

Commercial Scholarly Publishing : the Devil Incarnate or Divine Saviour?

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Although a fundamental part of research, scholarly publication has become an industry in itself and threatens to impede the very activity it is meant to enhance. In many ways, it is an industry unlike any other. There is a large number of producers supplying a relatively small market consisting of academic and research libraries. There is little direct competition between the individual products of each supplier and in many respects it has been an indiscriminating marketplace. Libraries have acquired most of the publishing output without there necessarily being any demonstrated need for, or subsequent use of, the publications.

Like all good things, this Elysian state has ended and much of the world's academic community is experiencing difficulty accessing the information needed for their research. It is becoming increasingly difficult to get articles published in international refereed journals and those who manage to have a monograph accepted by a major publisher are indeed fortunate.

That, unfortunately, is not the extent of the plague. Use of the Internet as a publishing, marketing and distribution mechanism has provided added dimensions to the difficulties facing the scholarly world. Technology is now available which enables publishers to exert greater control over access to their products and to impose a range of charging mechanisms which may be inimical to scholarship. The same technologies, however, provide opportunities for the academic community to regain some control over the scholarly communication process.

The last three decades of the twentieth century witnessed massive expansion of higher education and research activities throughout the world. There were not only more students in higher educational institutions but also rapid growth in research activity. In many countries, academic progression is dependent in part on the publication of research results in refereed journals or as monographs issued by established, prestigious publishing houses.

The increasing number of active researchers and the requirement that they publish fuelled an unprecedented demand for scholarly publications, an increase in the number of publications, the emergence of new publishing formats and a decline in the acquisition of these publications by the principal purchasing sector - academic libraries.

More manuscripts increased competition for publication space available and publishers reacted in a variety of ways. Some selected the best of the articles offered and rejected the remainder. Other publishers either increased the size of their journal, usually by publishing additional volumes at an additional charge, or started new titles to cope with the increased demand. Both these strategies increased the pressure on library budgets and added to the cycle of cancelled subscriptions and subsequent lack of access to particular titles.

The most intense demand has been on those publishers which have longstanding reputations for quality. There are, of course, differences between disciplines. In the humanities and social sciences, particularly, much of the journal

publishing is undertaken by scholarly associations or by educational institutions. This also applies to some of the more specialist areas of science and technology. In these disciplines, publishing costs have tended not to rise dramatically and the academic community has tended to maintain a greater involvement in, and control of, the publishing process.

Where there is a high correlation between research and its commercial application, however, publishing tends to be dominated by a relatively small number of companies which each publish a large number of refereed titles and often also control the main indexing and abstracting services. These conglomerates have operated in a hothouse environment for many years, but their exotic products are increasingly too expensive for the academic market to acquire.

The combination of increased research output, an emphasis on publishing as a criterion of academic success, the high cost of publishing and the decline in library purchasing power have created a situation which has been developing toward crisis point for some years. The crisis primarily concerns access to refereed journal literature in disciplines related to the sciences, technology and medicine, but it has implications for all disciplines.

The issue is multi-layered and has been addressed many times in countless conference papers and journal articles over the past twenty years. Much of the early prognostication was confined to the university library communities in Britain, Canada and Australasia. These countries were hit heavily by cuts in government funding to universities and had to cope with the added impost of periodic currency devaluation against the US dollar.

Between 1986 and 1998, the median unit cost of journals purchased by Australian university libraries rose by 226%¹ During the same period, the Australian Consumer Price Index (all groups) rose by approximately 57%.² In contrast, the median cost of serials purchased by³ the 111 largest North American universities rose by 175% during the same period.⁴ An added difference was that the North American price rise was gradual while the Australian experience was subject to dramatic swings which were associated with exchange rates. (Figure 1)⁵

FIGURE 1 - Serial Unit Costs 1986 - 1998

North American and Australian research libraries - median values

It was not until the mid-1990s that university libraries in the United States began to realise that their nirvana was under siege. Suddenly, the major libraries were faced with not being able to acquire everything they desired and were having to cancel journal subscriptions despite increasing their overall investment. Yet, compared with the large cancellation exercises which occurred in Australia, Britain and New Zealand from 1990, the major US libraries experienced little real pain.

The pain they did experience, however, had dramatic effects. The problems which had been battled by the rest of the world for a decade assumed a new importance. They were suddenly no longer threatening just a vague academic research community but the particular interests of its elite and leading universities, schools of which presidents, senior bureaucrats and business leaders were alumni.

The Association of Research Libraries marshalled its forces and began a campaign aimed at an enemy which was identified initially as the international publishers of science, technology and medical journals. Much rhetoric was expounded on the invidious circumstances which saw scholars provide their intellectual property to publishers only to have their institutional libraries buy it back at prices which were considered well beyond the value added by the publishing process.

