Abstract: Two developments are crucial in the massive changes now taking place in national libraries. First, their audiences have changed. They still serve scholars, but they try too to attract researchers and learners, formal and informal. This ambition poses challenges: how to reconfigure library buildings, how to engage the 'web generation', how to promote new services. Second, the rapid rise of recorded knowledge in digital form is changing how national libraries perform their traditional functions. How can they remain relevant to users who prefer knowledge in electronic form? How can they safeguard the electronic publications of their countries? How can they translate their analogue collections into digital form? How can digital knowledge be preserved for future generations? The paper suggests some answers to these questions, on the basis of recent experience in national libraries around the world.

DIGITISATION – LIBRARY BUILDINGS – MARKETING – NATIONAL LIBRARIES – WEB 2.0

Professor ANDREW GREEN has been Librarian of the National Library of Wales (http://www.llgc.org.uk) at Aberystwyth since October 1998. Up to 1998 his entire career was spent in British university libraries: University College of Wales Aberystwyth (1973–1974), University College Cardiff (1975–1989), University of Sheffield (1989–1992), University of Wales Swansea (1992–1998) – the last as Director of Library and Information Services, responsible for IT services and networking. He is an officer or member of numerous bodies in the area of library and information work, including the Society of College, National and University Libraries (SCONUL) (Chair 2002–2004), the Legal Deposit Advisory Panel, the Legal Deposit Libraries Committee (Chair, Implementation Group), the National Preservation Office (Chair), the Research Information Network Funders’ Group, the CyMAL Advisory Council, the JISC Digitisation Working Group, the Chartered Institute of Library and Information Professionals (CILIP) Wales (President), the Wales Higher Education Libraries Forum (WHELP) (Chair) and the Welsh Committee of the British Council. He was instrumental in establishing ‘Gathering the Jewels’ a pioneering, all-Wales cultural digitisation project, and its successor body, Culturenet Cymru. His professional interests include the application of information and communications technologies to library and information services, online developments in cultural bodies, staff training and development, and strategic planning. Two publications: (2007) National libraries and archives of the future; (2005) Wales on the Web. Cardiff: Institute of Welsh Affairs. E-mail: andrew.green@llgc.org.uk
Introduction

Most national libraries have long histories, but it would not be an exaggeration to claim that they have seen more fundamental changes in the last ten to twenty years than they have in any other period of their development.

The aims of this paper are to identify the nature of these changes, with examples drawn from experience around the world, and to offer some thoughts on what further challenges and changes await national libraries in the future.

I should enter an important caveat. Although I have almost ten year's experience of leading a national library, and in that time have visited and observed many national libraries on every continent, I would admit immediately that my knowledge of the sector is far from encyclopaedic.

Changing functions, changing audiences

One obvious difficulty facing anyone seeking to generalise in this field is that there is no such thing as a typical national library. In size, function and audience libraries differ enormously, and almost any general proposition about the whole class is open to contradiction. Nevertheless I believe that, although it will always be possible to adduce exceptions, the trends I'm going to suggest are real and general.

My first contention is that the last 10–20 years has witnessed a consistent widening in the historic audiences of national libraries: a shift that reflects changing social and political realities but also an important philosophical change in the outlook of the libraries themselves.

Let us set aside for the moment the case of those national libraries that have primary responsibilities to serve specific clienteles, for example the Library of Congress, which is charged with meeting the information needs of the members of both Houses of the US Congress, or the National Libraries of Finland and Israel, with their duty to serve specific university populations.

In general the people national libraries have traditionally served have been researchers – in particular academic researchers or others able to demonstrate the seriousness of their intent. This was reflected in the admission policies for readers, which tended to exclude those unable to justify their need to consult the collections. A national library was seen as a 'library of last resort'. Normally readers, even academics, were expected to exhaust the resources of their home institutions before making an application. As a result the number of readers tended to be small. It was unnecessary for the libraries to advertise or promote their services widely, and guidance and assistance in using their resources could be restricted to people already well equipped to use research collections. Higher education was the main target group, but whereas academic staff and postgraduate researchers were welcomed, there was often a bar on undergraduates, at least in their first years. Other education sectors, like schools, were typically ignored, and members of the general public were hardly encouraged to come.

