Electronic Journals: A New Mode of Scholarly Communication
by Maureen Gleason

In October 1994 the University Libraries placed their first paid subscription to an electronic journal. Soon faculty and students will be able to read the Chicago Journal of Theoretical Computer Science on Notre Dame's campus network and to print out whatever interests them. Although several other scholarly journals are similarly available through the campus network, this action is significant because paying for a subscription is a step toward normalizing what will become an increasingly important mode of scholarly communication. The University Libraries intend to incorporate electronic journals into the range of resources available to the University community, and we have begun a necessary period of experimentation.

The only justification for plunging into a fluctuating and confusing situation is the promise that, ultimately, electronic publication will improve the quality of scholarly communication and reduce its costs. To achieve quality, the electronic journal must perform all of the functions of its paper equivalent, fulfilling the unique information and communication needs of each discipline in a credible and reliable manner, while ensuring accessibility, permanence and recognition of authorship as well. Beyond that, it must demonstrate advantages of timeliness, superior information retrieval and interactivity. Cost reduction would ameliorate the "serials crisis" in which libraries can no longer afford ever-increasing numbers of ever more expensive journals. The promise is great but the ultimate shape of a transformed scholarly communication system is still uncertain. By adding e-journals the University Libraries are joining other system participants in testing possible models. The reaction of faculty and students to alternative means for delivery of information will be the ultimate test.

The simplest definition of an electronic journal is a journal which is delivered by means of a computer file; variety in formats and modes of delivery discourages greater specificity. The Chicago Journal of Theoretical Computer Science to which Notre Dame has just subscribed is available only electronically; other e-journals have print versions. Some mimic print journals in that they are gathered into issues, with traditional volume numbering; the practice of issuing articles as they are ready is, however, becoming more common. Some e-journals differ from their print counterparts continued on page 2

Two Grants Fund Major Preservation Initiatives
by Sophia K. Jordan

Despite growing awareness at the University about the dangers to research library collections posed by paper deterioration and other preservation-related problems, preservation is still in its infancy at Notre Dame. However, two major grants for external funding awarded in 1994 promise a future of growth and development.

In June 1994, the University Libraries were awarded a two-year grant of $652,226 by the National Endowment for the Humanities to microfilm the remaining 6,000 seriously at-risk volumes of the Medieval Institute Library collection. The project began in 1991 under another major NEH grant which resulted in the preservation of 12,000 embrittled volumes. Since the first phase of the project, advances in camera lens optics, computer enhancement and microfilm have made it possible to reproduce color and half-tone images with complete reliability. This means that important art history materials in the Medieval Institute, which could not be salvaged by traditional conservation techniques and which would not have benefited from black and white microfilming, can now be preserved.

In 1994 the Libraries reached a milestone in their collections by surpassing two million volumes. This growth presents many challenges, including the need for a comprehensive preservation program and a fully equipped conservation facility. Under its Education Program to Preserve and Lengthen continued on page 3
E-journals continued from page 1

only in mode of delivery, while others such as Psychology and Postmodern Culture take advantage of their electronic nature by providing for immediate response to articles through the journal or an accompanying discussion list. The most widely accessible e-journals are delivered in ASCII text via e-mail, but there are alternatives; for instance, the publisher Elsevier provides full-page scanned images for up to 40 materials science journals to each library participating in the TULIP project. A glance at the Directory of Electronic Journals, Newsletters and Academic Discussion Lists shows journals available in PostScript, TeX, html, etc. OCLC, the bibliographic utility from which Notre Dame obtains most of its bibliographic records, has moved into this field with a gradually expanding list of electronic journals accessible through its own software which is supplied with subscriptions. Since 1989 University Microfilms has provided bitmapped access to hundreds of its periodicals, accessible through a CD-ROM jukebox. In contrast to these last two examples, many electronic publications are available without cost over the Internet, but, significantly, a mere handful are refereed scholarly journals, and even fewer are in the sciences.

