Licensing, Consortia and Technology

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The development of the Digital Library has long been predicted and long awaited as a potential panacea for all manner of library ills. During the 70s much of the development effort and published literature focused on the automation of secondary services, such as abstracting and indexes tools and their efficiency, costs and management. A few commentators had the foresight to predict that in due course we would be delivering the full text of articles, though very few would have guessed, that that would happen by the end of the Millennium. Indeed in the UK Bernard Naylor undertook a rapid Delphi type survey of all University librarians in the early nineties (1). He asked them to predict at what stage they believed the printed scholarly journals would be overtaken by electronic delivery and the national consensus that emerged was 2015, which now looks unduly pessimistic. And even if the pundits of the 70s had predicted the acceleration in electronic delivery which has happened over the latter end of the 1990's, I doubt that many had the foresight to predict the exact nature of that development and in particular the extraordinary growth of the Web, and the vast amount of data it contains. And if all these technological changes had been foreseen I would challenge anyone to argue that they had a clear vision as to the ramifications of digital libraries on a range of managerial and commercial issues, with which we are all now struggling.

From a library perspective, there are clear positive benefits emerging as a consequence of the move to e-delivery. From a position not long ago of gradually degrading services; of spiralling prices; of buying less and less; of effort sunk into inter-library loan services as a way of compensating for poor collections; and of an annual, fruitless round of negotiations for more money to support an ever more demanding base of users: what Tom Saville of Ohiolink (2) has called the library of the old rules - from that position we are at least seeing a shift to a new paradigm where we can begin to reassert the plurality of resources needed to support a University, one where more investment brings more material and proportionately less staff effort. Let me illustrate this in two ways: in 1992 my own library was buying about 1800 journal titles, low I admit for a University library, at a total cost of £161,000. If we argue that each journal comprises, say 60 articles per annum the average cost of procurement excluding labour costs, would have been £1.50. On the same metrics and as of today, I am delivering 240,000 articles which, if we assume the journals remain as voluminous (I believe some are actually more so) the unit cost per items has dropped to £1.08 – a decrease of 28%.

Why has this happened? I would argue it is the result of two factors: firstly, and primarily, has been the emergence of consortial purchasing of electronic bundles of serials. You might want to argue that this is a matter of libraries buying a large amount of redundant materials, a point to which I will return, but nevertheless not only am I providing more volume to my users, I am also making significant gains in labour costs and reducing dependency on inter-library loans.

Collective purchasing has had a dramatic impact and, providing consortia members are prepared to give and take, the benefits have been significant to all concerned. It has also meant that libraries find it increasingly difficult to understand the merits of a per subscription service charge from agents, who it could be argued, add very little value to the equation other than the basic negotiation. And even this model may in itself not be transferable – it relates mainly to the licensing of scholarly data and works only in that context. There are limitations here: licenses are still confused as to how they treat remote users; there are still a variety of authentication procedures demanded and even servicing different buildings is not always simple or accepted. The emergence of licensing has brought new business models but at the same time raised new questions for librarians and publishers alike. As Fred Friend has said "consortial purchasing is not the only feature of the new way of working, but is a critical feature that we have to get right. We will only get it right if the new business models provide enough income for publications to remain viable and enough of a saving to allow librarians to increase the range of information available to users (4)."

In summary, what we have at least begun to do is stabilise prices and extend access - taking the journal back to what it once was – a widely available means of disseminating the results of research and scholarship. We have perhaps, for once, begun to satisfy the requirements of users in that, providing you have a basic grasp of the Web and suitable equipment, the opportunity to click through to full text journals is as big a step forward as most users have encountered from libraries since they began. The very simplicity of logging onto an e-journal collection such as Science Direct, searching, retrieving and displaying the results is all that many users seek and,

apart from publishing or promoting the relevant URL, and providing a degree of support, there is little that the library needs to do.

As a further indicator of the changing nature of libraries, look at the impact of e-journals on library traffic. Figure 1 (3) illustrates the decline in library visits throughout the past decade which must at least in part, be attributable to a shift away from holdings policies to access.. What seems to be happening is that usage is becoming more distributed, more screen based as a consequence of e-journals and more work based as a result of moves to graduate study, to reskilling and the like.
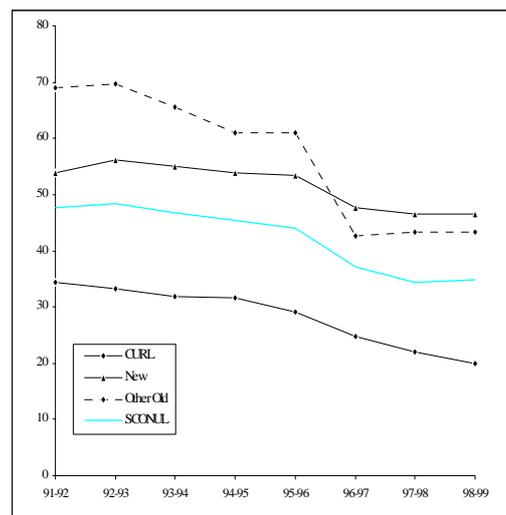
Fig 1 Library traffic: UK Academic Libraries 91/99