Of course there were national libraries that did not conform to this stereotype, like the National Library of New Zealand, that always welcomed a wide variety of user groups. But on the whole these were the tendencies that prevailed in most.
The underlying philosophy was that a national library usually operated as a second or third level resource, as a reserve or back-up to other information providers, and as a primary and direct resource for only a limited range of uses and a limited number of users.

What has changed in the 20 years since, and why? First of all, society has changed. It has become less acceptable for the state, always the main funder of national libraries, to maintain expensive institutions for the benefit of a limited number of people when their potential to benefit far more was so obvious. For us in Wales this change happened quite rapidly, in 1999, when we gained our first directly elected democratic government in our history with the inauguration of the National Assembly for Wales. The new government wanted to be sure that the services it was responsible for were actually used by its citizens.

But many libraries were by this time ready to change. They could see that the old elitist model for national library audiences was no longer justifiable. They could see the possibilities for extending their utility to people who had never made use of them, or even thought about doing so.

Two new audiences in particular suggested themselves. Librarians began to discern the potential of national libraries to contribute to their country's general educational goals. Instead of admitting higher level university students only, they started to think about how everyone with a wish to learn could be encouraged to make use of what a national library could offer: everyone from primary school children to people who have retired but who are still learning, and informal learners as well as those in the formal education system.

The other groups that national librarians began to think more about were those interested in the cultural inheritance of their countries. National libraries, of course, have always in some way tried to display or represent the cultures of their nations, for example by means of exhibitions and publications. Some of them have had a wider cultural role: the building of the National Library of Estonia in Tallinn, for example, resembles a large cultural centre for the whole community, with a theatre, exhibition areas, a conference centre and meeting rooms. But the role of national libraries in expressing some of the particularities of the culture of their countries has been better appreciated in recent years. This is especially true of states that have recently achieved independence, like the former countries of the Soviet Union, and of small nations like Wales and Scotland that have won a degree of self-government within a federal or quasi-federal state. National libraries have also become important in promoting traditionally neglected or underplayed elements of national cultures, like the Maori culture of New Zealand [Juan José Fuentes-Romero 2004]. National libraries as cultural magnets may succeed in attracting not only people from their own country but also visitors and tourists from abroad.

The changing national library building

These changes in audience propelled some national libraries into new directions in their policies.

First, they were encouraged to review their admission policies. They begin to remove the barriers that prevented all but a privileged minority of researchers from making a successful application to become readers. Some, like my own library, abolished all qualifications except age: anyone aged 16 years or over can become a reader on proof of identification. In 2004 the British Library, which had previously insisted on numerous requirements, liberalised its conditions for readership.

Their renewed educational and cultural roles have also led many national libraries to rethink the way in which their buildings are planned and used. Traditionally almost all of the physical space in the library was de-
voted to storing collections. Most public space took the form of reading rooms, with perhaps some limited exhibition space. But with the addition of many users who were not necessarily researchers or indeed readers, national libraries began to extend public areas of their buildings, either by adding new wings or by adapting what was previously storage or other private space to public use. They extended exhibition areas to display more of the collections or show external exhibitions, some of them designed to high security and environmental standards so as to be able to make visible some of their oldest and most valuable treasures. They set aside rooms to receive educational groups, where schoolchildren could work with and react to items from the collections, perhaps with resident artists or other facilitators present. They built auditoria or other large spaces to cater for visitor groups, whom they were unable to accommodate before, and videoconferencing facilities, to extend the geographical reach of their educational activities. And they added shops, cafes, restaurants and other ancillary facilities. The result is an institution that in part at least begins to resemble a national museum as much as a traditional national library: somewhere that can attract individual visitors or groups of visitors with an interest or curiosity in history, culture and art, and retain their attention for as much as a whole day.

This is the transformation that has taken place in the National Library of Wales during the last ten years. Alongside the well-established research library and archive another institution has emerged: a visitor centre where anyone can come, free of charge, to see exhibitions, watch films, listen to lectures or discussions, take part in classes, attend small conferences or seminars, buy presents or cards for friends, or just have a good meal. Other national libraries have followed a similar path.

The combination of opening national libraries to new groups of users and of attracting them with new and different facilities has led to large increases in the numbers of those coming through their doors. In the National Library of Wales the number of visitors doubled within five years.

Online national libraries

At the same time as national libraries have opened their physical doors to new audiences, they have also started to create the beginnings of parallel, online national library collections and services. Again, many or most of these are available freely, to a much wider audience than the traditional physical audience.

