

Digital Archiving Today

The view of a commercial publisher

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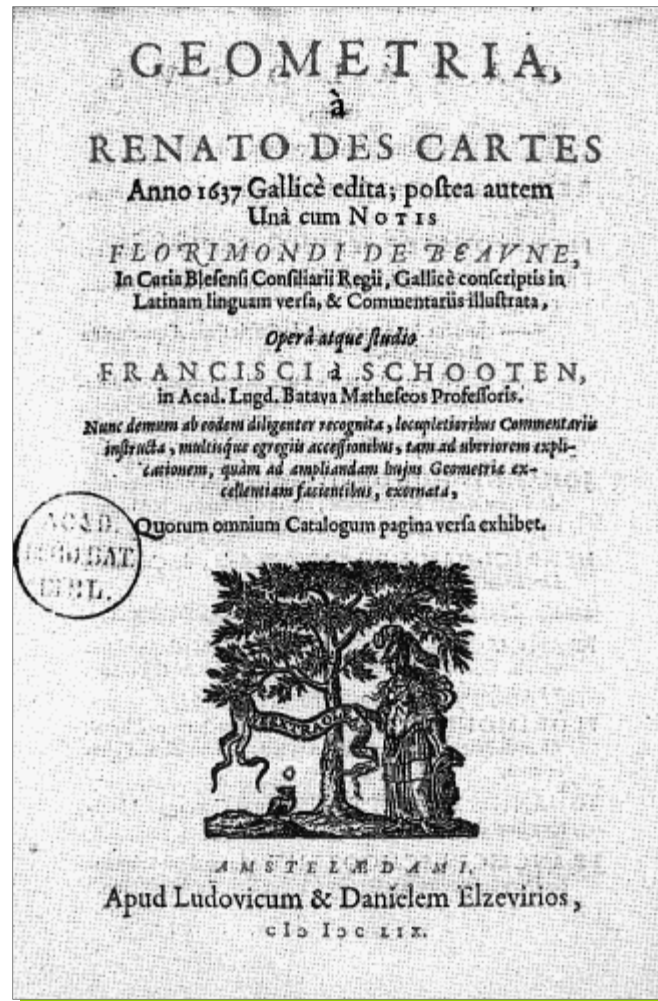


ELSEVIER

Topics

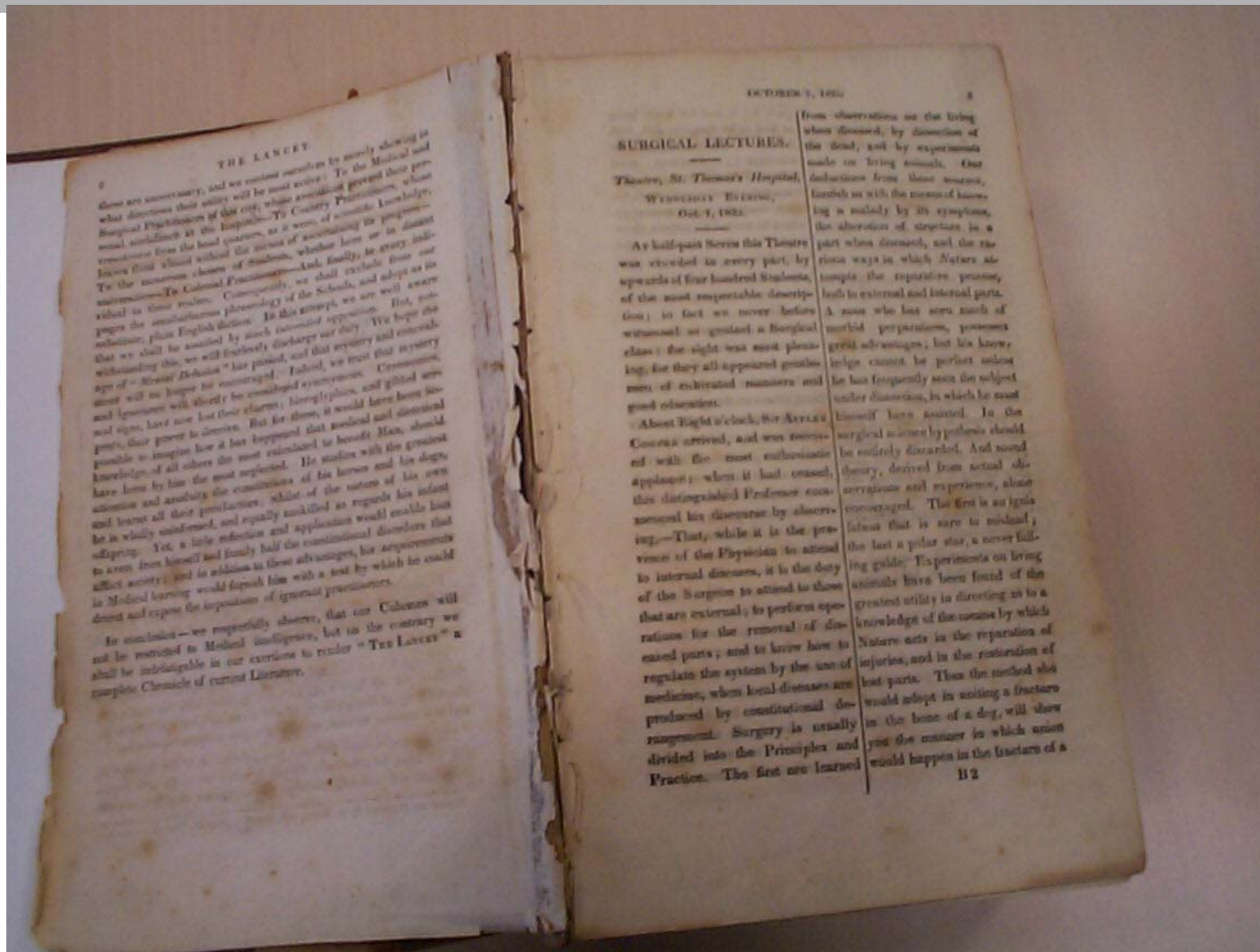
- Why should Publishers ever care about Digital Archiving?
- Some History (from a publisher's viewpoint)
 - Early approaches to Digital Archiving
 - How Elsevier arrived at its archiving strategy
- The current state of Digital Archiving at Elsevier; a transitional and redundant solution

