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The coming transfiguration of Academic Libraries:
Meeting the challenge of changing society, changing education and changing needs

ABSTRACT

Much thinking about and planning of academic libraries seems to assume that they are more or less separate entities, which will gradually change and develop in reaction to changes in higher education and developments in Information Technology (IT). However, they exist only to serve the needs of society and individuals, and their future cannot be planned except in a much wider context. The fundamental questions are first how societies will develop, nationally and internationally, and then how higher education information needs - both institutional and individual - will change; for all systems should be built around people - even today we do not know nearly enough about them. It is most likely that these changes will be radical. Only when these questions have been answered can it be determined what information resources are needed to serve new institutions, and how these can be organized and provided, with the help of IT. Libraries cannot change unless their parent institutions change, and resistance from various quarters can be expected. Change will necessarily be largely incremental, and it will be difficult, demanding inspirational leadership and flexible staff; but experience shows that it can be achieved.

BIOGRAPHICAL NOTE
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Maurice B. Line is a consultant in the library and information sector, specializing in the management of change. He retired in 1988 as Director-General, Science Technology and Industry in the British Library, which he served for 15 years after working in several university libraries. He is a Professor Associate at Sheffield University, and he has two honorary doctorates and an honorary fellowship from British universities. He is a Companion of the Institute of Management. He was President of the Library Association in 1990, and was awarded the medal of the International Federation of Library Associations and Institutions in the same year. He has written 14 books and 365 articles and papers on a wide variety of professional topics; translations have appeared in more than 20 languages. He has visited over 40 countries on professional business.

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The Changing World

Two years ago, at a similar conference in Athens, I gave a paper suggesting that major changes were going to take place in higher education, which were going to have a radical effect on information provision. Instead of libraries supporting teaching, teachers would be supporting self-directed learning; learning resources would embrace not only libraries but computer-based materials. One-off degree courses would be insufficient; lifelong learning would be essential for all.

This paper is a kind of follow-up to that paper of two years ago, but it puts the topic in an even wider context and pursues the issues I raised further. Inevitably there is some overlap with the previous paper, but since few of you will probably have heard or read it, and those who have will almost certainly have forgotten it, this will not matter.

Let me first summarize what I see as likely relevant features of the world in AD 2010.

Globalisation was well advanced two years ago, but it has now become an inescapable reality, affecting all countries and all people. This results in more power for business and less for governments, and is a main factor in the continuing reductions in the public sector. Manufacturing will still be a major element in the economies of most countries, since the demand for material goods will not diminish. But invisible products based on the use of information will play a much larger part than now, will be responsible for most employment, and in particular will be the main engine of economic growth. Moreover, the efficiency of manufacturing will be enhanced by the use of information and communication technologies (ICT). This means that most employees will be knowledge workers of one kind or another, and that anyone who is not ICT-competent will be in danger of losing out in the struggle for economic survival. This applies to most so-called manual workers as well as to executives - 'so-called' because less and less work is totally manual.

ICT will continue to develop. Physical limitations, notably the limits of minaturisation of computer chips, will slow down the rate of growth but will not stop it. Although systems

based on ICT will be more complex, they will also be easier to use. Computers with Internet access are by no means universal yet, but to judge from the rate at which ownership has grown over the last five years, ownership and Internet access will be much more widespread in another ten years. Large memories will be essential to provide the very large capacity needed for all the material that will be available, particularly images, but memory size too will grow, without increased cost (my current 64 Mb computer cost less than a 4Mb did eight years ago); I would expect 512 Mb memories to be almost commonplace within ten years. As for those who do not own their home computers, there will be access through television, though this will probably be limited for some years.

Largely because of continuing ICT development, jobs will keep changing. Even if the job is superficially the same, its nature will constantly change - think how much the job of 'librarian' has changed over the last twenty years. As already mentioned, the balance of jobs will also change, for example from manufacturing to services. This and other factors will lead to a great deal of job mobility, voluntary or enforced. The 'shamrock organization' forecast by Handy [1991] a few years ago (the shamrock is a small plant with three leaves on each stem), which has a small core of 'permanent' workers and relies on a much larger number of contract workers and flexible workers, will become common. All three sets of workers - leaves of the shamrock - will need to learn and relearn all their working lives.

