

NAVIGATING THE KNOWLEDGE JUNGLE:
 Australian Public Librarians as Endangered Species

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1. Introduction

The library has always occupied a key position in the ‘knowledge economy’ since its inception as a mechanism for fostering appropriate reading habits for the rapidly growing urban working classes in the nineteenth century. At that point the library was recognised as *strategic* in the dissemination and management of knowledge for the purposes of social regulation, moral and ethical improvement and rational recreation.

Having served that purpose very successfully and, to a certain extent, reinvented its purpose a number of times since then in changing policy and economic climates, the library has now arrived at another critical point. It is determined this time not just by domestic considerations but also by the international transformation of economic and power relations. This consists, quite simply, in the alleged arrival of a global information and knowledge economy.

The development of broadband services and the ‘information superhighway’ is perhaps comparable to the development of the electronic mass media of radio and television in the first decades of the twentieth century. These developments were, in their time, compared to the invention of printing in their implications for how people live and work and take their pleasure.

At these moments a critical point is reached at which cumulative developments and accretions in knowledge capacity are qualitatively transformed into a whole new set of rules, procedures, options, opportunities and threats. This is the point we are at currently, and libraries will need to move quickly to position themselves so that they are forward looking rather than relying on “borrowed time”.

The research question is: can public libraries service the new economy effectively (presuming that we do have one, which in itself is debatable)? Are Australian librarians

prepared for meeting the challenge? What new core competencies will they need? What are the threats to their existence, and opportunities for improvement? And who is, in the end, responsible for ensuring that the public librarian does not go, together with the public library, the way of the Australian dodo.

2. Why Libraries Now?

Libraries are identified as the focal point of communities. They are a place for meeting and sharing ideas. Libraries are considered leaders in the area of economic development. Organizations interested in providing an information service should build partnerships with their local libraries. Librarians are natural leaders in building partnerships in communities. Keeping librarians informed is key to meeting the information needs of the community. Today, libraries continue to operate at the leading edge of citizen participation in the political process. For years, the public has registered to vote and cast election ballots in libraries. Citizens attend forums with candidates in local libraries and learn more about their positions and voting records. They monitor the work of both elected and appointed officials through the publications housed in library depositories of government information, where they also gather data for taking positions on various issues facing their communities. During campaign seasons, citizens find voter guides and other relevant information about elections and referenda in libraries and engage with authors who write about political issues at events held in libraries. They also find information about deadlines for voter registration, locations of polling places, and valuable electronic links to high-quality electoral information in print as well as on the web. In the information age, libraries and librarians are more essential than ever. They are essential to our economic well being, to global understanding, to the advancement of learning, to meeting the challenge of information overload, to closing the digital divide, and to ensuring public participation in the democratic process.

There are many assertions about the impact of technology on the world of information and libraries - from the enthusiastic technophile approach, such as that 'by 2047 ...all information about physical objects, including humans, buildings, processes and organisations, will be online' (Bell and Gray, 1997), to the more moderate approach using metaphor to describe technology as tool, text, system and ecology where an information ecology is a system of people, practices, values and technologies in a local environment (Nardi and O'Day 1999).

It is clear that libraries are in a time of significant change. Aspects of the traditional role of the library are being challenged by the easy availability of digital information and converging technologies. As a result libraries are redefining their role and value in society. This process is revealing inherent tensions in our capacity to manage paradox and to be real and virtual (print and electronic, the hybrid integrated library), 'there and not there' (part of the economy of presence where remote and local services exist according to availability and cost) (Mitchell and Strimpel, 1997), and 'high tech and high touch' (Naisbitt, 1982), where technology is aligned with personal elements, such as self-customisation of software.

Martell (2000) describes these paradoxes as historical discontinuities - time and space, mind and body, real and virtual, and humans and technology. His conclusion is that within twenty-five years the physical symbol of the library will no longer be viable to describe what librarians do, but that librarians will remake the image of libraries by creating a virtual library space.

For information and library users uncertainty is pervasive in the seemingly certain technological environment. There is an overwhelming amount of information in multiple formats and users require assistance in making sense of this and finding and understanding information. Up to now capital and status in the profession has been based around 'things' rather than processes and interactions. Identifying and accessing documents has been the primary role. This bibliographical paradigm has meant that systems of work have focused on texts and sources and not on the process of information seeking.

There are emerging ways to create a virtual library space beyond digital content and include new services, such as email reference, online on call systems, online tutorials and interactive training systems. Libraries (real and virtual, hybrid and complex) are:

- The memory of society
- Provide access to learning resources and works of creativity
- Provide opportunities for a variety of cultural pursuits
- Empower individuals with information skills
- Provide a socially inclusive and creative environment
- Challenges to the role of libraries, and the redefinition of the value of this role, demand a different style of management and leadership and new skills for the information profession.