Even this brief sampling of the e-journal scene suggests some of the issues surrounding this new form of publication, and consequently, the decisions to be made by electronic publishers and by libraries. The most basic choice for the publisher is the extent to which the e-journal will break new ground rather than replicate the print journal. Steven Harnad, founder of the e-journal Psychology, states his ambition for this new format which "makes it possible to restore scholarly communication to a tempo much closer to the brain's natural potential while still retaining the rigor, discipline, and permanence of the refereed written medium." Others go further, with greater implications for libraries: "The new unit of information is the electronic document or the compuscript and it will increasingly lose its resemblance to the journal article. It won't require numbering or checking-in and it won't be limited by a style sheet; over time it will incorporate unique features of the electronic medium such as hypertext links, interactive capabilities and multimedia. It will be as long or as short as it needs to be and its natural home will be the database. Whether it will be cataloged or indexed is an open question and that may become increasingly blurry." So says Bill Kownacki, science reference librarian at Virginia Polytechnic Institute, a pioneer in e-journal experiments.

Issues include verification of authenticity. Is this the author's original version or one modified intentionally by the author, by others or unintentionally in the course of transmission? Libraries have traditionally taken responsibility for the accuracy of their bibliographic records as a representation of the physical piece -- are we similarly responsible for our description of the electronic entity? And what about preservation of the content of e-journals -- should libraries assume a traditional archiving role in an environment where items may disappear from the network or become inaccessible through change of format? What about copyright? Libraries are already seeing a move to licensing as a substitute for copyright, with as yet unknown cost implications.

Technical expediency for limiting access and metering usage already exist and will certainly be used more and more, particularly as commercial publishers enter the field.

While grappling with the long-term implications of electronic publishing, university libraries must decide now on the extent to which we make journals available electronically and the precise methods for doing so. Like most libraries, the Notre Dame Libraries plan to make the acquisition and cataloging of electronic journals conform as closely as possible to that for print journals, though necessarily in collaboration with systems staff. Library users, for example, will be able to locate Chicago Journal of Theoretical Computer Science through a record in UNLOC. This will direct them to the Notre Dame Gopher where they will select University of Notre Dame Information, then Library and Information Resources, then Access to Electronic Journals, where they will find the new journal on the menu with others such as the Bryn Mawr Classical Review, Bryn Mawr Medieval Review and Music Theory Online. In all of these cases, the text of the articles is reachable through some sort of contents listing. We might say that we "own" all of these journals: a decision has been made to include them in NDSinfo on the Gopher; eventually they will all be cataloged; in the case of paid subscriptions they have been acquired through our serials unit; and, most importantly, our users have access to the text. But they also have access to the text of many hundreds of other electronic serials, newsletters and popular magazines that are offered free to subscribers on the Internet, with no action whatsoever on the part of the Libraries. What users lack in the latter case is a bibliographic record with instructions for access and a somewhat more convenient mode of access. At some point in the future the UNLOC record will lead directly to the text of the journal with the press of a key or the click of a mouse, something already technically possible.

Perhaps "ownership" should also require us to store the back run of the journal to ensure continuing availability, either online, on tape, on CD-ROM or in microform. While it seems foolish to create redundant electronic collections as we have print collections, only guaranteed archiving can prevent loss of information. Aware of this, the Committee on Institutional Cooperation (the Big Eleven Universities, plus the University of Chicago) is promoting institutional cooperation in electronic resources through a collection of electronic journals on its network, CICnet, for which members share responsibility for cataloging and archiving. This collection is available on the Notre Dame gopher: select Non-Notre Dame Information Sources, then Electronic Journals ..., then Electronic Serials, then CIC E-journals Collection. Initially, only free journals were selected; the complexity of the enterprise increases when paid subscriptions are involved, and discussions on the management of this "collection" are still taking place among CIC libraries.

What does the coming of electronic journals to our collections portend for the future? The AAU's Task Force on a National Strategy for Managing Scientific and Technological Information foresees a gradual shift from the "classical" print on paper model of scientific communication to the "emergent" model where computing and communications technologies are
used to share instrumentation, primary data and software tools as well as information, and are used innovatively in interactive, multimedia environments. The "emergent" model takes us a stage beyond the electronic journal as we know it. It is significant, though, that even by the year 2015, the Task Force sees only 20 percent of scientific-technical communication conforming to the emergent model, with nearly 50 percent still dependent on print. Other visions are stated more dramatically: the American Physical Society projects that "the dominant mode for information delivery will be via a single electronic library that will contain all published books, papers, conference proceedings, numerical data, and computer programs," and which will be updated continually, with its entire contents searchable. If this will come to be, and when, no one knows. We do know that print journals will remain important, but they will co-exist with electronic journals. Beyond that the future of scholarly communication is cloudy, but the decisions we are making now will help to determine its course.

