

## INTERNATIONAL DIMENSION OF DIGITAL SCIENCE AND SCHOLARSHIP: ASPIRATIONS OF THE BRITISH LIBRARY IN SERVING THE INTERNATIONAL SCIENTIFIC AND SCHOLARLY COMMUNITIES

by Lynne Brindley, Chief Executive of the British Library

*The memberships of ARL and the Canadian Association of Research Libraries met together May 17–19, 2006, in Ottawa to consider the International Dimension of Digital Science and Scholarship. ARL President Brian E. C. Schottlaender, University of California, San Diego, and CARL President John Teskey, University of New Brunswick, convened the meeting that brought together librarians, faculty, scientists, and other researchers with extensive international experience to exchange their views on ways that research libraries could be most responsive to scientists, scholars, and students working together across borders.*

*The program featured keynote remarks from Lynne Brindley, Chief Executive of the British Library, and Deanna Marcum, Associate Librarian for Library Services at the Library of Congress. The complete text of these papers along with slides from other speakers at the meeting are available on the ARL Web site <http://www.arl.org/arl/proceedings/148/>; excerpts follow below.*

Research is internationally competitive and our best universities jockey for the best research talent at all levels and in all disciplines. Arguably what has made research libraries great in the past will not alone make them great in the digital environment of today and the rapidly evolving information context in this early part of the 21st century. We see a picture of ever more rapid innovation, mostly happening outside libraries and driven from the commercial sector; a picture of confusion and contradiction in the range of business models that are emerging and being experimented with; and new demands from discerning and empowered users. Such a challenge is an exciting opportunity for LIS to play new roles and define a new future. There is, in any case, no choice but to change, and change quickly if we wish to remain relevant for the future.

The challenge for libraries in the 21st century, as now only one part of a great diversity of alternatives, is to find new ways to add value and remain relevant in this rapidly changing, confusing, and competitive environment. While the distant future for libraries is not clear, it is timely for libraries to challenge some historic assumptions and ask some fundamental strategic questions.

Technology is turning on its head our assumptions about our value; it is challenging the roles of all accepted

players; and it is enabling increasingly promiscuous users with different and higher needs to have a much wider choice to fit their digital lifestyles.

All of this of course will be well known and familiar territory to you in your own institutions.

To help unpick some of the opportunities and methodologies emerging for international scholarship in the digital world, I would like to look at some specific projects being undertaken at the British Library (BL) and identify broader lessons and wider possibilities for us all as we look ahead.

### **British Library: International Profile and Activities**

The British Library is located in a global, multicultural city, with a mission and funding to make a major contribution to the national economy and to the social and cultural enrichment of Britain's citizens. Our strapline is "the world's knowledge" and our vision states that "we exist for anyone who wants to do research—for academic, personal or commercial purposes."...

Our readers come from around the world and the top 15 countries of origin for readers are: eight countries in Europe, the US, Canada, Israel, Australia, India, China, and Japan.

Approximately half our Web visitors, researchers, and library professionals, access our site from overseas, a similar pattern to that of users of the online catalogue.

The usage patterns reflect the particular historic strengths of our collections from the Middle East, Eastern Europe, South Asia, and North America. Our content strategy is currently out for formal consultation<sup>1</sup> and as the world changes we envisage strengthening our content acquisition, increasingly digital, from China, India, Anglophone Africa, and selectively South America.

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### **International Digital Scholarship Projects**

Let me share with you two of our current, high-profile, digital scholarship projects, which to my mind exemplify the potential to contribute, through collaborative activity, to changing the shape of scholarly and research activity. Both involve the digital reuniting of physically dispersed material across continents and libraries: both have political sensitivities and involve activities well beyond simple digitisation.

