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## *The effects of automation in libraries: the implications for work organisation and job design*

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TITLE: The effects of automation in libraries: the implications for work organisation and job design.

ABSTRACT

The purpose of this thesis was to investigate how libraries, as organisations, may adapt to the introduction of automation, specifically the use of computing technology. The study focusses on the effects on the organisation of work.

The thesis commences with an overview of libraries, their organisation, structure and environment, placing the development of automation in context. The nature of work in libraries is described and a categorisation of selected tasks drawn up, divided into four functional areas: acquisition, organisation, exploitation and administration. The question of whether librarianship is a profession is addressed. The relationship between the 'professional' and 'non-professional' is raised. Reviews of published research into the job preferences of library workers and the characteristics of library work are undertaken. The development of automation in libraries is described, followed by a review of library experiences of automation, with specific reference to the impact on organisational structure and the nature of work. Theories of job design are described and their use within libraries examined. The potential application of contemporary approaches to job redesign is investigated.

Field research undertaken involved administering a questionnaire to a group of library workers whose libraries were members, at that time, of the Scottish Libraries Cooperative Automation Project (SCOLCAP). Questions covered job preferences and characteristics, and attitudes to automation.

The various facets of the topic are brought together in a final discussion. The future of libraries and librarians is explored. Some recommendations for further research are made. The major conclusions are that automation is a catalyst for change in libraries rather than an instigator of change; that there are strategic choices involved in the change process, including choices in the capabilities of the technology used, why it is used and how work is organised around it. A model outlining the consequences of automation in libraries is presented.

THE EFFECTS OF AUTOMATION IN LIBRARIES:

THE IMPLICATIONS FOR WORK ORGANISATION AND JOB DESIGN

by

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A Thesis submitted for the degree of Master of Arts,
to the University of Durham.

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1988

TABLE OF CONTENTS

LIST OF TABLES AND ILLUSTRATIONS

Page

I declare that the material contained in this thesis
has never previously been submitted for a degree in
this nor any other university.

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CHAPTER 1

THE EFFECTS OF AUTOMATION IN LIBRARIES - AN INTRODUCTION

This thesis represents a personal attempt by the writer to gain a better understanding of the way libraries, as organisations, function and how they may adapt to the introduction of automation, specifically the use of computing technology. At the outset, certain views and opinions were held which were based on several years working experience in libraries heavily committed to automation. The direction of the thesis has, in fact, altered during the process of researching it and writing it up. This is perhaps an inevitable outcome, since the entire exercise has been a learning process.

From the mid 1960s onwards, when the possible benefits of computer processing began to be recognised by the library community, the initial attention of the experimentors was directed at the housekeeping side of libraries. Such activities as acquisitions, cataloguing, and circulation lend themselves particularly well to automation. [1] Many of the tasks are repetitive, routine, and clerical in nature, and involve the creation and maintenance of files of records. It is also a fact that much of this work is not observed by the library user. It is very much 'behind the scenes', although (in the opinion of this writer, at least) the work is vitally important to the smooth running of any library organisation. Traditionally, acquisitions and cataloguing are referred to as *technical services* operations, and circulation is regarded as a

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[1] Librarianship, along with many other occupations, is full of jargon. To aid in the understanding of some of the 'technical' terms used in this thesis, a *Glossary of Librarianship Terms* is included, immediately following Chapter 10. This list is very selective, and consists of terms which are directly relevant to the topic in hand.

*reader services* operation. (Such terminology is not necessarily
standardised throughout all libraries, and variations in use will
occur.)

Having been for many years a 'Technical Services Librarian', and more
latterly a 'Head of Technical Services', the writer is not only very
committed to this side of library work, but also is a supporter of the
use of computers in the area. The computer can eliminate much of the
drudgery involved in the activities carried out, and furthermore can
result in much more efficiently run sections and generate a much better
product or set of products, and hence an improved service to the user.
Nevertheless, the computer is not necessarily the panacea of all manual
technical processing (or any other manual library processing) ills.
Automated systems have to be examined and their implementation planned
carefully, with the goals of the individual library very much in mind.
The service provided by the library may be considered its ultimate
concern, and changes wrought within the library, as a result of the
introduction of automation, may need to be viewed in terms of the
effects on this service. But the library as an organisation is also
dependent on its workers, and any change ought to be evaluated in the
light of its effect on the people who ultimately provide the service.

Much has been written about the effects of automation on the user,
ranging from the impact on the types of library services available to
consideration of the interaction of the 'user' with the system
(sometimes referred to as the 'user interface'). Descriptions of library
computer installations abound, and the market for automated systems is
now fairly big business. Some research has been conducted into the
effects of automation on library personnel. As Stevens (1985) points

out, the introduction of automation has an impact on the "way people are mobilised to work and the kinds of behaviour and skills that are necessary for efficiency and productivity". (p332) [2]  What is lacking is an analysis of how the introduction of automation may change the way work is done.

Librarianship in the U.K., as we shall see presently, is characterised by a two-tier personnel structure. There are the qualified professional librarians on one side and the non-qualified clerical/library assistants on the other. Tasks and responsibilities are allocated according to whether they are considered professional or otherwise. There is a substantial difference in career possibilities and remuneration between the two levels. The introduction of automation may have a profound affect on both categories of personnel and the work they undertake. What is this impact likely to be? Will the nature of work change? How should libraries change to accommodate the new processes? Does the introduction of automation have any affect on the organisational structure of libraries? What impact will automation have on the organisational effectiveness of an individual library? These, and other questions, were in the mind of the writer as she commenced work on the thesis.

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[2] The form of reference used in this thesis will be a name-and-year system of citation. When reference to an author's work is required, a shortened form of the full reference will be inserted into the text in parenthesis. This may consist simply of the year if the author's name appears in the text, as in the case of Martell (1981); or it may include pagination with the citation (Martell, 1981, p436) or pagination on its own following a quotation from the author's work, as in the case of Stevens above; or it may use lower case letters (Martell, 1983a) to distinguish between several publications of the same author in one year. The reference will then be given in full in the alphabetically arranged *Bibliography* at the end of the thesis.

The first stage of the research programme was a fairly comprehensive literature review of organisation theory, including the psychology of organisations, work and people. This was done in order to build up an understanding of how organisations function and to gain more knowledge of human nature and how people at work behave. This study was followed by an extensive review of the literature on the management of libraries. An attempt was made at this stage to apply what had been learnt, by undertaking an organisational analysis of the library. This assignment formed the groundwork for Chapter 2 - Libraries: Their Organisation, Structure and Environment.

These initial exercises were followed by a detailed investigation of the nature of the work undertaken in libraries, and a review of the research that had been carried out into the job satisfaction of library workers. The findings constitute the bases, respectively, for Chapter 3 - The Nature of Work in Libraries, and Chapter 4 - Job Preferences and Characteristics. The knowledge gained through this work was considered a prerequisite to the greater understanding of the impact of automation on both the nature of work and on the job satisfaction of library workers.

The third stage of the research traced the development of automation in libraries, and reviewed the effects, as published in the literature, of the introduction of automation on the organisation and structure of libraries and on the work done by library workers. This review provided the information for Chapter 5 - Automation in Libraries.

The foregoing resulted in a growth of interest in theories of job design, and the possibility of redesigning library jobs, so that the full benefits of automation may be achieved. A study of traditional and

contemporary job design approaches was then undertaken, followed by a review of their application - actual and potential - in libraries. This work formed Chapter 6 - Job Design and Work Organisation.

These preliminary review exercises resulted in a focussing of interest on the following issues:

1. The characteristics of the job which lead to job satisfaction in library workers - both professionally qualified and clerical;

2. The way in which automation has affected the organisation of the work carried out by professional and clerical library workers;

3. The application of job redesign principles in libraries, following the introduction of automation, in order to optimise job satisfaction and productivity.

The reviews and subsequent analyses left a number of unanswered questions. At this stage it was decided that a field exercise should be undertaken to corroborate, or not, the findings from the literature and to test certain ideas. To this end, objectives for the field research were drawn up, a questionnaire was devised, and a survey population determined. The procedures involved in these are described in Chapter 7, and the main findings detailed in Chapters 8 and 9. The survey was undertaken in order to explore trends and experiences, rather than develop statistical models that could be applied in every library setting.

Chapter 10 offers a discussion of the various findings from the review exercises and the field survey, and will formulate some conclusions. Recommendations for further research will be offered in the area of the effects of automation in libraries.

CHAPTER 2

# LIBRARIES: THEIR ORGANISATION, STRUCTURE AND ENVIRONMENT

This chapter will attempt to orientate the reader to the different roles
of various kinds of library - specifically in the United Kingdom - and
to their structure and organisation, so that the development of
automation in libraries can be understood in context. The discussion
will concentrate on the U.K. library scene, since that is the area of
knowledge and of interest to the writer, although reference will be made
as appropriate to the wealth of literature on library administration
from the United States.

Some explanation of terms is needed at this point. The term 'library'
has two popular meanings: it can refer to an actual collection of books
and/or other material; or it can refer to the building, room or other
physical structure that houses the collection (whatever that may be). In
connection with this study, the term will be used to connote all the
parts that together make the library an 'institution', that is, the
collection and its organisation for use; the staff and their
organisation so that the work may be carried out; the managerial
structure; the technology and equipment used, and so on.

## LIBRARIES: THEIR HISTORICAL DEVELOPMENT AND PURPOSE

Libraries have a long history. They have existed as repositories of
knowledge for thousands of years and have been an essential part of any
civilisation. Over the centuries libraries have been created as
storehouses of contemporary information, by monarchs, emperors, nobles;
and by scholars, scientists, and philosophers. The latter would collect

the works of friends, colleagues or rivals. The wealthy or the nobility might set up libraries not just to keep records of their property and business transactions but also as status symbols and sometimes as philanthropic acts. Universities, as seats of learning, built up their libraries for the - sometimes exclusive - benefit of their academics. From the middle of the Nineteenth Century the information available in books became accessible to a larger audience than just the rich or privileged classes. Developments in the education process resulted in higher standards of general education for the mass of the population. Subscription libraries were formed. Then the free-access public library service was set up by act of Parliament, supported by local authorities - through the rates levied on house-owners. The book collections in the public libraries were small and limited in scope at first. The great collections in the ancient universities at the same time began to be opened up to a wider audience, and newer universities emerged in response to the increasing demand for more advanced education.

A critical factor in the development of libraries since the late Nineteenth Century has been the enormous growth in the amount of material published, particularly in the fields of science and technology. The 'information explosion', as this growth is called, has had a profound effect on libraries. Enormous sums of money are now spent in total every year to keep collections up to date, to extend or build new structures to house the collections, and to employ the people who select, acquire, catalogue, process, shelve, or manage the material stored. Growth has far reaching consequences for a library. The physical structures are finite, and the selection process has to be countered in most cases by a deselection process. In other words, some material has to go - that is, be withdrawn - to make place for the new. Various

criteria can be used to aid decision making in these and other aspects of library provision, including usage, relevance, usefulness, and so on. Each library will employ its own criteria based on its own particular circumstances.

Against this background of traditional values, we will examine some of the different kinds of library that exist so that a perspective on the organisation of library service may be obtained. Libraries will be divided into four categories: public, academic, special, and national. Each of these includes a considerable range of sub-types, some of which can contrast sharply with others within the same category.

*THE PUBLIC LIBRARY*

The term 'public library' includes a massive network of libraries covering the whole country and varying in size and scope. The large city libraries have large loan stocks, reference collections, valuable special collections, children's departments, and so on, and offer a wide range of services across a network of area and branch libraries within the city boundaries. By contrast, some rural areas may be served by mobile libraries or a myriad of branch libraries, perhaps with only one or two staff, providing a convenient local access point to enable users to draw on the resources of the entire library system. Higher standards of education and an increase in leisure time, as well as the social pressures of minority and ethnic groups and the unemployed, place great pressures on the resources of the public library service. Many libraries now offer services across the whole range of a community's needs, from the business world to the local historian. Some branches have developed

naturally into community centres, or were planned to be so, and as such encourage actively local arts and miscellaneous leisure activities.

Public libraries are controlled by local authorities or county councils. They are being hit severely because of the economies imposed on the local councils by central government. They are often low on the priority list compared to other services provided by a council. As funding becomes scarce, new strategies become imperative in an effort to increase revenue. Income might be raised by introducing fee-paying services to local industry and the business and commercial community which they cannot afford (or do not wish) to run themselves. For example, the public library may collect market reports, legal information, patents, standards, statistics, and directories, geared to the particular needs of local industry; and it can provide various facilities, such as facsimile transmission, photocopiers, telex, and on-line database searching. The extensive and unique interlibrary loans network in the U.K. further enhances the services provided by the public library in this respect, by making available documents held in other, more distant and inaccessible locations. Astute chief librarians will also introduce information services to local councillors in order to promote their libraries and to justify their presence. In many ways the public library is moving towards becoming an 'information-broker', rather than just a storehouse of books and other media. In a climate of competing demands on limited resources, these activities are a means of self-preservation. An image of the library as an indispensible organisation is (consciously) built up.

University libraries in the U.K. range from being several centuries old to those created within the last few decades. They cater for undergraduates on taught courses as well as for postgraduate students and researchers with highly specialised needs. Polytechnics were created in the 1960s to meet an increasing demand for higher education of a more vocational and practical nature, and thus they mainly emphasise teaching rather than research. Colleges and institutes of higher education, and the large numbers of colleges of further education, mostly undertake non-advanced further education courses. Most of these institutions of higher and further education will support, to a varying degree, libraries and resource centres.

In higher education, the library is normally organised on a subject specialist or a functional basis, or a combination of both. Libraries in this area tend to be larger than college libraries, and this results in greater specialisation of staff, and a tendency towards increased demarcation of tasks between different levels and different categories of worker.

The academic library has had to adapt to technological, social, and other changes. Like the public library sector, the academic library is experiencing decreased funding - for materials, equipment and staff. It has to compete for ever scarcer resources with the teaching departments, as well as other central services such as the computer centre or educational development unit. The teaching departments see themselves as the primary function of the institution, whereas the library is considered a support service, a pseudo-academic department at most. The

academic librarian strives to promote a better image than this, and by
strategic and political manoevering can achieve a cetain level of
success. Additional pressures arise through changes in the academic
programme, through changes in teaching methods, and through the
introduction of new courses. The building up of appropriate stocks of
books and other material to support new subject fields can jeopardise
the maintenance and continuing development of existing subject
collections. Students' expectations of library service and provision are
changing, partly as a result of successful promotion by library staff,
and partly as a result of increased emphasis on self-learning and
project oriented work.. There is a growing commitment towards the
development of open learning and distance learning schemes. These place
further burdens on library stocks, staff and services. The academic
library's public is becoming more diverse and sophisticated,
representing a wider range in age, social background, experience,
ability, motivation and expectation, and having a wide variety of
information needs.

*SPECIAL LIBRARIES*

Special libraries exist in many different types of organisation such as
industrial firms, commercial concerns, research establishments, trade
associations, public corporations, banks, newspaper offices, advertising
agencies, professional associations, prisons and hospitals. Some are
small conventional libraries providing a limited service; others might
incorporate an information unit linked to the research interests of the
organisation. The skills required of the librarians or information
scientists include technical reference work, literature searching,
abstracting, editorial work, technical writing and information systems

analysis and design. In the industrial and commercial sectors information units are often involved in management (for example, by the provision of management information systems), marketing, personnel and advertising. In the larger organisations, information scientists may be involved in end-user support systems. For example, researchers may access directly the available databases, where these could be internally or externally maintained, but may need advice from time to time on search strategies and on using software.

The special library in a profit making organisation is often in a situation where it has to continually justify its existence. The information supplied by the library, in whatever form or content, is often of vital importance to the recipient in terms of immediacy and relevance to some research or commercial endeavour. Accurate information can be a factor in the success or otherwise of a project. The performance of the library - or library staff - can thus be the object of close scrutiny or evaluation. Often the library may be the first section to suffer cuts in times of stringency or competing demands, particularly if it does not meet the desired levels of efficiency and effectiveness. It is the responsibility of the chief librarian to make sure that successes are advertised throughout the organisation (and, of course, to establish and rectify where possible the reasons for failure). It is easier to point the finger of blame on a section that sits quietly in the background, than on one which has an impressive list of organisational credits to its name.