There was an immediate battle cry which sought to exhort academics not to submit articles to journals owned by particular publishers. Australian librarians echoed the call, but to no avail. While ever academic progression relies on publication in refereed journals, individuals will seek to publish in them. This particularly affects academics seeking to establish their reputations. Publication in the major refereed journals means inclusion in the premier indexing and abstracting services. This leads to citation by other researchers, the possibility of personal contacts and the development of identity and status in the field.

Few researchers were prepared to forgo these benefits to address a problem which was not seen to affect them directly. When the first round of journal cancellations occurred in Australia in the late 1980s, the knee-jerk response was that the problem lay with university libraries. There was a spate of reviews of libraries⁶ which invariably found that at least the issues relating to publication costs were not institutional-specific.

By the late 1990s, American librarians were beginning to realise that the problem was not just a handful of European publishers. American publishers were just as culpable, as were librarians and the academic community throughout the world.

American commercial publishers were as mindful as their international colleagues of the need to maintain shareholder profits. The late 1990s saw the merger or acquisition of companies on both sides of the Atlantic as information became the commodity of the future. Conglomerates such as Reed-Elsevier and Thomson emerged, comprising publishing ventures in all disciplines and with substantial investment capital available to ease the adoption of electronic and online publishing.

Academic societies also contributed to the publishing crisis. Most have been directly involved in publication at some time in their history. Over time, some have ceased their involvement entirely while others have contracted with commercial companies to undertake the publishing activity. In some instances, societies have contracted with the very companies most noted for rapaciousness.

Despite the pious indignation of many librarians, they too are partly to blame for the crisis. Due to the complexity of the task, librarians were unable to institute reliable mechanisms for charting the real use of library materials, particularly journals. As a consequence, there was little quality control and scant evidence of any relationship between the amount paid and the subsequent value derived. This has become easier in the electronic environment and most libraries are now using use statistics as part of the budget and resource allocation processes.

Librarians have had a particular effect on the publication of scholarly monographs. When journal costs began to rise, many libraries transferred funds which would otherwise have been used to acquire monographs. This was generally in response to advice from academic staff that journals were more relevant to their disciplines.

The consequence was a decline in the number of monographs purchased. In Australia, the median number of monographs purchased by university libraries dropped from 18,693 in 1986 to a low of 8,088 in 1991⁷ when journal prices and currency devaluation were at their worse.

There has been some recovery in recent years, but the higher figures probably reflect the purchase of multiple copies of coursework texts. (Figure 2) Although there are no national statistics available, anecdotal evidence suggests that the majority of Australian university libraries purchase fewer research monographs than they did ten years ago despite an increase in the number of titles available.

FIGURE 2
Median number of monographs purchased by selected libraries⁸

Since the market for most scholarly monographs is primarily libraries, declining purchase rates has had a ripple effect. Publishers have had to adopt a range of strategies to remain in business. These strategies have included smaller print runs, increased unit costs, publication only if sales are guaranteed and requiring authors to underwrite all or part of the costs. The result has been that it is harder to get a monograph published, particularly if it is of a specialised nature or does not have a broad market appeal. In those disciplines which have a strong reliance on monographic literature, the effect is substantial.

The contribution of the academic community to the problem varies and is often related to the unquestioning continuation of traditional practices. Recruitment and promotion practices which include publication requirements certainly contribute, particularly where quantity is influential. To counteract this effect, some universities have altered their procedures and require candidates to identify only the most seminal of their publications.

Other areas in which the academic community has contributed to the problem include copyright, involvement in library purchases and direct influencing of publishers. The transfer of copyright to the publisher is frequently a condition for publishing. This worked well for many years. Individuals surrendered some or all of their rights in return for the publisher providing a service - the publication and distribution of the book or article.

In recent years, however, this arrangement has been complicated by the emergence of two factors - copyright licensing and electronic publishing. As sales of their products declined, publishers sought to maintain their revenue streams by recovering income deemed forfeited by copying within educational institutions. This has become a major cost to universities. The Australian Vice-Chancellors' Committee and the Copyright Agency Limited recently negotiated a \$10.5 million settlement for certain categories of copying not covered by the university statutory licences prior to January 2000. This is in addition to the \$25 paid annually for each full-time equivalent student. Copyright payments by Australian universities total more than \$15 million annually. Most of this revenue is paid to publishers, rather than authors, as the owners of the copyright.

With the introduction of electronic publishing, greater control of copyright has become possible. In Australia, the Copyright Agency Limited and some publishers and creators have lobbied heavily to have fair dealing virtually eliminated from any future legislation covering the digital environment. If successful, this would mean that copyright owners could charge every time their intellectual property is accessed even though it was used for non-commercial purposes. This would have an unknown effect on the publication of scholarly works.

