

Principles for Emerging Systems of Scholarly Publishing

by Mary M. Case, Director, ARL Office of Scholarly Communication

The following set of principles was agreed to by the undersigned individuals as a result of a meeting held in Tempe, Arizona, on 2-4 March 2000. Sponsored by the Association of American Universities, the Association of Research Libraries, and the Merrill Advanced Studies Center of the University of Kansas, the meeting was held to facilitate discussion among the various academic stakeholders in the scholarly publishing process and to build consensus on a set of principles that could guide the transformation of the scholarly publishing system.

The creation, dissemination, and application of new knowledge are fundamental to the development of an informed citizenry and a healthy global economy. Institutions of higher education exist to fulfill these functions. From the lab to the classroom to industry to the public, the advancement of knowledge through research and teaching is an invaluable contribution made by higher education to the public good. Scholarly publishing is the process through which newly discovered knowledge is refined, certified, distributed to, and preserved for researchers, professors, students, and the public.

The current system of scholarly publishing has become too costly for the academic community to sustain. The increasing volume and costs of scholarly publications, particularly in science, technology, and medicine (STM), are making it impossible for libraries and their institutions to support the collection needs of their current and future faculty and students. Moreover, the pressure on library budgets from STM journal prices has contributed to the difficulty of academic publishers in the humanities and social sciences, primarily scholarly societies and university presses, to publish specialized monograph-length work or to find the funds to invest in the migration to digital publishing systems. Numerous studies, conferences, and roundtable discussions over the past decade have analyzed the underlying causes and recommended solutions to the scholarly publishing crisis. Many new publishing models have emerged. A lack of consensus and concerted action by the academic community, however, continues to allow the escalation of prices and volume.

The participants in the Tempe conference came together with the hope of building consensus on a set of principles that would inform the design and evaluation of new systems of scholarly publishing. The goal was to provide guidance while leaving open to creativity and market forces the actual development of such systems. The following set of principles is the result of their discussions. While the principles and their explanations reflect a North American perspective, the participants recognize that the advancement of knowledge and scholarly publishing are international enterprises. While the academic community in North America may agree on collective action, international discussion and support will be needed for the success of any new systems.

The participants encourage broad discussion and endorsement of these principles by institutions of higher education, scholars, scholarly societies, and scholarly publishers. Endorsement carries with it the commitment to implement local actions that will bring institutions of higher education closer to the goal of providing access to all relevant published research across all disciplines to all faculty by way of systems that ensure dependable management and affordable access to information over time.

1. The cost to the academy of published research should be contained so that access to relevant research publications for faculty and students can be maintained and even expanded. Members of the university community should collaborate to develop strategies that further this end. Faculty participation is essential to the success of this process.

With the creation, dissemination, and application of new knowledge central to their mission, institutions

of higher education must work to create systems that will provide affordable access to all relevant published scholarship across all disciplines for researchers, teachers, and the broader public. To do this, faculty, university administrators, and professional societies must work together to create the systems that will contain, and in some cases, reduce substantially the costs of scholarly publishing. Since every faculty member should have access to all the relevant published research in her/his area, it is imperative that we find ways to bring down the cost to accommodate the expanding volume of publication within available budgets. The business arrangements of the journals for which faculty write, edit, and review must become a major focus of contributors, editors, and readers if scholarly publication is to become affordable again.

Containing costs might be accomplished over time within the current configuration of scholarly communication through the effective use of technology to streamline publishing functions, while increasing access and value. Such systems have been developed within the not-for-profit community by Stanford University's HighWire Press and The Johns Hopkins University's Project Muse; other efforts, such as BioOne, are being facilitated by SPARC, the Scholarly Publishing and Academic Resources Coalition. One could also envision systems that would build peer-review and abstracting and indexing functions on discipline- or institution-based e-print services. Such a system is being promoted by the Open Archives initiative, an effort that strives for compatibility among e-print services. Cost-containment should also continue through library consortial purchasing of electronic resources, a strategy that appears to be effective in lowering the unit costs of electronic information. Whatever the solution(s), cost must be made to fit within available budgets or the system will fail to provide the information to scholars that they need.

2. Electronic capabilities should be used, among other things, to: provide wide access to scholarship, encourage interdisciplinary research, and enhance interoperability and searchability. Development of common standards will be particularly important in the electronic environment.

With the growing volume of scholarly research, it is increasingly difficult to uncover all of the relevant material published on a given subject. As more scholarship becomes available in digital form, this problem can be surmounted through powerful search systems provided that commercial, technical, and legal constraints do not prohibit such searches. Searching, navigation, and linking across titles and across disciplines is essential since many disciplines have multiple titles that serve them and many problems have multidisciplinary aspects that may lead a researcher to publications in fields as diverse as microbiology, law, economics, and internal medicine. The development of standards is critical to the implementation of cross-field searching and navigation. In addition, given the importance of older literature to the advancement of new knowledge, retrospective works should be digitized and made accessible online.

3. Scholarly publications must be archived in a secure manner so as to remain permanently available and, in the case of electronic works, a permanent identifier for citation and linking should be provided.

The advancement of knowledge is dependent on access to prior scholarship. While research libraries, with significant support from the National Endowment for the Humanities, have made significant progress in preserving print publications, there is still a large proportion of unique printed material yet to be treated and a number of additional formats, such as videotapes, sound recordings, and film, whose preservation needs have yet to be addressed in any significant way. Electronic publishing adds yet another set of complex issues to the archiving and preservation of scholarly works. With libraries no longer owning copies and with the fragility of the electronic media, questions of what should be archived by whom and how are critical issues that need to be addressed. Despite many unanswered questions and unknown costs, archiving and preserving scholarly publications in all media are critical to any credible system of scholarly publication.