The British Library (BL) was established in 1973 from the amalgamation of several large national collections including the British Museum Library, the Science Reference Library, the National Central Library and the National Lending Library for Science and Technology. Its aim is to ensure the provision, on a national scale, of comprehensive reference, lending, bibliographic and other services based on its vast and distributed collections. The BL is an independent body with its own board of directors, but the terms and conditions of service of professional staff are similar to those of civil servants and posts are advertised through the Civil Service Commission. There are also two separate and distinct national libraries - one in Scotland and the other in Wales - which hold large collections each with a special emphasis on its own country. Much of the material acquired by these three libraries is received under legal deposit, according to the terms of the Copyright Act 1911 (and as amended by the British Library Act 1972). This means that three national libraries have the right to receive one copy each of every publication (books, periodicals, journals and newspapers) distributed in the U.K.. There are, in fact, three other copyright libraries: the Bodleian Library, Oxford; the University Library, Cambridge; and, the Library of Trinity College, Dublin.

The British Library Document Supply Centre (BLDSC) provides an interlibrary loan service which is unique and the envy of the rest of the world. The other divisions of the BL, and the two national libraries, provide additional back-up for the extra-mural demands of the entire network of libraries, of whatever type, throughout the U.K. as well as, to some extent, in the rest of the world. Interlibrary lending

is an essential feature in the day to day running of virtually every library in the country. In this way the information needs of the individual library user can be satisfied beyond the confines of the walls of the local library building. But this facility does not come free to the seeking library. There is the unit cost of each transaction which has to be paid for, in addition to the spurious saving to the library of not holding all material that may be wanted by users. The availability in an alternative location  - in any other library, be it a national collection or otherwise - of low demand material becomes one element in the equation when deciding which parts of the local service can be cut, without serious deterioration of the remainder.

*LIBRARY COOPERATION*

Library development in the U.K. has been characterised over the years by cooperative effort, and joint action for and among libraries. The extensive interlibrary loan network referred to above is a significant example of such effort. As the volume of publications increased and the quantity of recorded information multiplied, it became evident that no library could handle the flood alone. The goal of cooperative action is to make material as needed available to users no matter where they, the users, are located and no matter where the material is held.

Many cooperative efforts can be grouped under three broad areas, which are interrelated and reinforce each other. The three areas are: *joint projects to aid individual libraries*, such as centralised or shared cataloguing systems or shared storage centres; *building of bibliographic records*, such as periodical lists, union catalogues or lists, and descriptions of resources; and *sharing of resources*, such as

interlibrary loan, cooperative acquisition policies (that is, specialisation of fields of acquisitions), or sharing the costs of developing computerised systems. Cooperative networks involve a group of libraries working together on one or more of these areas. Such groupings can be based on geographical location, or subject, or clientele, or by type of library. Seldom though are cooperative groups exclusive in their membership.

Cooperative undertaking and participation in library and information networks open up new ways of sharing resources and providing or maintaining services for the user. Many of the advances that have been made in the area of computerised library systems have come about because of cooperative endeavour. At the same time cooperative work can create strains and conflicts between internal and external commitments. Cuts in staffing levels can reduce individual effort towards cooperation because of lack of time. Pressure on the bookfund can jeopardise joint acquisition policies. In the end, the needs of the library's own clientele can outweigh the good intentions of library cooperation.

*TRAINING AND QUALIFICATIONS FOR WORKING IN LIBRARIES*

Libraries in the U.K. are characterised by a two tier personnel structure, made up of professionally qualified librarians on the one hand and clerical staff on the other. The latter category consists of library assistants who undertake much of the routine clerical tasks associated with running a library. There may also be several other categories of support staff, such as library aids, typists, caretakers, cleaners, technicians, and so on, who in the performance of their various duties are just as important to the smooth running of the

library as those who are in direct contact with the user. Library
terminology can be confusing. Job titles can vary from one type of
library to another, and also within libraries of the same type.

In order to become a professional librarian in the U.K. it is necessary
to follow courses of study and examinations prescribed by the Library
Association (L.A.) which was inaugurated in 1877, a year after an
equivalent organisation was set up in the U.S.. The L.A. was
incorporated by royal charter in 1898. Associates of the Association may
refer to themselves as 'chartered' librarians. Chartership is awarded
after a period of approved work experience and the preparation of a
personal professional development report, following successful
completion of the professional examinations. Thus a 'qualified'
librarian need not be a chartered librarian. In 1985, membership of the
L.A. stood at approximately 24,000, and of these 16,000 were chartered
librarians. (Library Association, 1985, p1) Among the purposes of the
Association listed in the royal charter are:

> "To promote whatever may tend to the improvement of the position and
> qualification of librarians"
> "To promote and encourage bibliographic study and research"
> "To hold examinations in librarianship and to issue certificates of
> competency" (Library Association, 1985, p1)

Changes in society, educational opportunities, and employment prospects
in recent decades has changed the focus on library professional
education from mostly part-time study to full-time attendance at a
school of librarianship attached to one of several higher educational
institutions. Degree level studies in librarianship were introduced and
grew apace. Now graduate entry to the profession has become the
established means, with either a first degree in librarianship, or a

postgraduate diploma or masters degree in librarianship or information science, following a more conventional subject first degree.

The most recent census of personnel in librarianship and information work was carried out in 1981, by the Office of Arts and Libraries. (Great Britain. Department of Education and Science, 1982) There are many valuable demographic statistics available in the census, but the aspects that concern the writer at this stage are the proportions of qualified posts to clerical/non-manual posts; and the level of qualifications held by those in qualified posts. These figures have been extracted from the information provided in the published report, and further divided by sex and type of library. (See Tables 2.1 and 2.2) The Academic library category includes libraries in universities, polytechnics, colleges of further education and schools of librarianship or information science. The Special library category includes government departments or agencies, national libraries, public corporations, private industrial or commercial organisations, learned or professional societies, and research or trade associations.

From the figures presented, we may extract the following:

*Regarding the total workforce (see Table 2.1):*
    35% hold qualified posts, 65% clerical/non-manual posts.
    39% of the clerical staff are part-time workers, whilst only 5% of qualified posts are part-time.
    59% of the workforce is employed in public libraries, with about 20% in each of the academic and special areas.
    78% of the total workforce is female, and of these 27% hold qualified posts and 73% clerical posts.
    63% of the male workforce (22% of total) hold qualified posts and 37% clerical posts.
    40% of qualified posts are male, 60% female.
    13% of clerical posts are male, 87% female.
    Part-time qualified posts account for about 1.7% of the total workforce, and of these 84% are female.
    Part-time clerical posts account for about 25% of the total workforce, and of these 96% are female.
*Regarding full-time staff in qualified posts (see Table 2.2):*
    19% overall do not have any professional qualifications. Of

| | Type of library | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | Public | | Academic | | Special | | Total | |
| | Male | Female | Male | Female | Male | Female | Male | Female |
| **Qualified posts;-** | | | | | | | | |
| Full-time; | 3153 | 5105 | 1764 | 2132 | 2088 | 2917 | 7005 | 10154 |
| | 6% | 10% | 3,4% | 4% | 4% | 6% | 13% | 20% |
| | (8258) | | (3896) | | (5005) | | (17159) | |
| | (16%) | | (7%) | | (10%) | | (33%) | |
| Part-time; | 12 | 136 | 51 | 229 | 78 | 392 | 141 | 757 |
| | 0,02% | 0,3% | 0,1% | 0,4% | 0,1% | 0,8% | 0,3% | 1,5% |
| | (148) | | (280) | | (470) | | (898) | |
| | (0,3%) | | (0,5%) | | (0,9%) | | (1,7%) | |
| **Clerical/non-manual posts;-** | | | | | | | | |
| Full-time; | 1870 | 10478 | 587 | 3269 | 1313 | 3225 | 3770 | 16972 |
| | 3,6% | 20% | 1% | 6% | 2,5% | 6% | 7% | 33% |
| | (12348) | | (3856) | | (4538) | | (20742) | |
| | (24%) | | (7%) | | (9%) | | (40%) | |
| Part-time; | 290 | 9515 | 88 | 2255 | 100 | 950 | 478 | 12720 |
| | 0,6% | 18% | 0,2% | 4% | 0,2% | 2% | 0,9% | 24% |
| | (9805) | | (2343) | | (1050) | | (13198) | |
| | (19%) | | (4%) | | (2%) | | (25%) | |
| **Total staffing;-** | 5325 | 25234 | 2490 | 7885 | 3579 | 7484 | 11394 | 40603 |
| | 10% | 49% | 5% | 15% | 7% | 14% | 22% | 78% |
| | (30559) | | (10375) | | (11063) | | (51997) | |
| | (59%) | | (20%) | | (21%) | | (100%) | |

Table 2,1 Distribution of full-time and part-time staff in qualified posts and
clerical/non-manual posts respectively, by sex and type of library.
(Extracted from: Great Britain, Department of Education and Science. *Census of
staff in librarianship and information work in the United Kingdom, 1981.*
Office of Arts and Libraries, 1982, p10)

| | Type of library | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Public | | Academic | | Special | | Total | |
| | Male | Female | Male | Female | Male | Female | Male | Female |
| **Full-time staff in qualified posts:-** | | | | | | | | |
| With professional qualifications and other degree: | 1074 | 1345 | 1220 | 1271 | 681 | 1036 | 2975 | 3652 |
| | 13% | 16% | 31% | 33% | 14% | 21% | 17% | 21% |
| | (2419) | | (2491) | | (1717) | | (6627) | |
| | (29%) | | (64%) | | (34%) | | (39%) | |
| With degree level professional qualifications: | 205 | 638 | 92 | 198 | 139 | 334 | 436 | 1170 |
| | 2% | 8% | 2% | 5% | 3% | 7% | 3% | 7% |
| | (843) | | (290) | | (473) | | (1606) | |
| | (10%) | | (7%) | | (9%) | | (9%) | |
| With professional qualifications but no degree: | 1656 | 2582 | 201 | 423 | 230 | 548 | 2087 | 3553 |
| | 20% | 31% | 5% | 11% | 5% | 11% | 12% | 21% |
| | (4238) | | (624) | | (778) | | (5640) | |
| | (51%) | | (16%) | | (16%) | | (33%) | |
| With no professional qualifications - Other degree: | 51 | 69 | 218 | 131 | 738 | 524 | 1007 | 724 |
| | 0,6% | 0,8% | 6% | 3% | 15% | 10% | 6% | 4% |
| | (120) | | (349) | | (1262) | | (1731) | |
| | (1%) | | (9%) | | (25%) | | (10%) | |
| No qualification: | 167 | 471 | 33 | 109 | 300 | 475 | 500 | 1055 |
| | 2% | 6% | 0,8% | 3% | 6% | 9% | 3% | 6% |
| | (638) | | (142) | | (775) | | (1555) | |
| | (8%) | | (4%) | | (15%) | | (9%) | |
| **Total in qualified posts:-** | 3153 | 5105 | 1764 | 2132 | 2088 | 2917 | 7005 | 10154 |
| | (8258) | | (3896) | | (5005) | | (17159) | |

(Note: Percentages refer to columns)

Table 2.2 Distribution of full-time staff in qualified posts, by qualification, sex, and type of library, 1981.
(Extracted from: Great Britain, Department of Education and Science, *Census of staff in librarianship and information work in the United Kingdom, 1981*, Office of Arts and Libraries, 1982, p4 and p10)

these, 62% work in special libraries (representing 40% of those in qualified posts in special libraries), 23% in public libraries and 15% in academic libraries.

A third of the staff are professionally qualified, but without a degree, and of these 75% work in public libraries (representing 51% of those in qualified posts in public libraries).

In summary, we note that the biggest employer in library/information work is the public library sector. The library/information workforce is predominantly female, in both qualified and clerical positions, although a larger proportion of males hold qualified posts. Part-time clerical employment, especially for female workers, appears to be a feature of library/information work. Lastly, in many instances, particularly in the special library sector, it seems that one does not have to have professional qualifications in order to 'practice' librarianship or, at least, hold qualified positions.

Grading of professional librarian posts is not standardised throughout the whole range of types of library. It is an issue which has produced a great deal of debate within the occupational group, but is something which is mostly beyond the individual's power to change. The L. A. has produced guidelines for the minimum grading of professional and non-professional posts, associated with certain duties and levels of responsibility, and it keeps a watching brief on advertised vacancies in an effort to promote this policy. Grading and conditions of service within public libraries and most college and polytechnic libraries will usually be tied to standard local authority pay scales, with grades set according to comparability with other service areas or by locally negotiated agreement. Some senior posts in the academic libraries may be on academic grades, though rarely on academic conditions. Most professional posts in universities are tied to university teachers

scales, again without necessarily the conditions. Special librarians, particularly in the industrial and commercial fields, will probably have to negotiate for their own salaries and conditions.

Clerical staff are normally designated as 'library assistants', and they would probably be appointed at grades that conformed to the standard clerical grading structure within their institution. The term 'clerical assistants' may sometimes be used to describe only those staff who undertake purely clerical duties within the library, without ever coming into contact with the user, or it may be used as a generic name for the total non-professional element. Within this study, the two terms will be used synonymously to refer to non-professional library activity.

The 1960s saw the creation of a qualification specifically aimed at the non-professional. The City and Guild's Library Assistant's Certificate was designed to provide a basic qualification in library practice and its underlying principles, with emphasis on practical skills. The syllabus was revised and renamed Library and Information Assistant's Certificate in the 1980s, following a general consensus that the original course was either unsatisfactory or insufficient for its purpose. Russell (1985) reports that some criticism of the new certificate still remains, namely, that "it leads nowhere, that it does not provide the means for a keen and able member of staff to move towards professional status." (p298)  The Business Education Council, set up in 1974, attempted to introduce a double option module on library studies within its National Award syllabus in 1978/79. However, to date this module has not been taken up with great alacrity, even though it is approved by the Library Association.

THE LIBRARY AS AN ORGANISATION

The preceding sections have attempted to summarise the traditional

pattern of library service in the U.K., describing briefly the spectrum

of types of library and indicating some of the issues libraries are

currently facing. There has been no effort to be comprehensive; rather a

desire to be illustrative. We will now look at the library in

organisational terms, drawing on the extensive field of organisational

theory.


Robbins (1983) defines organisation theory as "the discipline that

studies the structure and design of organizations." (p7)  There are many

definitions of 'organisation'. The precise wording depends upon the

perspective of the particular researcher or theorist.  Blau and Scott

(1963) refer to a "formal" organisation as a social unit which has been

formally established "for the explicit purpose of achieving certain

goals." (p5)  Robbins (1983) describes an organisation as:

> "the planned coordination of the collective activities of two or
> more people who, functioning on a relatively continuous basis and
> through division of labour and a hierarchy of authority, seek to
> achieve a common goal or set of goals." (p5)

Robbins explains that *planned coordination* implies management.

Activities have to be balanced and harmonised to minimise redundancy

whilst ensuring that critical tasks are being completed. *Division of*

*labour* implies that jobs are broken down into sets of tasks which are

allocated among employees. A *hierarchy of authority* describes a

multilevel formal structure, with a hierarchy of positions, where each

lower position is under the supervision and control of a higher one.

These two characteristics of an organisation, namely the *division of*

*labour* and a *hierarchy of authority*, are according to Robbins the major

determinants of the organisation's formal structure. Lastly, organisations exist to achieve something, that is, *goals*, which are usually unattainable by individuals working alone or, if attainable individually, are achieved more efficiently through group effort.

Martin (1984) describes an organisation as "the formal and informal structure through which decisions are reached and individuals perform job tasks that contribute to the goals of the enterprise." (p5)  Martin goes on to explain that there are four elements to this definition: *goals* which underlie the reason why the enterprise exists; *decisions* in pursuit of these goals; *job tasks or assigned activities* involving different responsibilities and specialities; and, a *pattern of associations* - or structure - which hold the enterprise together.

