Counter Culture: Reshaping Libraries

Abstract: In his paper given at the 38th BIALL Annual Study Conference, Derek Law considers the role of libraries and teaching, in particular academic libraries, in the new Web 2.0 world. He considers the needs of the new generation of "digital natives" in terms of the traditional library and questions whether it still has a role to fulfil. He concludes that academic librarians must become fully involved in the digital revolution and embrace new methods of developing their collections.

Keywords: academic libraries; academic law librarians; social networking; e-learning; Web 2.0

Introduction

We have gradually slipped into a world where libraries are no longer a necessity, but one in which they are an optional, even lifestyle, choice. Much of this is reflected in the Web 2.0 world. Although this does seem likely to bring quite fundamental changes, it in turn is a reflection of changed attitudes and aspirations. In part this is reflected in changes in the nature of teaching and of scholarship. This is not to be confused with dumbing down, but is a slow but inexorable shift in the tectonic plates of scholarly communication. Now of course dumbing down does exist. High quality bookshops have seemed in the past to be allies in promoting a book-based culture. It was then quite depressing to see a major chain recently advertising a Leonardo Da Vinci Action Man. Quite apart from the faintly ludicrous concept of the artist as Action Man, the blurb made it clear that his greatest contribution to civilisation was to have Leonardo di Caprio named after him! Further investigation shows that the perhaps even more preposterous Einstein Action Man is also available.

More worrying than these obvious follies is the concept of aliteracy. It is at least theoretically possible to gain a PhD without reading anything. A scientist will pick up information in the coffee room and design an experiment – perhaps writing some software. Equipment will run the experiments and a computer analyse the result. This can then be written up. The other major part of a thesis is, of course, a literature review. Increasingly this involves Google Scholar coupled with cut and paste skills.

Now we might argue that the problem is no different from the historic one of persuading scientists and engineers to read. Librarians tend to be very conscious of

a history stretching back 4,000 years to the great library of Ashurbanipal and of a progression ranging from tablets of stone through to the mixed media we store today. The world has changed radically but the fundamentals of libraries remain the same. Research by OCLC (OCLC, 2003) reinforces that comfortable complacency that it will be alright. The researchers discovered that:

- There are five times as many library cards as Amazon users;
- There are more libraries than McDonald's outlets in the USA;
- One person in six in the world is a registered library user;
- There are over one million libraries and over 700,000 librarians worldwide.

We tend to fret over the inadequacy of the internet. We tend to fret over the absence of a Boolean gene. If only users could understand "and, or, not" the world would be a better place. This is misplaced. Increasingly the world has a simple binary split – on-web and off-web and growing numbers of digital natives simply do not bother with off-web. So the threat they pose is aliteracy not ignorance.

For these digital natives the issue is not information overload, but being time poor. The need is for just enough information to address the task in hand. Even the physical structure of our buildings has to be rethought. Perhaps the public library rumoured to have used its book fund to install treadmills next to a computer lab so that users could stay fit while waiting to use the computers is extreme, but we do need to learn both from the sort of shopping experiences offered by a Border's

Derek Law

Bookstore or the Apple store in Regent Street in London to see what users expect. Similarly, the online experience has to have in mind iTunes, Amazon, eBay and Paypal, with their fast and painless access to information. Purchase is painless. With only a few clicks you can get what you want delivered within 48 hours rather than waiting for the next time the library is open and wasting time hunting for stuff.

Digital natives

Tim Berners-Lee "invented" the World Wide Web in 1989. Prensky takes the development of the internet and the web as the point for his definition of digital natives (Prensky, 2001), those who have lived in a world which has always been web enabled. He argues that this is not an incremental change but a discontinuity.

> "Today's students – K through college – represent the first generations to grow up with this new technology. They have spent their entire lives surrounded by and using computers, videogames, digital music players, video cams, cell phones, and all the other toys and tools of the digital age. Today's average college grads have spent less than 5,000 hours of their lives reading, but over 10,000 hours playing video games (not to mention 20,000 hours watching TV). Computer games, email, the internet, cell phones and instant messaging are integral parts of their lives."

