

DOG EAT DOG? - AN ANALYSIS OF THE FORCES FOR CHANGE IN THE JOURNALS PUBLISHING MARKET

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E-journals and the Internet present new challenges for those involved in the scholarly communications process. These challenges are being met through the development of services which harness the advantages of the electronic format to enable content owners to reach new markets, researchers to find their way to relevant information and librarians to meet the requirements of their stakeholders.

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Over the past five years the explosion of online services and content has created new possibilities for librarians and researchers, who can now envisage a world of connected information, delivered seamlessly to the desktop. The utopian vision is of one where the online researcher becomes self-guiding through the world's literature and research tools, assisted by intuitive interfaces and navigation. The reality, however, is that the increasing volume of material available on the Web has made it harder and harder to separate the good, valuable and reliable from the ill-informed, biased and plain misleading. As a result, users of online services actually need more, rather than less, assistance in navigating through the information overload on the Web.

The vision of a world without paper delivery is also being challenged by the harsh reality of yet more trees felled, as the location of print and production merely moves from the factory to the office. The Boston Consulting Group recently reported that, despite the hype about the paperless office, demand for pre-cut paper will double in the seven years to 2003 as ever more information is downloaded to the office printer. Conversely, the demand for paper to print magazines and catalogues may fall by up 12 per cent as more information, especially that which is time sensitive, moves online.

Content owners and publishers are, similarly, facing intractable dilemmas. Many traditional publishers and content owners are struggling to discover how to enable online users to access the traditionally high value content in their scientific, technical and medical journals: how to enable them to find it easily; how to differentiate it from other less highly regarded sources, and yet still protect the value in their copyright.

For intermediaries the future is no clearer. Businesses, which have grown up over decades – in some cases over a century – serving the needs of the library community, have been forced to reinvent themselves, consolidate or die because the advent of online

delivery in serials publishing is forcing some profound changes in the structure of the market as illustrated below.

Traditional roles are being re-thought and there is a kind of pervasive paranoia about the dreaded 'd-word' – disintermediation.

- ⌞ When electronic delivery is the norm, and large numbers of journals are concentrated into the hands of a small number of publishers, who needs subscription agents to manage the library's budget and deal with returns and non-deliveries?
- ⌞ When the members of academic disciplines can collaborate in online communities and share research papers amongst each other, who needs publishers?
- ⌞ Since the US Government and the EC are actively competing to provide the research that their taxpayers finance in summary form in databases which are freely available on the Web, who is going to subscribe to abstracting and indexing databases?
- ⌞ Most frighteningly, for the budget-holders in a world where publishers deal directly with consortia and end users access material on the Web from their desktop, who needs librarians?

For its participants, the established circular structure of the scholarly communications world is feeling increasingly like a dog track, where it is quite possible that you turn out to be the hare that the others are desperate to eat.

These challenges require new ways of operating, new partners and new market structures. This is the arena in which ingenta, and similar service providers, are operating, by helping content owners to reach new markets, by helping individual users to navigate to content that is relevant to their needs, and by helping librarians to provide relevant resources freely to their stakeholders. This kind of service, performing a marketing and distribution function for publishers and freely available to librarian and end users, is a new kind of business that only the advent of the Web has enabled to exist.

From a relatively neutral position at the centre of this market service providers, such as ingenta, can offer perhaps a less apocalyptic vision of a future in which each of the existing participants has the opportunity to perform a valuable, if perhaps slightly altered, role.

Librarians in the new structure

Firstly, looking at the librarian community, these are times of profound change in a group where stability, tradition and continuity have been valued almost above all else. The whole concept of collection development in its traditional sense is threatened by the instant gratification of the Web's everything-on-demand promise. The certainties of the past are being whipped away. Archiving becomes nebulous and uncertain when applied to transient electronic formats rather than reliable old paper. New students are arriving already versed in the Internet and even the older academic staff have managed to find their way around the keyboard. What then is the role of the librarian, especially the serials buyer, when the readers are all online?

Clearly, not all readers will be online and there is still a role for the cataloguing and shelving of books, as there has always been. However, this is declining in line with the relative importance of the physical building of the library, which will increasingly seem redundant, as the ability to search and retrieve is devolved to the user anywhere on the academic network and even at home via the Web.

This concept of a distributed library could, however, be seen as an advantage. How many librarians went into the profession to be buildings administrators? If a substantial proportion of the budget was transferred from shelving costs, archival storage, repairs and renewals and transferred to acquiring the stuff that the library users want to have, satisfaction levels with librarians would certainly increase. Staff would be liberated from the constant pressure for increased availability. A recent survey of Bodleian Library readers showed that their biggest complaint was the limited hours of opening.

Another essential function of the librarian is in helping readers by directing their search for material, and this will be just as relevant when users find it difficult to find resources in the anarchy of the Web.