All organisations are similar, and all are different. They are similar in that invariably human beings work towards some common goal, and different in that neither the goals nor the people involved are the same.

We may apply the above definitions to describe a library. A library is created to achieve some particular purpose (or purposes); the tasks to be performed are determined, and grouped into jobs for people to carry them out; positions and departments are created; a structure, hierarchy or pattern of posts is formed, or emerges; and decision-making and coordination is undertaken to provide direction and control. Libraries by their very nature are designed to carry on functioning, on a continuous basis. They are not transitory organisations.

## THE LIBRARY AS A WORK ORGANISATION

Libraries are also "work organisations". Child (1973) defines these as those organisations "within which work is carried out on a regular basis by paid employees, and which have been deliberately established for explicit purposes." (p92)  This simpler definition reminds us that we are also concerned with libraries as institutions where people are gainfully employed to carry out the required tasks.

## THE GOALS OF A LIBRARY

We have already seen that there is a wide spectrum of different types of library, ranging from the small special library with only one or two staff to the huge national library system with staff numbers in the several hundreds. The goals of each library, whether explicitly stated or not, will be inextricably linked to the reason why the library was created in the first place. Over a period of time, an individual library's set of goals might change in a variety of ways, perhaps evolving along with the institution to which the library belongs. In many ways the goals of the majority of libraries will be similar, since any library "serves" a sub-set of the total population, by the provision of an organised collection of documents, books and/or non-book material together with various mechanisms for the exploitation and use of this material. According to Du Mont and Du Mont (1981) goals are a critical part of the study of a library's effectiveness, since they focus on "the purposes and objectives of [the] library service." (p14)  They facilitate evaluation by providing criteria for the attainment of results. The assessment of how well a particular library is achieving its goals provides guidelines as to appropriate corrective action.

Certainly, there is a growing pressure on libraries, from both the public and the private sectors, to be more accountable for the not inconsiderable resources that are expended on them, and library effectiveness studies and the development of performance measures and criteria are very much in vogue.

## THE LIBRARY AS A SERVICE ORGANISATION

Libraries may be said to belong to the class of 'service' organisations. According to Blau and Scott (1963), a service organisation is "one whose prime beneficiary is the part of the public in direct contact with the organisation, with whom and on whom its members work". (p51) Thus a service organisation is one whose basic function is to serve clients. In the public library, the clientele is potentially (though not in practice) the entire community within the boundaries of the local authority. In the academic library, the academic staff and students are the principal client group, although most colleges will allow the general public some access to their collections.

The crucial problems of service organisations centre on the provision of professional services, and the welfare of the clients is presumed to be the chief concern. Blau and Scott included in their category of 'service organisation' social work agencies, hospitals, schools, legal aid societies and mental health clinics.

The service offered by a library is primarily access to needed and appropriate recorded information. The library user may or may not know what will best serve his information interests. If he requires a known author and title then his needs can be straightforwardly met, either

from the library's own collection or through interlibrary loan from another. If the user only knows that he wants some information, then he has to rely on the services of the librarian either through direct consultation or indirectly by means of the catalogues and indexes provided and maintained in-house by library personnel. Alternatively, he may find appropriate references through published sources available on the reference shelves or by electronic means using one of the many on-line bibliographic databases to which the library may subscribe. These latter sources quite often require the efforts of an intermediary, such as the librarian, in order that the desired information may be retrieved quickly and economically. In Blau and Scott's terms, the user is vulnerable, subject to exploitation and dependent on the integrity of the professional to whom he has come for help. In many instances the information being sought may not be critical, in terms of the client's welfare or health, for instance, as in the case of a clinic or hospital. But it may be critical in terms of the outcome of some research, or the completion of a final essay or assignment, or the carrying out of a project. In some environments, such as the highly competitive business world, the client's job might hang in the balance! Depending on the type of enquiry, the user may be directed to a set of shelves and left to browse in the subject area of his choice, rather than receive the personal attention which might result in a specific item being placed in his or her hands.

*THE LIBRARY AS A PROFESSIONAL ORGANISATION*

The use of the term "professional" when referring to the "librarian" begs the question of whether librarianship is indeed a profession, in the established and traditional meaning of the word. Such a debate will

be taken up in Chapter 3, when we shall discuss in more depth the nature of work in libraries. Within the present context, we note that Hall (1973) describes a library as a type of "professional" organisation. (p123) He distinguishes three types of organisation for professional occupations. The first is the *autonomous* professional organisation, of which the medical clinic and law firm are examples. In such an organisation, the work of the professional is subject to his own, rather than to external or administrative jurisdiction. The second type is the *heteronomous* professional organisation in which the professional employees are subordinated to an externally derived system. Libraries, according to Hall, belong to this type, as do public schools and social work agencies. The third type is the professional *department* which is part of a larger organisation, such as the legal and research departments of many organisations. In this kind of situation, the professionals may or may not be able to affect the manner in which their own work is structured. Librarianship is, according to Hall and others (for example, Goode (1961) and Bundy and Wasserman (1968)), a professionalising occupation. It does not as yet exhibit, to a high degree, the main attributes of the established professions, such as law and medicine. Goode, in fact, doubts that librarians will ever achieve full professionalisation, although he predicts that they will move further towards it. Kast and Rosenzweig (1970) describe professionalism "not as being a unique set of characteristics" that can be used to measure an occupational group, but rather as "a continuum with the ideal type of profession at one end and unorganised occupational categories, or nonprofessions, at the other end." (p47) Further discussion of the nature of librarianship will be deferred until Chapter 3.

A library is also a "bureaucratic" organisation, in that it possesses "some sort of administrative machinery." (Blau and Scott, 1963, p7) The term "bureaucracy" more often than not connotes, using Blau and Scott's terminology, "rule-encumbered inefficiency." (p8) But all formal organisations have at least a minimum of bureaucracy, in that a certain amount of effort is devoted to maintaining the organisation itself rather than to directly achieving its objectives. There is a wide variation in the degree of bureaucratisation in organisations. This was demonstrated by Hall (1973), who undertook research into the degree of bureaucratisation of a group of organisations (of which one was a public library) each of which could be categorised in terms of one of his three types of professional occupations, as defined above. He found that there was a general tendency for the autonomous professional organisation to be less bureaucratic than either the heteronomous organisation or the professional department. (p132) He suggests that the nature of the occupational groups in the organisation affects the organisational structure.

All bureaucracies share certain characteristics which were first defined by Max Weber (1948). Duties and responsibilities of each position in the bureaucracy are well defined and carefully limited. Officials in the bureaucracy have the necessary authority to fulfill the responsibility of their offices. An hierarchical authority structure characterises all bureaucratic organisation, in which a firmly ordered system of super- and subordination exists where there is supervision of the lower offices by the higher ones. Impersonality of relationships between organisational members is expected. Management of the bureaucracy is

based upon written documents, which are preserved for posterity, and general rules, which can be learned. Recruitment of officials is on the basis of ability and technical knowledge (particularly of the rules just mentioned). The position of the individual is closely defined in the bureaucracy. Officials are not selected on the basis of family position or political allegiancies. The individual's office is expected to be his sole occupation or career. Officials receive fixed salaries determined by rank and, possibly, by length of service rather than in terms of work done. Security in old age is provided by a pension. Officials move up within the hierarchical order of the public service following a career, from the lower, less important, and lower paid positions to the higher posts. Promotion is based thus on seniority and achievement in passing certain expert examinations. Bureaucratic officials do not own the means of production and they have to separate their private affairs and property from the organisation's affairs and property.

The technical superiority of the bureaucracy over other forms of organisation is, according to Weber (1948), based on "precision, speed, unambiguity, knowledge of the files, continuity, discretion, unity, strict subordination, reduction of friction and of material and personal costs." (p214) Mouzelis (1967) argues that bureaucracies exhibit a system of control "based on rational rules" and these rules "try to regulate the whole organisational structure and process on the basis of technical knowledge and with the aim of maximum efficiency." (p39) Mouzelis points out that what makes an organisation more or less bureaucratic is not simply the existence of rules, but the quality of these rules.

Libraries in the public sector are clearly bureaucracies. Division of labour and specialisation of tasks are apparent, as we shall see presently, in the distinctions made between departments and/or sections, and positions (particularly between the professionally qualified worker and the clerical assistant). Most libraries have a hierarchical organisational structure with the library director - the chief librarian - at the apex of the pyramid. Librarians are expected to have certain formal qualifications and educational certificates. They are expected to look upon librarianship as a career. There is a much greater emphasis on hierarchical rank than on professional abilities and knowledge, with responsibilities and duties differentiated by level. Salaries, linked to grades, are usually determined by the individual's position in the hierarchy. Changes in grades are normally only possible through promotion to other positions higher in the hierarchy, in the same library organisation or, indeed, in a different one. Sometimes salaries may be set based upon years of service, periodic assessments, further qualifications attained, and such like, rather than on productivity. As one progresses up the hierarchy, administrative tasks tend to replace the professional ones. Libraries are characterised by numerous sets of rules and regulations. There are cataloguing rules, filing rules, and classification rules which govern how books and catalogues are to be organised. There are rules for library users telling them how they can (and cannot) use the library, as well as regulations covering borrowing rights and privileges.

Unfortunately, there is a series of dysfunctions associated with the bureaucratic model. Musmann (1981) argues that conformity to rules leads to rigidity, inflexibility, and "inappropriate response to change." (p65) There is the danger that strict observance of rules and

regulations will become more important than the fulfillment of the goals and purposes of the organisation. Procedural regulations can become ends in themselves. The hierarchical structure of the bureaucracy is often said to promote delays and indecision. Close supervision of employees encourages timidity and caution and stifles spontaneity and creativity. There are problems associated with the division of labour and specialisation of tasks. Specificity of job descriptions makes it very easy for the bureaucratic official to accomplish the minimum of work required of his position.

Examples of these dysfunctions are to be seen in libraries. An emphasis on efficiency and precision in the carrying out of tasks can lead to neglect of the service function. Unhelpful library staff can put off the hesitant user, irretrievably. The strict enforcement of a fine for the late return of a book (however valid the reason for the delay might be) can likewise turn a would-be user away. Library personnel may sometimes find it easier to hide behind the rules, enforcing them blindly rather than taking the risk of independent action and thereby bringing down the 'wrath' of superiors. Often the rules and regulations are at fault, and they can give the library a very bad image, however good intentioned they may have been when they were originally set up.

Certainly, there can be a conflict between the ideals of the library professional in carrying out his or her tasks, and what he/she is obliged to do in conforming to the bureaucratic mechanism of the library organisation. This factor will be discussed again later.

THE ORGANISATIONAL STRUCTURE OF LIBRARIES

The term "structure", in relation to an organisation, was mentioned

several times in the preceding section. At a simple level, Kast and

Rosenzweig (1970) define structure as "the established pattern of

relationships among the components or parts of the organisation." (p170)

Robbins (1983) defines an organisation's structure as "having three

components: complexity, formalization, and centralization." (p6)

Complexity is the extent of differentiation within the organisation,

which includes the degree of specialisation or division of labour, the

number of levels on the organisation's hierarchy, and the extent to

which the organisation's units are dispersed geographically.

Formalisation is the degree to which an organisation relies on rules and

procedures to direct the behaviour of the employees. Centralisation

defines where the locus of decision-making authority lies. Robbins

considers each of these components to be part of a continuum rather than

static characteristics in an "either"-"or" situation. An organisation is

thus not *either* centralised or not. Rather, it may *tend* to be

centralised or it may *tend* to be decentralised.


Child (1973) defines organisational structure as "the formal allocation

of work roles and the administrative mechanisms to control and integrate

work activities including those which cross formal organisational

boundaries." (p92)  In a later work, Child describes the major

components of organisation structure as:

   1.  The allocation of tasks and responsibilities to individuals,
       including discretion over the use of resources and methods of
       working.
   2.  The designation of formal reporting relationships, determining
       the numbers of levels in hierarchies and the spans of control of
       managers and supervisors.
   3.  The grouping together of individuals in sections or departments,
       the grouping of departments into divisions and larger units, and

the overall grouping of units into the total organisation.

4. The delegation of authority together with associated procedures whereby the use of discretion is monitored and evaluated.
5. The design of systems to ensure effective communication of information, integration of effort, and participation in the decision-making process.
6. The provision of systems for performance appraisal and reward which help to motivate rather than to alienate employees.
   (Child, 1977, p10)

All these components can be designed to take different forms, and if any of them are deficient, there can be, according to Child, serious consequences for the performance of the organisation.

## DETERMINISM OR STRATEGIC CHOICE?

There are two broad schools of thought concerning what defines organisation structure. The first, 'Determinism', posits that some variables, such as technology or size determine structure by causing changes in other variables such as the degree of specialisation, standardisation, formalisation and centralisation that is to be found in an organisation. (Buchanan and Huczynski, 1985, p363). The second school, and the one now generally accepted as being more valid, is that of 'Strategic Choice', which advocates that organisational structures reflect the perceptions, orientations and objectives of management. It is senior management which decides which technology to adopt, how it is introduced and used, what products are manufactured and in which markets they are sold, or - as in the case of libraries, for instance - what services are provided and to whom.

There are three particularly influential arguments within Determinism, which are, according to Child (1973, p92), *Size, Environment,* and *Technology.* The overall size of an organisation has been shown in much research to be closely associated with the type of structure adopted.

The kinds of environment in which an organisation is operating appear to determine the tasks and production it undertakes, which in turn have implications for its structural design and choice of personnel.

The argument from technology, which is of primary concern to us within the context of this thesis, has several variants, depending upon the definition of technology employed by the theorists concerned. For example, two of the most developed approaches are those of Woodward (1965), who used the organisation's production technology (ranging from unit to small batch, to mass and then process productions) as the main basis of her theory, and Perrow (1967), who used the organisation's materials technology as the basis of his approach. Perrow argues that technology, or the work done in organisations, is the "defining characteristic of organisations" (p194-5). Perrow's argument continues:

> ".... organizations are seen primarily as systems for getting work
> done, for applying techniques to the problem of altering raw
> materials - whether the materials be people, symbols or things."
> (p195)

His perspective treats technology as an independent variable, and structure - or the arrangement among people for getting the work done - as a dependent variable. Both Woodward and Perrow recognise that other factors, in addition to technology, may influence structure. But they regard technology, as they defined it, as a convenient and useful perspective for comparing organisations. Woodward (1965) notes that "it is not suggested that the research proved technology to be the only important variable in determining organisational structure, or that such factors as the history or background of a firm and the personalities of the people who built it up and subsequently managed it were unimportant." (p50) The Determinist approach rejects the view that there is any one best way to structure an organisation, and argues

instead for the tailoring of structure according to a set of
contingencies appropriate to the needs of a particular organisation.

Child, a leading proponent of the Strategic Choice debate, considers
technology to be a constraining factor in organisational design, rather
than a determining one (1977, p154).  He argues that all components of
organisation structure are open to managerial choice, not just
technology, and that the design itself is a political rather than a
technical question. In other words:

> "...when incorporating strategic choice in a theory of organisation,
> one is recognising the operation of an essentially political process
> in which constraints and opportunities are functions of the power
> exercised by decision-makers in the light of ideological values."
> (Child, 1973, p104)

He argues that management will implement a strategy - that is, various
policies and plans - so as to realize the objectives it has set (or has
been given) for its particular organisation. The implementation of these
strategies over a period determine the tasks performed, the areas of
location, the diversity of activities and the kind of people employed.

Limitations on time preclude further discussion of the Strategic Choice
versus Determinism argument. It is a significant aspect of the
relationship between technology and organisational structure, which will
be referred to again.

For the purposes of illustration, the structure of libraries will be
viewed using a set of components derived from those defined by Robbins
and Child. These components will be: horizontal differentiation;
vertical differentiation; spatial dispersion; the design of jobs;
integration; and, control.