ICT will also lead to much more leisure. One would expect the increasing automation of work to lead to reduced working hours, and this has indeed happened to some extent. However, this has been cancelled out by the rise of service industries, which in response to the wish of people to be served all day and night has led to an actual increase in the number of hours worked by people employed in these industries. This need not of course happen; the services in question could just as easily employ more people as to stretch the ones they have, but this is more expensive, and is therefore ruled out in the search for competitive advantage. I hope that the ultimately self-defeating nature of this trend is recognized; whatever advantage is attained is short-lived and increasingly small since other firms do the same, and it leads to physical and mental stress and increasingly often to early retirement, especially for professional workers. Whether leisure is spread through the working life or concentrated at the end of it, more of it there will undoubtedly be; and there is also no doubt that many people, especially the well educated, will want to occupy themselves by learning, whether for enjoyment or to aid them in the voluntary work many will do. The number of 'retired' people doing degree courses has already risen substantially.

For social and political reasons alone, education will need to be spread much more widely in the world at large, within as well as between countries. This is a hope rather than a prediction. While population in the developed world is shrinking, quite fast in some countries (for example Japan), it is increasing remorselessly in Africa, which, if present trends are maintained, will in 50 years' time have three times the population of Europe. If the gap between rich and poor, which was decreasing until the late 1970s but has since increased in most countries, both developed and developing, as well as between developed and underdeveloped countries, is not reduced, the prospect of national and international turmoil is very high. Discontent and resentment on the one hand, and population pressures on the other, provide a rich soil for social conflict, abuse of human rights, authoritarian control, fundamentalism, crime, displacement of people, and many other ills. The unceasing influx of Africans and Asians into Europe is already creating strains and the risk of social disorder, as is the regular movement of Latin Americans into the USA. Two common responses, isolationism and nationalism, make matters worse. Education is by far the best longterm remedy for underdevelopment indeed, without it any development will be insecure and short-lived - and it

must not be confined to a relatively few rich countries and people. Initially, the developed world will have to provide most of the educational resources and the infrastructure. This is not a matter of charity; it is a requirement for long-term stability and survival. It is noteworthy that the World Bank, which many have criticized for policies that have made things worse, devoted its World development report 1998/99 to 'the role of knowledge in advancing economic and social well-being'. [World Bank, 1998]. There are signs that UNESCO is taking the issue firmly on board, though its Learning Without Frontiers programme [UNESCO, 1999a, 1999b] focuses on school education and the reference in a recent World declaration on higher education for the twenty-first century to international cooperation in learning [UNESCO, 1998] is disappointingly slight.

An obvious means of spreading education is via the Internet. It will be much more widely accessible than now. The ICT gap between rich and poor will narrow only slowly, but access through interactive television will make it unnecessary to have a modem to tap into the world's information resources. For those without television, there will be public facilities; information access will in fact be like access to food, which can be provided at home or in a wide variety of cafes and restaurants. Many cities already have cybercafes, and two months ago a chain of garages in the UK started to install computers with Internet access.

Communication will be freed from constraints of time and place [SchWeber, 1999]. Reception is already often separate from transmission; both sound and vision can be recorded and made available anywhere, by physical media such as CD-ROMs or video recordings, by means of television, or directly online. Speed, quality and versatility will be much greater than now.

Anyone who wants information and has access to the right machinery is no longer at the mercy of others: everything needed is under his/her own control. People will, for example, be able to diagnose many of their ailments, and even (to a certain extent) treat themselves; the technology for this exists already, and increasing pressure on health services will make it necessary for many complaints.

The ability to have more power over one's life and learning applies par excellence to students. As Miriam Drake says in a paper that I read only after I had written the first draft of this paper, and that echoes uncannily many of my thoughts and themes, 'Self-motivated learning will be essential. People will not be able to wait to be told to learn ... Higher education needs to address the issue of teaching students how to learn and communicating the necessity and desire to continue to learn.' [Drake, 1996]. It must be remembered that 'students' are not only those who undertake a full-time course of education for three to five years after secondary education; they will include most of the working population for part of the time, as well as many of the leisured.

