Snap, crackle and ultimately pop?
The future for serials

Based on a paper presented at the 28th UKSG Conference, Edinburgh, April 2005

This paper had as its brief, for the concluding session of the 2005 UKSG conference, to overview issues within the conference, and hopefully within an entertaining framework. Readers of this article should therefore also refer to the UKSG web site at http://www.uksg.org/events/previous.asp#2005conf for my PowerPoint presentation which contains a significant amount of pictorial material. Topics covered include the recurring historical nature of the 'serial crisis', the open access movement, the costs of serials at both the 'front end' and 'back end', institutional repositories and the relationship of the academic book in electronic form to serial trends.

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Background

When I first thought about a word play on serials, I thought I would simply restrict comments to the title, but in fact it is possible to take comparisons with cereals a little further. The famous Kellogg cornflake characters were created in 1932, the same year that the US Association of Research Libraries (ARL) was founded. David Stam recounts in his short history of the ARL, 'Plus ça change', that an item for the first meeting on 29 December 1932 was the rising cost of serials[1].

In 1933 Rochester University noted that they had had to cancel Springer titles in the previous two years, while ARL noted a Medical Library Association resolution that "no library subscribe to any periodicals which do not have a fixed annual subscription price … unless definite word comes to that effect, MLA recommends cancellation except for one library in each of six to ten zones throughout America".

To return to cereals, in July 2004 the UK advertising watchdog upheld a complaint that Kellogg's 'Frosties' were unhealthy because they were alleged to contain too much sugar. Depending on one's viewpoint, serials could be considered unhealthy as they significantly slow the financial digestion of libraries! With cereals, the consumer has a choice between brands but it is not easy to substitute one serial title for another. What ultimately is required is a well-balanced information diet from publications made with 'research proven ingredients', especially for authors, that is, one that meets the requirements of the various national Research Assessment Exercises (RAEs).

Plus ça change – Paul Reekie, of CSIRO Publishing, in a presentation to an Australian Library and Information Association seminar in Canberra, Australia in October 2000, predicted some of the following scenarios by 2005[2]. (My comments are in italics below.)

- Serials will be online products
  – serials are now predominantly in electronic form in the STM market.
- Libraries would aim to be 100% online
  – while significant print legacy collections remain, much library information is currently available electronically and delivered at the desktop.
- Individual papers will rule
  – certainly in terms of impact, but not in terms of pay for view, and articles still remain bundled in aggregations.
- Current players will continue to be stretched
  – indeed probably more so now and in the future.
- Customer expectations will continue to grow
  – electronic developments from the publisher and libraries are largely taken for granted by academics and students, particularly in the context of the electronic one stop shop.

- New options will challenge traditional processes
  – *yes and no: but certainly, new publishing models including open access (OA) will continue to stimulate debate and offer alternative models.*
- Small publishers unable to adapt
  – *there are currently difficulties for small publishers in electronic provision and digitization of back-files, but a number of initiatives for learned societies have emerged, ranging from the US BioOne and ALPSP aggregations.*
- Publishers take on library roles
  – *in fact, in terms of electronic platforms and aggregations, probably true; but in terms of digital objects, grey literature and monographs, significant trends have emerged for libraries becoming publishers through e-Presses to institutional repositories.*

Open access

The open access debate needs to be viewed in the context of the wider issues of scholarly communication. OA should cover scholarly output in its entirety, both in textual and non-textual formats. The OA debate should not focus exclusively on STM journals, nor should OA be seen as a solution to the alleged library 'serials crisis'.

The open access debate has developed global momentum in the last two years through such bodies as the National Institutes of Health in the US, the UK House of Commons Science and Technology Inquiry, and the UK Research Council. Most of the academic community, however, are still unaware of OA initiatives. Rowlands, Nicholas and Huntington have noted that 82% of 4,000 authors surveyed in 2004 knew little or nothing about open access[3]. Other studies, however, have indicated that a majority of scholars, if mandated by their institutions or granting agencies, would deposit in or through appropriate OA mechanisms.

Most of the OA debate has focused on the 'author pays' (which is in itself a misleading term) article options rather than the depositing of OA material in institutional repositories, despite the constant admonitions of advocates such as Professor Stevan Harnad. If academics are unaware of Harnad's 'green and gold paths' for depositing of articles, then they are surely even more unaware of the 'dog's breakfast' of pricing for articles in relation to 'author pays' which can range from US$500 to US$3,500.