Ten years ago a national library website offered little more than an online catalogue and general information about how to use the building. Today it looks very different, for two main reasons. First, some of the traditional facilities, like enquiry services, have been made available in online form. Second, and more important, national libraries have begun to replicate some of their collections in digital, networked form. They have often been the first institutions in their countries to use digitisation technologies to create digital mirrors of their most important and attractive treasures. In recent years, in the wake of Google Books, many have ventured further, to digitise whole collections. Some smaller national libraries, like those of Canada, Norway [Skarstein 2007], Wales [Green 2007] and Slovakia [Katuščák 2007], have even nursed the ambition to digitise their entire printed national heritage. Most digitisation has been of out-of-copyright material, but sometimes bold attempts have been made to digitise material still in copyright.

Some libraries have also given their members free online access to commercial electronic information resources by buying or subscribing to them, sometimes on behalf of all the country’s citizens. The National and University Library of Iceland makes over 14,000 full-text periodicals available online to citizens of Iceland free,
with the support of the Ministry of Education, Science and Culture [Gylfadottir and Hlynsdottir 2006]. In Wales all registered readers of the National Library enjoy free online access to a range of electronic resources; the Library also administers a separate national scheme that gives free online access to reference works and newspapers to all users of local libraries throughout the country.

Where next for users?

Where do national libraries go from here in their attempts to reach and retain these new audiences? What are the challenges and barriers facing them?

Let us start with one of the most pressing, which arises from the effect of the digital revolution on libraries' traditional services to researchers. There can be little doubt now that fewer researchers are coming in person to our reading rooms. This is hardly surprising, when you consider that the core group of researchers to be found in national libraries are those associated with higher education – precisely the sector where the digital revolution has been felt most rapidly and most intensely. A recent study for the British Library and the Joint Committee on Information Systems [Information behaviour of the researcher of the future 2008] showed that future researchers – the children of today – are wholly at home in the digital environment, but also that their elders too are turning their backs on the world of books and print if they can find the information they need immediately online. Even unique material often to be found in national libraries, such as manuscripts and archives, will be in less demand in their original form, as many of them become accessible online.

This is a general cultural shift, observable in most types of library, but national libraries, through their efforts to provide digital services, are themselves aggravating the tendency. Does it matter? Certainly those research libraries that maintain extensive reading rooms are asking themselves whether they need to do so. Both the Library of Congress and the New York Public Library are currently considering reducing the number of their reading rooms. One possibility would be to adapt redundant reading rooms to other public purposes; another, to develop new learning spaces such as the ‘information commons’ now being created in university libraries, that combine varied individual and group discussion spaces with easy access to both printed and online information; another, to provide digital workshops or tool-sheds for people to re-use the library’s digital content in creating their own multimedia productions.

As use of national libraries for research purposes shifts from the physical to the electronic, new opportunities arise. We can reach through the internet many more people than before, and our users can exploit digital texts in new and more powerful ways. But just because they are at a distance they are much more shadowy to us than the researchers of flesh and blood we can talk to in our buildings. Who are they? What do they think of the digital collections and services we offer them at present? What would they really like to have? How do they use the resources our bare statistics tell us they hit upon?

Very few of these questions can be answered at the moment. The British Library study I mentioned tracked actual use of the Library's website through 'deep log analysis' and made some interesting findings: for example, that most people remain on a website page or article for a very short time. But all of us need to know a great deal more about our online users, their behaviour and needs.

We also need to do a lot more to bring our online collections to the attention of more people who would find them of benefit. A recent survey for the National Library of Wales showed that, whereas 50% of the population
knew about the Library's building, only 5% knew about our website. Publicity and marketing have not in the past been policy priorities for national libraries, but both are badly needed today in a crowded online universe. We need to use ingenuity and awareness of how users behave online: for example, we need to maximise the visibility of our resources, including catalogue records, to search engines like Google, given that most users depend on Google to find information, rather than tools such as library catalogues. This brings us to another problem about online information. When most searchers have little ability, it seems, to distinguish between authoritative and unreliable sources, how do research libraries signal to their potential users the value of the resources they make available.