This component considers the horizontal configuration of a library. How
are jobs grouped together in the library in the most appropriate manner?
In practice, the grouping depends very much on the size of the library
organisation. The smaller the number of personnel, the more variety they
will experience in their everyday work. The larger the library, the
greater the number of specialised positions and departments will be
found. We have already noted that there is a great deal of similarity
between libraries of all kinds. This follows because there are certain
basic tasks which are carried out in every library. This has led to the
predominant internal structure by function, although other kinds of
specialisation are used as well.

Martin (1984) defines the functional arrangement as the "breaking down
of work assignments into logical activities or services." (p176)
Usually this implies a sequence of processes, where all functions are
done in order. Materials have to be obtained to build up collections –
this is the *acquisition* function. The acquired material has to be
organised for use – this is the *organisation* (or *cataloguing*) function.
When the collection is in place, the stock needs to be exploited in some
way and users need assistance – this is the *exploitation* (or *reference*)
function. If users then decide to borrow the material, this activity is
the *circulation* (or *lending*) function. These four functions will
commonly be found in many libraries, even though the purpose of, say,
the academic library may be different from that of the public library.
As in many occupations, librarianship is full of jargon with which
librarians are familiar but which may be ambiguous or even confusing to
the outsider. For instance, the term 'cataloguing' does not clearly

convey the task of analysing the subject content and purpose of a
publication and of assigning it a place in a body of organised
knowledge. 'Reference desk' and 'reference librarian' may be equally
ambiguous as descriptive titles. Some librarians have adopted the
alternative label of 'information librarian' or 'subject librarian' and
users are directed to the 'information desk' or 'enquiry desk'.

Functional grouping allows members to share a common expertise and to
draw upon the same set of resources in their activities. Tasks are
clearly defined; staff can be recruited who have the requisite
abilities; and personal preferences can be taken into acount. The worker
learns from experience within the circumscribed duties. Specialisation
by function permits the employment of a large contingent of clerical
staff, who are paid less than the more highly trained professional
librarians. Functional organisation is administratively efficient and
economical, although there are drawbacks.

Functional grouping has led to a distinction between those sections
dealing with the public directly - 'reader' or 'public' services - and
those which are behind the scenes - commonly termed 'technical'
services. The latter are often accused, by the former, of losing sight
of the end product, that is, the provision of a service to the user; and
not infrequently friction can arise between the sections. The
information librarian has the inquiring user in mind, whilst the other
the integrity of the organisation of the collection. Proportionally,
there tends to be more non-professionals in technical services areas
since there are more clerical routines in the processing of orders and
material, ready for use. A considerable number of library workers may
seldom have direct contact with users in the course of their duties. As

a result they may tend to become attached to their particular activities
and think less of the eventual result of their work. Functional
specialists often are not sure whether their efforts result in service,
to which they are dedicated. For example, cataloguers do their best to
make publications and their contents accessible to potential readers,
via the surrogate catalogue records, but seldom will they know whether
they make a hit or a miss.

In larger libraries, both academic and public, subject specialisation is
likely to occur in some form. Subject librarians and subject departments
will frequently exist in addition to the traditional functional
divisions. The advantages of subject organisation are many. All material
dealing with a topical area are gathered together physically, which
users often find convenient. Librarians are normally appointed who have
special background in the subject areas. Collection development, that
is, the building up and maintenance of the subject collections, is
facilitated. The subject librarians can develop library services geared
to the particular specialist needs of their users.

Subject specialisation is an expensive type of organisation. Some
resources have to be duplicated, because there are general bibliographic
materials that are relevant to all groups of subjects. Subject
librarians can often cost more than 'general' librarians. Subject
departments and their enquiry desks must be staffed even if sometimes
the overall volume of use does not require it. As far as the user is
concerned, the subject grouping of stock may not always be a
convenience. For example, in the academic library subject lines can
shift and new disciplines can emerge or old ones combine, thus rending
traditional divisions invalid. So, rather than being helped, users may

end up confused and find themselves shifted from one section to another. Subject divisions may lead to decentralisation of services and, sometimes, of functions in some large library systems, particularly where the subjects are housed in separate buildings or separate sites.

Since a library is seeking to provide a service to its users, then there may be some merit in organising by user group. This has been tried to a limited extent, and with some degree of success. The more common examples are children's services and young adult services in public libraries, and undergraduate collections and services in academic libraries, particularly universities. The requirements for such a structure are that the user groups be distinct, with sufficient numbers to justify special attention, and having interests which to a certain degree are different from the rest of the users. Thus the concept could be extended to identifiable groups such as senior citizens; ethnic minority groups; professional, as opposed to academic, students in the academic libraries. In the academic library, subject divisions are in some cases determined by user groups. For example, law and medicine serve specific clienteles with particular needs and use habits. Overall, organisation by user group is not common, since it is expensive and since it also works against the economy of a centralised functional structure. According to Martin (1984), however, a lack of such organisation can result in a view of the library service as being "impersonal and discontinuous." (p193)

Public library networks (and some academic libraries) exhibit an organisation based on geographical divisions. The myriad of branch libraries, within a public library, provide services for specific districts or communities scattered throughout the local authority area.

Certain functions such as acquisitions and cataloguing, as well as most personnel and administrative matters, will be dealt with centrally in the main headquarters.

Lastly, libraries may be organised by form of material. This has come about as the quantity and variety of non-book and non-print material have mounted over the years. Magazines and journals, government publications, slides and films, gramophone records, videorecordings, microfilm and other microforms, and more recently computer software, have incurred special treatment, not only in their acquisition but also in their storage and preservation. Using form of material as a basis for organisation is quite natural, particularly if the shelf arrangement or shelf size has to be different to accommodate the material, or if another medium has to be used to make the information content accessible, such as in the case of microforms, and sound or video-recordings. Organisation by format cuts the collection in a way distinctly different from the basic arrangement represented by subject classification. It can complicate what may already be a somewhat confusing arrangement for the user. It is a costly arrangement in that several departments may have to be maintained and a larger number of specialised staff positions may have to be filled.

*VERTICAL DIFFERENTIATION*

Vertical differentiation refers to the depth in the structure. We are concerned here with the number of hierarchical levels which exist in libraries relative to their size. In libraries, the distinction between professional and clerical positions is very much a characteristic of library organisational structures. The mix of professional to clerical

workers provides a distinctive feature. On the one side we have a proportion of highly trained and skilled personnel, and on the other semi-skilled support staff. This follows from the dual nature of libraries. They are part educational, requiring experts, and part repositories of materials, which require routine handling – much of which is physical – and a considerable amount of record-keeping and maintenance of files.

The number of levels in the hierarchy depends very much on the size of the library organisation. In a library with only a handful of professional staff and a small contingent of clerical assistants, the lines of command of the senior staff will be relatively simple. A large library, on the other hand, will have a wide range of professional positions, at different grades according to experience and responsibility, and a large number of clerical workers – library assistants, clerks, typists, and such like. There will be several departments and possibly several specialist operations. Work will be divided up into smaller parts, and it will be necessary to coordinate much more the tasks being carried out. This leads to increased vertical differentiation. Thus, there will be department heads and specialist posts reporting to more senior personnel – divison or service heads, sub-librarians, or deputy posts – who will in turn report to the chief librarian or director of library services.

Vertical differentiation is possibly that aspect of organisational structure which conflicts most with the ethos of a professional organisation, since the vertical structure of many libraries in the public service is linked inevitably to the bureaucratic nature of their parent organisation. Grades of posts and hence salaries, within the

library, will be set according to the prevailing regulations that take no real account of professional expertise and qualifications. The numbers of staff and their groupings may be similarly restricted.

*SPATIAL DISPERSION*

Robbins (1983) defines spatial dispersion as the third aspect of complexity (after horizontal and vertical differentiation), and it is "the degree to which the location of an organisation's facilities and personnel are dispersed geographically." (p47)  The existence of multiple locations increases the complexity of an organisation.

This factor is quite relevant to many libraries. For example, polytechnic libraries in the U.K. are often characterised by multi-site campuses due to the fact that several disparate colleges were brought together when the polytechnic was formed; many university library systems, particularly in the U.S., have several sites often geographically quite remote from each other; and, very often large industrial organisations will have a library in each of their divisions, with services geared to particular product lines or research interests. Difficulties arise in the separation of tasks and power centres across the different locations, and in facilitating effective communication and the retrieval of necessary information for decision-making. In library terminology, geographic dispersion raises the question of "centralisation" versus "decentralisation".

Dunlap (1976) argues that the question of centralisation, as opposed to decentralisation, and the problems attendant to it, have probably created as much controversy as any other organisational problem in

libraries. (p399)  Dunlap was writing about the situation in the U.S.,
but many of her points are of relevance to the U.K. scene as well. Three
types of centralisation may be identified. These are *administrative
centralisation*, where a central officer controls a number of library
units; *physical centralisation* of a system, where all units are located
in a single building or a restricted number of locations; and
*operational centralisation*, in which certain operations are performed in
a single place by one group of personnel for the various units of the
system. The arguments for and against can be grouped into seven
categories: accessibility, cost, efficiency, adequacy, use,
interrelation of subject fields, and educational significance. The
central library, says Dunlap, wins in terms of cost, inter-
relationships, efficiency, and educational significance. The case for
the separate library is based on accessibility, particularly in a
library service covering a wide geographic area. If the institution has
the budget to afford good services for both general and separate
libraries, then the argument for decentralisation can be upheld. Local
conditions dictate the way the combination of centralised and
decentralised processes are operated. A number of factors complicate
decentralisation, such as inadequate communication, adherence to
personnel standards, unevenness of collection development, dependency on
separate financing, duplication of library materials, hours of opening,
and varying regulations for circulation and use.


*DESIGN OF JOBS*


Libraries, like any other organisation, possess a structure of jobs
which involves decisions on the range of tasks that a particular job
should encompass, on the way the job should be defined, and on the

freedom of action the people doing the jobs should have. According to

Child (1977) these decisions involve questions of "specialization,

definition and discretion." (p26) The more a job is specialised and

defined, the less discretion there will be in carrying it out. If

specialisation and definition are low, then discretion becomes high. A

detailed look at the nature of work in libraries will follow in

Chapter 3.

Jobs in libraries are invariably designed according to the nature of the

tasks involved. The amount of job specialisation in libraries varies

considerably, and is dependent on the complexity of the organisation

concerned. Specialisation of tasks and division of labour will be

greater in large libraries than in smaller ones. The division of labour

primarily rests between professional level jobs and clerical jobs,

although as we shall see subsequently the distinction between the two is

not always very apparent.

Following traditional bureaucratic practices, jobs are defined in

libraries using job descriptions. Procedures are set up and sometimes

formalised into manuals. Rules and regulations abound. Technical skills

are formed from knowledge of these rules and regulations. They are more

or less stable, more or less exhaustive, and they can be learned. Within

librares, technical knowledge and professional (expert) knowledge exist

concurrently, although many librarians will claim that their

professional work suffers from the constraints of bureaucracy.

Professionals are expected to exercise 'expert' judgements and so their

jobs should not have to be closely defined in terms of methods and

procedures. It is much more appropriate for them to reach agreement on

objectives. Professional staff constitute a highly educated workforce

which is likely to be committed to its work. Together then with participation in objectives and policy setting, they would also expect more responsibility, more autonomy and discretionary activity. In many cases, however, professional library jobs fall far short of this ideal. For example, many professional posts are fitted into a hierarchical structure, with different gradings (and hence remuneration) for positions requiring different degrees of accountability, responsibility, discretion and so forth in their work. For a person to move upwards in the hierarchy, it is necessary for him or her to apply for a post on a higher grade, thereby acquiring a new job.

The specialised routine nature of the clerical jobs is another problem area. Clerical workers have their own needs, aspirations, and levels of ability and attainment. With increased opportunities for further education, expectations grow. But clerical posts in libraries are also characterised by a relatively high turnover. Some attempts have been made to improve the clerical jobs, to make them more interesting and more satisfying.

Of course, not all people seek greater job satisfaction from their work. The library manager, like any other kind of manager, is constrained both by the work that has to be done and the people who are available to him to do it.

*INTEGRATION*

Coordination and integration of groups and departments are vital to the effective performance of an organisation. Individuals and groups can strain in opposing directions, pursuing their own objectives, and some

means of bringing them together is needed. Integration is impossible unless there is effective communication between the different levels in the organisation. The larger the organisation, the greater is the natural tendency for people to communicate with others within the same department, and with whom one shares common problems. Often, people's identity with their own department is reinforced at the expense of integrating with others in pursuit of the organisational objectives. For example, this may be illustrated by the rivalry between reader services and technical services departments, which exists sometimes more in the minds of the staff concerned than in reality. Library sections undertake work of different kinds requiring different methods and procedures. They also may operate to different time horizons and at a different pace. For instance, acquisitions personnel may seek to process new material on the basis of chronology of arrival, or of similarity of material, or of supplier, whilst cataloguers may wish to respond to pressure (from the reader services staff) for items which are particularly in demand. Departments may have their own objectives which may conflict with those of other sections at the practical level of daily operations.

Professional librarians identify themselves with a particular occupational role, and this may be sustained by the fact that they have contact with other librarians in other institutions and belong to professional associations. The professional is not necessarily a 'company' man or woman. There is a conflict for the librarian between loyalty to the organisation and loyalty to the profession and its own ethic. This latter loyalty may often be stronger than the institutional interest. But in some instances, librarians may subordinate their professional views to those of the institution, to safeguard their own position. Be that as it may, the debate about the charging for

information services has caused many problems for librarians committed to the free flow of information. Another problem area is that of censorship.

Stereotyping can signify quite deep-seated antipathy between different parts of an organisation based on considerable misunderstanding of other groups' objectives, methods of work and problems. Examples of this conflict can arise between the library and other units within a parent organisation, particularly, but not exclusively, at budget-allocation time. The public library competes for resources with other local authority departments, such as social services, housing, recreation and leisure; the academic library competes with the computer centre, the educational development unit, and the academic departments and faculty; and the industrial library contends with the research interests or the marketing and sales divisions.

Integrative mechanisms within a bureaucratic set-up usually involve the imposition of rules and regulations defining standard actions to be followed, and the establishment of plans and schedules. Integration is maintained by hierarchical referral when something out of the ordinary arises. If matters of procedure or operating policy require discussion, then a committee meeting can be called.

*CONTROL*

Control is concerned with regulating the activities of people within the organisation "so that they are in accord with the expectations established in policies, plans and targets." (Child, 1977, p117) Control is a checking or verifying process. There are various management

techniques which may be used to exercise control. Control involves the definition of what people and units are to do; the establishment of criteria against which performance is assessed; and feedback of information as to what has actually taken place. There is some balance in most organisations between orderly administration and unity of action, and the encouragement of initiative and full contribution from the employees.

Child (1977) suggests that three choices are involved: between centralisation and delegation; between formalisation and informality; and between heavy supervisory emphasis and light supervisory emphasis. (p119)

Centralisation, according to Child, is an approach where control is exercised by confining decision-making to a small group of senior people or even one man. Delegation is an approach where decision-making is passed downwards and outwards within the formal structure, but where nevertheless there are strict limits imposed on the scope and type of decisions that can be made without referral upwards. The smaller the library, the more the decision-making will be carried out by the chief librarian. As the organisation grows, delegation will naturally occur, since it is impossible for one person to have the time, knowledge or energy to make all major decisions. Traditionally the chief librarian has been a critical persona in the hierarchy, since the services provided and the flavour of the organisation will have tended to reflect his or her personality and particular preferences and philosophies. Strategic decisions such as determining new services, allocating capital resources, planning and budgeting, will be taken at chief executive level. Operational decisions concerned with methods of work and

supervisory activities will usually be taken at line management level.
The professional librarians, by the nature of their training,
professional knowledge and expertise, should be able to make decisions
concerning the services that they are providing. Effective
administration, on the other hand, depends very much on managerial
abilities, which are skills that are not always present in the
professional worker.