In the public libraries sector, the issue of access to information is revolving around the definition of 'core services' which are supposed to be provided free at the point of delivery. Since the majority of basic services is slowly moving out of the dimension of public provision, the implication is that the private sector will provide what the market will sustain, but only to those who can afford it at that price. Public libraries are responding to this changing environment in different ways: some compete in providing information to businesses and local government, partnering with public sector agencies which provide high quality services to those who can afford to pay. Among these is the State Library of South Australia Bizline [<http://slsa.sa.gov.au/research/bizline/index.html>], BRISQ at the Queensland State Library [<http://www.slq.qld.gov.au/bsd/brisq/>] and the Business Information Service at the State Library of Victoria [<http://expressinfo.com.au/>]. A few no longer provide information services, retaining only lending and reference services. A number of federal and state government bodies are now providing information through their own agencies, often to the detriment of the quality of this information. Thus it is inevitable that those who cannot afford access to information through the services provided in the private sector will have difficulty in obtaining certain kinds of information at all. The development of systems that link scholars together, moreover, calls into question the role of libraries in the academic sector.

Libraries are no longer defined as "location", but as "resource". With networked systems, access to such services as catalogues, databases, news and user services have become totally de-centralised. Digitalisation and electronic transfer have accelerated and reduced the costs of much document delivery, raising serious issues of copyright and "fair dealing". Availability of electronic scholarly resources has reduced the cost of subscriptions and the need for storage of hard copies. On the other hand, they have

created a problem of over-printing, since the display technology is still in its infancy, and majority of users prefer reading materials in print.

The role of the librarian has changed perceptibly over the past few decades. Whereas there is an explicit recognition that it is the provision of information – regardless of source – that is vital to the end user, quality of service is measured by the speed and accuracy of fulfillment of user's demands, not by the amount of material stocked by a library. The custodial role of the librarian has become irrelevant. The tools of trade (catalogues, databases, etc) have changed beyond recognition, giving the librarian access to vaster quantities of information than ever before, at a much faster speed. However, it also necessitated constant training and re-training of information providers. From custodians to skilled guides, librarians are increasingly seen as people with special skills in retrieving information and teaching others how to do so effectively. This has in no way lowered their status, as increasing number of corporations and firms are beginning to get swamped under an information overload and look to "information professionals" for a filtering, organising panacea.

3. Information Economy – Much Ado About Nothing

An Information Economy is a "collection of businesses offering products whose major input is labour, are electronically deliverable, perfectly reproducible, and not consumed through use". ([The Journal of the Information Economy, unknown](#)) It places a premium on information and its presentation, repackaging and delivery ([Geiselhart, 2000](#)). In general terms, it is the global economy that has emerged from the relatively newly acquired ability to access and transfer information from anywhere to anywhere at any time. In reality it goes far beyond a simple economic state to encapsulate all aspects of everyday life in the year 2000-from government to big business to the home ([South Australia's Department of Information Economy, 2000](#)).

Information economy is often interpreted in a narrow sense, describing the stocks and flows of information within an economy. It is often used in the same sentence as superhighway, national information infrastructure, or global information infrastructure. A broader definition incorporates the notions of information institutions, organisational capital and human capital. Information handling competencies, administrative, political and legal structures, education and training institutions and research and development facilities are all issues that need to be addressed in an assessment of the knowledge economy ([Simpson, 1997](#)).

When we talk about the new economy, we're talking about:

- a world in which people work with their brains instead of their hands.
- a world in which communications technology creates global markets.
- a world in which innovation is more important than mass production.
- a world in which investment buys new concepts or the means to create them, rather than new machines.
- a world in which rapid change is a constant.
- a world at least as different from what came before it as the industrial age was from its agricultural predecessor.
- a world so different its emergence can only be described as a revolution

When I started writing this report a few weeks ago, the material on “information economy” in Australia available online through both Australian and USA search engines was predominantly government publications. Governments are highly wary of criticising their performance, more so in democratic settings. So it was natural to find that between 1995 and today, the Australian Government produced report after report, and created endless committees and organisations (the worst offender being the National Office for the Information Economy [www.noie.gov.au], with which to soap everybody’s eyes and pretend they were doing something about it (and IT). For the latest examples, see ([PMSEIC, 2000](#) and [DOCITA, 2000](#)). Other industrial bodies, such as the Australian Information Industry Association [www.aiia.com.au], which is all industry, mind you, not information, have also jumped on the wagon with their own agendas ([AIIA, 2000](#)).

The fact is, they did not. Far from promoting Australia into a producer of IT, the current Liberal Government has excelled at shooting itself in the foot. One of the first things that it did – being as it is oriented towards creating a budget surplus – was to cut funds from public libraries, universities, research bodies, schools and community information providers. Hundreds of library staff were laid off, researches fight for almost non-existent funding, scholarships are reduced to paltry remnants of what they should be, and places at “high tech” colleges are allotted to full-fee paying overseas students. The results are appalling. Australia has slid down the list ([Colebatch, 2001](#)), becoming the worlds top user and producing nothing. It is worth comparing the OEUC ratings mentioned above with the Australian Bureau of Statistics report from 1999 ([ABS, 1999](#)). The Australian government, instead of encouraging Australian citizens to train in the new technologies, is now encouraging these same overseas students who paid through their noses for IT degrees to apply for permanent residence and man the country’s posts. The local ITC industry (small as it is) is striking back, by refusing to employ them. Australian-born IT specialist are migrating in hordes to the USA and Europe, where wages are twice what they are in Australia ([Fitzsimmons, 2001](#)). And most embarrassingly, we are talking here about “comparative” – not “competitive” advantage.

