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# Electronic Journals: Are We There Yet?

by Robert Burgin

**P**rint journals play a central role in the scholarly process. Faculty members are paid to generate knowledge and then are encouraged by their employing colleges and universities (through a "publish or perish" tenure process) to publish that knowledge in print journals. Faculty members also use print journals to obtain feedback from colleagues on the viability of their ideas. Articles in print journals may include the methodological details that lay behind the published discoveries and thereby support the mechanism of replication in the scientific process.

Unfortunately, there are problems associated with print journals that make them less than effective in meeting some of the goals of the scholarly process. For example, the process of getting an idea or a discovery in print is often painfully slow. John Budd's survey of seventy-two humanities journals found that the average time from submission of a manuscript to the publication of the article was thirteen months, just over a year.<sup>1</sup> This lack of speed in turnaround is hardly conducive to providing timely feedback or to providing an interactive environment in which ideas can be shared and discussed. As an electronic journal guru, Stevan Harnad, puts it, "It usually takes several years, ... before the literature responds to an author's contribution (if it responds at all) and by that time the author, more likely than not, is thinking about something else. So a potentially vital spiral of peer interactions, had it taken place in 'real' cognitive time, never materializes, and countless ideas are instead doomed to remain stillborn."<sup>2</sup>

Print journals also are expensive and

are becoming even more so. Librarians in general and serials librarians in particular are well aware of the problem of serials costs. Between 1976 and 1988, for example, the average price of serials rose 350 percent, and the average percentage of the materials budget devoted to serials rose from 40.4 percent to 56.2 percent among ARL member libraries.<sup>3</sup> Recent annual increases in print journal prices have exceeded the Consumer Price Index by 100 to 400 percent in some cases.<sup>4</sup> The growing burden of these price increases is especially infuriating given the nature of the scholarly process whereby universities are "generating knowledge, giving it away to the commercial publishers, and then buying it back for our scholars at increasingly prohibitive prices."<sup>5</sup>

## Electronic Journals and the Scholarly Process

One attempt to solve some of the problems associated with print journals is the electronic journal. Such publications offer a number of advantages over print journals, including the advantage of speed. Julene Butler of Rutgers University, sees significant time savings for electronic journals both by speeding up the production phase (where print journals report time lags of up to eighteen months from submission to the printer to actual distribution of the journal) and by making the article the unit of distribution. With electronic journals, an individual article can be distributed as soon as it has been reviewed and approved; by contrast, an article submitted to a print journal must wait for the traditional issue containing five to eight articles.<sup>6</sup>

More importantly, some argue, elec-

tronic journals can provide more timely feedback from fellow scholars on ideas and findings. One electronic journal, *Psychology*, is explicitly devoted to this kind of interaction, what its editor terms "scholarly skywriting, the radically new form of communication made possible by the Net, in which authors post to *Psychology* a brief report of current ideas and findings on which they wish to elicit feedback from fellow specialists as well as experts from related disciplines the world over."<sup>7</sup>

Future developments should enhance even further the capabilities of electronic journals. Improved retrieval software should allow quick, easy full-text searching and thereby enhance access to the intellectual content of journals. As an editor of an electronic journal Jean-Claude Guedon suggests, "In a few years (three to five at most), people will routinely ask: give me all documents dealing with, e.g., Boyle and Hobbes; or find me anything that has to do with the year 1492."<sup>8</sup> Likewise, electronic journals will soon match print journals by incorporating graphics and photographs and then surpass print journals by including sound and animation.

## Electronic Journals and Libraries

Libraries — academic libraries in particular — support the scholarly process by providing access to the print journals in which scholarly research is published. To the extent that electronic journals benefit the scholarly process in the ways outlined above, they also benefit libraries and their users. From the point of view of libraries, however, there is an additional advantage to electronic journals — reduced costs. Because "up to half the overall costs of publishing a journal are paper-bound,"<sup>9</sup>

electronic journals are potentially cheaper than their print counterparts. (The editor of *Psychology*, Stevan Harnad estimates that the annual costs to produce that electronic journal are about fifty cents per reader/subscriber.<sup>10</sup>) In fact, the majority of electronic journals available over the Internet today are free. Even if electronic journals did charge for subscriptions, they might be willing to develop "pay-as-you-go" systems whereby libraries could acquire individual articles of interest, rather than having to pay for entire issues.<sup>11</sup>