External administrative control and accountability may be imposed on the
library by the parent organisation or other body, and such devices can
conflict with the way the library might want to operate. For example,
unlike items of stationery and equipment, it is not necessarily possible
to purchase bibliographic material from the cheapest source. Prices
within the booktrade are heavily regulated, and so the decision on
supplier is often based on criteria other than price, such as delivery
times or adjunct services. Finance departments find the complexities
associated with the acquisition of library material to be
incomprehensible and will sometimes try to enforce their own rules upon
the library in an effort to control its activities and to make it
conform to the organisational norm.

Formalisation is the degree to which an organisation establishes written
policies, procedures, rules, job descriptions, and standing orders which
prescribe the correct or expected action to be taken in any situation,
and the system of documented recording of what has actually taken place.
According to Child, formalisation is an approach best suited to
conditions of relative stability. As has been noted, libraries are
characterised by their adherence to their own rules and regulations
prescribing actions and levels of performance. The level of formality

and informality associated with these rules, though, varies from one library to another.

The degree of supervisory emphasis is associated with the narrowness of managerial spans of control and the proportion of managers and supervisors in the organisation. Not all professional librarians are managers, in the sense that not all librarians direct or supervise the activities of others. Indeed many librarians would not wish to be in this position. The level of supervision depends on the degree of formality in the structure and the experience or otherwise of the subordinates working at any particular task.

Professionals resent having administrative controls imposed on them. Whilst the administrator strives to achieve maximum efficiency at minimum cost, the professional librarian seeks to improve the service provided regardless of cost – an essentially qualitative judgement. Every library exhibits the characteristics of bureaucracy to a certain degree. Each library displays a certain pattern of behaviour based on specialised tasks and job design. Some library administrators will restrict the discretion of staff more than in others, in terms of adherence to rules; some will centralise authority in a small subunit of administrators; and others will delegate authority to the lower levels in the hierarchy.

Libraries are greatly influenced by their environment. But an individual library is frequently in a monopoly position with respect to its own particular sector of society, or community of users. This factor affects the setting of objectives and the control of the library organisation. How does the potential client exert his influence on the objectives of

the service organisation? The user may sometimes be represented on a policy making panel, but this is rare. Instead objectives are set by the library administrators in the belief that these are meeting the needs of the users. A series of subjective judgements may be made which reflect the attitudes and social mores of the most influential members of the organisation, that is, the senior and middle management levels and sometimes the professional staff. In addition, there will be pressure from other units within the parent organisation for the library to abide by the control regulations laid down for overall organisational effectiveness. Whilst these controls may be considered restrictive and at times undesirable, the library has no other choice but to capitulate.

THE LIBRARY AS A SYSTEM

Much of the literature on contemporary organisation theory refers to the application of the systems approach for the greater understanding of how organisations work. Robbins (1983) defines a system as "a set of interrelated and interdependent parts arranged in a manner that produces a unified whole." (p9)  The systems perspective allows the organisation to be seen as a whole with interdependent parts, that is, a system composed of subsystems. Systems are also referred to as either closed or open. Closed-system thinking stems from the physical sciences which view the system as self-contained, having no interaction with its environment. The open system, on the other hand, has a dynamic relationship with its environment. An open system receives various inputs or imports from its environment, transforms these inputs in some way, and exports the resulting products or outputs back into the environment.

An organisation survives by importing capital, materials, equipment, labour and information. These are transformed somehow into goods and services. The organisation then exports waste materials, finished products or satisfied customers to get money or some other token with which it is able to begin the cycle again.

According to Ricking and Booth (1974) a library system can be thought of as generating products, services, or ideas (in the form of knowledge), over a span of time. A library's input-transformation process-output concept may be illustrated as in Figure 2.1.

Data as input ─────────▷ ┌─────────────┐ ────▷ Data as output
                         │ Library     │
Users as input ────────▷ │ activities: │ ────▷ Services as output
                         │ process     │
Things as input ───────▷ └─────────────┘ ────▷ Products as output

───────────────── Time ─────────────▷

 Table 2.1 Library input-transformation process-output concept.
(Adapted from RICKING, Myrl and Robert E. BOOTH. *Personnel
utilization in libraries: a systems approach*. American Library
Association, 1974. p34)
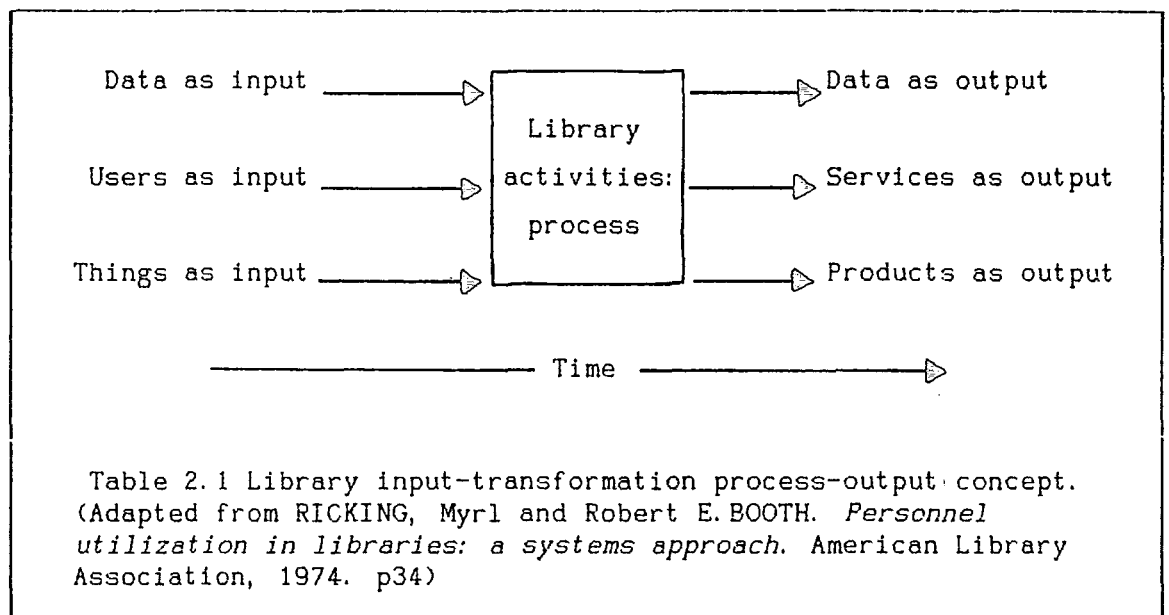
Katz and Kahn (1978) provide ten characteristics of open systems:

 Importation of energy; The throughput; The output; Systems as cycles
 of events; Negative entropy; Information input, negative feedback,
 and the coding process; The steady state and dynamic homeostasis;
 Differentiation; Integration and coordination; Equifinality.
 (pp23-30)

We will now examine these characteristics of open systems in relation to the library as a system.

The *importation of energy* implies that open systems import some form of energy from the external environment. The library obtains staff and funds from its environment, and both are forms of energy or are converted to energy and materials. A social structure is not self-sufficient nor is it self-contained. The *throughput* is the transformation process, whereby a new product is created, or people are trained, or a service is provided. Some work gets done in the system. The library creates something which did not previously exist when it performs its transformation. Books and other material are acquired by the library. The transformation occurs when the staff, using their energy, analyze the materials to create records which represent the materials, and label them in order to organise the library's collections. An *output* of the library may be the intangible process of relating the physical item - the book, or whatever - to a concept or idea. An example of the way this process may be accomplished is by classifying items to integrate them into an existing set of items on the same subject; and by describing them so that records representing the item can be displayed in a catalogue according to different principles of arrangement. Thus you get a collection of material arranged according to a classification scheme and a catalogue providing a subject and alphabetical index to the same material.

There is a *cycle of events* in the library. New publications are added to the collection and old ones are removed. Items are borrowed, returned, and borrowed again. Some items will be lost or damaged, and will have to be replaced. Some items might be lent and transformed by their borrowers into new publications which are subsequently added to the collection.

*Negative entropy* is a process, tending towards order. Provided the library continues to be funded at a sufficient level, the library system will continue to survive. In a sense, the creation of a physical and dynamic collection of material and the various catalogues providing surrogate access to the same material can be considered forms of stored energy. They represent an energy investment and would require large quantities of energy to replace. The accumulated experience of the library workers could also be said be a form of negative entropy. As time passes, they continue to learn about, and increase their knowledge of, how the library operates and they (hopefully) work to improve its operation.

The library gets various kinds of *information input* concerning its environment and about its own functioning in relation to that environment. Two examples are information about new publications and information about its operation. The former provides the library with information concerning new items to be acquired. In this sense, the output of the publishing industry becomes input for the library. Information about the library's operation provides messages - that is, *negative feedback* - about the way the library is achieving its goals. Feedback comes to the library in the form of complaints or of praise. This information from the environment, if used advantageously, will contribute to improvements in the system. This is itself a form of negative entropy tending to increase order within the system. But a library cannot take on board every point of criticism it may receive, just as in the same way it cannot rest on the laurels of praise. This is the *coding process*. The selective process involved in filtering the negative feedback can be difficult and ambiguous. Complaints about the material in the collection, for instance, may indicate changes in the

user community, or they could be an isolated incident. They must be
evaluated with the same care as other messages.


Libraries, on the whole, remain in a relatively *steady state* over time.
The steady state is not a motionless or true equilibrium. Budget crises,
or extraordinary changes wrought by the parent institution, or the
introduction of automation, for example, can be disruptive forces.
Facing a budget crisis, the energy of the library may be diverted to
greater public relations efforts, to more careful justification of
expenditures, and by greater controls being enforced subsequently on
procedures. Market forces and/or pressure from external funding sources
may cause the directors of a research institution to change the whole
focus of research activities. Automation of housekeeping tasks affects
workflows and procedures, which may in turn have an apparent impact on
staffing levels, job security and the attitudes of workers to their
jobs. These changes in turn could have a profound affect on the nature
of the institution's library collection and services, causing turmoil
until new procedures are set up internally, or new instructions
transmitted to agents and suppliers, or staff are reassured about their
jobs and the systems have bedded in. Over time, with effort, the
equilibrium will be restored, but the library in each case will not be
exactly the same as it was in its previous state. Such forces will also
work toward maintaining the system in a state of reasonable balance or
*dynamic homeostasis.*


*Differentiation* will occur in a library as a result of growth. The
library as a social organisation will thus move towards the
multiplication and elaboration of roles with greater specialisation of
function. Growth occurs not only when the size of the library's

collection increases (since rarely do libraries dispose of material at a rate equal to their intake), but also when pressure from the external environment results in a need for new or different processes and/or services. Departments may split or new ones may be formed. Specialisation by function is a common occurrence. New forms of information services have developed requiring different expertise, or increased staffing levels. Computers and telecommunications capabilities have especially contributed to increased differentiation in libraries.

The library system is subject to *integration and coordination* as differentiation proceeds. Integration is often achieved through the formation of work groups or teams, and through the use of such techniques as participative management, Management-by-Objectives, and so on. Coordination is the traditional prerogative of library management. Rules, procedures, set routines are commonplace and a distinguishing feature of libraries as work organisations.

The principle of *equifinality* means that a system can reach the same final state from differing initial conditions and by a variety of paths. Equifinality is probably apparent to most library users. As previously mentioned, each library, to some extent, provides the same services and similar types of materials. Each one, though, demonstrates idiosyncratic differences in such things as rules and regulations, borrowing procedures, fines, policies, layout, and general organisational climate. The goals may be the same in their most general form, but the means of achieving them will differ in many ways from one library to another.

The library thus displays all the characteristics of an open system in constant interchange with its environment.

THE LIBRARY AS AN OPEN SOCIO-TECHNICAL SYSTEM

In addition to being an open system, an organisation can also be

considered as an open socio-technical system. The technical subsystem is

based upon the tasks to be performed. The social subsystem is the

relationship between people in the organisation. The technical and

social subsystems are in interaction with each other and are

interdependent. Rice (1958) writes:

> "The concept of a socio-technical system arose from the
> consideration that any production system requires both a
> technological organisation - equipment and process layout - and a
> work organisation relating to each other those who carry out the
> necessary tasks. The technological demands place limits on the type
> of work organisation possible, but a work organisation has social
> and psychological properties of its own that are independent of
> technology." (p4)

Buchanan and Huczynski (1985) explain that the design of a socio-

technical system involves finding the 'best fit' between the social and

technical components, in such a way that "the needs of each aspect are

met to some extent." (p252) If the technical system is designed without

taking the needs of the social system into account, then the total

system will not operate effectively. The social system design must also

be appropriate to the demands of the technical system.

Kast and Rosenzweig (1970) view the organisation system as the

structuring and integrating of human activities around various

technologies, which in turn affect the types of inputs into the

organisation and the outputs from the system. The social system

determines the effectiveness and efficiency of the utilization of the

technology. The structured socio-technical system is made up of several

primary subsystems: goals and values; technology; structure; psycho-

social; and, managerial. (pp120-121) This can be explained visually as

shown in Figure 2.2. This approach emphasizes the importance of looking at each subsystem and its interaction with the others - treating the organisation as a total system - instead of concentrating on a particular primary subsystem to the exclusion of the rest. Technology, in such a system, is based upon the tasks to be performed, as noted above, and includes the equipment, tools, facilities, and operating techniques. The psycho-social subsystem consists of the interaction, expectations and aspirations, sentiments and values of the participants. The technical and social subsystems are in interaction with each other and are interdependent. Structure is concerned with the ways in which the tasks of the organisations are divided into operating units and with coordination of the units. The managerial subsystem is seen as the means of linking the other major subsystems of the organisation. Its primary role is that of integrating activities toward the achievement of explicit or implicit goals which make up the goals and values subsystem.

Subsystems

| INPUTS | ▷ | Goals and values<br>Technology<br>Structure<br>Psycho-social<br>Managerial | ▷ | OUTPUTS |

Flow of material/energy/information ➤

Figure 2.2 Organisation as a sociotechnical system.
(From: KAST, Fremont E. and James E. ROSENZWEIG. *Organization and management: a systems approach.* McGraw-Hill, 1970. p121.)
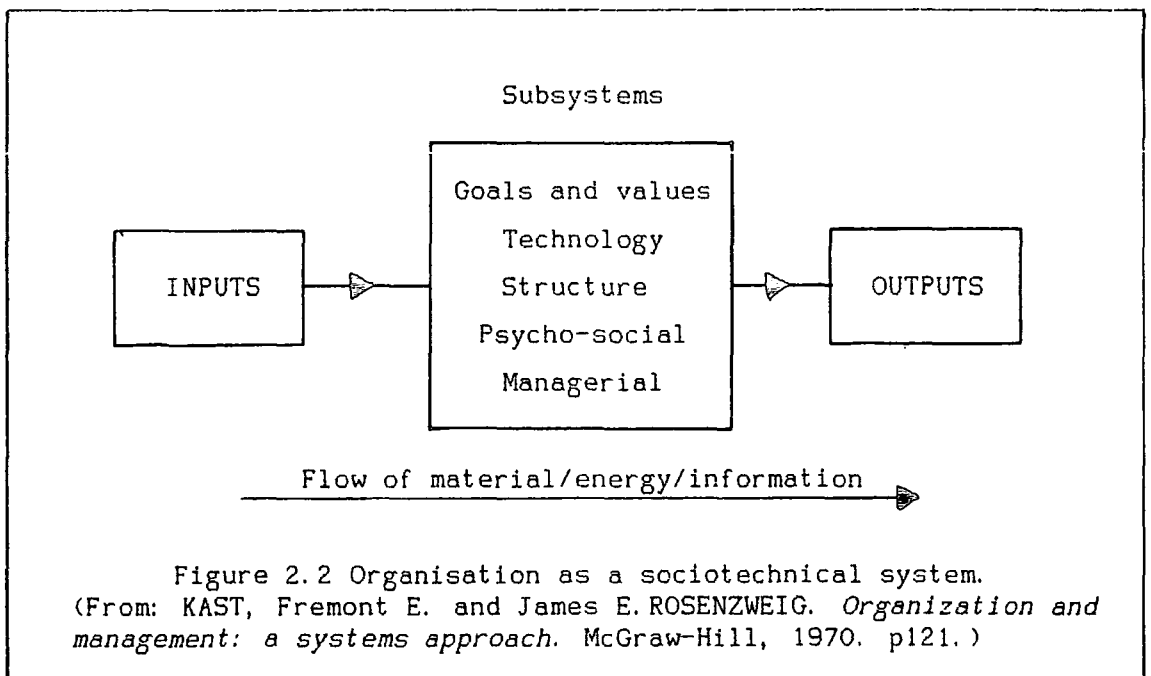
Buchanan and Huczynski (1985) argue that the socio-technical systems approach is a useful way of looking at organisations, since it highlights important aspects of the way in which organisations function. The method of socio-technical system analysis has also been applied to non-production systems such as service or advisory departments and organisations. The importance of this approach is its emphasis on group working rather than on the individual, and its appropriateness as a job design technique which looks at the total work organisation.