One thing we do know about at least some of our online users is that they make very different use of the web from their predecessors. Web 2.0 technologies allow them not only to interact with one another using social networking sites, but also to generate and share their own knowledge, like videos (YouTube) and photographs (Flickr), and to contribute to joint knowledge ventures like Wikipedia. This world belongs to media-sophisticated individuals and social groups and those companies, large and small, that are nimble and clever enough to take advantage of new needs. Public institutions like national libraries, with large inheritances of stored knowledge but few liquid resources and an inability to change direction quickly, are at a disadvantage. How should we react? There seem to be two choices. One is to join the Web 2.0 stage as an actor: by establishing Facebook or Second Life existences, by inviting the online public to add metadata tags to catalogues or comment on digitised content. This, however, is labour-intensive, and runs the risk of being seen as dipping an elderly toe into a pool full of younger people. The alternative is not to try to join the crowd directly but to ensure, as far as possible, that the knowledge we curate is sufficiently accessible and reusable by the Web 2.0 generation. This is the approach taken by the National Library of Poland in its Polona National Digital Library, where wikis are used by teachers, librarians and others to enrich texts already digitised by the Library [Katarzyna Ślaska 2007].

Web 2.0 services typically rest, like Google itself, on highly sophisticated search and find technologies allied to large-scale databases. These were traditionally the strengths of large research libraries. We now find that our online catalogues, despite the sophistication of the structured MARC data they contain, feel antiquated, overcomplex and slow next to the visual grace and nanosecond speed of Google. We have much to do to redesign these tools for the modern age, and of course to begin to turn them from mere indexes or pointers to the real information still hidden in print into instantaneous links to digital knowledge.

How, then, will our users of the future experience our services? I suspect that our buildings will still be well visited – perhaps by fewer researchers working independently in our reading rooms, but by more tourists, school and community groups and individuals interested in the nation’s history, culture, literature and art. For this to happen libraries will need to develop what they offer. It is not always easy to display the kinds of documentary materials typical of our collections: ingenuity and the use of new technologies, such as visualisation and gaming techniques, will be needed to encourage visitors who are used to a media-rich environment.

Researchers, on the whole, will increasingly have their information needs met remotely. Digitisation on a mass scale will make large quantities of out-of-copyright printed material accessible free from home or workplace, without the need to set foot in the national library building. In-copyright material will be slower to reach the remote user, but libraries and publishers will eventually make most back-catalogue and in-print material available online. The same will be true of popular archival material. Indeed, in some areas of high demand, such
as family history, most of the key resources, such as census data and parish registers, are already online. The national library will act either as the conduit of public access to commercially current information, via licences, or as the guardian and supplier of historical material. In this process the number and range of remote researchers is likely to increase, and only a few will make the journey to our reading rooms, to consult the residue of low-demand material that remains undigitised, or to study books and manuscripts in cases where the physical manifestation of the information is itself the object of study.

Capturing the nation

This, I believe, is the likely picture of how national libraries will deal with their existing collections, the vast majority of which are still in analogue form. It is a large and forbidding agenda. But the libraries face a still larger challenge: how to collect, present and preserve the recorded knowledge that will be produced in the future. Almost all national libraries have a responsibility, often though not invariably under a law of legal deposit, to attempt to acquire the complete publication output of their countries.

First they must accept the paradox that despite the vast rise in the amount of electronic publications, most of them online, the number of printed publications is still increasing. Whether this trend will continue, or whether the number will start to decrease, for example once a credible ebook reader enters the market, it is difficult to say.

But it is the flood of electronic publications that is the larger challenge. The very nature of publication has been revolutionised in the online world: whereas in the printed past publishers were relatively few, and acted as gatekeepers, controlling the flow of material achieving print status, now almost anyone can act as his or her own publisher. The size and without doubt the quality of the published universe have therefore been changed utterly, as books and periodicals are joined by websites, blogs, podcasts, wikis and media still being invented.

How should national libraries react to this quite new situation?

There is no doubt that they should attempt to collect at least some of this flood of material. If they do not, they are no longer reflecting accurately in their collections the variety and depth of the intellectual output of their countries. So much knowledge is now being produced and distributed exclusively in digital, online form, without a parallel in the world of the print, that it cannot be ignored.