Anno 1637; Print still works ...



Print publication by the brothers Elsevier, Leyden, The Netherlands, 366 years ago
Still available in the Leyden University Library

Lancet – vol 1 no. 1 1823



these are unnecessary, and we content ourselves by merely showing in what directions their utility will be most active. To the Medical and Surgical Practitioners of this city, whose assiduous pursuit these personal attentions at the hospitals. To Country Practitioners, whose remoteness from the best sources, as it were, of scientific knowledge, leaves them almost without the means of accumulating its progress. To the numerous classes of students, whether here or in distant universities. To Colonial Practitioners, we shall exclude from our recital in these notices. Consequently, we shall exclude as its subject the miscellaneous phenomena of the Schools, and adopt as its substance, plain English fiction. In this attempt, we are well aware that we shall be assailed by much interested opposition. But, notwithstanding this, we will fearlessly discharge our duty. We hope the signs of "Mental Dejection" has passed, and that mystery and concealment will no longer be considered synonymous. Circumstances, and legions with their charms, hieroglyphics, and gilded appearances, have now lost their charms; hieroglyphics, and gilded appearances, have now lost their charms; hieroglyphics, and gilded appearances, have now lost their charms. But for those, it would have been impossible to imagine how it has happened that medical and distasteful knowledge of all others the most calculated to benefit Man, should have been by him the most neglected. He studies with the greatest attention and anxiety the constitution of his horses and his dogs, and learns all their peculiarities; whilst of the nature of his own he is wholly unacquainted, and equally unskilled as regards his infant offspring. Yet, a little reflection and application would enable him to extract from himself and family half the constitutional disorders that afflict society; and in addition to these advantages, his improvements in Medical learning would furnish him with a test by which he could detect and expose the impostures of ignorant practitioners.

In conclusion—we respectfully observe, that our Columns will not be restricted to Medical intelligence, but to the contrary we shall be intelligible in our exertions to render "The Lancet" a complete Chronicle of current Literature.

OCTOBER 7, 1823

SURGICAL LECTURES.

Theatre, St. Thomas's Hospital,
WEDNESDAY EVENING,
Oct. 9, 1823.

At half-past seven this Theatre was crowded in every part, by upwards of four hundred Students, of the most respectable description; in fact we never before witnessed so grand a Surgical class: the sight was most pleasing, for they all appeared gentlemen of cultivated manners and good education.