THE LIBRARY AND ITS ENVIRONMENT

Robbins (1983) points out that one of the most obvious characteristics of an open system is its recognition of the interdependency between the system and its environment. There is a boundary which separates the system from its environment, and changes in the latter will have some affect on the former, and vice versa. Katz and Kahn (1978) point out that the study of organisations should include the study of organisation-environment relations. (p31) Thus, in this last section, we will look at the total environment in which the library finds itself.

The external influences on the library may be shown in diagrammatic form in Figure 2.3. Whatever the general function of libraries in society, a specific library fulfills its function within a particular community. Consequently, the most demanding of the external influences on the library is probably its community of users. The demand its community makes, to an extent, establishes the operational goals of a particular library and defines the nature of its services. Changes in the needs of the client body also put into question the traditional services offered, and this may lead to the services changing too. The actual user

SOCIETY' 'TECHNOLOGY'

INFORMATION
INDUSTRY
'THE ECONOMIC
SITUATION'

BIBLIOGRAPHICAL
UNIVERSE
USER
COMMUNITY

Publishers
Agents & Suppliers
Other Libraries
National Libraries

ILL Network
Documentation Centres
Database Hosts
Specialised
    Information Centres

THE LIBRARY

User Population

Parent Organisation
Governing Body
Primary Funding Body
Other Sources of Funds

Local Government

Local Industry,
    Business & Commerce

PROFESSIONAL BODIES
- Library Association

TRADE UNIONS

CENTRAL GOVERNMENT

THE LABOUR MARKET

OTHER AGENCIES
- UGC, CNAA, MSC, OU,...

Figure 2.3 The external influences on a library.

population is somewhat smaller than the potential population of any
library system. A lot of effort may go into marketing the services
offered, but no library could cope - for example, in terms of occupancy
or stock levels - if everyone in its catchment area were to start using
it.

Most libraries are part of larger organisations. The parent organisation
can be very influential in many ways, not least in shaping the services

provided and allocating the funding and staffing resources. The governing body may sometimes be a separate entity to the parent body, and it will exercise its own level of authority over the way the library is run. There can be many organisations or agencies which support the library in terms of the provision of funds, or which influence the way services are developed. Local industry and the business and commercial sector may offer patronage to their local libraries, in the expectation of specific services geared to their needs. The library and information professional associations have a certain impact on libraries, not just in terms of their control over membership criteria and professional development, but also in terms of their influence on standards of service and of various aspects of library work. Other professional bodies, from a variety of disciplines, may also exert external influences on a library system because of the expectations of their local memberships, or because of special arrangements for certain services for members, or through examination criteria which will affect curriculum activity, and so on. Central government and its many departments, the various accreditation agencies, and such bodies as the Manpower Services Commission, influence the library in many, sometimes subtle ways.

Rayward (1969) argues that the "bibliographic universe", from which the library obtains its raw materials, is another major area of influence. (p317) The library's primary function is one of purveying information rather than producing more tangible services or products like an industrial firm. Libraries do not like to dispose of materials, but when they do this will seldom be at a rate equal to their intake. The tremendous growth in published information, referred to earlier, which is still continuing, complicates and makes difficult the collection

development function of an individual library. Other libraries and information-producing industries are part of this bibliographic universe as well.

Society in general has become more information-based and information-oriented. New products and services, based on new information technology, are rapidly changing - and hopefully improving - everyone's daily life, in business, in the home, and in education. Information, in various aspects, has become a major industry, playing a growing role in the economy and in the life of our society. The field is dynamic and steadily growing and changing. The computer and new forms of communications have brought about a significant revolution in daily life. Satellite, cable and VTR are changing long-established habits of communication and entertainment. Information products are radically changing commercial access to information and research. Formal education and training bodies are developing new techniques of teaching and learning, to help people acquire new skills.

Libraries are part of the information industry. They have been affected by internal and external changes in the evolution of this information industry. The computer has brought about a technological revolution in libraries, making it possible for the library to organise and provide access to information in whatever form it may be produced - in print, microform, or audio-visual format; in electronic form; or on optical discs. As a result they have been permeated with all kinds of technology, in addition to the computer, which has resulted in an expansion of library technical skills and sometimes new job requirements.

Libraries of all kinds have to undertake a continuous review of their processes, services, personnel requirements and so on. Developments in education have resulted in a highly motivated workforce, including both qualified librarians and the clerical workers, and there are some that look critically at the traditional aspects of library work hoping to effect changes and gain more satisfying jobs. The extent of the general educational background of the whole labour market is having a profound affect on recruitment criteria and manpower planning. In turn workers' expectations from their jobs, at all levels in the library, are increasing.

Most libraries have undergone a series of changes in recent decades, brought on by mounting pressures from a variety of sources, mostly outside their control. One of the most significant factors affecting libraries in the 1980s is the economic situation. Holley (1981) argues that the economic difficulties faced by public and academic libraries

> "have provided the greatest impetus for change and account for other current trends, which in the final analysis are attemts to survive with fewer resources."

Reducing budgets put pressure on management to seek more efficient and cost-effective ways of achieving the same or similar results. Some libraries may look at ways of raising additional funds, which for many is a departure from traditional practice. Some may have to reduce services, stock and staffing levels. Apart from any other consideration, many libraries have turned to a variety of management and other techniques in an effort to help them cope with these pressures. Technological developments are regarded by many as a means to continue to provide an adequate service. In some cases these technologies may even make possible a greater range of services. But computer-based systems may bring with them imperfections which may or may not be the

same as those found in manual systems. Effective management of library automation, and the process of adaptation to the new techniques, is essential. The use of automation in libraries will be discussed in more depth in Chapter 5.

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SUMMARY

This chapter has looked at the organisation, structure and environment of libraries, with particular emphasis on the traditional pattern of library service in the U. K..

The library was discussed in organisational terms, drawing on several sources in the field of organisational theory. The library may be described variously as a 'service' organisation; as a 'professional' organisation; and as a 'bureaucratic' organisation. Whether librarianship is a profession in the traditional sense is perhaps open to debate (see next chapter), but many recognise it as a professional- ising occupation. This aspect of the nature of librarianship may produce a conflict for many librarians who feel bounded by the bureaucratic mechanisms of their libraries.

The organisational structure of libraries was reviewed. Some major points to emerge were:
-   The predominant organisation of libraries by function, into 'reader/public' services and 'technical' services divisions;
-   The hierarchical nature of library structures, resulting in specialisation by operation, which may present an area of conflict

vis-a-vis the ethos of the 'professional' organisation;

- The continuing debate about centralisation versus decentralisation of library operations;

- The specialisation of tasks and the division of labour between qualified librarians on the one hand and clerical workers on the other;

- The integrative mechanisms in libraries, which tend to be bureaucratic in nature, with the imposition of rules and regulations;

- The potential area of conflict of loyalty for the librarian between the interests of the institution and those of the profession;

- The various control measures to which the library and its personnel are subject, some internal to the library and its parent institution, others externally administered, not least by the community of users.

The library was also seen to display the characteristics of an open system in constant interaction with its environment, as defined by Katz and Kahn (1978). The library may also be described as an open socio-technical system, incorporating the five subsystems of goals and values, technology, structure, psycho-social, and managerial.

Lastly, we looked at the complex environment in which the library exists, noting the many and varied influences that may be exerted, of which the economic situation is one. In an effort to survive with fewer resources, libraries are turning to a variety of coping measures, including automation. Automation, as an aspect of technological change, is in turn an agent of change within the library.

In conclusion, we may surmise that libraries are not easy to categorise. There is perhaps no one best way to structure a library organisation. Each one is constrained by its particular local circumstances, which may also include the consequences of past decisions and the pressure of prevailing conditions.

This thesis is about the effects of automation in libraries and, in particular, the impact of automation on the way in which the work is organised. To this end, we will now look in some detail at the nature of work in libraries, including the roles of the professional worker and the clerical assistant, and the relationship between them. In the process, we need to take into account how the above organisational features of libraries influence the design of jobs.

CHAPTER 3

THE NATURE OF WORK IN LIBRARIES

What kind of work is actually carried out in libraries?  What is

professional work?  How does it differ from clerical or administrative

work?  Is librarianship a profession?  What is the relationship between

the professional and the non-professional?  This chapter will attempt to

answer these questions.

The organisational features of libraries, which were studied in

Chapter 2, will have some influence on the way jobs are defined and work

organised.  For example, most libraries display characteristics which are

essentially bureaucratic in nature.  Many libraries will, in turn, be

part of larger bureaucratic institutions.  The organisation of work will

be influenced by the bureaucratic model.  Thus, there will be hierarchies

of personnel at both professional and non-professional level. Jobs will

be defined by job descriptions and assigned roles.  Particularly in

larger libraries, job responsibilities will often be strictly prescribed

and demarcated.  The commonly found functional grouping of tasks will

tend to be efficient in terms of the specialisation of jobs.

The descriptions which follow should be considered illustrative, rather

than prescriptive, since it would be a task outside the scope of this

thesis to list and categorise all possible activities carried out in the

field of library or information work.  Use will be made of the systems

approach, which was introduced in the previous chapter, to build up a

picture of the work done in libraries.

DEFINITIONS

In describing the work done in libraries it is very difficult to avoid using technical, "library" terms. This problem was referred to earlier. The *Glossary of Librarianship Terms* will provide a selection of definitions to clarify the usage of certain words and phrases, but it is by no means exhaustive.

In this chapter we will refer to "tasks" and "functions". These terms may have different definitions depending upon the context in which they are used. For our purposes, a "task" will be defined as a "discreet unit of work which an individual performs to accomplish a specific purpose". (Hill and Watson, 1984, p214) A task will usually consist of more than one element (which is the smallest step or increment into which it is possible to subdivide an activity without getting into an analysis of motions, movements or specific thought processes). A task has an identifiable beginning and conclusion, and will consist of an action and something on which the action is performed. A "function" is a much larger segment of work, made up of a group of tasks, for which there is likely to be considerable variety and flexibility in the way it is performed.

"Work" and "job" also need defining, since they can have a variety of meanings. Sergean and McKay (1974) define "work" as "the combination of all the tasks or work activities in which a person is involved". (p114) A "job" is a combination of work and the environment in which the work is carried out. The environment of work not only includes characteristics of the immediate workplace, but wider social and

organisational factors, together with aspects of a person's terms and conditions of service.


## A DESCRIPTION AND CATEGORISATION OF WORK IN LIBRARIES


For the purposes of illustration, we shall consider the library as a socio-technical system. Within the context of this chapter, which concerns the nature of work, we shall concentrate of aspects of three of the primary subsystems: technology, psycho-social, and managerial.


We have already seen that the structure of libraries can vary considerably. But there is a core set of tasks which are carried out in most libraries. For instance, Rayward (1969) observes that:

> "an important characteristic of the library is that it takes in
> large quantities of discrete physical items - books, periodicals,
> manuscripts, [gramophone] records, music, tapes, and so on ...,
> subjects them to various processes, stores them, and then provides
> various kinds of service based on them." (p315)

With the advent of the computer and related information technologies, the physical nature of the "inputs" has altered, so that now many libraries and information units are more concerned with *information* in a wider sense, where information may be defined as "any set of symbols or any representation with meaning which can be communicated". (Edwards, 1975, p152)


For our purposes, the technology subsystem in the library may be said to include the three core functional groupings of tasks, namely: *acquisition*, *organisation*, and *exploitation*. The use of these three terms is considered by the writer to be an appropriate base from which to view the library as a total system, with inputs, transformation processes, and outputs. The Association of Graduate Careers Advisory

Services use these same divisions in their leaflet on Library, information and archive work. (1985, p3-4) Thomas (1971) defines the operational sub-systems in a library in terms of *Acquisition, Processing, Maintenance,* and *Use.* (p1) Sergean (1977) observes that information jobs are "concerned in some way or other with the *acquisition, handling* and *dissemination* (in the broadest sense of these terms) of information". (p8 - this writer's emphasis)

The three core groups - acquisition, organisation and exploitation - can each be considered as subsystems (see Figure 3.1). The outputs of the acquisition subsystem (that is, newly acquired material or information) become the inputs to the organisation subsystem (where they undergo the cataloguing, classification and/or indexing processes). These "organised" items, and their respective catalogue records, then become the inputs to the exploitation subsystem, where they form the basis for direct user services (reference work, document/information retrieval) and for various products, such as: recent additions lists; current awareness services; reading lists; bibliographies; and so on. In response to demand from users (or as a result of studying user needs) other material will be selected, and ordered through the acquisition subsystem. In a similar way, some of the older material in stock may become redundant because it is out of date, or no longer relevant to the user body. This material may have to be withdrawn from stock. It will have to pass back through the organisation and acquisition subsystems, to have all necessary records amended prior to it being 'removed'. For a variety of reasons, it is sometimes necessary to recatalogue or reclassify material. The foregoing illustrates the cycle of activity within a library and the interrelatedness of the subsystems. Certain categories of material may also be available for loan by users. The set

of processes involved with this activity form the *circulation* function.
Most libraries permit the borrowing of all or part of their stock. For
the purposes of illustration, the circulation function will be included
within the exploitation subsystem.

Following library custom, most of the work done in the acquisition and
organisation subsystems is considered the domain of *technical services*,
whilst that of the exploitation subsystem is the responsibility of
*reader (or information or public) services.* This distinction between the
work of the two service areas is not absolutely clear cut, as we shall
see presently.



Figure 3.1 The library's technology subsystem.
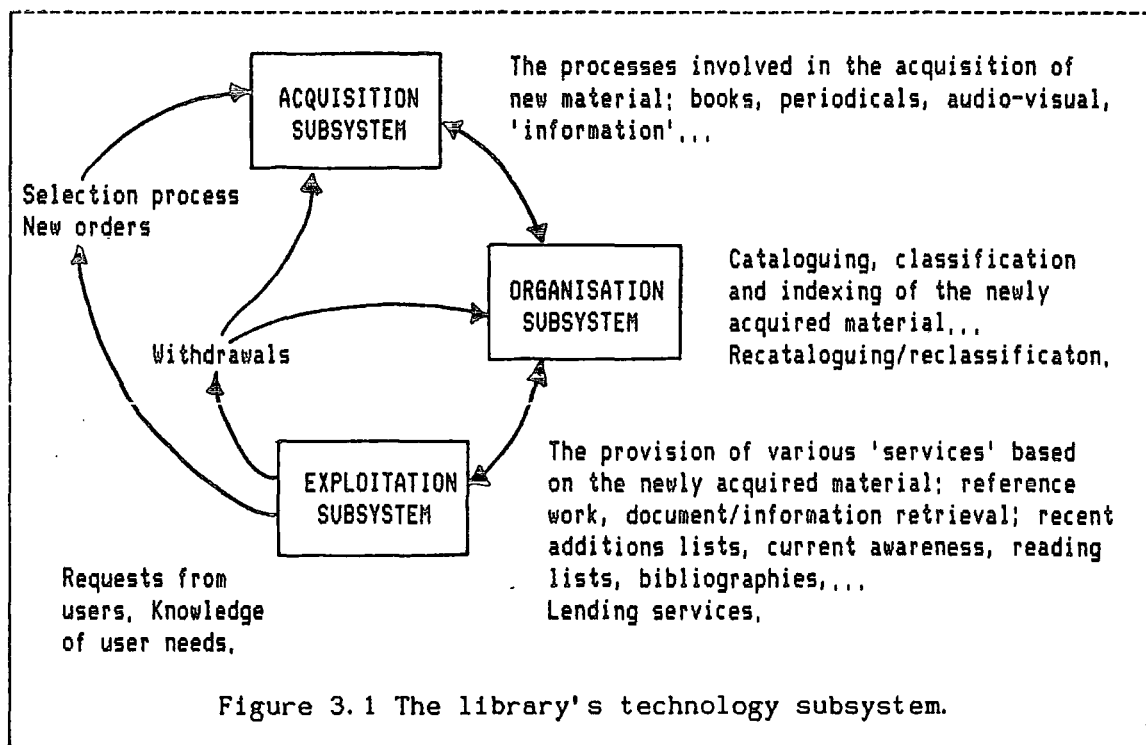
Libraries are organisations of people, working within physical
structures. Staff have to be appointed, trained and organised to carry
out the work. The work has to be supervised and directed, monitored, and

corrected as needed. Interpersonal conflict has to be resolved. Finances have to be raised, budgets created, and expenditure monitored. Equipment has to be purchased, maintained, repaired and/or replaced. In other words, there is a considerable and variable amount of administration, personnel management, financial acumen, political awareness and other knowledge and skills associated with the management and upkeep of the library organisation. These administrative tasks form the *managerial* function - or subsystem - of the library. Perrow (1967) points out that some of the tasks of the managerial subsystem will be concerned with changing or maintaining the structure of the organisation. Most of the tasks, however, according to Edwards (1975), will consist of working through other people or working with an organisation itself, as distinct from working directly toward the accomplishment of the goals for which the organisation exists. Tasks associated with the managerial or administrative side of libraries will be listed under the heading of *administration*, and may now be added to the three functions already identified.