In those countries where legal deposit legislation is established most national libraries have sought to have it extended to embrace electronic publications – both hand-held and, more significantly, online. Denmark, France, the UK and other countries have all succeeded in this aim, and are at various stages in implementing their new powers. In the UK it is hoped that within a few years the libraries will be using a combination of voluntary and legal deposit, under an Act of 2003, to collect hand-held publications like CD-ROMs and what we term the ‘free web’, that is, UK publications available to all on the internet without any access restrictions imposed by the publisher. This will be a large step forward, since the ‘free web’ consists of millions of different sites, regular ‘snapshots’ of which will give future researchers a rich picture of life and culture in contemporary Britain.

Harvesting the web in this way is relatively easy and cheap. It is much harder and more expensive to collect other kinds of online publications, like commercial e-books or electronic periodicals, where agreement and communication between the publisher and the library are needed to ensure successful deposit, and where there may be formidable technical complexities to be overcome.
This kind of activity brings national libraries into a much closer relationship with publishers than they have traditionally had. It opens the possibility of national libraries being more proactive in storing digital information on behalf of other organisations – of being Trusted Digital Repositories. In 2002 the Koninklijke Bibliotheek in the Netherlands showed the way in reaching an agreement with the scientific publisher Elsevier to act as the trusted archive for all their periodicals [Koninklijke Bibliotheek 2002]; by 2007 over 10m scientific articles had been stored in the library’s ‘e-Depot’. In Wales the National Library has had discussions with the Welsh Books Council about how it might act as a digital warehouse on behalf of Welsh publishers for the texts they publish in future: from it publishers could retrieve the texts for publishing (possibly in print), and the Library for addition to the freely available Digital Library of Wales, once its commercial use was at an end.

Safeguarding the digital present

If providing satisfactory access today to our collections is not a big enough challenge, ensuring continuing access to future generations is an even bigger one. Preservation has always been a fundamental role of all national libraries. It has become even more important since libraries of other kinds have gradually ceased to give the same emphasis to preserving what they hold, and have concentrated on serving more immediate needs.

Preservation and conservation of print, archival and other analogue material is well understood. That is not true for digital material. The science and art of making sure that websites can be read and interpreted as well in thirty years’ time as they are today are still in their infancy. Even if their core information content can be retrieved, will it be possible in twenty year’s time to reproduce their visual appearance, or to preserve the multitude of connections they contain to other electronic resources?

Will it be possible to use emulation software to mimic the software available to us now, but obsolete within ten years, let alone thirty? Or will we have to migrate our collections from one format to another over and over again, in order to keep them alive for each succeeding generation?

What is certain is that national libraries will need to invest far more than they have till now, especially in staff and expertise, to even start to get to grips with the challenge of digital preservation.

Old and new skills

One of the most striking features of national libraries in recent years has been the broadening of their staffing. By this I mean that librarians and cognate professionals like conservators have been joined by a host of other, newer specialists: educationalists, exhibition designers, IT experts, digitisers, web designers, finance and human resources officers, marketers, communications officers, and many others. This is an inevitable result of the broadening of the mission and the range of activities of the libraries themselves, as well as reflecting the increasing complexity of maintaining any large public organisation.

This expansion has put increasing pressure on the declining store of skills and knowledge traditionally held by librarians. Some elements of library work, once valued highly, have become deskilled. Routine cataloguing, for example, is now performed outside the national library by external agencies. The real challenge today is how we succeed in preserving two valuable things: first, staff who can help those readers who still need expertise in, say, rare books or manuscripts, and second, staff who work sufficiently close to our collections that they are able
to offer the kind of assistance to readers that cannot be supplied easily, or at all, by even the most sophisticated search and data mining engines.

This in turn poses some difficult problems for national libraries in their attempts to preserve these skills and this knowledge from one generation to the next. How can they make sure that when the only expert in an abstruse but necessary area retires there is someone else equally capable waiting, either already in the library or available on the outside?

To conclude

These are some of the issues that national libraries face in 2008. Some of them are shared with libraries everywhere: how to retain interest in large historic print and archival collections; how to respond to those whose needs must be met by digital means. Others, like long-term preservation, are more special to national libraries. It would not be difficult to imagine a future when national libraries are empty and deserted buildings, frequented by just a handful of print nostalgics. But perhaps this would be not a sign of irrelevance and defeat, but of transformation and rebirth – if, for example, the national library had been responsible for engineering remote network delivery of all the knowledge that its readers needed. What is certain is that this is a critical period in our history. How we act now will determine what sort of future history we will have.

References


