Open Access: An STM Journal Publisher’s Perspective

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First, a look at some numbers…

For Elsevier:

- 7,000 employees in 62 offices in 26 countries
- >1,800 journals, >20% of published peer-reviewed articles
- Affiliated with more than 500 societies
- <50% of revenues from journals
- A company following a great tradition…
DISCORSI
E
DIMOSTRAZIONI
MATHEMATICHE,
intorno a due nuove scienze
Attenenti alla
Mecanica & i Movimenti Locali,
del Signor
GALILEO GALILEI LINCEO,
Filosofo e Matematico primario del Serenissimo
Grand Duca di Toscana.
Con una Appendice del centro di gravità d’aluni Solidi.

IN LEIDA,
Appresso gli Elzeviri. M. D. C. xxxviii.
What do journal publishers do?

- Solicit and manage submissions
- Archive and promote
- Publish and disseminate
- Production
- Edit and prepare
- Manage peer review

- 5,000 new editors per year
- 500 new journals launched per year
- 3 Million+ article submissions per year
- 2.5 million+ referees
- 3.75 million+ referee reports per year
- 50%+ of submissions rejected
- 125,000 editors
- 350,000 editorial board members
- 30 million+ author/publisher communications per year
- 1,500,000 new articles produced per year
- 180 years of back issues scanned, processed and data-tagged

- 12 million researchers
- 4,500+ institutions
- 180+ countries
- 1 billion+ downloads/year
- 10 million+ printed pages/year
- 40 million articles available digitally, back to early 1800s
- Support third party archives (Portico, CLOCKSS, KB)

Note: industry estimates based on known numbers for a subset of the industry that are then scaled to 100% based on the article share of the known subset.
 Publishers have invested heavily to digitize since 1995

- Elsevier alone has invested over $750 million to digitize STM publishing processes since 1995
- STM industry has invested an estimated $3+ billion since 1995

**Organise editorial boards**
- Launch new specialist journals

- Solicit and manage submissions
- Manage peer review
- Edit and prepare
- Publish and disseminate
- Archive and promote

**Production**
- Production Tracking System $25 million
- Electronic Warehouse $25 million

**Author Submission & Editorial Systems**
- Author Submission & Editorial Systems $30 million

**ScienceDirect**
- (±1.5 million downloads per day)
- Scopus
- Scirus
- MD Consult
- HealthConnect

**eJournal Backfiles eReference Works**
- $70 million

**eNewsletters and alerts**
- >$600 million

**Elsevier Example**
- Elsevier alone has invested over $750 million to digitize STM publishing processes since 1995
- STM industry has invested an estimated $3+ billion since 1995

Figures in current (2009) UK pounds using gdp deflators
20 mainframe computers
Rows of servers
Four Sea Containers and Two Air Containers

Millions of pages

$40 million for scanning alone
A NEW FACTORY JUST FOR BACKFILES

2000 people
Now, turning to Open Access...
What falls under the umbrella of “open access” for STM?

1. **Author pays journals**
   - **Definition**: Author fee per article published – sole mechanism to support journal
   - **Examples**: BioMed Central, Public Library of Science, Hindawi

2. **Sponsored articles**
   - **Gold Road**
   - **Definition**: Option to pay article fee after decision to publish
   - **Examples**: Open Choice (Springer), Online Open (Blackwell), Elsevier sponsored option

3. **Delayed Access**
   - **Definition**: Subscription journals making articles free online after time delay
   - **Examples**: Cell (12 months), IJSS (24 months), HighWire Press

4. **Manuscript archiving**
   - **Green Road**
   - **Definition**: Final manuscripts, or preprints
   - **Examples**: Author-posted

5. **Public Access; Developing world access**
   - **Definition**: Scientific and medical articles used by public in medical need
   - **Examples**: Elsevier walk-in policy for SD, Patient INFORM, Patient Research, Research4Life
Where is ‘open access’ today?

1. Author pays journals
   - 95%+: BioMed Central, PLoS, Hindawi
   - 1%  1%

2. Sponsored articles
   - 25% of all published articles are in journals that offer this option
   - <1%  <1%

3. Delayed access
   - Some at <6 months; 6% at 12 months; 1% at 18 months+
   - Primarily life and health sciences
   - 7%  7%

4. Manuscript posting
   - Most journals allow preprint and/or manuscript posting
   - Increasing number of posting policies
   - 5%  7%
1. We are pro Universal Access
   – We exist to disseminate information, not to hide it

2. We are pro Quality
   – Peer review provides essential quality controls
   – Quality of the research experience is also essential (productivity)

3. We are pro Sustainability
   – Society depends upon a well-functioning communications system
   – System must be sustainable for our partners (universities, funders) too