The government has also been active in further self-damage by privatising public telecommunications systems. Telephone lines in Australia are expensive as is, more expensive than USA by far. However, Telstra was a public sector giant, heavily subsidised – and that permitted it to provide services to vastly isolated rural areas, no matter how bad these services were. With privatisation, the servicing of these rural communities has become unprofitable, and Telstra promptly removed itself from the area – first by disconnecting its analog mobile service, then by reducing staff to the minimum, and finally by increasing connection fees.

In the publishing sector (I strongly believe that publishing, in whatever form it takes, is a vital aspect of the information economy), the government has imposed GST taxes on services, effectively killing a few smaller publishing houses. It then passed a bill through the Parliament that allows overseas publishers to import books into Australia without consulting local publishing bodies, or having the permission of local copyright holders.

Finally, the government cut millions of dollars in funds from two major broadcasting giants ([Joy, 1999](#)): the Australian Broadcasting Corporation (ABC) [<http://www.abc.net.au>] and the Special Broadcasting Services (SBS) [http://www.sbs.com.au/sbs_front/index2.html]. These two high-quality, non-commercial broadcasters have been forced to re-adjust. ABC has stopped its South-East Asia service (which kept the East Timorese aware of what was happening to their country last year,

and which is Papua New Guinea's only window onto the outer world). SBS, the respectable winner of 2000 Walkley Award the most prestigious prizes in Australian journalism, is a multicultural broadcasting company specialising in educating and informing the non-English speaking communities in Australia. It was sad to see it slotting advertising clips in between its educational programs.

In July 2001, Australia's opposition party, the Australian Labour Party (ALP), published two very important documents. Although both have to be taken with a grain of salt, since they are pushing the political platform of the ALP, the Chifley Report ([Considine, 2001](#)) and the Knowledge Nation Report ([Chifley Research Centre, 2001](#)) are both worth reading. The ALP is going into the next elections on the strength of making Australia a "knowledge nation". Lots of stress is put on the technology; mentions of "knowledge" as the tacit but essential element of this economy are rare.

It (ALP) believes voters are now seeing the costs of the \$6 billion spending cuts for which the Coalition won such credit in 1996: plunging business spending on research and development, shrinking manufacturing in information and communications technology (ICT), stagnating school retention rates, slow growth in university enrolments, and a brain drain of research talent overseas.

The Chifley report concludes that, "Australia is falling well behind most of the major developed nations in investing in knowledge. As a result, Australia is putting its future position in a knowledge-based world seriously at risk." Labor's Knowledge Nation Taskforce, chaired by former science minister Barry Jones and including CT business leaders, proposed in their report short-term and 10-year priorities for a Labor government to make Australia a producer and not just a user of new technology. The taskforce proposed a list of growth industries that ALP should focus support on, as its chairman did with such extraordinary prescience 20 years ago in his book *Sleepers, Awake!* ([Jones, 1984](#)). Jones' proposals then were largely ignored by the government in which he served. With the deteriorating budget surplus limiting Labor's spending options, it remains to be seen whether this report will have more luck.

The Chifley report, drawing on work by Victoria University's Professor John Houghton ([Houghton, 2001](#)) argues that Australia is falling behind in developing information industries, while other countries are surging ahead. Houghton's work contains alarming findings. The information industries added 73,100 jobs in Labor's final term, but only 683 in the Coalition's first term. The number of ICT firms employing more than 100 people, and hence enjoying critical mass, grew by 84 percent under Labor, but just 7 percent under the Coalition, as domestic producers' market share slumped. From 1996 to 2001, the nation's trade deficit in ICT hardware has almost doubled from \$7.2 billion to \$13.6 billion. Exports have slumped, yet imports are booming, fuelled by raging demand for manufactures such as mobile phones and semiconductors not made here.

4. Under Cannon Fire - Australian Public Libraries in the "Information Age":

To better appreciate the importance of asking afresh what are public libraries for, the writer would like to make two observations on recent history that have had important consequences for these institutions. The first is the apparently inexorable shift from public to private provision of goods and services. There are many reasons for this - economic rationalism, globalisation, the collapse of collectivism - but what is crucial here is to

acknowledge the rapid advance of what has been called the 'neo-liberal consensus' for libraries.

The effects are palpable in utilities such as gas, telecommunications and electricity supply where privatisation and liberalisation have transformed previous services. They are evident too, in higher education: it is increasingly self-funded, with students defined as 'customers' who must take responsibility for their 'investment' in degree programmes. And the effects are clear too in television, where subscription services advance at the expense of public service broadcasting, where digitalization is to be pioneered on the basis of market criteria, and where the ABC and SBS are busy re-inventing themselves as entrepreneurs, well capable of matching commercial competition for markets and hard-nosed management.

The pressures are telling, too, in the library realm. Hence provision from taxation is deeply unpopular. Budgets are continually reduced, even if the euphemism 'efficiency savings' is preferred. The market model of information dissemination is increasingly that of the Blockbuster video chain: let customers determine choice of stock, only supply the most popular as measured by issues, and let borrowers pay on the nail for what it is they want. And it is this model which is in the ascendant.