The assumption by individuals of greater responsibility for their own learning does not of course mean that education at all levels does not have to be planned and managed. In the case of formal courses, there will need to be planned curricula and some form of examination if qualifications are to mean anything. But the way students learn will be in their own hands. Mass lectures have already given way to small-group learning, which may or may not be guided by a teacher.

Mature learners - many of them could be called 'worker-learners' - will have a wider choice. Some will want to gain a new qualification, which like first degrees will need some formal system of control and examination, but they can do this in their own time over any period they want. Most will learn in order to keep themselves up to date; enlightened firms already set aside time in the working week for such self-education, and this ought to become general practice. Most of the education that takes place will be after the formal degree period - this is probably the case already - and most of this will be self-education. Much of it is unrecognized; for example, I estimate I spend at least five

hours a week educating myself by reading, a mixture of published material and material on the Internet. I know more or less what I want, but this is not true of most, who will need some guidance and some structure.
Much self-education will be by people wanting to keep themselves informed about the world at large, or about history or literature or music. The 'University of the Third Age', established in the UK over ten years ago for older and retired people, has a flourishing membership, and demonstrates the demand for such self-education. Lifelong learning will fall into two broad but overlapping areas: learning for economic purposes (to stay employed and employable); and learning for self-enlightenment, including leisure. The two areas correspond roughly to applied science, technology and applied social sciences (e.g. education, management, economics) on the one hand and on the other to the arts and humanities, but including popular science and some social science.
Who will organize this further education? There are several possibilities. Firms themselves can be counted on to plan essential basic training for their employees; for education beyond this, very large firms may employ their own education force, as is already the case in some large manufacturing industries, but most will want to turn to other bodies. These may be existing institutions of higher education, or they may be new professional bodies specializing in distance education. There are considerable commercial opportunities here. Governments are playing an active part in some countries, most especially by funding the development of an infrastructure to support networks.

What do these trends mean for universities? I am sure that universities will continue in existence for a very long time, and that they will continue to provide the basis for first degrees. That, and research, will continue to constitute their core business, but to these activities will be added much wider roles, and a much bigger market. Almost the whole population of the country will constitute their potential market; beyond that are markets in other developed countries, and beyond that is the world market.
First degrees serve two main purposes. The first is to inculcate a basic package of up-to-date knowledge on which the learner can build. Much of this will be out of date in a few years, particularly in science and technology. The second, much more important in the longer term, is to develop minds: to train them in (e.g.) scientific or historical method, and, even more basic, to develop a permanent curiosity and questioning, and to inculcate the skills to answer questions. These include information searching, selection, discrimination and use. Some of these tasks can be achieved by self-directed learning, especially of basic factual knowledge. But some personal input is essential if minds are to be stimulated by constant challenge; the habit of asking questions and not being satisfied with glib answers does not come naturally to all (at least not after the age of about 8 - what do we do to children to knock it out of them?). The university teacher should be more of a mentor and guide than a purveyor of instruction. Students need a range of support functions, wherever they are based. They also learn as much from one another as they do from most teachers. They also learn to debate, organize things like sports and expeditions, work together in putting on concerts and shows, etc. The university is of major importance as a community, proving intellectual stimulus as well as socialization.
Since learning will be freed from constraints of time and place, it does not matter much where in the world the learning resource is, so long as it is in a language that can be readily understood by the learner. Moreover, resources can combine, within or across countries. Universities can serve remote learners either on their own or in concert with other universities, or for that matter with private firms. In the UK, a Distributed National Electronic Resource is under development. Institutions in English-speaking countries are at a particular advantage here; one can envisage them joining up with universities in other countries to provide courses.

