Some library e-reserve policies arguably too conservative
- Association for American Publishers: \$\$\$
 - CHE: “They clearly had a lawsuit in mind when they started contacting our office,” said Mary MacDonald, a lawyer for the university [of California] system.”

Textbooks to learning objects

- MIT's Open CourseWare started it all
- Add a dash of Blackboard and WebCT...
- “Virtual Learning Environments:” Sakai, Moodle, etc.
- “Open Textbook Project:” dicey economics

Peer review in trouble

- 
- Too many articles, not enough reviewers at top journals
 - Authors feeling pressure to publish in “top journals” send inappropriate articles
 - Peer review demonstrably doesn’t catch all errors
 - Biases and unsigned reviews assailed

Responses

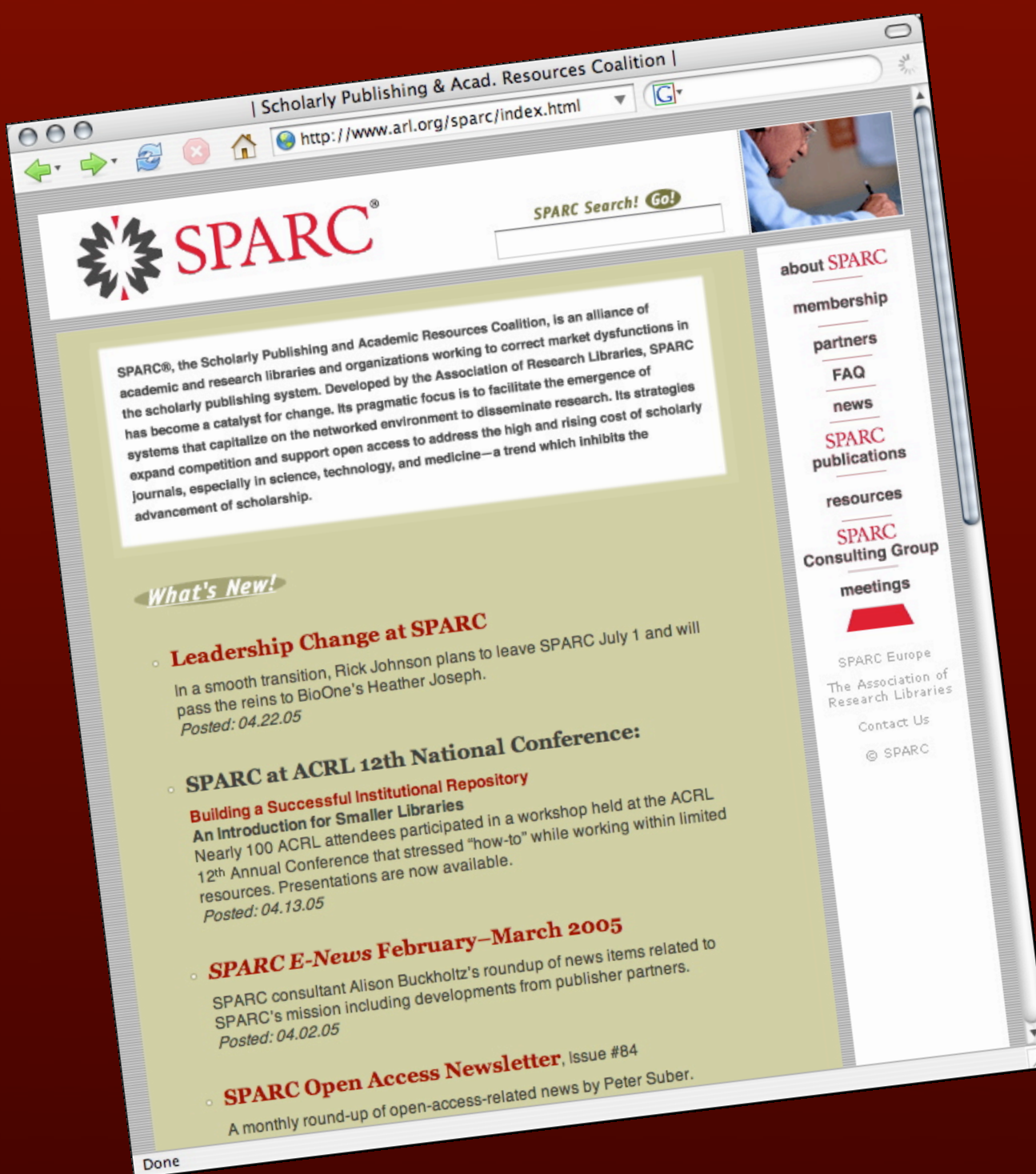
Library responses

● Then

- Forming consortia
- Buying the “Big Deal”
- Cutting budgets to the bone to afford the “Big Deal”
- Cancelling other journals