Another major factor in the decline of the cost base has been the emergence of free journals (free to users) derived from a mixture of a drift to self-publishing on the one hand and Institutions asserting rights over their own IPR on the other . We are all familiar with the arguments and although it is my view that scholarly publishing will continue in its existing form for some time come, the mounting body of opinion

which suggests that there will be a substantial increase in self-publishing or at least self-archiving can't all be wrong. Certainly the drift towards universities as knowledge centres is gathering pace. Universities are asserting rights over their own intellectual property, if not for research, then certainly for teaching material. The announcement of the MIT D-Space initiative, the consortium of Columbia, the LSE and the British Library in fathom.com, the growth of e-print archives and, in the UK, the DNER and the Heron Project are all potential ways of creating alternatives to the traditional scholarly publishing route.

I know you will counter with questions of quality but who is to argue that the current peer review mechanisms are not over elaborate or overstated? There are alternative ways of establishing authority and the current somewhat secretive process of peer review seems almost anachronistic in an age which is demanding more transparency. Lodging a paper in a MIT based repository to be accessed by many could be considered as prestigious an act as publishing in a journal that is read by very few And there are the emerging alternatives to peer review such as web site critiques, web citation, or myriad of site metrics as indicators of value. Moreover such knowledge repositories do not need to be merely passive - they are a potential focus for the dissemination of new ideas and could provide the same function of reinforcing academic status as that performed by scholarly journals.

Library Futures

So where does this leave the library? Will it continue to exist? What becomes its goal? Peter Brophy in a recent paper in Journal of Documentation (5) elaborated on

the enduring values of libraries, which he saw as essentially being user centric, matching user needs to available resources. There is no doubt that this model potentially transfers to the electronic domain with the exception that the definition of a collection in the electronic context becomes more problematic. It has to do with how the library circumscribes what resources the members of an institution are able to address, at any given time and to what extent? What navigational tools are in place to lead them to those resources? And also the extent to which the library can negotiate the adaptability and reuse of resources into certain contexts. The electronic library becomes a personal space as much as an institutional space so that each individual or groups of individuals might mark out their territory from what is made available to them, whether through published (and therefore licensed) resources or through the institutional knowledge centre, or via the Web generally.

As an aside it is interesting to note that whilst at one point the holy grail of the electronic library was a single interface to a multiplicity of resources and an interface which would reconcile different resources into a single presentation for the end users. There is an alternative view that users simply do not work like that - that they are happier addressing a specific subject or some other defined collection, which goes some way towards answering the kind of problems they have, rather than addressing the whole of 'cyber space'. They may want a common interface but users may not be easily diverted from historical patterns of usage towards more generalised searching just like that.

In my experience users are now nowhere near as discriminating in the electronic domain as to which single journal they ultimately consult. The notion of searching

out a specific title or publisher is disappearing and my guess is that these bundled journal collections are illustrating new paradigms in information searching whereby value stems less from quality markers such as peer review, reputation, layout etc and more from ease of access, ease of display and the quality of the descriptors which ensure adequate retrieval in the first place. Perhaps the difference might be that the bundles will be different to what they once were and will be defined not by publishers or links from secondary services but ways in which librarians et al choose to parcel them up. Many current aggregations are either historically based, that is based around pre - existing print collections or the consequence of consortial arrangements, even if this implies a level of redundancy. What are needed are aggregations based around institutional user needs and refined by actual usage.

And I also believe there is another sea change as a consequence of web enabling citations; again the simplicity of moving from item to iem suggests a shift from simple search and retrieve to extended structured browsing based around citations. So we are left with new paradigms of usage with shifting balances between:

- Collection v titles
- Generalised searching v subject/institutional scoped v personalised
- Search and retrieve v citations and links

Technology

In order to provide an effective operational and coherent digital library there are still a number of technical developments that need to be achieved which are critical. These include:

- Authorisation and authentication, that is establishing that people are who they say - so as to authorise access to licensed resources and to different material for different groups of users and so on. Authentication will need to get stronger if we want to move to more robust transactions in published material and we will need to understand far more about our users other than their basic status if we want to better tailor services to their needs;

- We need to provide simple coherent ways of searching out, and rendering resources, restating the point that the search model may well change given the changing context of delivery and the increasing use of linkages as a simplified approach to citation searching;

- We need to build tools and services which can allow users to navigate in collections which are both subject and institution specific and which can provide the jumping off points to support browsing.

- We need to develop better filtering tools and push type systems thus saving user effort by alerting them to requirements as and when they need them. Push can be used to create and sustain virtual and real research groups, to monitor the output of specific annual conferences, to monitor training and similar opportunities, and to identify citations, particularly to your own research.

Some Conclusions

Should we be optimistic about the future? Well yes and no. For librarians to succeed, like any other business in the Internet age, they will need to reinvent themselves probably either as developers and moderators of corporate portals, or as service support in whatever context they exist: information support in corporate libraries, learning and research support in education.