We support all mechanisms to achieve sustainable universal access to quality content
<table>
<thead>
<tr>
<th>Category</th>
<th>Access %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research articles in journals</td>
<td>93%</td>
</tr>
<tr>
<td>Reference works</td>
<td>74%</td>
</tr>
<tr>
<td>Clinical guidelines</td>
<td>73%</td>
</tr>
<tr>
<td>Professional/Trade publications</td>
<td>63%</td>
</tr>
<tr>
<td>Books/ Monographs</td>
<td>62%</td>
</tr>
<tr>
<td>Technical information (e.g. characteristics of materials)</td>
<td>57%</td>
</tr>
<tr>
<td>Patent information</td>
<td>56%</td>
</tr>
<tr>
<td>Conference proceedings</td>
<td>56%</td>
</tr>
<tr>
<td>Historical archives/public records</td>
<td>44%</td>
</tr>
<tr>
<td>Doctoral theses/ dissertations</td>
<td>43%</td>
</tr>
<tr>
<td>Market Research reports</td>
<td>38%</td>
</tr>
<tr>
<td>Data set/ Data models/ Technical Info/ Algorithms and programmes</td>
<td>38%</td>
</tr>
</tbody>
</table>
Where are we now: Access by content type, global

4,109 respondents

Global Study - Phase I
PRELIMINARY STUDIES – NOT YET RELEASED
We will continue working to closing remaining gaps

% of each sector rating access to original research articles in journals ‘very easy’ or ‘fairly easy’

<table>
<thead>
<tr>
<th>Sector</th>
<th>Percent</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMEs</td>
<td>70.9</td>
<td>134</td>
</tr>
<tr>
<td>Large corporate</td>
<td>82.4</td>
<td>74</td>
</tr>
<tr>
<td>University/College</td>
<td>93.9</td>
<td>458</td>
</tr>
<tr>
<td>All non-corporate</td>
<td>88</td>
<td>765</td>
</tr>
</tbody>
</table>
Where are we now: Quality

Peer review

Researcher views on peer review process

- Improves quality: 90% agree, 3% disagree
- Determines importance: 60% agree, 16% disagree
- Determines originality: 58% agree, 17% disagree
- Picks best ms for journal: 49% agree, 22% disagree
- Detects plagiarism: 46% agree, 24% disagree
- Detects fraud: 43% agree, 26% disagree

Industry initiatives

- Cross-publisher initiative with CrossRef to detect instances of plagiarism in scientific articles
- Includes most major publishers, with over 22 million articles
- Provides online forum for publishers and journal editors to discuss issues regarding scientific and peer review integrity
Elsevier is very active in the access arena

- **Founding partner of Research4Life**, providing research to developing nations
- **Adopted ‘green’ Author Posting Policy**
- **Began depositing NIH author manuscripts to PMC to appear after 12 months**
- **40+ journals began offering sponsored article option**
- **Established OpenCourseWare agreement with MIT**
- **“Showcase” pilot launched**
- **Established agreement with Howard Hughes Medical Institute**
- **Elsevier-Wellcome Trust agreement**
- **Founding member of PEER**
- **300+ journals offering sponsorship option**
- **Free access to first LHC article**

- **Founding partner of Research4Life, providing research to developing nations**
- **Adopted Science Direct walk in policy**
- **Cell Press journals articles available to non-subscribers after 12 months**
- **Freedom and Subject collections**
- **Established GDP-based pricing**
- **Elsevier launches Patient Research**
- **Launched OncologySTAT**
- **Established GDP-based pricing**
- **Elsevier-Wellcome Trust agreement**
- **Funding member of PEER**
- **300+ journals offering sponsorship option**
- **Free access to first LHC article**
Elsevier’s position

Author pays journals
- Remains niche
- Financial viability remains in question
- Launching a few author pays titles in 2010

Sponsored articles
- 450 Elsevier journals have sponsorship option
  - Author uptake minimal – 515 articles in 2009
- Sponsorship agreements with funders – such as Wellcome Trust
- Elsevier is committed to not “double dip”
2. Sponsored articles: (Elsevier)

Elsevier public statements on pricing

“When calculating subscription prices we plan to only take into account content published under the subscription model. We do not plan to charge subscribers for author sponsored content.” – Participating journal home page.  http://www.elsevier.com/wps/find/authorshome.authors/nupha

“As needs and models evolve, our subscription agreements will increasingly recognize the decoupling of print from electronic subscriptions. For individual journals, we are realigning prices to reflect a number of factors, including differences in the number of articles made available, quality, and usage, as well as new factors such as Sponsored Articles.” 2009 Pricing Letter.