We are now able to present an initial model of tasks undertaken in a library. Figure 3.2 lists selected tasks under their appropriate function.

CATEGORISATION OF TASKS

We have now partially answered the question: what kind of work is carried out in libraries? Before examining the range of tasks in more depth, we need to look at who does this work. Mirroring the division of labour, the work of people in libraries is normally categorized into professional and non-professional duties. We shall concentrate on those

```
┌─────────────────────────────────────────────────────────────────────────┐
│                                                                           │
│     ACQUISITION     ORGANISATION     EXPLOITATION     ADMINISTRATION       │
│                                                                           │
│     Selection       Cataloguing      Reference work   Staff selection      │
│     Ordering        Classifying      Document/info    Training             │
│     Receipting      Indexing           retrieval      Supervision          │
│     Processing      Recataloguing    Compilation      Planning             │
│     Withdrawals     Reclassif-         of lists, etc  Direction            │
│                       ication        Knowledge of     Financial            │
│                                        user needs       management         │
│                                      Lending          Staff                │
│                                                         management         │
│                                                       Equipment            │
│                                                         purchase &         │
│                                                         maintenance        │
│                                                                           │
│             Figure 3. 2 Selected library tasks by function.               │
│                                                                           │
└─────────────────────────────────────────────────────────────────────────┘
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aspects of the work done in libraries which can truly be called "library

work". Tasks associated with the upkeep of the library building/

premises, such as cleaning and portering, will be largely ignored since

they are not considered relevant to the present discussion.


Several sources will be examined in the process of elaboration.


*LIBRARY ASSOCIATION. Professional and non-professional duties in*

*libraries.*

In 1974 the L. A. issued the second edition of a descriptive list of

professional and non-professional duties in libraries. Whilst there has

been many changes in philosophy and technique since then, which now

makes the list out of date, the basic rationale for the list is still

valid. The list states that:

> "'professional' duties are those whose adequate performance
> involves the ability to exercise independent judgment based on an
> understanding of the principles of library service - publications
> and information users and the means by which they are brought into
> effective relationship. This understanding implies a wide knowledge
> of specific library techniques and procedures.
>     This is not to say that specific techniques classified as
> professional cannot be taught to individuals who are not, by

training, professional librarians. What is implied is that adequate
performance of the full range of professional duties requires
professional judgment and a thorough understanding of the principles
and objectives of each duty and its function in relation to the
overall purpose of libraries." (Library Association, 1974, p8)

The basis for the first edition of this list was the 1948 American

Library Association's *Descriptive List* which was considerably modified.

The duties in the second edition are arranged into nine broad functional

groupings. No attempt is made to distinguish different levels of

professional duties. The groupings are:

    General administration;
    Personnel management;
    Public relations;   ·
    Selection and withdrawal of material;
    Acquisition and disposal of material;
    Cataloguing, classification and indexing;
    Production, preparation, conservation, housing and the handling of
    material and associated equipment;
    Information work and assistance to readers;
    The lending function of libraries.

A fuller version of this list, broken down into professional and non-

professional duties, is provided in Appendix B.1.


*THE SHEFFIELD MANPOWER PROJECT.*

This project was carried out in the 1970s in the U.K., and its findings

are a major source of information on the qualitative aspects of manpower

planning in the library and information field. The project was described

as:

    "an investigation of the manpower requirements for library/
    information work, specifying characteristics of the required
    personnel...[and] will be concerned with devising a methodology for
    analysis and classification of jobs and personnel". (Sergean, McKay
    and Corkill, 1976, p1)

In order to establish the nature of jobs in library and information

work, the research team took a 5 per cent sample of library and

information units in Britain (selected on the basis of type and size),

and administered a 'Job Analysis Questionnaire' to individual members of staff in these units. The questionnaire, devised by the researchers, sought to describe jobs (using non-technical language) in terms of their intellectual, social and physical demands, and in terms of the human behaviour called for by the work. In addition, it was hoped to identify certain aspects of the job environment to which the jobholder must adapt. A feature of the questionnaire was that the jobholder him/herself was to be the source of information about the job, and no additional information was sought from supervisors.

The classification of work activities compiled by the researchers covers seven areas:

I.     Activities associated with the provision of TECHNICAL SERVICES
       (= Input and maintenance).
II.    Activities associated with the provision of USER SERVICES
       (= Output and exploitation).
III.   ADJUNCT OR ACCOMPANYING ACTIVITIES
IV.    Activities involved in ORGANISING AND RUNNING THE SYSTEM.
V.     Activities involved in SERVICING THE SYSTEM.
VI.    COMPOSITE "TECHNICAL ACTIVITY" CATEGORIES.
VIII.  RESPONSES NOT IN "TECHNICAL ACTIVITY" TERMS.

A more detailed description of the 103 activities identified in this classification is provided in Appendix B.2.

*THE ILLINOIS LIBRARY TASK ANALYSIS PROJECT.*

This project was undertaken in the U.S. in the early 1970s. It involved the analysis of 1,615 tasks which occurred in one or more of eighteen Illinois libraries included in the study. Whilst the findings are not entirely appropriate to the U.K. scene, due to differences in personnel practices, the arrangement of tasks into eight major subsystems, and the distinctions made between professional and non-professional duties are relevant. The eight areas are:

1. Collection development.
2. Collection organisation.

3. Collection preparation and maintenance.
4. Collection storage and retrieval.
5. Circulation.
6. Collection interpretation and use.
7. Management.
8. Staff development. (Ricking and Booth, 1974, p38)

A selected summary of these tasks divided into professional and non-professional duties (the latter categorised, in the original published report, into technical and clerical positions) is given in Appendix B.3.


We can now attempt to categorise the tasks in Figure 3.2, and at the same time expand the lists, according to whether they are considered professional or non-professional. (See Figure 3.3) Those tasks which are considered administrative in nature, rather than specifically 'library' work are listed separately. As a consequence a third category of worker is included, namely, the *administrator.* This is not to say that the administrative tasks will necessarily be done by a person appointed as an administrator. Rather, many of these tasks will be done by the professionals, and sometimes non-professionals, in the course of carrying out their other duties. The objective in making this distinction is to highlight the degree of administration performed in libraries.


In categorising the various tasks in the manner outlined in Figure 3.3, it should be appreciated that some tasks which fall in one functional area may be performed by personnel who technically reside in one of the others. For example, in many libraries selection and stock editing, which are important activities performed within the acquisition subsystem, are considered the responsibility of information services librarians. The resulting requests for purchase, or piles of redundant stock, will then be directed to the acquisitions department, where

orders will be placed, or material withdrawn, as appropriate. Similarly, subject indexing and classification of new incoming material may be performed by information services librarians (particularly in academic libraries), whilst descriptive cataloguing and the other catalogue maintenance tasks are left to the cataloguing section of technical services. Decisions concerning, for example, interlibrary lending and cooperation policies, disposal policies, and cataloguing/classification practices, might be determined after consultation and discussion between several departments/sections.

In many instances, professional workers might undertake some of those tasks identified in Figure 3.3 as non-professional (although this practice would not normally be reversed).

In analysing the tasks presented in Figure 3.3, the writer is aware that some of the tasks are still shrouded in library jargon, particularly those concerned with professional work. To an extent this is unavoidable, since to describe each one in layman's terms would take up too much space. A feature of many of the tasks is their reliance on the upkeep of files of various kinds. For example, acquisitions personnel will maintain order and supplier files; cataloguing personnel will maintain catalogues of stock, authority files, and subject indexes; and, reader services personnel will maintain the records of items borrowed. The clerical work involved in maintaining these different files is fairly labour intensive and such activity, amongst others, might lend itself very well to computerised methods.

| POSITION | ACQUISITION | ORGANISATION | EXPLOITATION | ADMINISTRATION |
|---|---|---|---|---|
| *PROFESSIONAL* | Acquisition policy formulation | Policy formulation | Policy formulation | Setting goals |
| | Evaluation of publications | Descriptive cataloguing & recataloguing | Reference work | Planning |
| | Selection of material | Subject analysis | Document/info retrieval | General library policy execution |
| | Interlibrary lending policy | – classification | User education | Public relations |
| | Stock editing | – subject headings | User guides | Manpower planning |
| | Stock allocation | Indexing | Compilation of lists, bibliographies | Recruitment |
| | Selection of supplier | Catalogue maintenance | Knowledge of user needs | Training & staff dev |
| | Disposal policy | Design of systems | Lending policy | Management of staff |
| | Design of systems | Evaluation of systems | Library cooperation | – organising |
| | Evaluation of systems | | Marketing | – directing |
| | | | Design of systems | – evaluating |
| | | | Evaluation of systems | Supervising |
| | | | | Committee work |
| | | | | Report preparation |
| *NON-PROFESSIONAL (Clerical/ library assistant)* | Checking details | Typing cards | Lending | Supervising |
| | Typing | Filing/sorting | – issuing | Bookkeeping |
| | Filing/sorting | Labelling | – discharging | Cash accounts |
| | Placing orders | Processing | – renewing | Raising invoices |
| | Receipting | Shelving | Reserving | Equipment maintenance |
| | Checking invoices | Copy cataloguing | Recalling | Filing/sorting |
| | Renewing subscriptions | Amending catalogue records | Overdues | Collecting statistics |
| | Accessioning | Shelf checking | Fines receipt | Typing |
| | Repairing worn/ damaged items | Simple cataloguing | ILL requests | |
| | Withdrawing stock | Collecting statistics | Photocopying | |
| | Collecting statistics | | Filing/sorting | |
| | | | Collecting statistics | |
| | | | Basic document retrieval | |
| | | | Typing | |
| | | | File checking | |
| | | | Shelf checking | |
| *ADMINISTRATOR* | Authorising orders | Monitoring performance | Monitoring performance | Planning |
| | Certifying payments | | | Policy formulation |
| | Controlling bookfund expenditure | | | Obtaining & allocating resources |
| | Monitoring performance | | | Budget control |
| | | | | Buildings management |
| | | | | Health & safety |
| | | | | Staffing matters |

Figure 3.3 Categorisation of a selection of library tasks

Much of the work carried out in libraries has a tangible end product or outcome, such as the production of a catalogue (on cards, microform, or in machine-readable form); the placing of orders with suppliers; neat rows of books after shelving returned bookstock, or shelf-tidying; stock editing or maintenance, which results in a certain number of items being withdrawn from stock or being repaired/rebound, or additional copies of some items purchased to meet demand; the production of current awareness bulletins and new accessions lists; and so on. But some of the work of the librarian is less readily apparent and less tangible, particularly to the user. The selection process, which will result in new material coming onto the library shelves, involves a series of decisions ranging from a consideration of the balance of stock in the particular subject area concerned to financial. For every item selected, many more items will have been rejected. The classification process involves the (expert) assignment of a class number to an item, not just to fix its position in a filing arrangement, but to permit a subject approach to the retrieval of that item at a later date.

Initial formal education and training tend to introduce the librarian-'noviciate' to the techniques of librarianship, for example, cataloguing, classification and bibliography. First posts potentially give the librarian the opportunity to become highly skilled in these techniques. The amount of experience or professional expertise required to carry out a particular professional duty depends on many factors of which the type and size of library, and the varying needs of users, are only some of the relevant considerations. In a small library, library workers of all grades may have the opportunity to practise a wide range of duties in the course of a normal working day. In this situation, it is also likely that there will be a certain amount of overlap between

professional and clerical roles, particularly in the case of the
experienced clerical assistant. In a large library, on the other hand,
specialisation of tasks is much more likely to happen, along with a more
strict line of demarcation, and librarians and clerical assistants will
undertake a specific sub-set of the range of duties on a regular basis.
The relationship between the professional and the non-professional will
be discussed below.

The stage at which a librarian ceases to be a pure practitioner and
becomes more of an administrator will vary and will depend on the size,
type and structure of the library organisation. In a large library, new
entrants and other personnel in the lower ranks of the hierarchy are
more likely to be solely practitioners. As individuals rise in the
hierarchy, through promotion and career progression, they will be
required to work less and less on pure library practice and will instead
have to take on a greater administrative/management role, particularly
in planning and policy formulation and staffing matters. Not all
librarians relish an administrative role, especially where they feel the
tasks involved are of a senior clerical nature, as in the authorisation
of orders and certification of invoices. As a consequence, some
libraries have appointed senior administrators, who are not librarians
nor professionally qualified, to undertake the bulk of these
administrative activities.

In 1984 the L.A. produced a statement on the Duties and Responsibilities
of Library Staffs, following a re-examination of the 1974 published
list, as a consequence of a review of librarians' gradings in the local
authority sector. This statement identifies the skills of the librarian,
splitting them into two groups: specialist skills which are necessary

only in the operation of a library and its materials, and those skills

of a more general nature which are also required for the successful

operation of a library. These skills are:

    (a) Specialist skills
        The analysis of the library and information need of existing and
        potential users.
        Selection, provision and maintenance of the full range of
        library materials.
        The identification, analysis and organisation of information.
        The assessment, implementation and use of technology in the
        library.
        The exploitation of information resources.
        User education in the library.
        The selection and maintenance of special collections and
        services.
        The selection and exploitation of non-book media.

    (b) General skills
        The planning and development of policy, its implementation and
        assessment.
        The management and financial control of all or part of an
        organisation.
        Interaction with clients and users.
        Supervision, training and motivation of staff.
        Contacts and communications with other individuals and groups
        pertinent to the work of the organisation, e.g. governing
        bodies, suppliers, members of other professions, etc.

Two professional levels are identified - assistant librarian and

librarian. The former level includes both recently qualified personnel,

undertaking particular responsibilities in limited areas under the

supervision of a more senior librarian, and more experienced assistant

librarians exercising some of the specialist and general skills

mentioned above. The librarian would have professional responsibility

for one or more specialist areas of stock or departments and contribute

to the development and implementation of associated policies. These

levels and definitions are subject to amendment and elaboration to suit

the circumstances of particular employing organisations.


The L.A. document also defines appropriate duties and grades for non-

professionals. The library assistant will work under the close and

regular supervision of more senior library personnel, undertaking a variety of routine tasks and procedures, including the operation of various systems and equipment used by the library. Much of their work will involve direct contact with the client and they would generally be the first people with whom the client comes into contact. Interpersonal and communication skills are essential. The senior library assistant will supervise the operation of a variety of tasks and procedures and may be involved in the design and implementation of other procedures within guidelines provided by professional workers. Depending on the size and/or the organisation of the library there should be scope for promotion to posts of greater responsibility for experienced non-professional and administrative staff which would be reflected in the grading of such posts.

## LIBRARIANSHIP AS A PROFESSION

It is appropriate at this point to discuss librarianship as a profession. The topic is one that has been debated for many years, particularly in the U.S. where, it seems, the professionalisation of an occupation appears to be an important issue. This is not to say, in this writer's experience, that librarians in the U.K. are not interested in the matter. The L.A. has worked continually to establish librarianship as a profession, but it is not always held by others in the esteem that most librarians would wish.

Librarians believe they are members of a profession, and refer to themselves as having been trained professionally. But, as Kaplan (1979) argues, they "agree that they lack the status of doctors, professors, scientists, and other high-ranking professionals". (p20) Etzioni and

others (1969) define librarians as 'semi-professionals', along with

nurses, social workers, and teachers. Sociologists and librarians have

written at length on the topic of the professionalism of librarianship,

but there is no absolute consensus. Kaplan (1979) further notes that "an

occupational group cannot give itself the accolade of professionalism;

this must come from others". (p21)


What then are the characteristics of professional occupations which

