Scholars are on MARS:
Scholarly communication in the 21st century

Dorothea Salo
Digital Repository Services Librarian
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%
• 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...
One-fifth to one-third of authors surveyed feel uncomfortable reusing their own work!

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

Photo credit: http://www.flickr.com/photos/pictureperfectpose/68108278/
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

Photo credit: http://www.flickr.com/photos/bahal210/732977786/
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

Photo credit: http://www.flickr.com/photos/arts/62554955/
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
May 2005, NIH “requests and strongly encourages” peer-reviewed final manuscripts be placed in PubMed Central.
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.”

-- 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...”
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
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
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.
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

Photo credit: http://www.flickr.com/photos/slightlywinded/60172014/
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!

- <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.