The shift from public to private supply influences not just libraries' dissemination of information; it impacts profoundly what information is generated and made available. Growing commercialization means that, more and more, what information is made available depends on what is saleable, and what people get hinges on what they are prepared (and able) to pay. Of course, this is not a new thing, and nor is it necessarily to be deplored outright. Publishing, after all, is a commercial activity, and from it we have today paperback books that are cheaper in real terms than they have ever been. Nevertheless, commercialisation has accelerated and deepened its hold over recent decades. An example is, for instance, the demise of the Net Book Agreement, and the resultant hike in the price of academic titles now that the book trade is more thoroughly marketised than ever, and the established habit of cross-subsidy of titles is difficult to maintain.

As commercialisation spreads the principle of private provision to every activity in society, so too does it pose challenging questions for institutions, such as libraries, that are organised on a principle - public service - that is antipathetic towards it. If libraries don't ask what it is they are about, then they meet the challenges of commercialisation unprepared and incapable of doing more than adapting to a business agenda.

The second factor is the much observed 'information explosion'. Whatever measure one takes, there has been an extraordinary growth of information in the present era. Nowadays we have round the clock television, many more channels than ever, a huge growth in book titles published each year. Above all, perhaps, we have the development of information and communications technologies, which, in the form of the internet, heralds an information superhighway which brings prodigious amounts of information to all and sundry at the touch of a few keys so long as people are 'networked'. Association with the latest technologies has an undeniable allure, and there is no denying the fact that network technologies will have enormous consequences for the library world, so it cannot be surprising that many a librarian, aware that the profession has something of a dated image and eager to prosper in unpropitious times, has eagerly endorsed ICTs (and even, in some cases, taken to describing themselves as 'information scientists'). Such people look

to the day when there is a 'digital library', an 'information centre' with row upon row of computer terminals, and the librarian again has an appropriate esteem.

The above two factors have been coupled with three changes faced by the public libraries in Australia. The first is an outright attack on public libraries by the proponents of commercialization. They argue that libraries were an unjust tax levied disproportionately on the poorer sections of society (who use the library least), that fully 80% of their revenue went on salaries, and that these employees then had the gall to select books for the public rather than to meet the expressed needs of borrowers as indicated by loan statistics. The second change is the intellectual climate for the librarians: Reductions in book budgets continue, while the wider informational domain - publishing, broadcasting, electronic services - has gone on being marketised wherever possible and developed by private companies firmly along private lines. The third is the endorsement by the government of a "knowledge society", with a "modernised" public library service: the government is willing to provide resources provided that the libraries rid themselves of the old-fashioned fuddy-duddy habits of 'library silence', policing by aged spinsters in Hush Puppies, and, above all, discard an over-reverence for books which inhibits the take-up of modern electronic technologies and enter wholeheartedly into the network era, suggesting a central role in policies of lifelong learning should public librarians equip themselves with computers that attract those citizens willing to take responsibility for their own, ongoing, retraining.

As Webster (1999) aptly noted, this technological hype may well lead to the sad fact that public libraries are no longer working for "public good". Technology is commercialised, and far from being free, its price continues to rise. Libraries currently subsidised to get "networked" may end up entangled in deals that they cannot afford. Information provided by the mass media (Internet included) is usually of questionable value, and the vast amount of it is enough to prevent librarians from adequately sifting through it. The value thus of information provided by "modernised/digitized" public libraries will deteriorate in value. And despite the fact that librarians are often accused of being classist, the fact is that the poorer sectors of Australian society will face even higher barriers to accessing online information than they face accessing literacy programs.

5. Digital Wine in Old Casks

Most librarians use new technologies and have new roles. Despite the changing shape, the core of librarianship remains the same: librarians still develop ways to make information useful. They still teach patrons how to evaluate sources and introduce children to reading and research. Only now they use new tools, handle more varied responsibilities and have more opportunities to see their work reach beyond library walls.

As technology became pervasive, it became increasingly apparent that library and information services professionals working within technologically rich environments, needed IT skills which extended beyond expertise in the use of automated library management systems for general housekeeping purposes. New library buildings are packed with technology, and front-line staff, serving on information or help desks, have to field a range of IT-based and subject-based enquiries. These staff require expertise in troubleshooting hardware and networking problems, and in the use of electronic information resources. They also need to be familiar with any software packages which might be available over the network. Users are not interested in whether staff call

themselves computer staff or library staff - they simply want whoever is on hand to assist them with their questions and resolve their problems.