This is represented in another way by the Mindset List of Beloit College. It aims each year to identify the world-view of 18 year-olds entering Beloit College. The Beloit Mindset List (Beloit College, 2007) sets out to define this group in soundbites and notes some of the attributes of new college students over recent years:

- They have grown up with bottled water;
- Thanks to MySpace and Facebook, autobiography can happen in real time;
- They learned about JFK from Oliver Stone and Malcolm X from Spike Lee;
- Most phone calls have never been private;
- High definition television has always been available;
- They grew up with and have outgrown faxing as a means of communication;
- "Google" has always been a verb;
- Virtual reality has always been available when the real thing failed;
- "Ctrl+Alt+Del" is as basic as "ABC.";
- They have never been able to find the "return" key;
- Computers have always fitted in their backpacks;

- Stores have always had scanners at the checkout;
- They have always had a PIN number;
- They don't remember when "cut and paste" involved scissors;
- Bill Gates has always been worth at least a billion dollars.

As a result, they have a quite different and specific set of expectations and assumptions, which we cannot disregard. They want:

- Choice but selectivity;
- Personalisation;
- Instant gratification, because convenience trumps quality;
- Cheap, fast and good;
- Mobile anytime, anywhere technology;
- Just enough not complete or perfect.

Libraries rarely deliver that and, as a consequence, 73% of college students reported using the internet more than the library. (Hong, 2006). This new attitude has been reinforced by other studies. Holliday and Lee (2004) undertook studies which confirmed this and discovered that the digital natives expect research to be easy and feel they can be independent in the process:

- They do not seek help from librarians and only occasionally from professors or peers;
- When they can't find what they need, they give up and assume that the information cannot be found; [Shades of Pluchak's "satisfied inept"]
- Students often stop after their initial searches thinking they have completed the research process and fail to choose a particular focus;
- Access to full text articles seems to have changed students' cognitive behaviour. Instead of having to read through material at the library, they can now download material at their desks. They do not have to take notes or read through them to develop themes and ideas, an activity central to a focused research project;
- Electronic articles enable cutting and pasting, almost certainly leading to increased plagiarism – although I suspect that this is down to ignorance more often than malice.

And so we have a growing group of users for whom the library is at best a secondary, and often an optional, resource and where there must be at least a suspicion that library statistics are maintained and bolstered by the provision of network connectivity, rather than by the quality of the collections, staff or services. What users appear increasingly to need is not perfect information, but just enough information for the task in hand.

From authoritative to consensual content

Prensky is equally radical in his view of content:

"It seems to me that after the digital "singularity" there is now *two kinds* of content: "Legacy" content (to borrow the computer term for old systems) and "Future" content. "Legacy" content includes reading, writing, arithmetic, logical thinking, understanding the writings and ideas of the past, etc - all of our "traditional" curriculum. It is of course still important, but it is from a different era. Some of it (such as logical thinking) will continue to be important, but some (perhaps like Euclidean geometry) will become less so, as did Latin and Greek. "Future" content is to a large extent, not surprisingly, digital and technological. But while it includes software, hardware, robotics, nanotechnology, genomics, etc. *it also includes the ethics, politics, sociology, languages and other things that go with them.*" (Prensky, 2001)

But content has undergone other changes as new technology has emphasised the on-web and off-web divide. We can increasingly see that it also moves from being "authoritative" - as embodied in the printed word - to "consensual", to being user created and often image based. Fifty-seven per cent of online teenagers create content for the internet on social spaces such as Myspace, Youtube and Flickr; 62% of content viewed by online users under the age of 21 is generated by someone they know. (Hong, 2006). And user-created need not mean poorer. The user-created films which now regularly feature on the main evening news are every bit as valuable as historic documents as any written record of previous events.

Community based and consensually agreed written content can also have validity. Wikipedia (Wikipedia, 2006) is a free encyclopaedia and a wonderful community based resource, albeit with issues of accuracy at the margin which regularly reach the press. Jordanhill Railway Station in Glasgow has the curious distinction of becoming the one millionth entry on Wikipedia. The entry was begun on 1st March 2006 with a single sentence. Within a day it had been edited 400 times and expanded to become an entry that now runs to some five pages. Unsurprisingly, there is no such entry in *Encyclopaedia Britannica*, which is barely 10% of the size at 120,000 entries. Wikipedia is currently the 17th most popular site on the internet at 14,000 hits a second. And it is much more up to date than *Britannica*. For example the death of the rally driver Colin McRae was recorded in his entry within hours of the helicopter crash which killed him. The argument rages as to accuracy and whether a thousand amateur administrators can provide adequate quality control – or as Jorge Cauz, president of the *Encyclopaedia Britannica* recently put it, "Wikipaedia is to

the Encyclopaedia Britannica as American Idol is to the Julliard School" (McGinty, 2006). This comment seems to miss the point entirely.