● Now

- Rejecting the “Big Deal”
- Building open access
 - Hosting OA journals
 - Building institutional repositories
 - Spreading the word



In 1997, the Association of Research Libraries founded **SPARC*** to address the **dysfunctional economics** of scholarly publishing.

***Scholarly Publishing and Academic Resources Coalition**



Mason is a member of SPARC

Faculty responses

- Then...
- Now
 - Growth of “grey literature”
 - Faculty senates reject the “Big Deal”
 - Journal editorial boards revolt
 - A few faculty self-archive
 - Public Library of Science
 - MLA revalues e-scholarship
 - University of California charts the way forward

Funder responses

- The taxpayer
 - NIH proposal
 - CURES Act
 - Alliance for Taxpayer Access
- The private/non-profit funder
 - Wellcome Trust
 - SPARC
- The rest of the world
 - Major push for national research repositories
 - England, Australia, elsewhere

NOT-OD-05-045: Implementation of Policy on Enhancing
http://grants.nih.gov/grants/guide/notice-files/NC
Implementation of Policy on Enhancing Public Access to Archived
Publications Resulting from NIH-Funded Research

Notice Number: NOT-OD-05-045

Key Dates

Release Date: April 29, 2005
Effective Date: May 2, 2005

Issued by

National Institutes of Health (NIH), (<http://www.nih.gov>)

The National Institutes of Health (NIH) published its Public Access Policy (Policy) in the February 3, 2005, and in the *Federal Register* on February 9, 2005. These announcements including Questions and Answers regarding copyright and other concerns, are available at <http://www.nih.gov/about/publicaccess/>.

The purpose of this Notice is to provide a summary of the Policy and to furnish guidance to authors of manuscripts.

Summary of the Policy

The Policy becomes effective May 2, 2005. The Policy requests and strongly encourages authors of peer-reviewed author's final manuscripts available to other researchers and the PubMed Central (PMC) [see <http://www.pubmedcentral.nih.gov>] immediately after submission, authors are given the option to release their manuscripts at a later time. NIH expects that only in limited cases will authors deem it necessary to withhold publication.

The Policy applies to all research grant and career development award mechanism and Individual Ruth L. Kirschstein National Research Service Awards, as well as to peer-reviewed, original research publications that have been supported in whole or in part by NIH. The Policy does not apply to book chapters, editorials, reviews, or conference proceedings. NIH expects that only in limited cases will authors deem it necessary to withhold publication. The Policy applies to 1) currently-funded NIH research projects or 2) previously-supported research projects resulting from 1) currently-funded NIH research projects or 2) previously-supported research projects accepted for publication on or after May 2, 2005. Publications resulting from research projects accepted for publication on or after May 2, 2005. Publications resulting from research projects submitted. We welcome comments and suggestions about the submission process.

The NIH Manuscript Submission System

The password-protected, Web-based, NIH Manuscript Submission (NIHMS) system was designed to facilitate the submission process. This system allows easy identification of intramural project numbers by associating them with the corresponding extramural project numbers. Currently, manuscript files from NIH Intramural PIs can be submitted by the PI or staff. Manuscript files from extramural PIs may be submitted by the PI only to the NIHMS system by either the extramural PI or a third party on the PI's behalf (e.g., librarians, publishers, etc.).

May 2005, NIH
“requests and strongly
encourages” peer-
reviewed final
manuscripts be placed in
PubMed Central

PubMed Central Homepage
<http://www.pubmedcentral.nih.gov/>

PubMed Central
A free archive of life sciences journals

About PMC Journal List Search Utilities

PubMed Central (PMC) is the U.S. National Institutes of Health (NIH) free digital archive of biomedical and life sciences journal literature.