Grants continued from page 1

the Life of Library Materials, the Charles E. Culpeper Foundation awarded the University Libraries a grant of $95,400 to underwrite equipment costs for a full-scale preservation/conservation facility which will be located in what was the Reyniers Germfree Laboratory. This development, together with significant increases in the Preservation Department's operating and staff budgets during the next six years, will allow us to complete plans for a comprehensive program.

The facility will have separate laboratories designed to accommodate specific types of preservation activities. One room will accommodate conservation of collections, e.g., rare books and manuscripts, general collections, art on paper, maps and photographs, and will contain the necessary equipment to deacidify materials before they become brittle. Another room will be devoted to the conservation of non-paper based materials, such as magnetic tapes, microforms, electronic and optical disks. In this same room, we will continue the brittle books reformatting initiative and begin the task of inspecting, replacing and eventually transferring information from microfilm to alternative formats. Yet another room will be fully equipped for fumigation and vacuum freeze drying of materials damaged by water. The room will function as a communications center for disaster recovery operations. A detailed profile of each campus library and its collections will be maintained and linked online to this facility, which would respond in the event of large-scale damage to the University's scholarly and archival resources. Unique in the Michiana area, this facility will not only benefit Notre Dame's collections, but will also serve as an invaluable regional resource, providing training and preservation assistance to librarians and archivists outside the Notre Dame community.

18th-Century British Women in Print
by Laura Fedeler

A n exhibit in the Hesburgh Library Department of Special Collections currently features 18th-century British women authors, printers and booksellers. The exhibit complements the "Fourth Annual Conference on 18th- and 19th-Century British Women Writers" to be held March 2-4 at Notre Dame. More than 80 items on display reflect the development of the book trades, the changing relationships between authors and booksellers, and the involvement of women in authorship and the book trades over the course of a century.

In the 18th century the functions of printing, publishing and retail book-selling frequently overlapped. For example, a bookseller might have published and sold books wholesale while a printer might have sold retail. At the beginning of the century fewer than 100 booksellers were operating in London with very few in the provinces. Aspiring authors had limited options. They could pay a printer to produce copies, raise funds through pre-paid subscriptions or find a bookseller willing to publish the material. If they were lucky the bookseller paid them a lump sum for the work, but then the bookseller retained the copyright to future printings.

Among the oldest publications on display are early newspapers, including a 1684/5 issue of the first British newspaper, The Observer. Newspapers experienced phenomenal growth through the early decades of the century and their production and distribution actually may have been dominated by women. Known as "merceries," these women bought papers wholesale and distributed them retail, through street hawkers (also mostly female) or in their own shops. In some cases they also printed the newspapers. Between 1711 and 1735 Ann Dodd started six periodicals, some with Elizabeth Nutt. In 1731 Edward Cave initiated the first magazine, The Gentleman's Magazine, and Dodd published under her own imprint a magazine by the same title, presumably a counterfeit or piracy of Cave's.

Frequently holding opposition views, merceries such as Ann Dodd, Elizabeth Nutt and Mary Cooper also published tracts defending freedom of the press and often were issued warrants or imprisoned for their activities. As the century progressed men gradually replaced women in newspaper distribution, and by 1750 no women remained in the news business.

Family dynasties were typical of the book trades throughout the 18th century. For women more than men, however, the family connection was essential for entry into the trades. In dictionaries of printers, booksellers, etc., by Plomer and others, women constitute around five percent of the entries. The majority of female entrepreneurs acquired the business as widows. While many passed the business on to a son or second husband or went out of business after a couple of years, others continued successfully on their own for decades, carrying on not only the husband's specialty but also his activities, i.e., occasionally being thrown into prison or accused of libel against the government.
The exhibit includes examples of five female printers or booksellers, all but one widows. Seneca's Morals carries the imprint "Printed by M. Bennet, for J. Tonson at the Judges-Head in Fleet-Street; and E. Hindmarsh at the Golden-Ball against the Royal-Exchange in Cornhill, 1699." Margaret Bennet was active as a printer from ca. 1691 to ca. 1709. Also displayed are the memoirs of a highwayman named Dangerfield, printed by Margaret's husband Joseph in 1685 for Charles Brome. According to Michael Treadwell, "the Bennet printing house seems in fact to have been a sort of mother house for the small group of Catholic printers who worked in the Holborn area in the early 18th century..."2