The nature of content has progressively changed while libraries have not. We continue to focus on the identifiable published object. The nineteenth and much of the twentieth century can be defined in terms of words, whether spoken or written. Short phrases can encapsulate major events. No explanation is required for "Let them eat cake", "the thin red line", "Custer's last stand", "Dr Livingstone I presume", "Never in the field of human conflict has so much been owed by so many to so few" - or even the formula "e=mc2". Conversely the last fifty or so years can be defined almost entirely in images: film of the burning airship Hindenburg; the Dunkirk beaches; the mushroom cloud of an atomic bomb, the assassination of JFK; Neil Armstrong stepping on the moon; the beauty of fractal images; the obscenity of the aircraft crashing into the Twin Towers. Digital natives expect image content, hence the huge success of Youtube and Flickr. This shift in medium has largely passed libraries by – although the JISC has made noble attempts to address the issue in the face of a supine constituency.

Web 2.0 as a substitute for libraries

For digital natives it can be argued that there is nothing in the traditional library which does not have a Web 2.0 alternative and therefore nothing of value. Whether or not we think these poor substitutes, and whether or not we disapprove of them is immaterial. According to a recent report, 52% of UK students log on to Myspace or Bebo at least once a day (Metro, 2007). The internet is their place of choice. These resources are used by digital natives. The underlying issue for libraries is not an overload of information but a shortage of attention for the abundance of information available. A simple table demonstrates this:

Traditional Library Activity	Web 2.0 World
Cataloguing	Automated metadata, del.icio.us
Classification	Folksonomies and the semantic web
Acquisitions	e-bay, Paypal, Amazon and Abebooks
Reference	Yahoo Answers and Wikipedia
Preservation	Digital Archives and repositories
User Instruction	Chatrooms
Working space	Bedroom and Starbucks with a laptop
Collections	Youtube, Flickr, Institutional Repositories, Open Access
Professional judgement	The wisdom of crowds

13

Derek Law

But libraries are great survivors. Provided our response is to embrace change rather than revel in supine complacency, it is easy to extend the table to demonstrate new relevances based on traditional skills and responsibilities. If we choose we can readily respond to the Web 2.0 world with a Library 2.0 world.

Traditional Library	Web 2.0 World	Library 2.0 World
Cataloguing	Automated metadata, del.icio.us	Metadata
Classification	Folksonomies and the semantic web	Locally provided and relevant folksonomy
Acquisitions	e-bay, Paypal, Amazon and Abebooks	E-archives, e-data and quality assurance
Reference	Yahoo Answers and Wikipedia	Branded links to trusted resources
Preservation	Digital Archives and repositories	Institutional repository
User Instruction	Chatrooms	Moderate chatroom
Working space	Bedroom and Starbucks with a laptop	Wired campus and 24-hour workspace
Collections	Youtube, Flickr, Institutional Repositories, Open Access	Aggregation of unique content with other libraries
Professional judgement	The wisdom of crowds	Teaching retrieval skills

At the heart of the issue lies what can be seen as a collective professional failure to deal with this emerging threat. It has at least five causes. Firstly we have made the technology work too well and we have failed to make clear our role in that success. It doesn't break down, it is not visibly centrally organised and managed and it is rarely branded.

Secondly, there is a lack of underpinning philosophy. In my view this is perhaps the biggest single failure of my generation of senior librarians. We have rested lazily on the shoulders of giants and ignored what lay ahead, looking backwards to constantly improve the past. This is in part due to the third cause - the rise of the managerial technocrat.

When I began my career it was in a world where the university librarian was a senior figure in the university and often one of the three or four named office-holders in the statutes of the university. More often than not he, or she, would be characterised as a scholar-librarian with some small record of publication in a decently obscure minor area of the Humanities, but nonetheless a clear member of the academic and university community. As libraries grew more complicated and more technically dependent, and in need of serious fiscal prudence, the managerial technocrats came to the fore. It is now quite uncommon to find a university librarian with a set of academic publications who is seen as a senior member of the academic community. Libraries have arguably never been better managed, but the Librarian now tends to have all the power and influence of the Head of the Estates Office; that is, just another of the university's professional service managers.