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Add your name to the **PMC News list** to get email notification of new PMC journals and other significant updates.

Find out how you can **include your journal in PMC**.

All journals in PMC provide free access to full text (sometimes on a delayed basis). Some go beyond free, to **Open Access**. Find out what that means.

The **NIH Public Access** plan is meant to make the published results of NIH-funded research freely available to everyone.

PMC's **utilities** include an OAI service that provides XML of the full-text of some articles, functions for scripting PMC searches and linking to specific PMC articles from your site, and more ...

NIH-funded authors: see the **NIH Manuscript Submission** system.

It's about preservation and access: **digitizing the complete run of back issues** of many of the journals in PMC.

Looking for a thoroughly modern journal article DTD? Take a look at NLM's **Journal Publishing XML DTD and schema**.

Get **answers** to other questions about PubMed Central.

Write to PMC | PMC Home | PubMed
NCBI | U.S. National Library of Medicine
NIH | Department of Health and Human Services
Privacy Policy | Disclaimer | Freedom of Information Act

Last updated: April 29, 2005

Results

- NIH report released 16 February 2006
- Abject failure thus far
 - 3.8% compliance rate
 - Awareness was high; compliance still low
- NIH, National Library of Medicine reactions
 - Mandate deposit
 - Shorter or no embargo
 - Use paper's final published version
- Future: CURES Act?

Open-Access Journals

Open Access Journals

Open access journals **do not charge** readers or their institutions for access.

“By ‘open access,’ we mean its **free availability** on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles... **without financial, legal, or technical barriers** other than those inseparable from gaining access to the internet.

“The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to **give authors control** over the **integrity** of their work and the right to be **properly acknowledged and cited.**”

4018 signatures have been added to the Initiative.

-- from *Budapest Open Access Initiative*, 2001

Cui bono?

- Why publish?
 - Authors: career, prestige, impact
 - Small societies: journal sales fund society activities
 - Big publishers: \$\$\$
- Many actors in publishing are not paid \$\$\$
 - Article writers
 - Peer reviewers
 - Editors (often)



The Internet changes everything

- **Print journal costs divide into three parts**
 - “First copy” costs: peer review, editing, typesetting, etc.
 - Reproduction and dissemination costs
 - Preservation costs (borne by libraries)
- **E-journals eliminate the second cost!**
 - Copies after the first go out at nearly zero extra cost
 - Other economies possible (communication, management)
 - But what about preservation?

Why adoption is slow

- Many researchers: out of sight, out of mind
 - OA publishing requires research, intentional action
 - Who listens to librarians, anyway?
- Publishers: Fear, Uncertainty, and Doubt
- Authors, editors, reviewers have power but are not exercising it
- No institutional mandate

Self-Archiving and Institutional Repositories

There's another way!

- Journal publishers don't have to provide OA if researchers do themselves!
- Some researchers already email each other preprints or post PDFs to the Web
- And libraries said "hmmmmmm..."



ARL Bimonthly Report 226 February 2003

Institutional Repositories: Essential Infrastructure in the Digital Age

by Clifford A. Lynch, Executive Director, Coalition for Networked Information

Introduction

In the fall of 2002, something extraordinary occurred in the continuing evolution of disciplinary scholarly practices. The development of a new strategy that allows universities to apply serious, systematic role of supporting established publishers in modernizing scholarly digital content, and also scaling up beyond ad-hoc alliances, partnerships, and support with a few select faculty pioneers exploring more transformative new uses of the digital medium.

Many technology trends and development efforts came together to make this strategy possible. Online storage costs have dropped significantly; repositories are now affordable. Standards like the open archives metadata harvesting protocol are now in place; some progress has also been made on the standards for the underlying metadata itself. The thinking about digital preservation over the past five years has advanced to the point where the needs are widely recognized and well defined, the technical approaches at least superficially mapped out, and the need for action is now clear. The development of accessible journal article collections in disciplines such as high-energy physics has specifically for the digital medium to

An **institutional repository** is a set of **services** that a university offers to the members of its community for the **management** and **dissemination** of digital materials **created by the institution** and its community members.