It is small wonder that Derk Haank indicated at the UKSG conference that relatively few authors have paid for open access with Springer[4]. This is surely because of the high cost of US$3,000 per accepted article. Is differential open access pricing in fact a clever, if unconscious, collective ploy by publishers to confuse the market and academic authors? In contrast, Diane Sullenberger has indicated a much higher percentage of authors depositing in the Proceedings of the National Academy of Sciences[5]. In her study, open access papers are read more and sooner than subscription access papers by a factor of 50% in the first month. Her evidence, however, did not indicate that open access papers are cited more, or faster.

Gatten and Sanville have indicated in an OhioLINK analysis that 30% of titles from 'big deal' publishers accounted for 80% of articles downloaded[6]. The NESLi2 study of usage statistics of journals also revealed that a comparatively small percentage of serial titles generated high usage[7]. Thus, the vast majority of articles are still relatively little used in the electronic environment.

Caroline Michel of Harper Press indicated in the 'Guardian World Book Day Forum', on 3 March 2005, that Colman's Mustard made more money out of the mustard that was left on the side of the plate than the mustard people ate with their meal! Thus publishers in 'big deal' serial aggregations are probably also making more money out of the serials that are left unused on the side of the information plate. A vast majority of material is being published that could be arguably termed academic dross, whose sole purpose is to meet benchmarks required for promotion, tenure and RAEs.

The impact of RAEs and university league tables are pre-eminent in the thinking of institutions, and thus their academics, in the nature of reward systems. Unless reward systems are changed, or added to, then historical publication frameworks will continue to prevail, particularly publishing in journals cited by ISI (Institute of Scientific Information). There is an urgent need therefore to re-engineer reward systems for scholarly communication change, of which campus advocacy programmes at a discipline level will be crucial.

In a perfect world, one should step back and contemplate scholarly communication in a holistic fashion. Houghton has outlined, in an Australian context, the issues and challenges for knowledge production and access[8]. Most of the researchers covered in this Australian study were operating in

a Mode 2 science interdisciplinary mode for research creation. Their publishing patterns remain, however, because of the existing rewards system, in what might be called historical Mode 1 patterns.

The front and back end of serials

A lot of attention has been paid to the 'front end' of serials – for example, the dramatic comments on the serials pricing crisis in the United States in 2004 and 2005. It is interesting that the 'serials crisis' which was experienced in a number of countries in the 1980s and 1990s, for example, Canada, South Africa and Australia, was generally overlooked by American commentators and libraries. Nonetheless, given that 64% of the STM market is in North America, the current STM debate and its outcomes are crucial there in ultimate serial scenarios.

In the meantime, are the major publishers suffering, such as Reed Elsevier, Thomson, Sage, Taylor & Francis and Wiley? Annual profits are still large and in several cases rising. Thus Reed Elsevier in 2004 had pre-tax profits of £1.03 billion up from £1.01 billion in 2003. Annual operating profits have been consistently in the range 33–35% over the last five years. The LISU October 2004 pricing study revealed average price increases by publishers ranging from 27% to 94% over the period 2000 to 2004[9]. For these publishers, one must ask: is there really a crisis in serial publishing?

Most university libraries now opt for electronic access over print wherever possible – 83% of STM journals are available electronically. The University of Western Australia Library went from 9,357 electronic serial titles at the beginning of 2003 to 37,339 by the end of the year. Universities have clearly benefited in numeric titles from consortial deals, but the question of usage and costs comes into question, as mentioned above.

The research and student communities increasingly access material at the desktop. The academics do so in their own research environments, while students use physical library information commons environments, which often bear more resemblance to shopping malls. This electronic world clearly benefits the user but users are often unaware of the logistical complexities at the back end of serials, just as they are unaware of the costs at the front end. As a result, we have seen firms like Serials Solutions, now taken over by ProQuest, emerging to cover issues such as contracts, price changes, user authentications, usage statistics, renewals, cost per use, etc. It is certainly a complicated serials back-end world.

Serial agents

The role and nature of serial agents has also been a problematic one in recent years. There has been a decline in global players over the last decade as margins reduce. Many publishers have their own web sites and engage in direct selling and direct linking, with consequent reductions in sales by middlemen. Serial agents have experimented with a number of add-on services and aggregations, some of which have been successful and others not. There is increased evidence of the linking of subscription services and online research database business. Ian Middleton, EBSCO's UK General Manager, has argued that it is the "agent who delivers economies of scale and efficiency within a supportive environment"[10]. Nonetheless, Middleton believes, only authors and users (often the same but wearing different hats) are "secure in their roles"[11].