Cooperation can take several forms. Commercial firms might provide the educational soft-ware, based on the information provided by academics. Universities might organize their own consortia, or set up jointly owned commercial enterprises. In principle, universities could combine to give courses at the first level. A student could decide to do a package which included components offered by three or four different universities. Whatever form cooperation takes, it will be on a commercial basis, since there will also be competition; organizations will cooperate when it is perceived as more beneficial to them, compete when it is not.

Academic staff will carry out research as now, but their other functions will change. As well as some teaching of students, and more mentoring, they will also produce software, some for inhouse use only, some for sale to other institutions. It is clear that 'research too is changing. It is becoming more interdisciplinary on the one hand and more specialized and fragmented on the other' [Drake, 1996].

It is worth noting in passing that the Internet is already beginning to change the way information is published and used. The economics of publishing printed matter impose constraints on length - between 8 and 30 pages for most periodical articles, above 100 pages for most books. The Internet removes these constraints; a piece can be as short as a paragraph. It is no longer necessary to inflate a simple idea or the result of an experiment to make a respectable article; if only fifty lines of text are needed, that is all it need have. There will be two effects; the disaggregation of text into smaller chunks by the writer [Line, 1986], and the restructuring of articles and books to enable them to be disaggregated by the user [Bishop, 1998]. Books can be disaggregated into chapters, journals into articles, and chapters and articles into what I have called 'infobricks'. Much information on the Internet already consists of infobricks. The problems these developments will cause for bibliographic control can be imagined. Incidentally, they make plagiarism much easier, since it is very hard to track down the origins of an article or book that is an amalgam of various chunks lifted from a wide range of other material.

There is another major trend, which is still only in embryo. This is the virtual unification of access to cultural institutions - museums, galleries, archives and libraries. Museum objects and paintings are being digitized, as well as texts.* Unification of access will be 'virtual' because the actual institutions are likely to remain separate - the different materials they deal with need different sorts of housing and treatment; and the digitized databases that contain images of them will almost certainly be separate too; but from the user's viewpoint they will be accessible together through the same portal, whether they are French paintings, Greek pottery, ancient Roman shoes or medieval missals. The first step is obviously to make catalogue records of the holdings available, and it ought to be possible to combine these in a single subject database. The recent creation within the European Commission of a single unit with responsibility for archives, libraries and museums, and in the UK of a Museums, Libraries and Archives Council, is a portent of things to come [Dempsey, 1999a; Dempsey et al., 1999b]. Bodies such as this will be able to provide the organization needed to take the necessary steps, and also, one hopes, to provide the necessary funding. Such databases can be made available on CD-ROMs (or whatever medium succeeds them) as well as online. They will be of much more importance to the humanities and arts than to science, technology and the social sciences, but there will be use for such databases in these areas too - for example, geology and the history of science. Work is going

*A recent example is the AMICO Library - a database of more than 50,000 digitized images of works of art in 26 US and Canadian museums and galleries, who constitute the Art Museum Image Consortium. This data-base is accessible through the Research Libraries Group's Eureka® search system [Research Libraries Group, 1999], but is not - yet, anyway - integrated with RLG's text database.

on in this direction under the auspices of the Consortium for the Computer Interchange of Museum Information (CIMI); its Dublin Core Testbed is exploring 'the usability, simplicity, and technical feasibility of Dublin Core for museum information' [CIMI, 1999].

We are then beginning to talk of educational and information resources in a much wider framework than textual material (and sound recordings, with which many libraries have dealt for years). If there is the prospect of integrated access to all these kinds of resources, we need to consider where it will be provided. If it does not matter much where the resources are, nor does it matter where reception takes place.