Garrod (1998) found that:

- the information society is fast becoming reality due to rapid innovations in information and communications technology.
- education has now been formally linked to the needs of employment; the move towards a system of mass higher education is a response to the need for a skilled, and economically viable, workforce. There is also a need for citizens of the information society to be information and computer literate, and higher education can help achieve this with its technologically rich environment.
- the introduction of mass higher education has resulted in a rapid growth in student numbers, and the prospects are for further expansion of higher education.
- the rise in student numbers has coincided with diminishing resources. There is less money for subscriptions, collection development, site licences and especially staff. There is a pressing need to find a solution to providing the same quality service to a larger client group using fewer resources.
- changes in the student profile: more students are now over the age of 21; they are less likely to come from a traditional background, as the range of qualifications providing access to higher education is extended, they are likely to be poorer, and they are of varying ability. These students need additional support from staff at a time when there are fewer staff to help them.
- the trend is towards student centred or independent learning; this has been driven by rising student numbers, and facilitated by innovations in information and communications technology. There are more part-time, distance, and vocational courses on offer, plus credit-accumulation schemes; all these changes have built flexibility into study programmes, but they make course delivery much more complicated for both teaching and support services staff.
- new technology has resulted in widespread availability of, and increasing demand for, electronic information resources. Use of the Internet has grown at a phenomenal pace and is set to grow even more once access has been speeded up.

These changes affect three groups in libraries in particular:

- senior managers - they need managerial not professional skills.
- subject or information librarians - their role is seen as developing along the lines of 'academic convergence' i.e. close working with academic colleagues.
- library assistants - who are increasingly doing the work of professional staff

This said, the nature of training and education needed by library staff and support staff has been less than clear to institutions providing LIS education. Where computers and library services have been integrated, distinctions between "information" professionals and "computing" professionals has begun to blur. However, despite some convergence between roles and responsibilities, many in the industry see the two as still very separate working cultures.

Marcum (1995) describes what, in her opinion, are the most important changes that have resulted from a new emphasis on technology:

1. Library education has become increasingly technical. As needs for technical training increase, historical and philosophical subjects are more often ignored by students as they choose electives. Even worse, such subjects are often eliminated from the curriculum altogether. Consequently, students know more about how to do certain tasks using a computer, but less about how the profession developed and what its ethical and philosophical bases are.
2. Technical skills, not subject knowledge, more frequently form the basis for professional positions. Librarians are hired for their expertise in online searching or microcomputer applications in libraries. In many ways, the emphasis on technical skills in library school grows directly from the employment situation.
3. Staff training has become more technical. In the 1970s and 1980s, staff development received great emphasis. Courses and workshops in many aspects of organizational development, management, and interpersonal skills were made available to library staffs. Librarians were beginning to work in groups to solve problems and share knowledge. Work today, much of it computer-based, is more likely to be solitary.
4. Library instruction has changed its focus as well. In earlier years, librarians concentrated on teaching research skills to library users. Today, the emphasis for both groups is on technical skills. Librarians and users alike must learn how to use machines in order to find the information they need. Little time and few resources are left for the broader utilization of information types of courses.

The point of all this is that librarians are more than processors of information. If they continue to focus on how to make machines work in libraries, they will fundamentally change the nature of what we do, and also become members of a different community. No longer will they be perceived as allies of scholars, active researchers into the substance of an academic discipline or the experts on their collections. Users begin to think of librarians as the technicians who will change the paper, fix the CDROM or reboot the computer, not the experts who will help them think through the substance of important questions (Griffiths, 1995).

6. Core Competencies for the Brave New World

There is much research and analysis on the issue of skills in the information sector. In 1999 CREATE Australia published a training package in library and information competencies for certificate and diploma courses. The 1998 report from the United Kingdom Libraries and Information Commission (LIC, now replaced by the Council for Museums, Archives and Libraries) *Building the new library network* devotes an appendix to skills. This is a comprehensive analysis of a number of recent studies and projects and focuses on the impact of the environment on skills of library staff.

A report by TFPL Ltd (1999) commissioned by the LIC found that information management skills are important for the knowledge management environment. The needed skills range from understanding the business processes of the organisation to change management, to leveraging information technology to document and information management. The link with traditional information service skills are in the core set of information literacies - finding, appraising and using information - the interactive information seeking process skills.

The National Library of Canada's work on core competencies (Scott, 1998) highlighted skill sets covering communication, information technology, dealing with change,

organisational (planning and managing work and priorities), problem-solving, teamwork, self-management, corporate (mission and values, marketing and promotion). Competencies required under specialised activities are service (to public), people management, process and organisational management and systems and information technology support. Specific skills under change include adaptability as well as the ability to deal with ambiguity.

In Weir's (2000) opinion, many of the essential skills that will be required of the information professionals of the future will be similar to the skills of traditional librarians of the past, but we will be applying them very differently. As Jose-Marie Griffiths (2000) said it is not *what* librarians do that will change, it is *how*. There is no doubt that the internet revolution has had a dramatic impact on how librarians do their jobs and has greatly expanded the range of skills we need to be effective. It is primarily the complexity of what they do that has changed. Balancing the traditional print resources with the burgeoning electronic environment in an era of shrinking budgets and very high user expectations is the challenge facing librarians today. They need to reposition themselves in an environment that increasingly focuses on the end-user. The belief that 'everything is online' and 'instantly accessible' is one that librarians face constantly.

A key role for librarians will still be filtering or sifting information. The 'information overload' that most people feel works in our favour. There are two categories of end-users - the 'do it for me' group and the 'let me do it myself' group. In my opinion, librarians have something to contribute to both those groups. The librarians' strengths in organising information are usually recognised by organisations when they approach the challenge of developing an Intranet, although librarians face a marketing challenge here, to convince IT specialists that they do have something to contribute. Traditional library cataloguing may see a decline but metadata indexing of web and Intranet resources, which use the same principles, will take its place.