Librarians, the Australian Vice-Chancellors' Committee, the scholarly academies and others have lobbied against any changes in the legislation which would result in different conditions applying to the print and digital environments. The Digital Agenda Bill was passed by the House of Representatives on 28 June 2000 with only two amendments. Provided that the Bill gets through the Senate unchanged in August, fair dealing will continue to be a feature of the Australian copyright scene.

The other aspect of electronic publishing which has impacted on the publishing crisis has been the republishing of works originally issued in print. By

assigning copyright in perpetuity to publishers, authors have granted them the right to republish electronically without further reference or payment.

The fault does not reside only with publishers. Until relatively recently, there has often been little discrimination exercised by academic staff in the ordering of journals and monographs. Orders were placed to use available funds or on the pretext of developing the library collection yet without any discernible planning. All university libraries contain small collections which relate to the interests of individuals or to research no longer pursued. Some of this is inevitable with monographs but, for years, journal subscriptions were maintained even though there was no discernible link to current research or teaching.

Academic staff who have connections with publishers as editors or members of advisory boards have rarely questioned company policies. In some cases, editors are deliberately isolated from company issues, in others there is no desire to know and others are fearful that they will lose their position if they interfere. This is understandable, as most publishers have a plethora of candidates waiting to fill any vacancy, particularly if there are monetary or other benefits attached to it.

In order to develop a coordinated approach to the publication crisis, librarians sought to develop alliances with other members of the scholarly community. In Australia, the National Scholarly Communications Forum was established in 1993 by library associations, the scholarly academies and other organisations to ensure that Australia obtained maximum benefit from, and remained well informed about, the emergence of new forms of scholarly communication. The Forum runs conferences and lobbies the academic community and government on issues relating to scholarly publishing and research. The Council of Australian University Librarians has been a major supporter of the work of the Forum.

Although these efforts have been useful, Australian academic publishers are too small a proportion of the world's academic publishing industry to have any real effect. It was recognised that alliances needed to be forged with like-minded associations internationally. This coincided with a campaign in the United States to gain the support of senior academics and administrators.

Various alliances have been established which bring together librarians, academics and university administrators. These include SPARC - the Scholarly Publishing and Academic Resources Coalition. SPARC has a number of objectives, including support for:

- lower-cost, directly competitive alternatives to high-priced journals in scientific, technical and medical fields.
- ventures that obtain competitive advantage through the use of technology or innovative business models, and/or address the information needs of an emerging or fast-growing STM field.
- development of non-profit portals that serve the needs of a discrete scientific community by aggregating peer-reviewed research and other content.
- creation of better, faster, and more economically sustainable systems for distributing new knowledge.⁹

SPARC has eleven partners which provide online alternatives to commercial publishing. It is too early to tell whether these initiatives will have a lasting effect, as it takes about five years for any journal to become established. The

partners include major universities and academic societies, and their reputations and support should ensure that the publications survive.¹⁰

Activities such as those sponsored by SPARC have not driven commercial publishers from the temple. The academic community is conservative, and commercial publishers have taken steps to protect their investment. There have, however, been some victories. Initiatives, such as Highwire Press established by Stanford University, have shown that the business model for scholarly publication does not have to conform to the commercial model to be successful. Joint action by libraries and academics throughout the world has shaken publishers, who have ameliorated their charging regimes and have become increasingly willing to negotiate with the academic community.

The reality is that if the publishing industry were suddenly obliterated, there would be a need to invent it as a means of scholarly communication. Publishers provide services which the scholarly community, in whole or part, has elected not to undertake. They have a role, and in some instances their primary market is not the academic community but industry. This is particularly true in many areas of the sciences, technology, medical and legal disciplines.

The challenge which faces the scholarly community is multi-faceted and requires a range of strategies and alliances. At its most basic, the academic community needs to resume its interest in, and control over, scholarly publishing irrespective of the format in which it is presented.

The value of intellectual property needs to be recognised and advice made available to guide individuals in their disposition of it. Most universities now have business offices which assist researchers whose intellectual property has an obvious commercial potential.

There appears to be less assistance available to scholars whose work is has no immediately discernible value. Some universities and the Australian Society of Authors¹¹ have developed model contracts or checklists to assist authors in their dealings with publishers. The reality for many scholars, however, is that conformity with publisher requirements is necessary to get published. There are often plenty of other manuscripts available.

Pressure needs to be placed on publishers to ensure that their pricing models are based on actual costs rather than on what they believe the market will pay for their products. There is considerable activity on the part of libraries to approach publishers in order to negotiate consortium deals. This is assisted internationally by the International Coalition of Library Consortia, which shares information on dealings with major scholarly publishers.

The ideal of each author using the Internet to become a publisher is utopian. Such a proposal provides no guarantee of the provenance, quality or preservation of the information. Yet the Internet does offer opportunities for academic societies and institutions to take a more active part in the publishing process. It will not, however, solve all of the problems.