How far universities get involved in continuing education is not at all clear. As stated above, large industries provide for their own needs. For example, British Airways 'has established a network of Quest centres - fully-equipped libraries and learning centres, which allow people to learn during breaks, around shifts, in the evenings or on days off. ... the centres offer books on everything from organisational behaviour to feng shui; audio and CD-based language packages and IT training.' [Lucas, 1999]. 'ICL ... now delivers interactive IT training over the Internet ... Students worldwide can download training materials to their PC, review material with the help of an on-line tutor and exchange views with other students via on-line chat facilities.' [Lucas, 1999]. Internet and software firms have developed what Baer [1999] calls 'E-learning', as 'a natural extension of their own training programs'; and enterprises such as America Online and Knowledge Universe (a recently established firm specializing in Internet-based education) are also entering the field. Most industries are small or medium-sized, even the largest will not be able to cover all areas of necessary expertise, and there are independent learners, who may be employed but want to educate themselves in subjects unrelated to their employment. There will be at the very least some large niches for universities to occupy. We shall see new types of 'university', like the 'University for Industry' being established in the UK, which will be based on a national learning network and use a variety of resources, including existing universities.

Where do libraries fit in?

So where do libraries fit into this? When most people in developed countries have access to the Internet, and it does not matter where resources are, why have a library at all?

We need to remember first that even today many students have their own computers, but they still need to use the library. This is chiefly because so little textual material is yet available on the Internet, and access to much of what there is has to be paid for. It is difficult to see this changing; publishers are not going to give away their material free because it is electronic, any more than they give away printed material now. The same will apply to the creators and producers of museum and gallery databases. What the library will be is a store of printed and audio knowledge, and also a gateway to knowledge held elsewhere - in the home university, in other universities, in resources held and managed by commercial firms. Site licences, whereby publishers give permission for use by a university for its students of their electronic material on payment of an overall sum, are now quite common, and students therefore have access which to them is free. The above is true for first-degree students on the spot, but not for remote students and lifelong learners. Universities have a responsibility to their own students, and can justifiably give students free access to electronic resources, but there is no such obligation to lifelong learners. In any case, it is most unlikely that licences to serve such users would be given by publishers. In that case there would be little incentive for lifelong learners to use the university library for access to resources, unless they are registered with the university and special licences at higher rates are negotiated, or the cost of access is shared. Another prospect is that the library will be

able to organize resources in ways that would be difficult or impossible for individuals, and also provide help. It will be for universities to think whether, in what ways and how much they want to get involved in serving lifelong learners. My own hope is that they will, and offer associate membership to mature and distant users, including some in foreign countries. The service to less developed countries that I advocated would be by means of educational soft-ware and by access which is subsidized by the government; they have very few decent libraries of their own.

Since gathering and managing the resources will involve computing facilities and educational technology expertise as well as libraries, it makes sense to have close cooperation between the university units concerned. This may take various forms, from loose association to integration. Over half of British universities are now 'converged', though this term covers a range of connections; and in many of the others there is someone at very senior level (e.g. Pro-Vice-Chancellor or Dean) in charge of information technology and services. The library then becomes a Resource Centre - which indeed is what some are already calling themselves.

The boundaries of the library or resource centre will become more fuzzy. There will no longer be any clear division between teacher and information provider; the two will work hand in hand.

If their parent universities do get involved in continuous education, the library will be in competition with public libraries, which see this as an important opportunity for a future which is under threat from various quarters. Instead of competition, however, the two types of library could, and I hope will, cooperate, serving different levels of educational use and in close electronic contact with one another.

What do users want?

(see Line [1998b])

I want now to switch to another topic, which may at first appear unrelated to the changes I have indicated. Librarians have been inclined to assume that they know what users want - better than the users themselves. This is highly questionable; a focus group of social science researchers that I facilitated in one university identified all kinds of need of which the library staff were quite unaware, at the same time as the library was offering services that noone really wanted. This is on reflection not surprising; all librarians can normally know about what people use, and what they demand. Many years ago I defined a hierarchy needs - wants - demands - uses [Line, 1974]. People need information that is not always recognized by them as a want (an example, not in the area of information, of needing and not wanting is the statement 'He needs a bath' - which may be obvious to everyone but the person concerned). At the same time they may want what they do not actually need - information that proves useless once they get it. Likewise, people do not translate all their wants into demands, whether because they cannot articulate them in a form that can be asked of the information system or because they do not expect the want to be fulfilled; and they can demand what they do not really want. Finally, they do not use all they demand (perhaps because it is unavailable at the time), and do not demand all they use (a great deal of information is picked up by serendipity - accidental discovery). What libraries ought to aim to serve is needs, not just demands or uses, or even wants.