Excellent communication and interpersonal skills have always been important but are increasingly essential as librarians are called upon to explain the complexity of electronic resources to their clients. Information literacy, with its increasing emphasis on developing self-sufficiency in the end-user, will solidify the role of librarian as educator. In all environments, we hear about developing 'partnerships' which requires good listening, communication, diplomacy and negotiation skills.

However, librarians must also seek out and encourage other characteristics and skills. These include:

- Management skills, especially for leadership, cultural change and finance to support the change
- Information technology skills and competence
- Approaches to and skills in working in groups and teams
- Strategic thinking skills
- Customer service skills - Librarians are the 'human face' of technology for many people and, as we progress to be managers, we need good people skills to help both staff and clients adjust to the changes facing them
- Adaptability - Information professionals must be able to cope with constant change
- Creativity - Resolving many challenges will require ingenuity and lateral thinking

- Willingness to take risks - Not a characteristic normally associated with librarians
- Self-starters - Much of the responsibility for self-improvement will fall to the individual
- Project management skills

Now more than ever we face serious threats to public access and the free flow of ideas. What happened on September 11th will have a permanent mark on freedom of speech and thought. What is at stake is not only the basic and fundamental role of libraries, but also the public's access to information and knowledge and the basic underpinnings of our democratic society. We must act quickly if we are to convince the public that libraries are the information and literacy access points they and their children need to succeed in the 21st-Century information society. Yet, no matter how essential our mission, librarians must struggle to raise public awareness. Like never before, we must capture the public's imagination about the value of libraries and librarians to democracy. The challenge in this new decade of the 21st century is to act-to raise our voices to effectively present what we do-to show how librarians make a difference. We must work together to tell the full library story to leaders in government, business, education and the general public. We must speak with a unified voice. What we need are articulate advocates armed with facts, cases, examples, stories, testimonials, pictures, that show how libraries and librarians help and how the lack of either hurts. We need to find users willing to tell their success stories-how they got their start or improved their lives at the library. We need ammunition to ensure that the battles to come are fought loudly, visibly, and successfully. Building partnerships and speaking out for the public's information rights works. It worked when librarians stemmed the tide of libraries closing. It worked when they fought to ensure free electronic access to government information. It worked when they fought to protect fair use under the copyright law. It worked when they fought to secure subsidized telecommunications rates for schools and libraries. It worked when they fought to ensure intellectual freedom in the digital age.

Kranich (2001) suggests the following strategies:

- 1) Recognising why these issues are so important to libraries. Librarians must be informed about the issues and the players (stakeholders) on all sides, and must participate in the public policy process, be visible, gain a seat at the table. They must raise issues to others, to the press. They must participate actively in the debate over fair use, the free flow of ideas, and the digital divide, and communicate the implications for public access.
- 2) Librarians must speak out in a unified voice: tell people about the value of libraries to democracy and economy.
- 3) Librarians must build partnerships and coalitions as they cannot be effective on our own. They must get organized and work together with others to make a difference and extend their reach. They must galvanize grass roots action.

7. Woman's Job, Woman's Loss

Hildebrand (1999) is among a few who have raised concerns about the status of librarians in the new "information age". Librarianship in Australia has been mainly a "woman's job", on par with nursing, primary school teaching, hospitality and child care. All of the above jobs are grossly underpaid (Burrow, 2002). Hildebrand's argument runs along the lines that embracing technology (computerization, digitisation, etc.) may intensify historic gender inequities in both library education and in the workplace, as the Information Age brings with it an assault on the public sector and government regulations, an inhospitable

environment for the emphasis on equity. Men are identified with technology. This seems to hold true both in terms of library jobs and leadership in library education. Examination of library school faculty and course offerings suggests that women are falling behind, as do Australian Bureau of Statistics on trends in the IT industry.

The identification of technology with males offers a way to favour men while evidently advancing librarianship. When it comes to computers, women are depicted as passive users while men are active agents in the computer world. This may explain why libraries increasingly hire outside experts in management and in technology, rather than develop such expertise in-house.

In a by now slightly outdated article, Roma Harris (1992) stated that librarianship is a female-intensive profession. Although it is numerically dominated by women, the profession is controlled, to a large extent, by men. This male control is evident in two respects:

- First, the evolution of the field is, at present, being dictated largely by male-dominated sectors of the economy, particularly by the information industry.
- Second, within the field itself, men tend to hold a disproportionately large number of the positions of authority, even though their overall presence in the profession is relatively small.