But is it axiomatic that it will be greatly needed at all? The rise of IT literacy and Web skills, coupled with easier systems, might suggest that the need for information professionals to support Web delivery will become superfluous or at least little prevalent. By contrast Chris Rusbridge has said (6): "However optimistic we may be, the use of digital library resources is by no means sublimely obvious to many of their potential users, and it is certain that many problems cannot be resolved through appropriate graphical interfaces alone."

Service support is nothing new to libraries but the nature of it will change from supporting basic searching to providing more holistic support to screen based working. There will always be a need to educate our users in the evaluation and appreciation of resources - weighing up the evidence as opposed to the simple mechanics of information retrieval. Whether this constitutes a job, a profession or a

structure remains to be seen. My own guess is that a new generation of professionals is already beginning to emerge tied to less traditional means of delivery and perhaps identifying less with specific professional groupings. Librarians will probably survive if, for no other reason than they are generally cheaper than those whom they serve.

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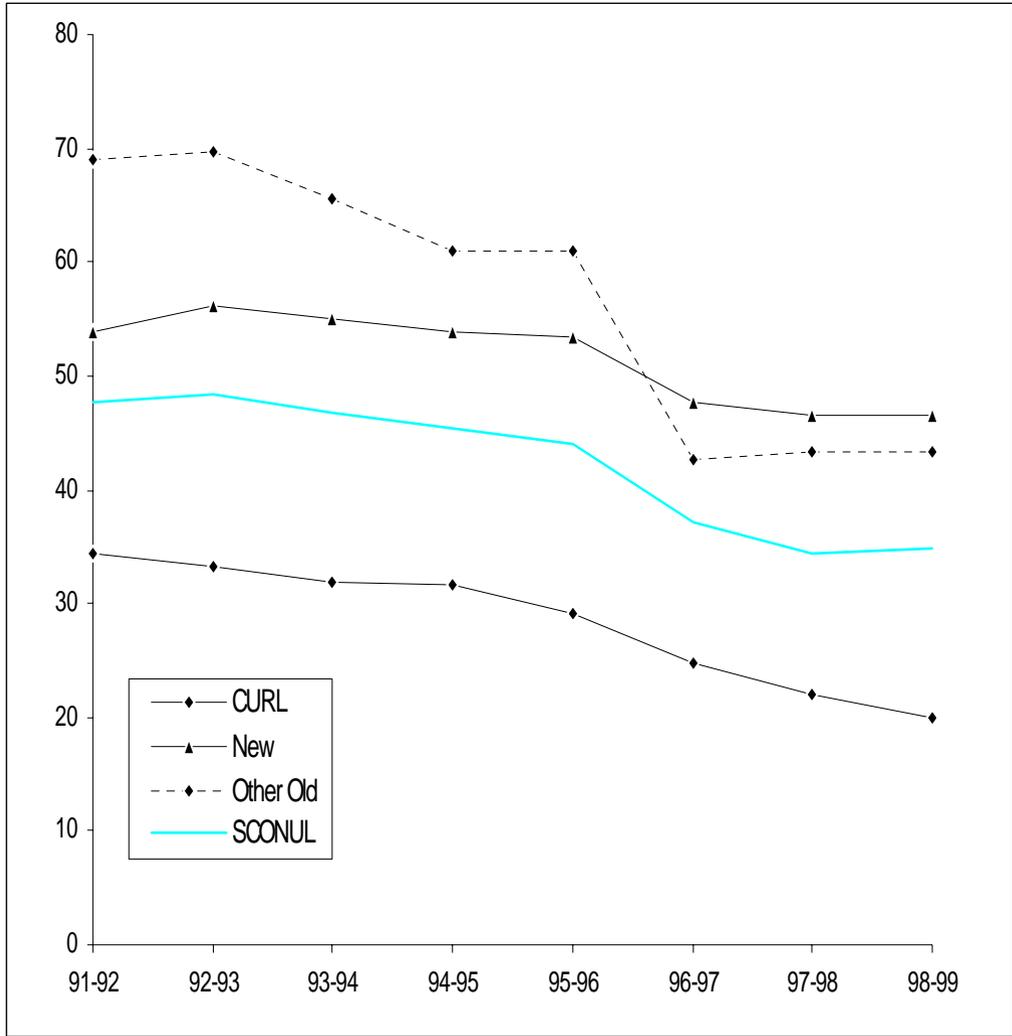
Oxford.doc

Licences, technology and consortia

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Libraries in Decline?

- Over past ten years:
    - Costs per item down   28%
    - Visits to library down   27%
    - Space per student down   9%

Licences

- confused as to how they treat remote users;
- variety of authentication procedures demanded
- servicing different buildings is not always simple or accepted

New Search Paradigms

- Collection v titles

- Generalised access v subject/institutional scoped v personalised

- Search and retrieve v citations and links

Technology

- Authentication
- Authorisation
- Simple coherent searching
- Allow users to navigate
- Filtering/push systems