### Making Electronic Journals Work

Electronic journals hold great promise for libraries and for others involved in the scholarly process. Unfortunately, that promise has yet to be realized, and electronic journals are still largely tangential to the scholarly process that college and university libraries, in particular, support. There are far fewer electronic journals than there are print journals: only 240 electronic journal titles are listed in the latest *ARL Directory of Electronic Journals and Newsletters*. Fewer than a dozen are refereed, and it is unlikely that faculty will publish widely in electronic journals until they are refereed. Even fewer two or three at most — are indexed in standard indexing services such as MLA or ERIC, and it is difficult for faculty members to know that articles of interest to them have been published in electronic journals.

Julene Butler has suggested that two important goals must be achieved if electronic journals are to fulfill their promise: electronic journals must reach a large portion of the scholarly community; and such journals must achieve a level of respectability within that community.<sup>12</sup> Unless both goals are achieved, publications in electronic journals will not be taken seriously by tenure committees and faculty members will not be interested in submitting manuscripts to them.

In order to reach a large share of the academic market, Butler argues, users of electronic journals must be ensured both access to, and retrievability of, those journals. Access to electronic journals will be accomplished by having those journals indexed in the standard indexing and abstracting services used by members of the academic community, by having scholars cite articles from electronic journals in their own publications, and by making members of the academic community aware of individual electronic journals. Retrievability of electronic journals relies on individuals having access to the hardware and software necessary to connect to the Internet and also having the skills needed to access electronic journals via the Internet. Retrievability may also be achieved through libraries collecting and making electronic journals available to individuals who may not otherwise have access.

In order for electronic journals to be seen as respectable vehicles for scholarly publication, Butler notes, there must be a rigorous peer review of all submissions; in fact, she argues that the reviewing standards for electronic journals may need to be even more rigorous than those for print journals in order for electronic journals to prove themselves. Electronic journals must also

disseminate research results and commentary on such results in a timely fashion and they must enable further dialogue to take place between authors and journal readers. Finally, she argues, electronic journals must have well-known and respected editorial board members and must be able to stand the test of time.

### How Librarians Can Help

It is clear that libraries can support the goal of making electronic journals available to a larger portion of the academic market and that libraries are therefore critical to the success of electronic journals. As Butler argues, "Libraries must collect and make available e-journals so that individuals (who do not otherwise have access) are guaranteed retrievability. Implied here is the need for libraries to publicize the availability of e-journals and train users in their access."<sup>13</sup>

Butler is not the only proponent of electronic journals to see librarians as instrumental in bringing about their success. An electronic journal editor, Lon Savage, claims that the "future success of electronic scholarly journals can be materially affected by concerted efforts of libraries" and that "All involved in scholarly communication will be the beneficiaries of [electronic journals], but none will benefit more than the libraries."<sup>14</sup> Stevan Harnad calls libraries "allies in hastening" the coming of electronic journals and argues for a "strategic pro-revolutionary alliance" among libraries, learned societies, and the scholarly community.<sup>15</sup> Linda Langschieff of Rutgers University library claims that "if the potential of the electronic journal is to be realized, it will require librarians' collaborating with the authors, editors, and scholarly societies who are currently acting as champions of this new form of scholarly communication."<sup>16</sup>

The most obvious role to be filled by libraries, then, is the traditional one of providing access to information; in this case, access to information in a different, electronic format. Access may also include providing downloading and printing capabilities to patrons, as Jean-Claude Guedon has suggested:

Libraries must have the electronic links to the databases where these e-publications originate. They may choose to mirror them, but systems such as a gopher bookmark avoids [sic] actual local storage. Downloading capability and possibilities of printing the result (as most people will prefer to work with a paper version if they need to do "deep reading" of a paper) are what libraries should be thinking about.<sup>17</sup>

Librarians also need to be aware of the difficulties — as well as the promises — of providing access to electronic journals. There are a number of thorny questions associated with electronic journals, and librarians should be defining those problems and seeking solutions to them. For example, what kinds of access should librarians provide to electronic journals? Should print copies of electronic journals be produced as a matter of course, should print copies be made by patron request only, or should the library merely provide printers for patrons to make print copies?



