

## THE IMPLICATIONS OF CURRENT AND FUTURE INITIATIVES FOR LIBRARIES

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*The author suggests that while there may be some confidence and a measure of unanimity about the likely eventual future pattern of research communication, there is much uncertainty about timescales and intermediate scenarios, and contrasts the 'just in case' and 'just in time' models for library purchasing.*

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As manager of a University Library in a major research-led University, the academic journal is very important to me. It takes at least 20 per cent of the budget for which I am responsible and occupies more than 20 per cent of the building in which the Library is housed. For some of my most important and influential users, the ones who can exercise most influence over how the Library is seen by the University, the journals we stock, and the journals which we do not stock but to which we provide access, are the most important aspect of our service.

I will assume that the process of gradually replacing the traditional printed academic journal with an electronic surrogate has already begun, that it may well take some time to complete, but that, in the longer term, it is inevitable. But there are some aspects of the present situation which are not entirely consistent with that scenario.

If we agree that the academic journal is at a crossroads, this implies that we face an important choice or choices. For some of those standing at the crossroads, the basic question can be stated as follows. The purpose of academic journals is to underpin scholarly communication, certainly by validating research results, and quite likely by helping to transmit them. At present, considering journal cancellations by libraries and our inability to subscribe to some significant new journals, it is clear that we cannot afford to have as much scholarly communication as we would like. How can we rectify that? These people see the problem as being essentially economic, and would be relieved if technology, or any other miracle factor could add significantly to the amount of scholarly communication they can currently afford.

But there are others, also standing at the crossroads, who take a different view. They see the landscape as remarkably similar to the landscape which so many industries have confronted in recent years. Their basic question might be stated thus. Like so many other industries, the academic journals industry is being overtaken by information technology. What must we do to adapt to this changing situation? These people see the problem as essentially technical, and they are evangelists for a brave new future for scholarly communication.

The argument at the crossroads, about which direction to take, has been going on for sometime. It is simplistic to imply that

everyone arguing there is in one group or the other. Most people have a go at both bits of the argument from time to time, but it is my contention that the argument is deeply confused because of this. The people at the crossroads have still not decided whether the object is to try to achieve more scholarly communication within the same financial constraints or to find the most acceptable way, in financial and other terms, of introducing a new electronic basis to scholarly communication. Of course, some people manage to imply that the two aims are inextricably linked, but, while this may turn out to be true in the long term, as the costs of electronic technology continue their steady fall, no one has yet proved it to be so at the present time.

Standing at the crossroads, in this state of confusion, it is interesting to look at two features of the landscape.

#### **Alternative forms of access**

The first concerns the present process by which alternative forms of access are being used to substitute for more traditional forms which are no longer affordable. In almost all cases, what libraries look for is an alternative form of access to those journals they have concluded are less central to their needs, never an alternative to those titles they regard as "core journals". If more money were available, most users would still welcome the opportunity not to cancel journals and possibly even to increase the number of subscriptions taken by the Library. There are few signs yet of any enthusiasm to embrace a new technology-based system of scholarly communication. Print on paper is the "gold standard"; electrons are second best.

The second feature is the assurance, so often given, that, if libraries do opt to depend on electronic means for access to information, they can rest assured that the printed originals will still be found in the great libraries, the British Library, Bodley, Cambridge, Manchester, Leeds, Edinburgh and Glasgow, to name but seven. Once again this seems to indicate reluctance rather than enthusiasm to adopt new methods of access. If electronic forms of access are the future, we ought surely to accept that our greatest libraries would give a lead in adopting them. Some, perhaps, might sardonically comment that

adaptability was never the dinosaur's strong point. Still, it looks unrealistic to propose for our greatest libraries a role which condemns them to support the access mode of yesterday, rather than of tomorrow, if that is what electronic access is considered to be.

When the economic case for going electronic becomes overwhelming, the message is stark: adapt or die - as many companies have discovered to their cost. But as long as the economic case is unclear, there is not the same imperative to take the electronic path. So, in universities, we have a gap between those who evangelize about an electronic future - and they are often in positions of power and influence - and those who simply wish that existing resources would buy more scholarly communication, whatever form it took, but still with print on paper as their preference. In my view, such confusion does cry out for clear leadership, accompanied by a serious investment in training if people are to be required to adapt to a new future. That is what other work sectors have had to do.

#### **Models for payment**

This leads me on to a related topic, the two alternative models by which libraries pay, on behalf of their users, for the scholarly information in journals. In one model, libraries pay up front, and, subject to the restrictions imposed by copyright law, they buy for their users unlimited rights of use. This is the typical journal subscription model, and is also now referred to as "just in case" provision. It is specially preferred for journals likely to get heavy use but it is also considered to provide better and easier access. The provision of plenty of journals on the spot is viewed positively by research libraries and their users.

In the second model, libraries pay as they use - typically by making use of document delivery services - and provide a "just in time" service. I am well aware that at present the payments in this model do not go to the same parties as in the first model. Probably they go the BLDSC and not to the publisher. But for libraries, this looks like the appropriate way to pay for titles that are not so heavily used. In principle, if it gets more expensive for a library to pay for a journal per use

than to subscribe, then the sensible thing to do is subscribe. In fact, most research libraries probably take quite a lot of titles which cost more to subscribe to than they would cost if access was on a pay as you use basis. Hence, when they cancel journals, and provide access - inferior access, I would agree - by document delivery instead, libraries do save money.