#### *The Codex Siniaticus Project<sup>2</sup>*

The Codex Siniaticus is the oldest surviving bible, produced in the middle of the fourth century, and an extremely important landmark in the history of the book. The codex was preserved for many centuries at the Monastery of St. Catherine but now just over half of the original book survives, dispersed among the monastery, the British Library, Leipzig University Library, and the

National Library of Russia in St. Petersburg. Due to the extreme age and fragility of the codex, none of the holders of the different portions is able to allow access to the manuscript, beyond display in a glass case.

We are now undertaking—with St. Catherine's, the other holders of the manuscript, and leading international scholars—a major project to reproduce the entire codex in digital form, employing cutting edge technology and advanced scholarship to achieve a virtual reunification of the different manuscript parts. Biblical scholars in Germany and the UK are leading a new transcription of the text; multispectral imaging is likely to enable differentiation of different scribes and correctors of the manuscript and therefore potentially challenge the dating and accepted interpretations of biblical history; an internationally distributed TV documentary, high-quality facsimile, conference, collection of scholarly essays, and exhibition are all planned.

### **The International Dunhuang Project<sup>3</sup>**

The International Dunhuang Project (IDP) has been running for over 10 years and represents collaboration between the British Library and libraries in China, Russia, Japan, and France. It focuses around the manuscripts, paintings, textiles and other artefacts dating from 100 BC to 1200 AD found in the Library Cave at Dunhuang and at numerous other ancient Silk Road cities in the late 19th/early 20th century. The material was dispersed to museum and library collections worldwide, making access for scholars difficult. Priority has been given to conservation and cataloguing work, but digitising the manuscripts began in 1997 with the aim of bringing together collections in virtual space. In this way, Silk Road material is becoming increasingly available to scholars and the general public alike. The IDP has created an essential scholarly resource with local centres in London, Beijing, St. Petersburg, Kyoto, and Berlin, with Chinese, Russian, German, and Japanese versions of the Web site being maintained locally as well.

### **Mass Digitisation Projects**

These, perhaps, are two “wow” examples of the art of the possible to change the face of scholarship in the digital age. But there are many more examples, from the BL and from all of your own endeavours.

At the other end of the spectrum are initiatives to create an enormous critical mass of materials for research and scholarship. Gale's international programme to digitise all pre-1800 texts in English, Early English Books Online, is facilitating new research. With

funding from the National Science Foundation (NSF) and working with the University of California, Riverside, we have digitised our 18th-century newspapers and will make them available online; with funding from the UK government's Joint Information Systems Committee we are digitising our 19th-century newspapers. We are working with Microsoft on digitising out-of-copyright books and are starting with 19th-century English novels, a corpus which is likely to surface new leads for researchers on material long-neglected in the print world. Optical character recognition and online searching will facilitate new kinds of research, previously impossible.

As should be expected while we redefine ourselves in the digital age and develop new and more effective patterns of international working, there will be political issues, which we need to consider and tease out.

For example, as some of you may be aware, Jean-Noel Jeanneney of the French National Library has raised concerns about Google's potential influence on global culture; that the creation of an immense database of content from the United States will taint the future generation's interpretation of history and culture, as more people rely on the Internet to learn about the world. In an article in *Le Monde* entitled “When Google Challenges Europe,” he warned of “the risk of a crushing domination by America in the definition of how future generations conceive of the world.”

While welcoming (publicly, again in *Le Monde*) the BL's joint digitisation programme with Microsoft—since in his view it diminished the risk of a Google monopoly—nevertheless he saw the BL/Microsoft deal as an act of “anglo-saxon solidarity” with a big American enterprise and, as such, counter to the close cooperation with the European national libraries who are working towards the development of the European digital library.

Our view at the BL is that it is plain we must adopt a portfolio approach to digitisation, with a range of publicly and privately funded initiatives. Thus we remain committed to CENL, TEL, and other European initiatives, and to working collaboratively with other libraries in Europe, as well as to similar initiatives in North America.

I have used these examples—from the iconic to the large scale; from externally funded public good projects to commercially funded, subscription-based programmes; from BL-focussed to globally collaborative projects—to indicate the potential contribution our great libraries have to richly enhance and change the face of humanities research and scholarship.