As well as the dominant presence of men in the management of the large library systems, there is some evidence that relatively more men than women work (and study) in areas of the field in which the primary emphasis is computer technology. Women are over-represented in areas such as children's librarianship and cataloguing. Hildebrand (1999) states that these are two areas that are disappearing rather quickly from the USA Library and Information Science courses menu, being replaced by "information science". Indeed, it appears that some of the female areas of specialization, especially cataloguing, are undergoing a process of "deprofessionalization" or "de-skilling," due to the continually increasing automation of processes. Early warning signals were given out by Vagianos and Lesser (1988) who stated that women may be especially vulnerable to technological displacement in the information sector. Similar warning, especially for library workers who are employed at the clerical and paraprofessional levels, are Webster and Robbins' (1986) observations that *"because women disproportionately work in low-skilled, most often white-collar occupations where they deal routinely with information...their labor has every likelihood of being automated."*

Feminist discourse aside, there is another, rather sinister aspect of this "female-intensive" profession: few public libraries serve male reading needs. With men in the management, but women in acquisitions and customer service, collections often tend to become biased, thus "feminising" the users (Hole, 1990). This has not changed much over the years, as shown in the table below:

Subject Heading	Number of titles available and break up	Numbers of books per publication year
Automobiles ("male" subject)	402: 287 adult non-fiction, 19 adult periodicals, 19 juvenile literature, 9 reference, 34 videos, 2 CDROMS, 33 other format	1 in 2002, 22 in 2001, 34 in 2000, 28 in 1999, 25 in 1998, 13 in 1997, 13 in 1996, 21 in 1995, 25 in 1994, 30 in 1993, 190 are more than 10 years

		old (47.25%)
Cookery ("female" subject)	2810: 2111 adult non-fiction, 17 adult periodicals, 93 videos, 11 reference, 3 CDROMS, 568 other formats	47 in 2002, 247 in 2001, 293 in 2000, 214 in 1999, 216 in 1998, 201 in 1997, 202 in 1996, 182 in 1995, 222 in 1994, 213 in 1993, 773 are more than 10 years old (27.5%)
Gardening ("neuter" subject)	1153: 715 adult non-fiction, 26 adult periodicals, 6 CDROMS, 76 reference, 31 videos, 299 in other formats	8 in 2002, 81 in 2001, 84 in 2000, 73 in 1999, 79 in 1998, 66 in 1997, 73 in 1996, 65 in 1995, 78 in 1994, 74 in 1993, 472 books are older than 10 years (40.93%)

TABLE 1. Comparison of subjects at Brisbane City Council Public Library (http://www.brisbane.qld.gov.au/uhtbin/cgiirsi/vSrO5Xow2j/8630012/38/1/X/BLAS_TOFF)

Where the library does service the needs for "male" literature, it is invariably in the middle-class, professional business area.

Women represent some 85 per cent of the profession and work almost exclusively in the public sector (Currie, 1992). Despite the predominance of women in Australian librarianship, their movement into senior management positions has only recently occurred. The most significant movement of women into management areas has occurred in the state libraries: six out of seven state librarians are now women (Bannister, 1992). The Queensland state library is the only state library in Australia where a predominately male hierarchy still exists. In Queensland academic libraries, there are now six out of seven university librarians who are female. Information on staff positions in university libraries was obtained from organizational charts.

The perception that women's work is somehow less productive than men's is based on long held gender-biased perceptions and beliefs. As Gatens (1991) argues, "It is not what is done or how it is done but who does it that determines its value". A feminist librarian claimed: *"Those tasks allocated to women are normally the ones which carry less prestige and similarly, since men are more highly valued than women, the work they do is similarly valued and given greater status and financial reward"* (Burrington, 1987). Women's skills in librarianship have been devalued by male administrators throughout Australia's library history because many of the skills women exhibited were not considered necessary for doing their job or for the management of the organization. Given the historical devaluing of women's skills in the workforce it is not surprising that some women are still concerned with their lack of power within organizations. After all, the typical female librarian has been portrayed as a "kindly maiden lady in Red Cross shoes. Such negative stereotyping has plagued women librarians since their entry into the profession. As argued by Burton (1991), *"We are dealing with deeply held beliefs, perceptions and realities about women's place and women's capacities"*. Because women's household role has been either ignored or devalued, women's presence in the workplace suffers from the same gender blindness.

Technology is not the only barrier to women working in the information profession. Childrearing, maternal leave, "boys club" mentality, lack of enforcement of the equal opportunity legislation, and even the perception that "success" is a male thing are all aspects of the problem. However, all the previous problems have existed for decades; technological changes in libraries are recent woes. The existing predominance of men in the industry has created a series of factors which discourage young women to pursue careers in IT&T. IT&T careers in Australia have always been stereotypically male pursuits. Men in IT&T unconsciously are more prepared to be mentors for male rather than female students. Parents are more likely to buy computers for boys than girls because they are more likely to believe that male children will have a future career in IT&T. Around 32 per cent of boys own their own computer compared with 23 per cent of girls. Female teachers (especially those aged over 50) have lower levels of computer skills (both basic and advanced) than male teachers and are less confident in using the web and email (DETYA, 2000). There is a general misunderstanding in the community about what an IT professional does. When female IT professionals are asked what is the reason for the gender imbalance in IT they most frequently attribute it to misconception of what a career in IT is actually like. They believe that careers in IT are lonely and dull with little human interaction. The way IT subjects is taught in universities and schools tend to confirm this notion.

This and other barriers can eventually lead to increasing numbers of female library staff not finding it possible to adapt to the new informational environment and as such losing their jobs or opting out of their careers.