Here, I am going to risk a short speculation about publishers. If a publisher has a very heavily used journal title on his list, he probably grieves a little at times to think that all that use is sold for the cost of a fixed subscription. If the title is relatively weak on the other hand, he may be glad of the relative security represented by an adequate number of subscriptions paid up front. So there is conflict of interest between publisher and library as to when "pay up front" or "pay as you use" should be the preferred option.

I believe that this theoretical speculation is confirmed in the electronic environment - by experience with the Bath ISI Data Service (BIDS)\*. Prior to the inauguration of the BIDS service, or the availability of CD-ROM, those who accessed the ISI citation indexes paid according to use: a further example of the "just in time" approach. With the BIDS service, a subscription regime was introduced, with payment of a fixed sum up front and permission for subsequent unlimited use. The ISI databases then became a "just in case" service. No doubt, when the subscription-based service was negotiated, ISI thought that the subscription level was reasonable. But use has been very heavy and has transferred to BIDS from other pay-as-you-use data spinners. This accords closely with the way that universities prefer to pay for access when data is likely to be heavily used, but it is said to have inspired regrets at ISI at the low level of subscription compared with the amount of use, and hints that renegotiation of subscription levels will be put on the agenda as soon as an opportunity arises.

These considerations are in my view very important for the relationship between libraries, the purchasers in the information industry, and those we may call the providers, be they conventional publishers or database spinners.

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\* Editor's note: BIDS = Bath Information and Data Services

Whatever the underlying technology, libraries will try to pay an economic price up front for unlimited use of the most heavily used materials and, at some possibly well judged cut off point, to prefer pay-as-you-use for the rest. Furthermore, they will want to channel as much use as possible in the direction of those information products for which they have paid a single upfront price. Although librarians and publishers do have some common interests, in this matter, their interests do not coincide.

### Recharging

Into this picture, I want to inject the topic of recharging. The funding of universities is now much more transparent than it used to be. Every teaching department knows the precise value and cost of every additional student. Every research department knows how the funding model will respond if a research rating moves one point up or down in the triennial assessment by the Higher Education Funding Council. As a result, university libraries are increasingly being asked who benefits from each pound they spend. This is the basis of the recharging process. In the old universities, at least, teaching departments have traditionally exercised much influence over how library money is spent. Now they are in a position to create a purchaser/provider relationship with the library, or indeed with some other information provider. The chastening experience of a few institutions which have gone down this road in a thorough-going way may deter some of the others. The fact remains that some of the circumstances have been created for a significant shift in the power to spend on information.

Other factors are also helping to facilitate such a shift. Increasing numbers of academic library users are getting access to personal computers or workstations. Teachers now usually have them in their offices. Students are provided with clusters of machines in strategic locations across the campus. These machines, when attached to campus networks, have provided libraries with a powerful means of providing decentralized services. Users can consult the catalogue from remote locations; they can renew or reserve books; they may be able to make suggestions for purchase; or to check the arrival of journal parts;

and so on. The concept of information access through the VDU screen is gaining ground. It is potentially in conflict with the conservative attitude to the printed journal which I described earlier, even though the battle has not yet really been joined.

The service offered by CARL\*, the Colorado Association of Research Libraries, is a "just in time" service well attuned to these developments. End-user access to the service has been combined with simplified methods of end-user payment, for example payment by credit card. Thus a change in technology, favouring end-user access to more services, is being accompanied by a change both in the funding regime and in payment mechanisms, which are also shifting power towards the end user. If we accept the lesson of the BIDS analogy, "just in case" provision can still be important in an electronic environment, and it will be for libraries to negotiate it. As for "just in time" provision, there could well be a shift towards more user control, with library and information specialists acting in an advisory role if they can prove that they add value.

In January 1987, the University Grants Committee promoted an initiative in favour of library networking. Its end result was that many more online public access catalogues were available than previously, both within the institution and over JANET. The UGC's objective was clearly stated: "a situation in which all users of a campus network... are able to access computer-based library services ... and in which terminals and workstations in the library differ from the rest of the campus terminals principally in their location rather than their application."

With advances in technology, that objective looks to be receding rather than getting nearer. The fullest benefits of SuperJANET can only be enjoyed by those who have access to a terminal of

high quality, one capable of presenting large amounts of complex data, for example, the coloured illustrations of some journal articles, on a high resolution screen. A basic terminal on the other hand, adequate to support word processing, a spread sheet package, and access to a library computer, costs a fraction of the price. So far, universities and their libraries have not even begun to face the consequent financial implications. If all terminals in the university are to be capable of doing everything, in accordance with the UGC's old model, there is bound to be large-scale redundancy of workstation power, something which in the present financial climate, universities cannot afford.

There is something supremely egalitarian about print on paper. Everyone is equally capable of looking at what is there, drawing their own conclusions, and debating them with others. At present, I do not foresee the day when the quality and capability of a workstation will not carry cost implications. Is a research result which can only be accessed by someone with a high performance workstation really published?

There are many implications in all this for libraries, for their equipment spend and for their use of space, even for their very existence as we now know them. As problems, the implications are not hard to discern. How they will be resolved is more problematical. What I would argue is that "just in case" versus "just in time" is the most fundamental issue, rather than "paper" versus "electronic" or "holdings" versus "access". "Just in case" provision still looks highly relevant to some of the needs of universities and to the role of their libraries, even in the electronic context. When we find ourselves deeply involved in solving the problems of "just in case" electronic access, with "just in time" access as supplementary provision, we will know that the evangelists for electronic provision have finally prevailed.

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\* Editor's note: CARL - Colorado Alliance of Research Libraries