The central area of the librarian's responsibility will remain as important as ever. As the guardians of the institution's purse strings, they will be certain to remain a popular figure to an ever-increasing range of service providers seeking to relieve them of the burden of their wallets. Even if

information purchasing budgets are delegated to individual departments, there will still be a role for central negotiation of terms and management of the budget to ensure value for money.

This will become a key role for the librarian in the new information age, increasingly in collaboration with IT departments: not just knowing what readers are asking for but collating the statistics to back up decisions to purchase one journal over another. It is key to the management of electronic journal distribution that librarians look at the data on access and usage and use the information to select the journals offering best value. Such information would have been almost impossible to collect with open shelves. The librarian can become closer to their subject by managing information and not merely the physical aspects of their work.

Publishers in the new structure

Since the advent of the journal concept, there has been a need for an organising structure for the vast quantity of research output. The application of the peer review process – although far from consistently applied – adds an independent quality control step to the publication process and prevents the publication of false or misleading information. It is a counterweight to the pressure from the academic world to be published, whilst providing a highly efficient system for ensuring that the best research in a field is archived, accessible and promoted.

The main challenge facing publishers is the threat to the subscription system created by the Web's on-demand 'only pay for what you want' paradigm. Every publisher will admit, if only on the psychiatrist's couch, to inner fears that they do not really know how many people actually read their journals or what they would have to charge for individual articles in the popular ones to offset the costs of the unread and the irrelevant ones. This is one of the strengths of the journal publishing system: by removing the commercial valuation of every item of research, it makes it possible to subsidise the costs of publishing large amounts of minority interest material from a smaller number of profitable titles.

This view, however, ignores the fact that, currently, the journal subscription system only reaches a tiny core of those potentially interested in the material published. Putting the material

online enables a whole new range of users to see that the work exists and to stimulate interest in it.

There is a lot of evidence that online journal searching benefits users by allowing them to look at publications which they do not have on the shelves. Work by SuperJournal, collated from almost 3,000 respondents, showed that 90% of social science users found material through electronic searching that they would not normally have found, and that 70% of them found material that was not otherwise available in their library.

So, there is a large, untapped market out there and publishers can, through using a service like ingenta's, experiment with new pricing formulas and licensing regimes without throwing out their entire current business model.

Many commentators have also predicted the death of the journal as individual researchers are able to post research directly into a repository for others to download and in some research communities it is, indeed, happening. At the research level in the area of high-energy physics, a service of this kind has been operating for the last thirty years – nearly ten of them on a server – run by the community themselves. However it is unlikely that this kind of service would operate effectively for researchers when the volume of material produced, and the number of participants, was significantly larger – as it is in most other branches of science.

A more challenging, and as yet unresolved, issue is that of the surrender of copyright in all the subsequent manifestations of a work beyond the original journal. While publishers can continue to cover themselves by obtaining rights from willing authors covering all forms of exploitation of the material then current, it is likely that further forms will emerge which the author will still own, resulting in a complex series of further negotiations.

The journal in the new structure

A further conundrum for the publishing community is how to evolve the concept of the static, snapshot-of-a-point-in-time printed journal into a form more appropriate to online delivery and the more fluid, evolutionary nature of the Web.

In line with this feature of online delivery, a number of nascent forms of online community

have started to evolve, some successful and some less so. The best usually combine a strong sense of community – communication with other members, and providing solutions to problems – with compelling content that is highly relevant. Such online communities usually involve partnership with the owners of key database and journal content, and with leading societies. In these communities one of the elements, but by no means the most important one, will be the online journal, the content of which will differ significantly from the paper version.

The power of the electronic version will transform the usefulness of the content in many areas of science. The researcher's task will be transformed by the creation of active links between pieces of information which will enable users to navigate from citations directly to the articles cited, to follow links to other articles which subsequently cite the article in question and to follow similar links to books.

Beyond text, the computer's ability to offer 3D modelling of structures, such as bridges or chemical chains, will aid progress in the many scientific areas where the understanding of the subject is as much about envisioning the object as doing the maths.

Hence, one can envisage a world where an online community sees the start of the research publication process, with the internal distribution to a small group of 'work in progress'. This could be turned into a finished article and published in print form 'for the record', and continue to evolve in the online form thereafter, with the author or others adding to the conclusions as further work is undertaken.

Conclusion

There can be no doubt that the Internet is here to stay and that we are only just beginning to understand what it can do for us.

The library will also be with us for some time to come but the role of the librarian is going to change. Instead of dealing with physical objects in the form of books and journals, the future will be more about dealing with the information they contain, measuring the amount it is used, qualifying sources by checking the veracity of content and pointing users in the right directions.

For the publisher, the challenge will be to keep focused on adding editorial value and providing distribution and quality control while the actual nature of the content, and the medium of its distribution, are constantly changing.