It is exceedingly difficult to identify needs; to do so requires probing into what the user is actually engaged upon and determining from that what information would serve his/her purposes best. This is what I tried to do in the above-mentioned focus group. It is time-consuming, but not impossible; and since a great deal of time and money can be wasted by ineffective information provision it is worth thinking how we can do it. Closeness of library staff to users is one essential; a research study I headed many years ago involved two information officers working full-time with social science researchers over a period of two years, during which they

learned to provide what was really needed, and incidentally gradually enabled the researchers to articulate their needs better [Evans & Line, 1973]. In the case of students, their tutors ought to be able to say what they need, even if they cannot always do so for themselves.

I have been wondering recently if technology and expert systems might help us. It is technically possible to log most of what any user does over any period of time, whether it is borrowing items from the library or searching the Internet. This information will tell us only what the user does, but from such a large body of information it ought to be possible to probe more deeply. It should be fairly easy to identify with some precision the detailed topics on which information was sought, and having done so to match these topics with information resources of various kinds. However, such a system might be ruled out in principle on the grounds that it infringed data privacy. Even if some users were initially willing to take part, they might object on second thoughts, since by no means all uses of the Internet are connected with scholarship.

There is another major point to be made here. It is obvious that uses, demands and wants can and do change according to what is available. One has only to think of changes in transport systems over the last hundred years and the way they have changed what we do, expect and want. What is not quite so obvious is that needs too can change. Noone needed to travel from Europe to the USA within one day a hundred years ago, but air transport has changed the way business is conducted, and turned an impossible dream into a perceived and widespread need. ICT has made so many new things possible that it has changed fundamentally the ways in which we conduct information use and searching. It has created new uses, wants, demands and needs. So we not only have to think how ICT can help existing needs to be better satisfied, but what new needs it is creating. Universities will have to consider how the new services they will have to give will generate new needs, which may in turn require new services.

Resource centres will have to be constantly alert to changes in needs. This will require a lot more sensitivity than most libraries have shown in the past. They have either assumed they know what is needed, or responded blindly to changes suggested by academic staff, who are not always sensitive to needs themselves. In a recent article [Line, 1998a] I noted what I wanted of a good library of a more or less conventional kind. For interest, I am attaching this as an Appendix to the published version of this paper. The point I want to make now is that very few libraries can provide much of what I would like to have in the way of services, and no library can provide them all, though they are all entirely possible today. This does not augur well for the future.

The new model university and the new resource centre

As I have pointed out, there will be major changes in the markets served by universities, in the role of teachers, in the nature and location of resources, and in access to these resources. Let me list the changes that I have mentioned briefly:

- Less government money
- More first-degree students
- More older students
- More distant students
- Lifelong students
- Students in other countries
- Universities competing to serve one another's students
- Competition and / or cooperation with industry
- Competition and / or cooperation with other bodies (making educational software etc.)
- User-oriented / user-driven education
- Onus of learning shifting from supplier to user
- Ability of students to build up courses from several HE institutions
- Change in role for academics from teaching

to preparing software and mentoring
Many more sources of information, unsifted and needing control at the receiving level
Integrated access to the contents of museums and galleries as well as libraries
Changes in needs as a result of ICT.

These changes, even if not all of them come to pass within ten years, will require a rethinking by universities of education and information provision as a whole, and in a wider context. After all, the provision of education and information is the main raison d'etre of a university. Its organizational structure will need to be changed, as will its relationship with other universities and bodies; and its possible international role should be reconsidered.