4. The system of scholarly publication must continue to include processes for evaluating the quality of scholarly work and every publication should provide the reader with information about evaluation the work has undergone.

The academic community relies on the judgment of peers when assessing the quality of faculty work. While core archival journals are expected to preserve the peer-review process, the scholarly community recognizes that the exact nature and methodology of quality assessment varies by discipline. Any evolving system of scholarly publication should allow for an evaluation process to take place as appropriate and should provide a transparent mechanism that informs the reader--an expert, a student, the public--of the nature of the evaluation the work has undergone in its various versions. This recommendation recognizes the development of discipline- or institution-based collections of articles which may go through different stages of review and where neither the hierarchy of existing journals nor the reputation of the publisher may exist as a signature of quality assessment.

5. The academic community embraces the concepts of copyright and fair use and seeks a balance in the interest of owners and users in the digital environment. Universities, colleges, and especially their faculties should manage copyright and its limitations and exceptions in a manner that assures the faculty access to and use of their own published works in their research and teaching.

The role of copyright is central to the academic community's mission of advancing knowledge. Members of the community are both creators and consumers of scholarly publications. As creators, faculty depend on copyright to protect the integrity of their work and on fair use to be able to use and incorporate the works of others with attribution in their own work. By tradition, faculty have transferred without direct compensation all of their copyrights to journal publishers in return for the wide distribution of their work. In some cases this tradition has resulted in the need for faculty to seek permission and pay a fee to use their own work in their research and teaching. If the academic community is to achieve its mission of advancing knowledge, it is critical that faculty authors retain the rights to use their own works in their teaching and in subsequent publications. Widespread adoption of university policies requiring faculty to retain such rights could provide individual faculty with the bargaining power to negotiate such agreements with publishers.

While this document concentrates on copyright and fair use of scholarly works, the importance of copyright and fair use go well beyond the scholarly publishing system. It is imperative that the academic community monitor and critically examine any new license arrangements or proposed legislation (whether it be copyright amendments or any body of law affecting intellectual property directly or indirectly) and take appropriate action to make sure that such arrangements or legislation do not upset the balance between owners' rights and users' exceptions to them that has been achieved in copyright law with its provisions for fair use and library and educational exemptions.

6. In negotiating publishing agreements, faculty should assign the rights to their work in a manner that promotes the ready use of their work and choose journals that support the goal of making scholarly publications available at reasonable cost.

By judiciously assigning the rights to their work, faculty members can help assure that scholarship remains affordably available to the community. In the publication process, faculty can choose to publish in journals whose access and pricing policies make their work easily and affordably available. All faculty members should know the cost of journals to libraries and should consider refraining from submitting their work and assigning copyright to expensive journals when high-quality, inexpensive, publication outlets are available. In fields where alternatives do not exist, universities and scholarly societies should work with faculty to develop such outlets.

7. The time from submission to publication should be reduced in a manner consistent with the requirements for quality control.

In rapidly evolving fields, lags of 12 months or more mean that scholarly history rather than cutting-edge research is the subject of publication. If published scholarship is to be a useful building block, it is imperative that the lag between submission and publication be shortened as much as possible for each field. While a number of factors contribute to the lag--peer review, author's changes, back and forth with editors--and are important to the quality of the final work, technology should be exploited to speed up the process where possible. For example, some journals have already designed systems that select reviewers based on workload and availability. In addition, a number of disciplines depend on e-print systems for quick distribution of their work.

8. To assure quality and reduce proliferation of publications, the evaluation of faculty should place a greater emphasis on quality of publications and a reduced emphasis on quantity.

While a fundamental factor contributing to the rapid increase in the volume of published research is the rapid expansion of knowledge, the academic credentialing system encourages faculty to publish some work that may add little to the body of knowledge. In the spirit of creating an environment that reduces emphasis on quantity across the system and frees faculty time for more valuable endeavors, faculty in research institutions should base their evaluation of colleagues on the quality of and contribution made by a small, fixed number of published works, allowing the review to emphasize quality. This de-emphasis of quantitative measures could moderate the rate of increase in new titles and numbers of articles published. Some universities have already modified faculty evaluation in this manner and federal granting agencies, such as the National Institutes of Health, have implemented policies to limit the number of articles cited in the grant application process.

9. In electronic as well as print environments, scholars and students should be assured privacy with regard to their use of materials.

The digital environment, in particular, makes it very easy to obtain data on users and use patterns, information that can have great marketing appeal. It is incumbent on the academic community to assure the privacy of individual users with regard to their use of scholarly publications or other source materials made available through our institutions, consistent with state and federal laws.

Signatories to Principles for Emerging Systems of Scholarly Publishing

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The AAU Committee on Intellectual Property, at its meeting on 18 April 2000, reviewed the Principles and commended them to the AAU presidents and chancellors for discussion on their campuses. At its meeting on 19 May 2000, the ARL Board endorsed the Principles and encouraged members to distribute them widely and engage faculty and administrators in their discussion. The AAU and ARL are publicizing the Principles and commend them for discussion by scholarly societies and institutions of higher education. The Principles can also be found online at <http://www.arl.org/scomm/tempe.html>.

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