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# INTERNATIONAL DIMENSIONS

Continued

Are there general lessons and points to make? Almost certainly as libraries we can and should do more together to promote and create greater awareness of what is available for scholars already. Almost certainly we are only at the beginnings of trans-border digital join-up of relevant parts of our collections.

There is certainly a lot more scope to engage at a discipline level internationally on what projects might really make the most impact on scholarship of the 21st century and a question for discussion is how we might better do this, despite the differences in mission, funding, governance, and national priorities?

## Lessons: Different Roles in STM and Social Sciences

What has been covered so far would appear to offer profound and growing opportunities in the digital space to play an increasingly critical role in underpinning 21st-century research in the humanities.

But what is equally clear is that there are very different trends in the different disciplinary areas that are suggesting different roles in STM [science, technology, and medicine] and social sciences. This is strongly recognised in "Redefining the Library, the British Library Strategy 2005–2008"<sup>4</sup> and our proposition in each broad area is different.

In STM, we have a critical role to play in the digital preservation of the record of science, and we are working closely with the Koninklijke Bibliotheek (the National Library of the Netherlands) that is leading the European task force on Permanent Access to the Records of Science. We are also working closely with peer bodies in government and quasi-governmental bodies in the context of the UK's 10-year science strategy on the development of a route map for e-infrastructure for research. We have a clear mandate to engage with the new forms of publishing and particularly with the open access and subject repository movement, in the development of tools for virtual communities, and to ensure join-up with data repositories and the creators of e-science.

There is quite clearly a role for the national library vis-à-vis questions of quality assurance in the Web environment, in navigation, and in facilitating seamless access across repositories. In terms of the British Library's role of supporting innovation we have a particular responsibility to ensure support for those small and medium enterprises that do not have the same access to rich and deep collections of digital science as do researchers with well-funded university libraries. As a national library we also have responsibilities relating

to the public's understanding of science and its engagement with major issues. Arguably there are different forms of international engagement, focussed more on technology partnerships and collaboration both with public and private sector partners, e.g., bioinformatics institutes, research funders, data repositories, digital library and digital preservation experts.

In the social sciences the BL strategy is explicitly one of collaboration, particularly at the national level to ensure greater join-up and exploitation of resources that are often difficult to find—so-called grey literature and its migration to the Web environment. We are also key providers of datasets and archives but again our aspirations are

largely UK-focussed. Our strategic approach to opening up our rich resources to social science scholars is to develop small teams of disciplinary experts to expand our relationships with key partners and ensure long-term join-up of digital preservation efforts.

## Reaching out to Scientists and Scholars to Advise on the British Library's Agenda

The British Library does of course have a range of formal and informal mechanisms to connect it to scholars. As has already been mentioned, its international relationships with libraries and international professional bodies, and with those engaged in digital library developments is already extensive. Being a national library, rather than a research library with a focused university constituency, however, makes direct connection with scholars a more complex business.

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At the British Library our direct scholarly engagement is primarily with the UK base of scholars, even though we recognise that the international community is the recipient and beneficiary of much of the resulting endeavour. In a recent wide-ranging report on UK-USA research collaboration and strengthening transatlantic research partnership, undertaken by Sir Gareth Roberts, encouragement has been given to the Library of Congress and the British Library to work ever more closely together to facilitate such relationships, particularly through better coordination and systematic digitisation of primary and secondary resources of interest to the humanities and social sciences, and through exchange of scholars. Initial priority is likely to be given to our respective archives of newspapers and sound recordings. This newly emerging bilateral model might offer a practical model to make tangible progress.<sup>5</sup>

*...there is potential for global impact if we can coordinate our efforts effectively [in] the digitisation of 19th-century printed books via the Google Library Project and the digitisation of newspapers....*

## Reflections

The essential question for all of us is how can research libraries be most responsive to the international dimensions of scholarship when contributing to the creation and support of international digital resources? What broader lessons can we take from the experience and activities of the BL?