Fourthly, comes a failure to engage with e-resources. Although libraries have access to huge quantities of e-material, they tend to be books and journals in a different medium. We avoid the difficult stuff because it is fast moving and complicated. We have no concept of e-collection building, of how to deal with e-mail and research data, far less blogs, wikis and avatars. I know of no library which has developed a coherent philosophy in this area, although some, such as Oxford, have attempted to deal with the issue of funding commercially available electronic resources.

Fifthly, and finally, comes complacency. I have already noted how we reach for the comfort blanket of the library as a place and for the precedents of history, when faced with these challenges. The image of the library as place is a powerful one and one in whose bricks and mortar all sorts of organisations continue to invest literally tens of millions of pounds. It can be seen as the last remaining substantial social space in universities; as the last remaining public place of trust in society, and in the case of public libraries, as somewhere that young children can be left in the care of strangers while parents shop. The precedents of history trace a 4,000 year path from the oral tradition through tablets of stone to papyri, the printed word and even sound and film. We comfort ourselves that through these 4,000 years of history we have often been buffeted by great waves of change, but never yet capsized. We remain confident that, as in the past, something will turn up.

Lest all of this seems irrelevant to law libraries and librarians, it is perhaps worth reflecting on two separate events in the month before the BIALL Conference. Firstly, Allen & Overy withdrew access to Facebook, formally on the grounds that too much computer power was being consumed in downloading images and videos (Legalweek, 2007). After a huge clamour, this was restored within forty-eight hours. Staff had staged a popular revolt. The

second event was the case of Lord Justice Richards, accused of flashing and cleared, largely because the Transport Police failed to provide video evidence from CCTV (Times, 2007). Social networking and images pervade the legal community as much as the rest of society.

Reshaped roles for librarians

Yet many of our traditional skills remain relevant to this rapidly developing environment. Organisations will continue to need at least some of our core skills.

Information is expensive and corporate information budgets can be quite large, but one never hears of libraries going bankrupt. Librarians have an unremarked but real skill at fiscal management. Not only do librarians manage budgets well, but we have a history of managing complex purchases to get both best price and best value. That will remain a core competence.

We can continue to have a role as selector and acquirer of relevant information and provide seamless access to a variety of data sources from a variety of publishers. Even where selection is devolved to users, there is a major role as an educator on differentiation. The quality assurance of sources is a core competence, but we can have an equally powerful role in teaching users how to make judgements on data quality.

Then there are emerging roles within organisations, such as the management of datasets. The technical issues around digital preservation remain uncertain but the lack of understanding and preparedness is all too clear. A recent report (Digital Preservation Coalition, 2006) revealed that fewer than 20% of UK organisations surveyed have a strategy in place to deal with the risk of either loss or degradation to their digital resources. This was despite a very high level of awareness of the risks and potential economic penalties. The survey further revealed that the loss of digital data is a commonplace – and indeed is seen as a routine hazard by some – with over 70% of respondents saying data had been lost in their organisation. Awareness of the consequential risks is high, with 87% recognising that corporate memory or key cultural material could be lost and some 60% saying that their organisation could lose out financially. In 52% of the organisations surveyed there was management commitment to digital preservation – but only 18% had a strategy in place.

Very closely linked to this is the growing need for organisations to have an intellectual assets manager. As content becomes increasingly collective in its creation, defining what assets belong to the individual, the organisation and third parties becomes more and more complex. This leads in turn to a series of new or at least newly defined potential roles. The management of both incoming and outgoing intellectual property rights is much more burdensome in a web environment where "private" documents are increasingly replaced by material which is, in effect, published, on the web. The cost of getting this wrong for an organisation would be huge. Litigation would be international and the sums involved in the tens of millions if a major publisher feels sufficiently wronged by the display of material on a website or in a repository.

The curation of research data is another emerging role. While we may feel that the technical aspects of curation can be left to IT staff, the definition of what is to be retained; what is to be public and private; what might be in dark archives and so on, remain the sort of judgments we are best equipped to make.

Information arbitrage is another emerging skill. With the same information available from multiple time zones with variable sets of value added and different licensing agreements, someone has to be able to manage not just access but best value for the organisation.

Equally important is training. Law's Second Law states "User friendly systems aren't" (Law, 2005). As soon as a new piece of software or content is released stating that help is available online, the sensible librarian knows that a training course should be offered. After all, perhaps self-evidently, publishers sell products on their differences, not their similarities. If users are to extract maximum benefit from these resources, they have to understand these differences and how to exploit them.