About eight o'clock, Sir ARTHUR COCHRAN arrived, and was received with the most enthusiastic applause; when it had ceased, this distinguished Professor commenced his discourse by observing.—That, while it is the province of the Physician to attend to internal diseases, it is the duty of the Surgeon to attend to those that are external; to perform operations for the removal of diseased parts; and to know how to regulate the system by the use of medicine, when local-diseases are produced by constitutional derangement. Surgery is usually divided into the Principles and Practice. The first are learned from observations on the living when diseased; by dissection of the dead, and by experiments made on living animals. Our deductions from these sources, furnish us with the means of knowing a malady by its symptoms, the alteration of structure in a part when diseased, and the various ways in which Nature attempts the reparative process, both in external and internal parts. A man who has seen much of morbid preparations, possesses great advantages; but his knowledge cannot be perfect unless he has frequently seen the subject under discussion, in which he must himself have assisted. In the surgical science by pathology should be entirely discarded. And sound theory, derived from actual observations and experience, alone encouraged. The first is an ignis fatuus that is sure to mislead; the last a polar star, a never-failing guide. Experiments on living animals have been found of the greatest utility in directing us to a knowledge of the means by which Nature acts in the reparation of injuries, and in the restoration of lost parts. Thus the method she would adopt in uniting a fracture in the bone of a dog, will show you the manner in which union would happen in the fracture of a

112





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THE LANCET.

VOL. I.—No. 1.] LONDON, SUNDAY, OCTOBER 5, 1823. [Price 6d.

P R E F A C E.

It has long been a subject of surprise and regret, that in this extensive and intelligent community there has not hitherto existed a work that would convey to the Public, and to distant Practitioners as well as to Students in Medicine and Surgery, reports of the Metropolitan Hospital Lectures.

Having for a considerable time past observed the great and increasing inquiries for such information, in a department of science so pre-eminently useful, we have been induced to offer to public notice a work calculated, as we conceive, to supply in the most ample manner, whatever is valuable in these important branches of knowledge;—and as the Lectures of Sir Astley Cooper, on the theory and practice of Surgery, are probably the best of the kind delivered in Europe, we have commenced our undertaking with the introductory Address of that distinguished professor, given in the theatre of St. Thomas's Hospital on Wednesday evening last. The Course will be rendered complete in subsequent Numbers.

In addition to Lectures, we purpose giving under the head, Medical and Surgical Intelligence, a correct description of all the important Cases that may occur, whether in England or on any part of the,

Digital Archiving—why should publishers care?

- **Shift in the economics and business model: electronic access growing faster than print. Soon we will reach a tipping point. Elsevier e-only customers are now more than 50%.**
 - **Print World: libraries fulfilled archiving role (and still do).**
 - **E-World: content now resides at publishers' or aggregators' platforms, often no longer in libraries. Under this model, publishers must now assume responsibility for the future of the content.**
- **Users/Readers. They expect the electronic version to be available forever or at least when they need it.**
- **Authors. They too are concerned that their research is preserved and archived.**
- **Librarians. They express their concerns to us often on this subject as they make decisions on keeping print or going all digital.**
- **Digital is likely to become the permanent archive. Why? Backfiles are continuing to grow in number and increase the mass. Cost of maintenance over the long term is cheaper for libraries than storing print.**

Archive before it's too late...

The Saga Of the Lost Space Tapes

NASA Is Stumped in Search For Videos of 1969 Moonwalk

By [Marc Kaufman](#)

Washington Post Staff Writer

Wednesday, January 31, 2007; Page C01

Inset... the high-quality footage that was transmitted to Parkes.
Main..."There will only ever be one first moon walk", John Sarkissian at the Parkes telescope.



Digital Archiving is not trivial

Volume of Digital Data is growing daily as more information, books, backfiles, digital scans (Google), are brought online

- Can we rely on Google to archive and preserve their digital format?
- Elsevier alone already has > 90 terabytes of data in ScienceDirect that includes much more than text, ex: tables, figures, audio files.

Importance of Archiving to Elsevier

- STM Publishers now have a Responsibility to Science and to the researchers who create the science to “maintain the minutes of Science”.
- Authors who publish with us expect their research to be always available just like it is with the print format.
- Recognition and acceptance of an important curatorial obligation that has become critical to libraries in the digital age if we are to preserve a permanent record of scholarship.
- Offers an opportunity to play a partnership role.

History: The beginning of Digital Archiving at Elsevier

- Since 1999, all ScienceDirect online licenses have contained an annex specifying that:
 - 1) we will maintain a permanent digital archive of journals we own & offer on SD
 - 2) we will migrate the archive as technology used for storage or access changes
 - 3) we will transfer the archive to an independent, librarian-approved depository if we cannot maintain it.
- > Librarians requested the Digital Archiving clause in the early licenses and wanted even stronger language.