8. Quo Vadis?

Even those who are most optimistic about the new technologies acknowledge that in their vision of the future the direct service role formerly played by reference librarians will be deprofessionalized as nonprofessional staff members assume primary responsibility for most patron contact. As Hall (1984) described it, users will become an "abstraction" for the professional librarians (and others) who design and manage information systems. For Hall then, the "new librarianship" is a field that responds to "a need that has been abstracted out of its original and particular context and is generalized to a sizeable user group". However, what she described is not really a new librarianship, but basically a new occupation.

What will this occupation look like? Many futurists agree that the most significant roles remaining to librarians in the face of automation will be teaching and consulting. For instance, Veaner (1985) predicted that no matter what it is called in the future, there will still be an infrastructure that will "need librarians as intermediaries, teachers, consultants, advisers, and interpreters". Similarly, Bearman (1987) observed that the new technologies will inevitably lead to increased teaching and consulting roles and noted that, "*[E]ven with improved front end packages and enhanced expert systems, the proliferation of databases and the rapidly changing technologies will require the help of information professionals to keep up with services, provide expert access to them, and serve as a member of the organization's management planning team knowledgeable about information assets.*"

All this leads one to wonder, of course, whether limiting the roles of professional librarians to those of consulting and teaching users about the new technologies will not

eventually result in the demise of the occupation, since both functions are inherently short-term in nature. As both software and its end-users become more and more sophisticated, the need for expert intermediaries will, presumably, shrink, or at least appear to be less necessary as end-users become more convinced of the quality of their systems.

The 'market' for the wide range of library services is large, healthy, diverse, dynamic and growing. It is certainly larger and more diverse in demographic and other terms than the market for other publicly funded cultural institutions. It is also a market which is diverse in its needs and expectations. The museum, the gallery and the performing arts venue are largely sites for one-off display and performance, however regular. The library, on the other hand, has a continuing and recurrent range of functions in the personal and professional lives of its users - and potentially its non-users.

The library is unique, in this sense, in its capacity as a centre of automatic recourse in the information economy. This provides its key market position and defines its market share and client-base in much broader and more fluid terms than apply to any other cultural institution or, for that matter, to any other public or private sector agency. The library cannot, however, rest on its laurels, rely on public esteem (or quantitative visitation rates) or simply assert traditional public good arguments to maintain its position. A more pro-active and less defensive posture are necessary.

This posture does not mean free market entrepreneurialism - this would both alienate and disenfranchise important sections of the current client base. It does mean, however, social market entrepreneurialism in various forms. This means resisting 'demonising' the market as in some sense the antithesis of the public good.

It is in the market place, via the commercial cultural industries, we should recall, where most of the Australian population have access to cultural resources and experiences. Commercial publishers, media corporations, recording studios, distributors, television, video, film, advertising and design companies: these provide most of the key landmarks of the contemporary cultural domain. Whatever the medium the key mechanism of access is commercial.

It is precisely in these cultural and 'content' industries with which the library has multiple forms of contact that many of the battles over integrity, autonomy and independence are fought. These industries have sharp policy implications in areas of cultural identity. The library is well-positioned to act as both 'referee' and navigator in this context. These cultural industries, for good or ill, shape the interests and define the competency horizons and capacities of the library client base, particularly those in the younger groups. Total government cultural funding (including funding for the ABC and SBS) represents only about 15% of annual turnover in the cultural industries. When you add the information industries to this calculation, government input and the policy horizons provided by the logic of 'patronage and provision' governing the public cultural sector pale into relative insignificance.

This is the nature of the cultural marketplace in which the library is uniquely positioned to act as a broker endowed with the integrity provided by a long public service and public good tradition, but *also* empowered - precisely because of its location in the 'economy of knowledge' at the intersection of information, cultural, and education and training policy domains - to act as an authoritative intermediary and guide.

From studies such as the Libraries Working Group (Mercer, 1995), it is clear that there is a structural tendency for early and successful users of the library to become later non-users by social and economic disposition. Marginal non-users as identified in this report have, on the whole, a high regard for the library but, quite simply, no need to use it because they can get what they want elsewhere. The library, for marginal non-users is a relatively temporary resource or a resource which no longer meets their needs and expectations in economic, social or access terms. To address this structural tendency of users to become non-users, libraries should do a number of things. These include:

- The *strategic* positioning of the library through enhanced service and program developments in the policy domains of both the information economy and education and training. Both of these capacities will be enhanced significantly by enhancing infrastructure and skills in online and networked services.
- The imaginative promotion of existing services through a nationally coordinated rolling promotion campaign.
- The *tactical* enhancement of the library as an integral and vital centre of amenity wealth including not only provision of textbased services but also a more systematic partnership arrangement with private sector cultural industries.

Thousands of dollars have been spent on providing the hardware and software that can deliver this positive content to public institutions like libraries and schools where everyone can access them freely in local communities everywhere. More is being spent on placing on the Web educational content that is easily accessible, of dependable quality, and free of charge for everyone. However, electronic networks must become not just technological pipelines for marketing and infotainment, but a healthy circulatory system that regenerates all parts of the body of humanity. And that will not be possible without the heart, which is still reading, and the main vessel, which is still the book. And not yet without the vein between the two: the human librarian.

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