And finally we should embrace kitemarking and quality assurance of resources. The web carries no value judgements in the way that publishing does. Faced with two books on, say, vivisection, from Oxford University Press and the Animal Rights Movement, one can make some assumptions about objectivity. On the other hand, faced with a website marked ox.ac.uk, one has no idea of the authority implied by such a location. The traditional markers of quality have gone. We can then aspire to the role of trusted selector and judge.

The Digital Library environment and Web 2.0

I'd like to turn now to the Digital Library environment and to explore what little thinking has gone on to develop some kind of philosophical basis for this. What we have done so far is to concentrate on digitisation. Many university libraries have done this, and what we have done has been fine in terms of learning about digitisation, but what we have created is cabinets of curiosities not coherent collections. We are closer to Dr Caligari creating a horror movie than to Panizzi creating an overarching concept such as the universal library. Inevitably such thinking that has taken place has happened in the United States rather than the UK, although we may take some comfort from the fact that one of the key thinkers is Lorcan Dempsey, late of this parish. (Dempsey, 2007). For example he was amongst the first to comment that a student's workplace is increasingly virtual, increasingly full of information, but increasingly

15

library free. He has also commented on the changing nature of the research process, although it has been much less studied than teaching and learning. The decline of academic physical use of the library is a much discussed but little analysed phenomenon of the last decade, although it is now, it seems, generally assumed that, at least in the sciences, delivery to the desktop is the norm. He also argues strongly for the need to develop the "long tail" concept for libraries. One can sense here the beginnings of a philosophy of e-resources for libraries.

Although many could be cited and although new developments appear apparently daily, four specific examples of the environment we must engage with are mentioned here.

Firstly, Penn Tags (Penn Tags, 2007), which is a brilliant new version of the ancient rule that the best guide to what will be used in future is what was used in the past. Librarians at the University of Pennsylvania are experimenting with this. They have created a social bookmarking site for members of the University so that sites of interest, bibliographies or links to other user-created content can be collected and shared by the user community at large. Users can download a specialized toolbar or use a bookmarklet created to facilitate adding content to PennTags. It follows the now standard structure of sites such as del.icio.us in using font size and emboldening to show the most frequently used terms. The wisdom of crowds, the hive mind, and the collective intelligence are being harnessed as an alternative to what used to be the high skill of cat and class. Users are categorising and organising the internet and determining the user experience, and it is working. In this approach users are empowered to determine their own cataloguing needs. Metadata is now a user defined tool – but using the classic library school rules and managed by the library.

Secondly, Worldcat. This OCLC service is at least attempting to respond to the ease of use which the web has brought from other book-related industries. A search for a book shows not only the location of the book within a predetermined radius (say fifty miles) from the user, but also will show availability – and, if the copies are all out on loan, it will show you where to buy a copy second-hand and for how much. The user is given the key ingredient of choice.

If we move to the more exotic cyber world of Second Life, there is a CybraryCity. Here the user's avatar can enter such places as the Michigan Library. The user can then move to different but virtual departments, make enquiries of the subject specialists whose pictures (or at least those of their uniformly appealing avatars) are displayed on the virtual wall and make enquiries or carry out other library functions. It will take very little to link this to digitised texts, so that the virtual library fits seamlessly into this virtual world. Almost needless to say that this is a world with a community numbered in millions.

These technologies affect research as well as teaching. The Blue Obelisk Group (Openbabel, 2007) is run from the University of Cambridge. It aims to use and share open source tools and data. Another similar but quite different form of social networking is Openwetware. It is a site for sharing information between researchers in biology. MIT is there along with Imperial College, MIT, Manchester, Chicago, UC Berkeley, Paris, Nanyang and Tufts. One suspects that few librarians are abreast of these developments, and nor are their academic colleagues in most institutions. Why not? Isn't the exchange of information something to do with what we are about?