—Clifford Lynch, CNI



Mason Archival Repository Service

Logged in as
dsalo@gmu.edu (Logout |
MARS Admin)

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[Advanced Search](#)

Browse by:

[Communities &
Collections](#)

[Title](#)

[Author](#)

[Date](#)

Sign on to:

[Register with MARS](#)

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Welcome to MARS

Mason Archival Repository Service exists to be a stable, well-managed, permanent archive for digital scholarly and research materials of enduring value produced by Mason faculty, staff, and students.

[Read more about MARS...](#)

Scholarly Communication workshop

The MARS Librarian, Dorothea Salo, is holding three sections of a **workshop on scholarly communication**. These will take place February 22, March 28, and April 20 at 1 pm in Fenwick Library. Learn how MARS fits into the landscape; [sign up today](#) or [send email to RSVP!](#)

Communities in MARS

Choose a community to browse its collections.

- [Event Proceedings](#)
- [MARS Pathfinders](#)
- [School of Law](#)
- [School of Public Policy](#)
- [University Libraries](#)
- [Volgenau School of Information Technology and Engineering](#)

Common concerns

- “But I signed over my copyright!”
 - Don’t do that next time!
 - Many journals permit self-archiving anyway
- “But if I self-archive, no one will publish it!”
 - Check with your favorite venues; many won’t care
 - Self-archive on acceptance
- “But who will read and trust it?”
 - It can still undergo peer review
 - Research is unanimous: GREATER CITATION IMPACT FOR WORK FREELY AVAILABLE ONLINE, irrespective of venue

Suber's “Six Things”

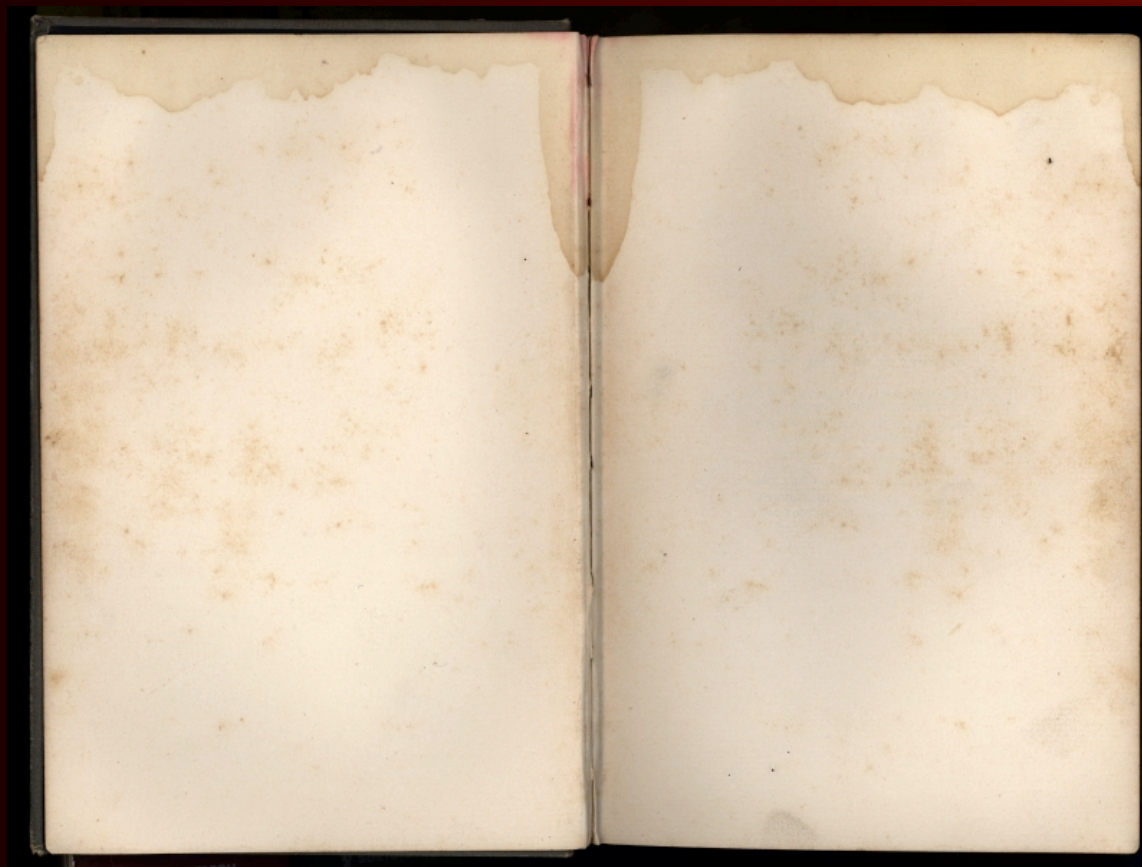
1. What OA journals exist in your field?
2. OA journals are not the whole story of OA. There are also OA archives or repositories.
3. OA archiving only takes a few minutes.
4. Most non-OA journals allow authors to deposit their postprints in an OA repository.
5. Journals using the Ingelfinger Rule are a shrinking minority.
6. OA enlarges your audience and citation impact.