The University of Sydney Library has established a Scholarly Electronic Text and Image Service which makes available digital versions of literary and other works for textual analysis. SETIS digitises print material, acquires digital works from other sources and encourages original publication. The later activity is still in its infancy, but there is scope for it to be widened as a means of publishing the many journals and reports associated with the University.

Such a facility will be an essential part of future scholarly communication. Refereed journals are likely to continue for some time but in many disciplines will not be available in print format within a few years. Publishers of these journals will continue to be a mix of commercial organisations and academic societies. As more publishing becomes Internet-based, it is likely that the concept of a journal will disappear and be replaced by a database which will retain the quality standards of the journal.

Greater use of the technology for pre-print services, discussion rooms and other forms of scholarly communication is likely to occur. There is a danger, however, that some of this activity will not be archived adequately and therefore not available for posterity.

The problem of archiving is of particular concern. It has always been one of the main roles of libraries, and was relatively easy in the print environment. Unless there is an adherence to standards, the long archiving of digital publications may be difficult. Another area of possible concern is the relationship between preservation and commercial interests. With the hosting of digital information transferring to publishers or other commercial entities, there may be a temptation to retain only that information which brings a financial return. Librarians have recognised this issue and have been negotiating with publishers to ensure that their files will be transferred to a non-commercial entity if they go out of business or no longer wish to maintain the information.

There will continue to be a plethora of journals issued by societies and institutions, especially in the humanities and social sciences. Although universities have tended to withdraw their financial support in recent years, it may be necessary for them to reconsider the benefits which accrue from their involvement.

The future for the scholarly monograph is questionable. Print runs are already small and in most instances verge on the uneconomical. It is likely to become almost impossible to get a monograph published commercially in the future. The academic community will need to reconsider the role of the monograph in the scholarly communication process and determine the involvement which the academy will have if it is to continue.

While the familiar bound volume may become increasingly rare, the concept and role of the monograph can be catered for using information technology. Facilities which allow on-demand printing are available already and there are a number of initiatives underway to exploit it. Several major publishers have trialed the technology, especially for course reading requirements. The Australian Society of Authors is investigating ways of allowing authors to place their works on the web linked to facilities which enable them to be compensated if the text is copied.

The technology also allows different approaches to be taken so that links are provided with other texts as well as to sound, graphic and other images. All of this requires time and different skills, but it also opens up new avenues for transmitting knowledge.

Linked to these developments are electronic books which allow large amounts of text to be read using hand-held viewers. They are popular already in Japan for comics and there are some products being developed in the United States which could change the way in which monographs are published.

Whatever happens, the future will not be as comfortable as it was during the 1970s and early 1980s when higher education was expanding. Access to

scholarly literature will become more difficult unless the academic community recognises the challenges and takes appropriate steps to accommodate them.

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Notes

¹ 'Australian and New Zealand Academic Library Statistics' 1986 - 1999 published annually as a supplement to *AARL - Australian Academic & Research Libraries* and quoted in J Houghton *Economics of Scholarly Communication: a discussion paper* prepared for The Coalition for Innovation in Scholarly Communication 2000, p.6.

² Reserve Bank of Australia *Table G02 - Consumer Price Index*.
http://www.rba.gov.au/bulletin/g_tables.html

³ Association of Research Libraries *Statistics* <http://www.arl.org/stats/arlstat/mrstat.htm>

⁴ Association of Research Libraries *Statistics* <http://www.arl.org/stats/arlstat/mrstat.htm>

⁵ J Houghton *Economics of Scholarly Communication: a discussion paper* prepared for The Coalition for Innovation in Scholarly Communication 2000, pp.6, 8. The figures are quoted in US\$ for North American libraries and AUD for Australian libraries. The purpose of the graph is to illustrate the volatility of the Australian market.

⁶ Including 1991 (Melbourne); 1993 (Sydney); 1994 (James Cook, ADFA, Tasmania); 1995 (La Trobe, Western Sydney - Nepean, UNE, Newcastle); 1996 (ANU).

⁷ 'Australian and New Zealand Academic Library Statistics' 1986 - 1999 published annually as a supplement to *AARL - Australian Academic & Research Libraries* and quoted in J Houghton *Economics of Scholarly Communication: a discussion paper* prepared for The Coalition for Innovation in Scholarly Communication 2000, p.6.

⁸ J Houghton *Economics of Scholarly Communication: a discussion paper* prepared for The Coalition for Innovation in Scholarly Communication 2000, pp.6, 8. The figures are the median monograph acquisition figures for 61 Australian and 62 US libraries.

⁹ SPARC homepage <http://www.arl.org/sparc/core/index>

¹⁰ Columbia University, Massachusetts Institute of Technology, American Chemical Society, Institute of Physics & German Physical Society, Royal Society of Chemistry.

¹¹ <http://www.asauthors.org/checklist.html>