Should libraries provide downloading capabilities to patrons or send electronic journals to patrons via electronic mail? Should libraries provide access to electronic journals via their OPACs? If print copies of electronic journals are produced, should they be bound and shelved? Should electronic journals be fully cataloged and classified? Should libraries provide value-added capabilities like keyword or string searching for electronic journals? Should access be limited to free electronic journals or should the library pay to acquire fee-based electronic journals? Who will select or recommend electronic journals for the library to acquire? Which library departments will have the responsibility for subscribing to, checking in, and distributing electronic journals? Good introductions to these and other issues are provided by reports of the library task forces at Virginia Tech and MIT in recent issues of *Serials Review*.<sup>18</sup>

### North Carolina's Academic Libraries

It is clear that electronic journals offer a promising alternative to print journals. It is also clear that the success of electronic journals depends on the support of libraries and, in particular, on the support of college and university libraries. To what extent, then, are North Carolina's academic libraries engaged in activities that support the viability of electronic journals?

To investigate the situation, the author sent a four-page survey to fifty-four college and university libraries in North Carolina. All North Carolina libraries listed as college and university libraries in DIALOG's American Library Directory database were included, along with all medical and law libraries associated with North Carolina universities. The survey instrument was based largely on an Internet survey conducted by Sam A. Khosh-khui, the Serials Cataloging Librarian at Southwest Texas State University.<sup>19</sup> Twenty-nine (54 percent) of the surveys were returned.

Nineteen of the respondents (66 percent) provide no patron access to electronic journals whatsoever. Of the remaining ten respondents, five subscribe to at least one electronic journal title; the other five do not subscribe to electronic journals, but provide patron access in other ways, usually by providing some kind of Internet access. In fact, six of the ten respondents who provide some kind of access to electronic journals do so by means of Internet access outside the library OPAC, and two provide gopher access as menu options on their OPACs. Four of the ten respondents who provide some kind of access to electronic journals allow downloading to floppy diskette. Three run printouts of the journal text for patrons by request only, and three provide printers for patrons to print the journal text themselves.

Of the five respondents who subscribe to electronic journals, three reported subscribing to only one title; one subscribes to two titles; and the remaining respondent subscribes to fifty-one titles. Only two libraries subscribe to journals with a paid subscription. Only one respondent fully catalogs and classifies its electronic journals; one briefly catalogs them but does not classify them; and one respondent noted that complete cataloging and classification was "imminent."

Of the five respondents who subscribe to electronic journals, selection responsibility rests with librarians in four cases and with faculty in two. The responsibility for subscribing to and setting up check-in records is assigned to acquisitions at one library, serials at another, and automation at a third (although this last respondent noted that the responsibility might be transferred to acquisitions in the near future). The responsibility for distributing electronic journals is assigned to reference at two libraries, to serials at another, and to automation at another.

Unfortunately, the most obvious finding of the survey is the lack of participation in the new medium. Nearly two-thirds of the academic libraries that responded to the survey do not

provide patron access to electronic journals. Furthermore, North Carolina's academic libraries are not atypical in their failure to provide access to electronic journals. A January 1992 survey of ARL libraries found that just half of the responding libraries (49 percent) subscribed to electronic journals or intended to subscribe to them.<sup>20</sup> Khosh-khui himself only received twenty-five responses to his survey, which was distributed nationwide via an Internet discussion group devoted to serials in libraries. In spite of the promises that electronic journals offer to academic libraries, few appear to be providing access to this medium.

### Conclusion

Libraries and those served by libraries have much to gain from the success of electronic journals. Electronic journals promise to provide a more rapid and more effective means of sharing scholarly ideas and discoveries with other members of the academic community and to do so at much less cost to libraries than do current print journals.