The Law of Unintended Consequences

A close-up, slightly angled view of a row of old, leather-bound books. The spines of the books are visible, showing various colors like yellow, red, and brown. Each book has a small, white, rectangular label with a call number attached to its spine. The text is overlaid on the left side of the image.

We're moving from a world
where everything existed in
physical form to...

“...if it’s not online it might as well not exist.”



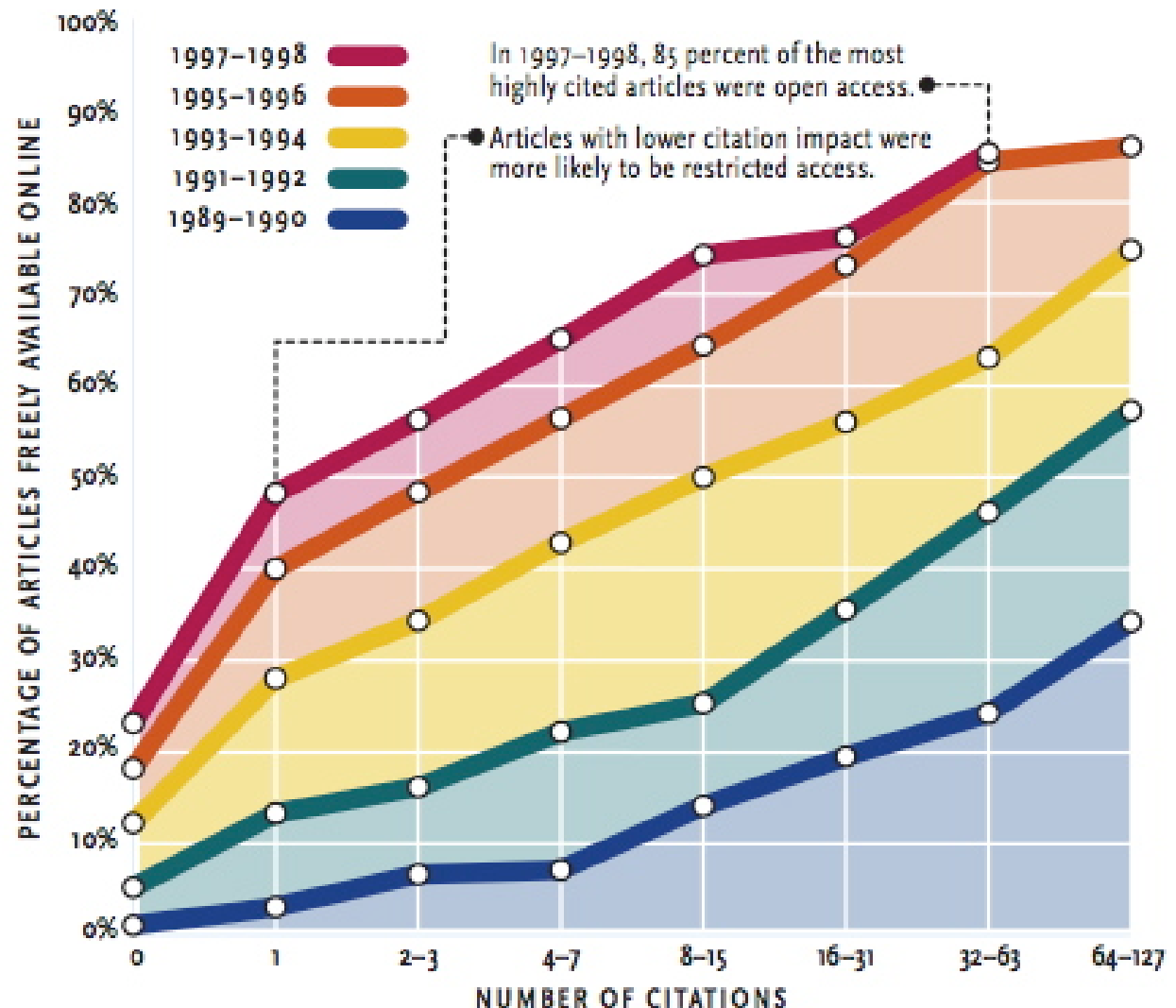
Impact factors

Steve Lawrence, a scientist at NEC Research Institute, analyzed nearly 120,000 computer-science articles.

Articles with higher levels of impact or citations were more likely to be open-access, and vice versa.

The strength of this correlation steadily increased over a decade.

Open access *increases* research impact.