Summary

When tens of millions of books are directly available through Google, what will libraries have to offer? It has arguably been the case that library collections were built for the future user not the current user, certainly in the humanities and historically based disciplines. It was also the case, and probably still is the case, that research libraries collect more non-commercial items than commercial items. Archives, ephemera, local publications, government publications and so on are all acquired. It is a major failure of the present generation of librarians not to have engaged with collection policy for born digital material. There is no real debate on what should be collected and by whom and, as a result, valuable material is already being lost. Not just electronic mail, but increasingly the wikis, blogs, text messages, video clips and photographs, never mind the research data, electronic maps and electronically plotted chemical structures which will form the historical documents of the future, are simply ignored. Our successors will rightly blame us for this. An easy answer is that Libraries 2.0 should collect the born digital material which will give us brand differentiation. The same is true of all the intellectual output of our universities. The institutional repository is an activity and space which librarians are ideally equipped to manage. We can see some elements of this future – although not yet with born digital material – in such deep archives as the immensely rich Valley of the Shadow, pulling together resources from a range of media, on the American Civil War. As was always the case, in the text-based age it will be our special collections and archives of electronic materials which will give libraries both purpose and brand differentiation. To follow the argument to its conclusion, we should then accept Dempsey's (2006) premise that it is the aggregation of these resources that will turn libraries into a major gravitational hub where any salvation must lie.

Having created the content, its preservation is another obvious activity. Research libraries have the great advantage of not being commercial activities. They have

the luxury of storing material which may not be needed for decades.

Conclusion: the options for libraries

Web 2.0 is a symbol of the threat facing libraries, a symbol of a quite fundamental cultural shift. It is pioneered by digital natives who have a completely different way of managing their information needs. This is not a threat in that libraries are not going to disappear overnight as a result of some cataclysmic cultural change. Digital immigrants will ensure a robust library environment for a long time to come. But if we try to lift our attention from the quotidian and look ahead at what we should be trying to achieve, there are three key goals which we should be seeking to pursue.

Firstly creating and building the quality e-collections which will give us the brand differentiation from the het-erogeneous junkyard of collections which is the web. Related to that we should have a coherent and well articulated view of what we are collecting and why.

Secondly, having understood what we are collecting and retaining locally, we should link this to quality assurance of resources we expect our users to require. We need to understand the importance of kite marking, quality assurance and relevance ranking and how that material relates to the material we have chosen to collect.

Thirdly, we should look at how we can add value to services and collections, not least through providing appropriate training and support and whether we add value by offering services through virtual worlds.

Fourthly, we should recognise that no library operates in isolation and work in partnership with other libraries to create the sort of aggregated services offered by suppliers such as Abebooks, iTunes and eBay.

If we can do all of these we can look forward to having passed on a vibrant library service which has yet again proved receptive to great societal changes.

References

Beloit College. Mindset Lists http://www.beloit.edu/~pubaff/mindset/. Viewed on 15th September 2007.

Dempsey, Lorcan (2007) Dempsey's weblog is an apparently unending cornucopia of thinking and ideas. http://orweblog.oclc.org/. Last viewed 15th September 2007.

Digital Preservation Coalition (2006) *Mind the Gap: Assessing Digital Preservation Needs in the UK*, 2006. http://www.dpconline.org

Holliday, Wendy and Qin Li. "Understanding the Millennials: Updating our Knowledge about Students." *Reference Services Review,* v.32, no.4 (2004): 346–366.

Hong, Matt (2006) Content in the Emerging World of Digital Natives http://www.stuntdubl.com/2006/09/25/matt-hong/. Viewed on 5th November 2006.

Law, Derek. Law's Second Law (as the first) is quoted in an attempt to emulate the famous Murphy by seeking some kind of vicarious immortality.

Legalweek (2007) Staff complaints force red-faced A&O into Facebook U-turn http://www.legalweek.com/Company/273/Navigation/18/Articles/1028745/Staff+complaints+force+red-faced+AO+into+Facebook+U-turn.html

Metro (2007) Metro Newspaper [London edition] 14th May 2007.

OCLC. Libraries: How they stack up. Dublin: OCLC, 2003.

Openbabel (2007) http://openbabel.sourceforge.net/wiki/Blue_Obelisk

Penn Tags (2007) http://tags.library.upenn.edu/

Prensky, Marc Digital Natives, Digital Immigrants *On the Horizon*, Vol. 9 No. 5, October 2001.

Times (2007) Judge cleared of rush-hour flashing. June 13th 2007 http://www.timesonline.co.uk/tol/news/uk/article1926574.ece

Biography

Derek Law is Head of Information Resources Directorate, University of Strathclyde. He has worked in several British university libraries and has published almost 200 book chapters, articles and conference papers. He is also a committed internationalist and has worked in projects and research in over 40 countries.