No ‘double dipping’
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**Delayed access**
- 30 journals, including Cell Press titles, are available to non-subscribers after a delay
- Delay period determined by characteristics of journal
3. Delayed Access: Embargo periods and sustainability

Article usage over time: first 5 years only

More than 60% of usage within first year

35% of usage within the first year

Life Sciences – rapid

Social Sciences

One size does not fit all – usage over time varies significantly across journals and subject areas
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Manuscript Posting
- Support individual authors voluntarily wanting to post preprints and final author manuscripts to their own websites, Institutional Repository or preprint servers, but not to third party websites or for purposes of systematic distribution
- Actively worked with funding bodies, NIH, Wellcome Trust, HHMI, Austrian Science Fund
Elsevier deposits NIH manuscripts to PubMed Central

- Elsevier began depositing more than 1,000 Accepted Author Manuscripts (AAMs) to PMC per month in April 2007. Thus, with release on PMC 12 months after publication, the large numbers of Elsevier manuscripts began appearing on PMC April 2008.

- As of June 2009, 15,400 Elsevier accepted author manuscripts (38% of all AAMs) appear on PMC. The number of Elsevier AAMs appearing on PMC will grow at a steady rate of about 1,200 AAMs per month, an estimated 100% of Elsevier manuscripts reporting NIH-funded research.
**Market Perception: Elsevier’s author posting policies**

<table>
<thead>
<tr>
<th>Publisher:</th>
<th>Elsevier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-print:</td>
<td>✓ subject to Restrictions below, author can archive pre-print (ie pre-refereeing)</td>
</tr>
<tr>
<td>Restrictions:</td>
<td>✓ This does not include Cell Press</td>
</tr>
<tr>
<td>Post-print:</td>
<td>✓ author can archive post-print (ie final draft post-refereeing)</td>
</tr>
</tbody>
</table>
| Conditions: | ✓ On authors personal or authors institutions server  
✓ Published source must be acknowledged  
✓ Must link to journal home page  
✓ Publishers version/PDF cannot be used  
✓ Articles in some journals can be made Open Access on payment of additional charge  
✓ NIH Authors articles will be submitted to PMC after 12 months. |

**Mandated OA:**
- ANR (Compliant - see conditions)
- arc (Paid OA option)
- ARC (Paid OA option)
- BBSRC (Compliant)
- Cancer Research UK (Paid OA option)
- CSO (Paid OA option)
- DoH (Paid OA option)
- DFG (Compliant)
- ESRC (Compliant)
- CERN (Compliant)
- ERC (Compliant)
- FWO (Compliant)
- FWF (Compliant)
- HHMI (Paid OA option)
- Inserm (Compliant - see conditions)
- IRCSET (Compliant)
- MRC (Paid OA option)
- NHMRC (Compliant)
- NIH (Compliant)
- NERC (Compliant)
- PPARC (Compliant)
- SNF (Compliant)
- STFC (Compliant)
- Wellcome Trust (Paid OA option)

**Paid access:** Sponsorship Option

**Copyright:** view policy

**RoMEO:** This is a RoMEO green publisher

**Updated:** 22-Aug-2007. Suggest an update for this record

**Elsevier is viewed favorably as a “green publisher” and for establishing policies and agreements that allow authors to comply with funding body policies.**

Source: [http://www.sherpa.ac.uk/romeo.php?all=yes](http://www.sherpa.ac.uk/romeo.php?all=yes)
5. Public Access: access for patients & developing countries

Patient access

Patient Research is an initiative to give patients, family members and caregivers access to medical articles that might help them better understand their health issues.

- A patient, family member or caregiver searches the Internet on topics relevant to a patient’s condition.
- Search results link to articles in participating Elsevier medical journals.
- The individual may register to request email delivery of the article for a small processing fee.

Free or low cost content

Subsidized solutions

The Elsevier Foundation

Grants for innovative library solutions in developing countries
We are a “green” publisher: under our journal publishing agreement with authors, they can voluntarily post their accepted manuscripts to their website or institution’s repository, provided it is not for the purposes of systematic distribution.

However, if authors are required to post or an institution otherwise has a policy of systematic distribution that is designed to collate and disseminate all manuscripts, we require an agreement with that institution, which involves embargo periods.
Another option

Web Showcase
Service where we would provide a complete, immediate and publicly accessible index of all UNT-authored articles, with live links to the published journal articles hosted by their publishers (from all 18,000 journals covered by Scopus, not just Elsevier publications). This is still in pilot phase and we are working with development partners.
Conclusions

• We fully support the goal of achieving universal sustainable access to published research.
• We will systematically measure access across all constituents and seek to close remaining access gaps where they exist.
• We are open to any mechanism that has the potential to close remaining access gaps without compromising current high standards and at least maintaining existing:
  – Quality control
  – Researcher productivity
  – Efficiency in system-wide costs (i.e. not duplicating)
  – Professional archival preservation systems
• We will continue our hybrid approach, with a fact-based, test-and-learn approach to ensure that net benefits for researchers are positive.
• We would be happy to work with UNT to permit authors to comply with your proposed policies.