Love your OA journal!

- Vivian Siegel: PLoS Biology submissions were slow... until its huge impact factor became public, when submissions DOUBLED!
- Researchers submitting without knowing that PLoS Biology was OA!
 - faster publication
 - better author services
 - author charges comparable to for-profit journals
- Lesson: OA can compete on more than ideology



The Future

Photo credit: <http://www.flickr.com/photos/perspective/66048653/>

The humanities



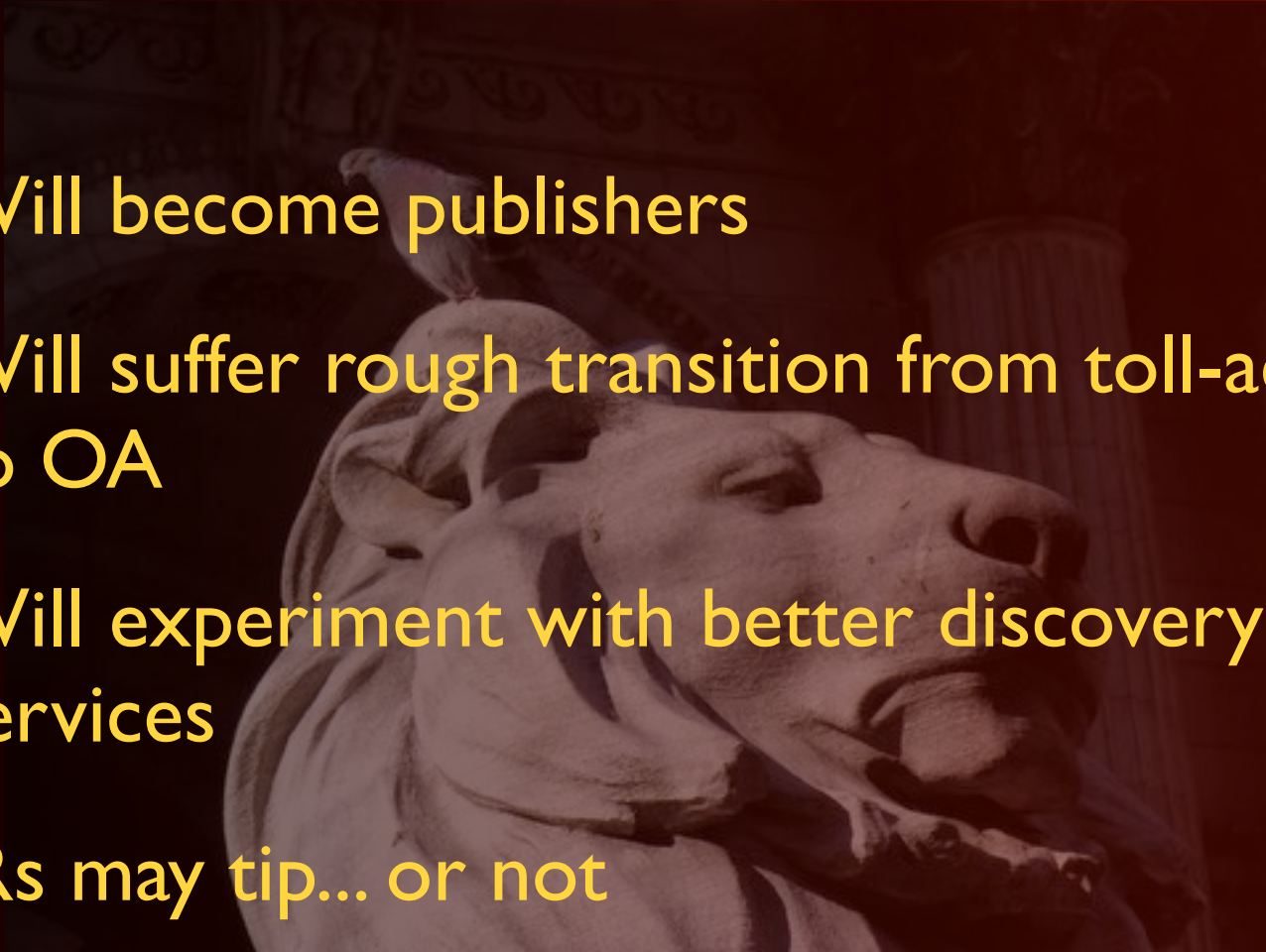
- The “scholarly monograph” will fade
 - Monographs with wider appeal will still find publishers
 - Abstruse works may be published POD or all-electronic
- More innovative digital projects
 - In cooperation with libraries? We have the tech skills and the humanities backgrounds!
- Tenure/promotion requirements will change