On the opposite side of the fence are the anti-Catholic Baldwins. Purgatory Prov'd... was "Printed for Richard Baldwin" in 1688 and The Remarkable Sayings, Apothegms and Maxims of the Eastern Nations for him and William Lindsey in 1695. Plomer describes Baldwin as "one of the best-known publishers of his day" specializing in political pamphlets and broadsides, but also producing satires, plays and romances. Plomer cites John Dunton (The Life and Errors of John Dunton, 1705) as saying, "Mrs. A. Baldwin, in a literal sense was an help-meet and eased him of all his publishing work; and since she has been a widow, might vie with all the women in Europe for accuracy and justice in keeping accounts..."3 On display is The Thirteenth Chapter to the Romans... "Printed for A. Baldwin, near the Oxford-Arms in Warwick-Lane, 1710."

The Nutt family represents one of the minor printing dynasties of the period. By 1698 John Nutt had established himself first as a bookseller and publisher and later as a printer; his imprint "In the Savoy" was continued by his widow alone from his death in 1716 until 1722 and by herself and son Richard from 1722 until her retirement in 1740. From 1709 until 1760 the family printed a famous almanac, The British Merlin, although not at the Savoy address after 1741. Of ten children at least six became involved with the book trades. After John became the assignee of Edward Sayer he specialized in law publications; the legal patent was inherited by his widow, who later divided it between Richard and another publisher son, Benjamin. John Nutt is listed in Nichols' Literary Anecdotes among the "High Flyers" (defined in Samuel Johnson's dictionary as "One that carries his opinions to extravagance"). The high flyers may have been opposition printers and publishers whose publications often got them in trouble with the government. Members of the Nutt family questioned, issued warrants or imprisoned for libel against the government included Elizabeth (whether John's widow or son Richard's wife, daughter of another dissident family, the Meeres, is unclear), daughters Sarah, Catherine and Alice, and son Richard who was imprisoned for two years.

On display are several books by the Nutt family. Although he specialized in law, two of John's most famous works include The Storm... by Daniel Defoe, "Printed for G. Sawbridge in Little Britain, and Sold by J. Nutt near Stationers-Hall, 1704," and Jonathan Swift's A Tale of a Tub, 1705. The imprint of The Compleat Sportsman... reads "In the Savoy, Printed by Eliz. Nutt, and R. Gosling, (Assigns of
Edward Sayer Esq.; for J. Tonson at Shakespear's-Head in the Strand, and W. Taylor at the Ship in Pater-noster-Row, 1718." Note the association with publishing magnate, Jacob Tonson. Defoe's *A Journal of the Plague Year* was "Printed for E. Nutt at the Royal-Exchange; J. Roberts in Warwick-Lane; A. Dodd without Temple-Bar; and J. Graves in St. James's-Street, 1722." The address informs us that this Nutt was Edward, not Elizabeth. This book is one of two in the exhibit whose imprint includes bookseller and mercury Ann Dodd; the other is the autobiography of Charlotte Charke. Finally, the imprint typical of the many law books published by Elizabeth and Richard appears in *Law Quibbles*... as "In the Savoy: printed by E. and R. Nutt, and R. Gosling. (Assigns of Edw. Sayer, Esq.); for T. Corbett, at Addison's Head without Temple-Bar, 1729."

Another female publisher and bookseller, Mary Cooper, was active from 1743 to 1761. Widow of printer and publisher Thomas Cooper, she sold frequently for Robert Dodson, by mid-century a major figure in the book trade. *Education, a Poem... and An Hymn to the Nymph of Bristol Spring. By Mr. R. Whitehead* were both "Printed for R. Dodson in Pall-mall; And Sold by M. Cooper in Pater-noster-row" in 1751 (see illustration on page 4). Also sold by Cooper were *The Memoirs of the Baron du Tan... in 1744 and Love Elegies... in 1752. A Supplement to the Works of Alexander Pope Esq.* was printed for her in 1757.