The Mellon projects, 2001–

- Six projects funded by the Mellon Foundation – 2001 Planning Year
- Yale: single publisher (Elsevier)
- Harvard: three publishers (Blackwell, John Wiley and the University of Chicago Press)
- Cornell: subject orientation (agriculture)
- URL: www.library.yale.edu/~okerson/yea

Yale-Mellon Foundation Project

- Elsevier partnered with Yale University Library in 2001 under a one-year planning grant to explore issues related to digital archiving.
- Goal: Answer the question: can a Digital Archive be built? Response: Yes, but...

Yale-Elsevier: raised issues about the Archive

- What are you actually archiving?
 - content vs format vs functionality (e.g., storage of links when linking on the fly)
 - must you have all that is in the paper?
- Is anything ever removed from the archive?
- Who certifies and audits the archive?
- Some of these issues have been resolved but others continue “under discussion” to this day

Yale-Elsevier: early findings

- Must have compliance with OAIS
- “dark” vs “bright” archives – very hard to identify a “trigger event” (then)
 - x number of years after publication?
(retrodigitization issues and backfiles)
 - e-files no longer available from publisher or successor
- No clear economic model for archive (then)

Refining its concept for a Formal Archive

Mellon study helped Elsevier to define its thinking regarding the necessary characteristics of a formal archive. Some conclusions:

- Long-term preservation of content is the driving concern.
- Use of Standards are the basis of a Digital Archive.
- Experience in technology and digitization is paramount
- Demonstrated sustainability—effective business model(s)
- Sustainable commitment to Digital Archiving

Current Status of Digital Archiving at Elsevier

Four levels of redundancy; 2 groups

a) Elsevier/publisher maintained:

- In-house systems and backups
- ScienceDirect Platform and backup at LexisNexis

b) Library or Consortia maintained:

- Local ScienceDirect On Site Loaders (ex: OhioLink, Univ. Toronto) but no formal agreement
- Formal Digital Archives



Level 1--Inhouse Digital Repository

- Internal -- Electronic Warehouse
 - Final home for all processed journal articles, books, and backfiles
 - Located in Oxford, UK at Elsevier's Data Center
 - Database for creating files for transmission to ScienceDirect as well as Local Loaders (ScienceDirect On Site)
 - Database backup procedures maintained.

Level 2: ScienceDirect Platform

- Located at LexisNexis in Dayton, Ohio
- Copies maintained on the LN platform
- Working version of ScienceDirect
- Backup maintained offline
- Building is bomb-proof and restricted access

Level 3: Full Set Libraries/Consortia

- De facto library archives
- ScienceDirect OnSite customers and library consortia worldwide, including about a dozen who receive one copy of every journal (ex: OhioLink, Toronto)
- No formal archival commitment, but these libraries have all the journals
- Discussions with National Archives -- special agreements with respect to SDOS licenses for those countries in which there is a desire to hold an archive “on our soil”
 - Ex: Australia, Korea

Level 4—Official Archives

- Official archives -- libraries with whom we establish a contractual relationship to preserve the digital journals in perpetuity and make them available to anyone internationally at such time as we (or a successor) no longer can do so
- Agreements:KB (Netherlands) and Portico (US)
 - Member of CLOCKSS

Official Archives: The KB

- On August 20, 2002 we announced the first official ES archive: the Koninklijke Bibliotheek, which is the National Library of the Netherlands and is known as the KB
- the KB has been an outstanding leader in digital preservation activities
- they have received all files, including backfiles (v.1,no. 1) as available



Koninklijke Bibliotheek
National library of the Netherlands

Portico is our second official archive

- The Portico Model also meets the requirements:
 - advanced technology;
 - experience with digitization;
 - sustainable business plan;
 - experience in the area.
 - ability to provide content online to subscribing libraries

PORTICO



Some Conclusions

- Important to continue to learn and improve based on experience but also take calculated risks. We are in a transitional phase as we move from print to only digital.
- Partnerships among all parties are critical in the success of Digital Archiving.
- More Archiving initiatives will continue to appear, esp. in niche or speciality areas, e.g., Architecture & Art, Video, Media
 - E-books example at Portico

Thank you

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Important Links for Archiving

Digital Library Organization

www.diglib.org

Portico

www.portico.org

Mellon-Yale-Elsevier Report

www.library.yale.edu/~okerson/yea

LOCKSS

<http://lockss.stanford.edu>

OAIS

<http://ssdoo.gsfc.nasa.gov/nost/isoas/overview.html>