The hard sciences

- More science funders will insist on OA
- Researchers will continue bypassing the formal publication system
- If the US does not step up to the OA plate, Europe, Australia, and Asia will eat its lunch
- OA journals will (mostly) thrive
- Will universities start charging for-profit publishers for editing and review services?

Academic libraries

- Will become publishers
- Will suffer rough transition from toll-access to OA
- Will experiment with better discovery services
- IRs may tip... or not
 - May end up limited to specialized uses, e.g. e-theses
 - May consolidate across state systems or consortia



Large journal publishers

- Will experience price and impact-factor pressure
- Will continue to lobby governments and spread misinformation to researchers
- Will experiment with business models
- May panic
 - Draconian restrictions on self-archiving and e-reserves
 - Will hasten scholars' move to other venues

Scholarly societies



- Won't suffer as much as they think they will
- Will still publish journals
 - With library help?
 - OA?
- Will find other ways to create member value
- Will continue partnerships, aggregations

Peer review

- Will continue
 - In for-profit journals
 - In OA journals
- Will operate alongside post facto measures like impact factors
- May become post facto altogether (e.g. Faculty of 1000)
- May cease to be anonymous
- May become “commenting” on the article-of-record

What to do

“Faculty copyright retention
is a precondition for us to
help disseminate (manage,
and preserve) our
institution’s scholarly
output.”



—John Ober,
University of California,
21 January 2006

Insist your publishers fly right

- After all, they're not paying you
- Don't sign over copyright!
- Check their policies
 - What do they charge?
 - Do they allow self-archiving?
 - Have they planned for subscribers' electronic access in case of business difficulties?
- When all else fails, revolt!
 - Join the best of the best
 - Support your discipline, not publishers' shareholders

Publish OA

- Find and submit work to OA journals in your discipline
- Ask your funders to pay author charges
- Nudge your favorite journals to consider OA
- Ask your department to make a statement in favor of OA publication

Be a MARS Pathfinder!

A Mars rover, likely a Mars Pathfinder, is shown on a reddish-brown, rocky surface. The rover has a large solar panel extended to the right and a camera mast with a camera head. The background shows a hazy, orange-brown sky and distant hills.

- <http://mars.gmu.edu/>
- Register with MARS
- Email dsalo@gmu.edu to get deposit access
- Deposit your research!
 - Preprints/postprints, working papers
 - Conference slides
 - Podcasts or video
 - Datasets

Convince your colleagues

- Seven mentions before faculty investigate IRs
 - Be one (or more!) of the seven
 - Lead by example
 - Invite Dorothea Salo to faculty meetings!
- Join Cornell, California, and many other faculty senates:
 - Reject the Big Deal
 - Call for faculty to retain article copyrights
- Need an article on e-reserve? Ask the author to self-archive it instead.