However, the promise of electronic journals cannot be realized without the help of librarians. Librarians should make their users aware of electronic journals, provide access to such journals (especially for individuals who do not otherwise have access), and provide downloading and printing support. Librarians should be aware of the wide range of options for providing access to electronic journals, storing such journals, and cataloging such journals. Librarians should be involved in the publication of their own electronic journals and should subscribe to those that focus on topics related to electronic journals (such as *Ejournal*). In short, librarians should become active players in making electronic journals a successful medium for scholarly communication.

Librarians have much to gain from participating in the effort to make electronic journals work, because it is early enough in the

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development of this alternative medium for librarians to make a meaningful difference. As members of the Electronic Journals Task Force at the MIT Libraries have pointed out:

We can wait and then attempt to accommodate ourselves to new systems after the fact, or we can move to shape what our future will look like.<sup>21</sup>

## References

<sup>1</sup> John M. Budd, "Humanities Journals Ten Years Later," *Scholarly Publishing* 22 (July 1991): 200-16.

<sup>2</sup> Stevan Harnad, "Post-Gutenberg Galaxy: The Fourth Revolution in the Means of Production of Knowledge," *The Public-Access Computer Systems Review* 2 (1991): 44.

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<sup>3</sup> Ann Okerson, "Report on the ARL Serials Project," *Serials Librarian* 17 (1990): 113.

<sup>4</sup> Gary D. Byrd, "An Economic 'Commons' Tragedy for Research Libraries: Scholarly Journal Publishing and Pricing Trends," *College & Research Libraries* 51 (May 1990): 184-95.

<sup>5</sup> Patricia Battin, "The Library: Center of the Restructured University," *College & Research Libraries* 45 (May 1984): 175.

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<sup>8</sup> Guedon, J. (1993, November 20). Proliferation of E-Publications. *Interpersonal Computing and Technology Discussion List* [Online]. Available e-mail: [PCT-L@GUV.M.GEORGETOWN.EDU](mailto:PCT-L@GUV.M.GEORGETOWN.EDU)

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<sup>10</sup> Harnad, S. (1992, November 25). *Electronic Journals. Serials in Libraries Discussion Forum* [Online]. Available e-mail: [SERIALST@UVMVM.UVM.EDU](mailto:SERIALST@UVMVM.UVM.EDU)

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<sup>12</sup> Butler, J. (1993, November 20). Proliferation of E-Publications. *Interpersonal Computing and Technology Discussion List* [Online]. Available e-mail: [IPCT-L@GUV.M.GEORGETOWN.EDU](mailto:IPCT-L@GUV.M.GEORGETOWN.EDU)

<sup>13</sup> Butler, November 20, 1993.

<sup>14</sup> Lon Savage, "The Journal of the International Academy of Hospitality Research," *The Public-Access Computer Systems Review* 2 (1991): 54-66. [To access this article, send the following electronic mail message to [LISTSERV@UHUPVM1.UH.EDU](mailto:LISTSERV@UHUPVM1.UH.EDU): GET SAVAGE PRV2N1 F=MAIL]

<sup>15</sup> Harnad, "Post-Gutenberg Galaxy," 50.

<sup>16</sup> Linda Langschie, "Electronic Journal Forum: Column I," *Serials Review* 18 (Spring/Summer 1992): 131-36.

<sup>17</sup> Guedon, November 20, 1993.

<sup>18</sup> "Electronic Journals: Considerations for the Present and the Future," *Serials Review* 17 (Winter 1991): 77 - 86; Marlene Manoff, Eileen Dorschner, Marilyn Geller, Keith Morgan, and Carter Snowden, "Report of the Electronic Journals Task Force MIT Libraries," *Serials Review* 18 (Spring/Summer 1992): 113-29.

<sup>19</sup> Khosh-khui, S. (1993, June 1). E-Journal Survey. *Serials in Libraries Discussion List* [Online]. Available e-mail: [SERIALST@UVMVM.UVM.EDU](mailto:SERIALST@UVMVM.UVM.EDU)

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<sup>21</sup> Manoff, et al., 114.

## Electronic Journals of Interest

For a recent edition of the *ARL Directory of Electronic Journals and Newsletters* (available as two ASCII files), send the following commands as an e-mail message to [LISTSERV@ACADVM1.UOTTAWA.CA](mailto:LISTSERV@ACADVM1.UOTTAWA.CA):

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