The future of the academic monograph and serial deconstruction

A significant portion of scholarly publishing in the future will no doubt come under the umbrella of 'public funding, public knowledge, public access'. Evidence from those publishers, such as MIT and the University of California, who provide material free of charge on the web, is that free access to books on the web actually generates more conventional book sales than would otherwise be the case. Professor Diana Oblinger, Vice President of Educause, noted in a personal visit to Washington on 9 May, that her new book *Educating the Net Generation*, while available on the net free of charge, had stimulated unexpected sales of a substantial nature of the hard copy, for example in Hong Kong[12].

Electronic monographs, particularly when offered in consortial monograph offerings, are often based on serial models such as Oxford Scholarship Online. The e-slicing of books and the rental of texts by Taylor & Francis and others are further examples of the merging of serial and book formats. The increasing use by students of material in course management systems to the exclusion of the full text of monographs will accelerate the trends

mentioned above. The use of citations through chapter metadata will be particularly valuable in measuring the impact of social sciences and humanities monographs, similar to the serial citations. In addition, what will be the long-term impact of Google Print and Amazon's Look Inside the Book?

Institutional repositories

Two strands are arguably now beginning to intersect, namely, the 'decline' in university presses and the 'rise' of university libraries/ repositories. Digital publishing technologies, linked to global networking and international interoperability protocols and metadata standards, now allow for an appropriately branded institutional output to serve as an indication of a university's quality and also as an effective scholarly communication tool through visibility, status and public value. Recent trends in May 2005 in certain top American universities exemplify this public good manifestation of their scholarly research.

The repositioning also of the university library in the digital publishing movement will mean changes in the role and function of libraries, for example, in the areas of collaborative research, publication and digital archiving. As a result, on the way to changing scholarly communication, libraries may end up changing themselves as well as the future of scholarly publishing. The recent developments of e-Presses in a number of Australian universities, as well as those in America at the California Digital Library, Columbia and Cornell, demonstrate embryonic new trends, both for serials and monographs, in an institutional setting.

The serials debate has led to questions on the economics of scholarly publishing and institutional responsibilities. One major serial agent speaker at UKSG said that if some of the money that was being put into institutional repositories was put into the library, it would alleviate the serial crisis! The amount of funding and infrastructure going into institutional repositories is relatively low in terms of the total serials budget. The cost of institutional repositories, based on examples from MIT DSpace, Australia and Hong Kong, reveal relatively low figures in terms of effective research output compared to the serial costs of research input. Figures have been quoted by the University of California system that their acquisition budgets costs are in the order of

US$30 million on an annual basis (US$21 million: serials and US$9 million: monographs). The institutional repository and e-Press costs there are relatively minimal in comparison.

Economics of serial publishing

It is increasingly important for detailed economic studies to be undertaken to look at the total costs of serial publishing from creation to access by the academic community. Sally Morris has indicated the somewhat staggering "true costs of scholarly journal publishing", which include both research time and academic input before the formal publishing process[13]. Scholars are driven by the RAE process (publish or perish) and are largely unaware of the options for change. This must be a major issue for all in terms of communication and advocacy programs[14]. It is clear that unless the incentives for research assessment change, a core element of scholarly communication change will not occur.

In this context, it is sobering to reflect that a number of the major serial conferences held globally that I have attended in 2005 have been noticeable by the lack of scholars themselves. The key players in the creation of, and access to, scholarly knowledge are rarely present in the major conference debates. This is due to a number of reasons. These include a lack of funding by departments outside specific discipline conferences, pressures of work, and a lack of knowledge and interest in the topic in a generic sense, a trend which is exacerbated by the fact that the academic community is largely divorced from the actualities of serial pricing, access and delivery.

Conclusion

Scholarly communication change has to come from both above and below. In that process, whither the serial? While the serial construct in its historical form may ultimately go 'pop' there is no doubt there is still a lot of crackle left! The serial future is likely to be evolutionary rather than revolutionary. Changes in attitudes and scholarly communication models will ensure that the current serial 'feudalism' may eventually be replaced in part by the global creative commons. We may end up with a two-tier publishing system, namely high toll access (TA) and low open access (OA). Elsevier have stated, in

the context of the OA debate, that their dictum is 'close enough for free – or excellence for a fee'. Perhaps instead we should aim for 'Most free – the best for a fee'.

In the end, as Gerald Coppin of Nature Publishing, quoting Charles Darwin, has noted, it may not be "the strongest species that survive, nor the most intelligent, but the ones that are most responsive to change"[15].

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