Also featured are books by authors ranging from Restoration and early 18th-century women such as Aphra Behn, Mary Astell and Elizabeth Elstob to late 18th- and early-19th century writers such as Ann Radcliffe, Maria Edgeworth and the Quaker Mary Leadbeater. In between are books by women influenced by Samuel Johnson, including Hester Thrale Piozzi, Charlotte Lennox and Ellis Cornelia Knight. Other cases focus on the Rhettstocks (Elizabeth Carter, Elizabeth Montagu, Hester Chapone and Catherine Talbot), the women they influenced such as Hannah More and Fanny Burney, and many other authors including Charlotte Charke (daughter of Colly Cibber), Clara Reeve, Anna Seward and Mary Wollstonecraft.

The dedications and prefaces (often containing the obligatory apology for publishing) are revealing of relationships among women of the period and of female self-perception. Taken together, these books display a degree of involvement by women in the intellectual, literary and publishing currents of their day that some might find surprising.


---

Notre Dame's Libraries in the 21st Century
by Robert C. Miller

Like most institutions in our society, libraries are going through some major changes. What will Notre Dame's Libraries be like in the year 2005? The past may offer some clues to the future.

There have been major changes in the University Libraries in recent years. Most processing and circulation activities have been automated, the card catalog has been replaced by UNLOC and many traditional journal indices are now provided in electronic form. In addition, a number of electronically based full-text and numerical databases are now available to faculty and students. Finally, the growth of the Internet and related Gopher and World Wide Web services has made possible access to a broad range of resources throughout the world. These various services have become all the more significant as the campus network backbone has enabled us to provide services outside the physical space of the library. Clearly much has changed since 1980. Yet, at the same time, print acquisitions have continued to expand and several major print collections have been acquired. These trends of the past are indeed suggestive of the future.

In the early 21st century the University Libraries of Notre Dame will be both the same and different. Print will continue to be important for many users and our collections will continue to grow, but probably at a declining rate, particularly in the area of journal literature. Traditionally, libraries have been perceived as place. This will continue. The Hesburgh Library will remain a major focus for the provision of study space for undergraduate and graduate students. It will continue to house print and other information resources, especially in the humanities and the social sciences, of which a significant proportion will be in compact shelving.

But in the 21st century, the library will be perceived more as service than space. An increasing portion of the resource budget will be devoted to the acquisition of, or provision of access to, electronic media. Delivery of information, print and digital, to the workplace will be increasingly common. There will be a steadily growing emphasis on providing information to segmented groups of users, frequently from small, remote service points. There will be significant variations in the types and levels of service provided, and in some cases there will be charges or cost-sharing. The traditional lines between technical and public services will be increasingly blurred, with individual personnel involved in a broad range of activities. The library will be much more involved in formal and informal instructional activity to make users aware of print and electronic resources and more skilled in their access and use.

University research libraries are not freestanding and self-directed institutions. The Libraries of Notre Dame exist to support the work of the community, and as the needs of our users change, so will our resources and services. It is critically important that linkages to the teaching and research continue on page 6.
21st Century continued from page 5

faculty be strengthened. Clearly, the pace of change to an electronic environment will vary by discipline. The Libraries' programming must recognize and reflect these differences.

There will be several key elements in the successful transition to the future. Critical will be a sufficient number of library personnel possessing both subject and technological expertise and who must be given the opportunity for continuing enhancement of their knowledge and skills. They will also require a sophisticated understanding of our community's needs and an openness to change, for change will clearly be the principal characteristic of the next decade in librarianship.

The years ahead will be exciting and challenging. As the Libraries play an expanding role in the teaching and research mission of the University, they will also be rewarding.

Access: news from the University Libraries of Notre Dame (ISSN 0743-2151) is published quarterly and is distributed to the University community. It is available by subscription upon written request.

Editor: Mary C. English

Access Editorial Committee:
J. Douglas Archer
Katharina Blackstead, chair
Melodie Eiteljorge (ex officio)
Mary C. English

Access (ISSN 0743-2151)
University Libraries
University of Notre Dame
Room 221
Theodore M. Hesburgh Library
Notre Dame, Indiana 46556-5629
(219) 631-5252

Non-Profit Org.
U.S. Postage
PAID
Notre Dame, IN
Permit No. 10