The question of how the necessary rethinking and changes will come about is rather nearer to being answered than it was two years ago. By a process of evolution rather than revolution, many universities are making some of the changes needed. The rethinking seems to be taking place gradually; there is not much sign of deliberate planning, but progress is taking place all the same. Evolution is often better than revolution; it does not matter greatly how the changes occur. So perhaps what seems to be happening is enough. I am still however worried that the sheer scale of change is not fully understood or appreciated, and I would be happier if there were more evidence of visionary thinking. Progress could still be gradual, but at least it would be towards a common end, understood by all if not agreed by all. Most resistance can be expected from teachers, who will find it hard to accept new roles for which most are untrained and many unsuited. To quote Drake [1996] again, 'Teachers will have to transform themselves into multimedia producers, team leaders, directors and coaches. Faculty accustomed to teaching with lectures, chalk and blackboard are likely to find difficulty in meeting new demands.' Librarians are often accused of being conservative, but in my experience teachers, radical though their ideas and research may be, are a lot more conservative. Meanwhile, librarians must prepare for their own transformation; and departments of library and information science must prepare the next generation. Here again, there has been much progress, but it tends to be gradual and unplanned, reacting rather than proacting.

Progress must be driven both from below - from the people actually involved in education - and from above. Official bodies like the Museums, Libraries and Archives Council in the UK are needed, and any country that does not have a body of a similar kind with official status and direct access to government needs to consider establishing one immediately.

APPENDIX: What I want of a library

From Line, Maurice B. [1998a] Designing libraries round human beings. Aslib Proceedings, 50(8), September 1998, 221-229.

1. An attractive building (*ugly ones are not pleasant to work in*).
2. A friendly and informal physical atmosphere (*buildings can be friendly or forbidding*).
3. Long (*but not excessive*) opening hours.
4. Comfortable seats for working (*but not so comfortable that they induce sleep*).
5. A variety of study areas, where I can if I wish study quietly or have group discussion (*I want to use the library as a community centre, where I can discuss my work with others from time to time; in any case, few people want silence all the time*).
6. A coffee shop, where I can relax, refresh myself, mix with other users and with library staff.
7. A minimum of rules (*but a few clear principles*).
8. A self-usable arrangement and system (I should not need to ask any directions).
9. A wide range of current material for browsing, selected according to what the library discovers its clientele needs (*I want to see what the latest material is on a variety of topics - and I mean latest, not three or six months old*).
10. A high proportion of what I want in the collection and on the spot (i.e. not on loan) (*unless I am working on an esoteric subject, in which very few if any other people are interested, I would expect 70% of my needs to be met locally*).
11. A selection of older material, including 'classics' and standard works.
12. A good collection of reference books (*in whatever format*).
13. Simple and speedy procedures for borrowing and returning books etc. (*I do not want to stand in long queues waiting to borrow books, or fill in long and complex forms*).
14. The ability to access a variety of media from one workstation (*ideally I ought to be able to access digitized printed matter and audiovisual material from the same place*).
15. A catalogue that:
    -is easy to use
    -is accessible on every floor of the library, from home and from other remote sites
    -contains all the library's holdings in one sequence, and that offers a variety of access points, including and especially subject terms
    (*I do not want to search several sequences, whether divided by date or format*).
16. Speedy access to resources that are not held in the library, both bibliographically (i.e. through integrated access to union catalogues) and physically (i.e. the documents themselves) (*I expect the library to use the fastest and most efficient method to locate and obtain wanted items for me*).
17. A shelf arrangement that aids browsing (*I do not want detailed classification*).
18. Good access to information tools that are produced by others (*e.g. commercial indexing and abstracting services*), if possible with unified front ends (*ideally, I want to access all databases using the same software - the system would convert my search terms to those used by each database*).

19. Copying machines on every floor of the library: easy and fast to use, cheap and reliable.

20. Friendly and helpful staff, who are bibliographically and technically knowledgeable, who are visible and who invite inquiries (i.e. they do not bury their heads in books when I approach), and who tolerate questions that seem stupid to them, but who behave like this genuinely, not just as a matter of duty or artificial politeness (*e.g. I don't want staff who say mechanically 'have a nice day' - especially when it is eight o'clock at night. The image of friendliness must not be a substitute for the reality*).

21. A willingness on the part of management and staff to accept criticism and suggestions, to act on them where appropriate, and to respond whether or not action is taken. (*I do not expect all my requests and suggestions to be acted upon, but I do want answers to them all*).

22. To pay as little as possible for access to information.

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