My first observation would be that we are all at very early stages of recognizing the potential to support international digital scholarship. Our projects are exciting, groundbreaking in some cases, but also feeling their way, in terms of what can make a real difference to the highest quality research activity. A first step might well be the creation of greater international awareness of what is available, better mechanisms for feedback on the usefulness to scholars of what has been created, and suggestions for future priorities.

Second, I think that we need to recognise that research libraries are going to play very different roles depending on the needs and behaviours of different disciplines. Most of our international digital scholarship work has been focused so far on the humanities and the opportunities afforded by opening up legacy collections, joining up dispersed collections through digital scholarship projects. Our roles in support of STM and social sciences are likely to take on very different manifestations.

Third, most of our relationships with scholars and researchers are institutionally or perhaps at best nationally joined up. Of increasing importance is the joining up of relationships with other resource providers—data services, software developers, other cultural bodies, such as archives and museums. How do we prioritise these possibilities and which will have the most impact on the quality of global research? How practical is the joining up, particularly given differences in mission, funding, governance, and national priorities? What is the realistic balance between planning and opportunism?

Fourth, international efforts in digital library developments and digital preservation are well underway and our task professionally is to ensure that we share best technical and professional practice to ensure that we do not reinvent wheels, that our particular efforts contribute most appropriately to these enormous global challenges and that interoperability is sought.

In conclusion, without boundaries of physical space, the hegemony of institutions is disrupted. The very concept of institution is downplayed in the digital world—with beneficial effect—making institutions less formidable and enabling cross-institutional study. Indeed—so far as our users are concerned, institutions are entirely irrelevant in the digital world. Our

convergent interests are around a shared network space—and yet historically we have focused our efforts within our own institutional and national domains. There are opportunities for joining up our thinking about digital scholarship internationally that will significantly benefit users and require us to think much more creatively, outside our institutional and national boundaries.

As a practical starting point, two particular areas come to my mind where the ball is already rolling and where there is potential for global impact if we can coordinate our efforts effectively: the digitisation of 19th-century printed books via the Google Library Project and the digitisation of newspapers where we are making a substantial commitment through a £2 million publicly funded programme to deliver 2 million digitised pages of 19th-century newspapers (in addition to the 1 million pages of 18th-century newspapers we have already digitised under the separate Burney newspapers project).

Working together across international and institutional boundaries to develop a critical mass of digitised material could provide the necessary key for expanding our roles in the digital world. Not only would the end product be of immense scholarly value, accessible to all via the Web, but in the process we would begin to untangle some of the procedural, cultural, and regulatory difficulties inherent with the new possibilities digital has given us.

For instinctively—researchers, scholars, libraries, Internet surfers alike—we sense the potential digital gives us to make the world's knowledge available to all—wherever in the world it is physically held. Our challenge is how to make this a reality. We need to be listening to our users to ensure we meet their needs.

We need to be developing new skills and technologies to deliver added value to our scholarly communities—and sharing that good practice. We need to recognise the difficulties in international collaboration and work together to surmount them.

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- 1 British Library Content Strategy, <http://www.bl.uk/about/strategic/contentstrategy.html>.
- 2 The Codex Siniaticus Project, <http://www.bl.uk/onlinegallery/themes/asianafricanman/codex.html>.
- 3 The International Dunhuang Project, <http://idp.bl.uk/>.
- 4 "Redefining the Library, the British Library Strategy 2005–2008," <http://www.bl.uk/about/strategy.html>.
- 5 For a fuller account of plans regarding UK-USA research collaboration, see Deanna Marcum's remarks "International Dimensions of Digital Science and Scholarship: Enhancing the Potential for Research Collaboration among Academics," *ARL: A Bimonthly Report*, no. 246 (June 2006): 10–13, <http://www.arl.org/newsltr/246/marcum.html>.