distinguish them from non-professional ones? The traditional model is

based on the presence or not of several attributes. There is a degree of

consensus over what are the attributes. For instance, Greenwood (1957)

puts forward five characteristics of a profession: *systematic theory;*

*authority; community sanction; ethical codes; and, a culture.* (p45)

Greenwood qualifies his assertion with the point that, strictly

speaking, the five attributes are not the exclusive monopoly of the

professions, in that some non-professional occupations also possess

them, but to a lesser degree. He advocates the view, supported by

others, that the occupations in a society are distributed along a

continuum, with the well-recognized professions at one end and the least

skilled occupations at the other. Goode (1961), in his classic essay on

librarianship, writes that:

> "Any traits used in the definition of the term "profession" must be
> conceived as variables, forming a continuum along which a given
> occupation may move. Instead of the dichotomy of "professional-non-
> professional", we use the variable of "professionalism", and we may
> ask how far an occupation has moved in the direction of increased or
> decreased professionalism." (p307)

Hanks and Schmidt (1975) advocate that the characteristics of a

profession may be possessed by an occupational group in varying degrees,

and that the degree to which any characteristic is present in such a

group may vary over time. (p176)

Goode in his essay enunciated two attributes as being sociologically central to a profession: *prolonged specialised training in a body of abstract knowledge; and, a collectivity or service orientation.* (p308) He concluded that librarianship was not yet a profession and not likely to become one. Even though the article was published in 1961, much of what Goode said, in this writer's opinion, is still valid and relevant today. According to Goode, the specific knowledge which a librarian must have is not clear. He writes that "it is difficult to define a problem for whose solution one would uniquely go to a librarian." (p312) A large number of librarians would dispute his view that there does not appear to be any special talent for librarianship. The role of library schools in this area has been open to criticism, but it is significant that in the development of curricula for first degrees in librarianship, subjects such as sociology, education, psychology, and management science have been taken on board to increase the academic standing of the courses. Goode doubts that it is possible to identify principles or generalisations which can be used to solve problems in librarianship. He sees the librarian's role as one which is to organise and order the flow of information and to help others to locate it. Even if librarians had a body of knowledge, the public they serve does not know this, says Goode. The public views the librarian as a gatekeeper and a custodian of the stock room; as well as an intelligent clerk who can help them find the goods they need (as in a department store). The work of the librarian also takes place in areas where the public does not ordinarily go, and thus the public has no way of seeing what he does. This matter of the public image of librarianship is one which is referred to frequently in the literature. Goode notes that, earlier than in other occupations, the librarian takes on administrative tasks, much of which is not specific to librarianship. The chief librarian, whose work mostly involves

"integrating human beings in a corporate enterprise" (p315), could

transfer the majority of the skills he uses daily to a high-level

managerial position in any corporation. Without the firm knowledge base

and its recognition by the relevant public, the professional librarian

cannot easily claim autonomy.

Regarding the service orientation of librarianship, Goode argues that

the librarian provides a passive help, that is, he simply reacts to an

expressed need, rather than a more active sense of service. The

librarian has little power over his clients. They do not pay

individually for his services, and at best he can send them away with

the plea that he is too busy. But the client has the right to take out

on loan or use any of the materials of the library even if the librarian

believes he cannot use them to advantage. "Intellectually, the librarian

must work within the client's limitations, instead of imposing his

professional categories, conceptions, and authority on the client."

(p316)

Goode does concede that, whilst he asserts that librarianship will not

become fully professionalised, this is not to predict that it will not

move further in that direction. He recognises that the increasing flow

of knowledge and the greater dependence of a technological society on

the accumulation of that knowledge will augment, at least, the

bargaining power of librarians. Goode suggests that more emphasis should

be placed in the future on the central task of organising the flow of

publications. He advocates that intellectual exploration should be

carried out in the following areas:

1.  *New modes of organising* the materials...to bridge better the gap
    between the mental categories of the users and those of the ...
    catalogue.
2.  *Development of new cataloguing systems* for handling materials...

3. *Creation and utilisation of electronic equipment* for locating
   materials and bringing them to the user, as well as reproducing
   them for borrowers at great distances. (p320 - this writer's
   emphasis)


Bundy and Wasserman (1968), in their analysis of librarianship as a

profession, viewed librarians in terms of three major relationships:

with clients; with the institution in which the librarians perform; and

with their professional group. The authors judged librarians (at that

time) to lack those traits which mark professionals, in all three

relationships. Librarians are, for the most part, "medium- rather than

client-oriented", where medium refers to the physical nature of the

books, periodicals, microform, and other kinds of material which contain

recorded information. They resist the idea that "the more fundamental

commodity of modern times is information and that it takes myriad

forms." (p9-10) Bundy and Wasserman abhor the situation whereby

libraries are measured in terms of the size of their collections while

"the more significant measure, the quality and nature of the service

they render, is ignored." (p10) Other examples they give are those of

cataloguing conventions, codes, policies, and procedures which they feel

are also divorced from their ultimate purpose - service to clients. They

suggest two prototypes of their professional ideal. One is the subject-

expert special librarian and the other the subject bibliographer. They

urge librarians to move from a fundamentally passive to a more

aggressive role in information prescription. Regarding institutional

relationships, the authors believe that, since libraries function within

a bureaucratic setting, librarians are "faced with conflicts inherent in

the incongruence between professional commitments on the one hand, and

employee requirements on the other." (p14)

This last point introduces the argument that professionalism and bureaucracy have opposite characteristics and that they may even be incompatible. That libraries are bureaucracies has already been discussed in another chapter. Lynch (1979) suggests that the bureaucratic elements have their sources, "not in the red tape or pettiness of officials, but in the attempt of the library to control its environment...[and]...to ensure its efficiency and its competency." (p267) Hall (1973) concluded, however, from his research on profession-alisation and bureaucratisation within a range of occupational groups (including a library organisation), that "an assumption of inherent conflict between the professional or the professional group and the employing organisation appears to be unwarranted." (p133) It cannot be denied that there is a large element of bureaucratic control enforced in libraries, not only on staff but also on users. Libraries are facing increased costs and reducing budgets, and are being forced into justifying their expenditures to non-librarians, using not only efficiency criteria, but also effectiveness and performance measures. The bureaucratic nature of the work is, therefore, not likely to diminish.

North (1977) re-examined Goode's evaluation of the occupation of librarianship. He came to the conclusion that it had not progressed far along the road to professionalism, using the model as defined by Goode, since it had still not specified a body of specialised knowledge and there had been no distillation of a service orientation. Asheim (1979), in a detailed review of the literature on librarianship as a profession, notes that "by accident, foresight or default, librarianship has not yet fully adopted some of the characteristics of the traditional professions ..." (p253) Edwards (1975), whilst concurring with the view that

librarianship in general had not yet achieved the stature of a

profession and that most librarians were not working as professionals,

still argues that "there are some functions of librarians which have the

potential for being developed to a high level of professionalism."

(p153)  Among these are:  the function of research;  the selection of

materials;  the functions of establishing control of information and

providing access to it through various forms of bibliographic

organisation (specifically, the design of systems for organising

information, and subject cataloguing, indexing and classification); and,

the function of direct client aid.


North, Ashiem and others raise the question of whether, in fact, Goode's

traditional model of professions (based on those of law and medicine) is

appropriate to librarianship, since the model "is now largely irrelevant

due to its inherent antipathy and unresponsiveness to the changes taking

place in modern society." (North, 1977, p257)  Ashiem (1979) argues that

it has become "possible to evaluate the practices of librarians on their

own terms, and to decide whether criteria borrowed from other occupat-

ions are really applicable." (p252-3)  Hank and Schmidt (1975) argue

vigorously and effectively the case against the traditional model. They

ask "whether or not the established model of professionalism is an ideal

to which librarianship *should* aspire." (p175 - this writer's emphasis)

They postulate that:

> "The traditional paradigm of professionalism encourages a static
> condition which is incompatible with the dynamism inherent in a
> truly client-centred (including non-user clients) professional
> orientation." (p176)

They then offer a critique of the traditional model of professionalism.

Prior to advocating an alternative model of a profession for

librarianship (based on the open systems approach), the authors describe

the influence of the changing environment on libraries. In particular, they refer to the "media revolution" and the "awesome power of computer technology"; the demand for services from online computer databases - bibliographic and non-bibliographic; and increased sensitivity to their social responsibilities. (p179-180) The open systems model of librarianship would require "new client-centred librarians". (p182) The traditional functional organisation of the library would have to be replaced with one based on the types of client served. Other implications of the new model include: changes in educational attainment, whereby functional tasks would be performed by people with lower qualifications than those undertaking the client-centred roles; changes in the client-professional relationship, where the clients are seen as members of the library organisation; changes in the role of the library administrator from one of supervision to one of coordination (implying the open participation of non-administrative personnel in the decision-making process); changes in the organisational environment; and, changes in the content, structure and methodology of library education.

Jones (1984) describes librarianship as being "unusual as a profession in that the professional role is one of mediation between the client and a system of non-human professionally-provided facilities, that is, information sources and retrieval systems, rather than direct and personal professional service." (p23-24) He argues that much of the professional effort goes into the creation of a system of information sources and linkages. Where direct personal help is given it is still mediation in most cases, in that the enquirer is referred to an information source. The greater part of the client's activity is thus helping himself. The professional librarian maintains independence of

judgement and does not allow the client's wishes, as distinguished from his interests, to influence his decisions.

Librarians provide their professional service without in many cases having a personal and continuous client relationship. Those who work in the small specialist library, or the small college library, or a branch library, may have a greater chance of having such a close working relationship with their users. To an extent the user in the larger library system depends on whichever member of staff is available at the time of a visit. For example, public libraries and academic libraries during term time open in the evenings and on Saturdays. Extended opening hours can be operated with a mixture of shift working, overtime working, or the employment of part-time staff. Whatever method is employed, there will be periods when the regular staff are not present. The personal librarian-client interaction is not always required when the user comes into the library, since the user, for example, may only wish to return an item, or to collect an inter-library loan, or to use the photocopier — activities which do not require the intervention of a professional. There may be times when the user/client does not realise he or she is receiving a 'professional' service.

The nature of the problem posed by the user tends to be transitory. For example, the user may require to know whether the library has a particular item in stock and, if so, it's whereabouts; or he/she may want a detailed literature search carried out on a specific topic. Having retrieved the wanted item, or having received the results of the search, the user may go away quite satisfied. The user with the literature search will probably scan the list so as to identify those documents that appear to be most relevant, and will subsequently return

to the library in order to retrieve them. The next time the user comes into the library, he/she may have a different set of queries, completely unrelated to the previous ones. There will be times when a particular query continues for a while, for instance in a research or academic environment.

How then do we recognise a professional when we see one in action? A profession tends to be judged by the contact with and performance of its individual members. The public image is poor, as has been indicated above, and there is a general lack of understanding about what librarians do. Librarians, as well, appear to have a self-image problem. Presthus (1970), in a study of library workers, found that "the vast majority of librarians are somewhat less than satisfied with their work and workplace." (p87) Slater (1979), in her study of labour turnover in library and information units, reported that "21% of bosses in our sample believe that the job image is so bad that it is a major cause of staff defecting, or moving restlessly around the field looking for a place where they will be better respected and treated by their employers and customers." (p60)

The image question is linked to another problem area for the librarian. There is a conflict between what the professional does in the course of performing his job and what he feels he ought to be doing as a result of his professional education and training. This raises another point, namely, that a distinction has to be made between professional ability and professional attitude. Part of the answer is the nature of the work in libraries. Sometimes it is expedient for the librarian who retrieved a book from the shelves for a user, to also put it back again; or for the cataloguer who has just catalogued an urgently required item to

process it ready for use, with dust jacket and spine label, because there are no clerical staff available at that moment to do it. There has been a tendency to employ a large number of professional staff in libraries at the expense of clerical support. Lack of this support can result in an under-utilisation of the potential professional skills available. We have observed that much of the work is clerical. If there is a larger proportion of professionals to non-professionals then it may be that the former may be obliged to do some of the clerical tasks in order to keep the library functioning. Librarians seem to be of two minds themselves about the confusion of levels of work in their jobs. They may complain about the clerical tasks imposed on them, but will then resist any recommendation that the number of clerical posts be increased at the expense of professional posts. It seems to this writer that an individual library has to decide what level of professional service is appropriate for its particular clientele, even if this exercise results in a need for less professional posts. The public image of librarianship is not the most important criteria by which professional activity should be judged, but it is a very emotive one.

Measuring professional performance in public organisations is complicated, since it is something which is difficult to quantify. Unlike performance in profit-making organisations, there are no clearly established accounting procedures for determining noneconomic success. Dragon (1984) identifies six determinants of organisational performance for librarians:

1.  The motivation to work;
2.  The availability of rewards;
3.  Individual ability;
4.  Training and staff development;
5.  Organisational design;
6.  Leader behaviour.    (p34)

Dragon argues that the major constraints on measuring professional

performance in libraries are unclear performance objectives and the

concept of collegiality:

> "Librarians have fought a long battle to achieve professional status
> and are understandably reluctant to engage in practices that will
> result in a diminution of that status. To many librarians,
> professionalism means individual responsibility for adherence to
> standards transcending the needs of the local institution. To submit
> to the degradation of performance appraisal would lessen the
> professional's self-respect and respect for the profession." (36-37)

Service performance standards need to be developed locally to meet the

demands of the local institution. What may be appropriate services in a

large research-oriented public library may or may not be appropriate in

a small college library.


Librarianship as an occupation is probably moving towards greater

professionalisation due to a number of factors, such as: increased

specialisation, as libraries become larger and more complex

organisations and as new services are demanded of them (not necessarily

by the user); increased technical expertise, in order to cope not only

with the range of equipment - including computing technology - that is

now available, but also with the organisation and dissemination of

information in various media; and, not least, a desire by the majority

of librarians to upgrade the status and prestige of their work. The

introduction of automation may offer librarianship the opportunity to

reassess the work carried out by qualified workers, with the aim of

increasing the professionalism of the occupation - as Goode suggested in

1961.

THE RELATIONSHIP BETWEEN PROFESSIONAL AND NON-PROFESSIONAL

The relationship between professional and non-professional is somewhat
ambivalent. The emphasis in the literature is, with few exceptions, on
the work of the professional. Seldom is the work of the clerical
assistant discussed on its own merit. Russell (1985) notes that "it
would seem that librarians have been so concerned with their own
standing that they have cared little about their assistants." (p296)
Yet it seems to this writer that a potential source of disharmony in
libraries is the apparent misunderstandings which can exist between the
librarian and the library assistant.

One factor in the relationship is the proportion of professional to non-
professional personnel. The 1981 census of staff in librarianship and
information work in the U.K. indicated that in public libraries
approximately 60 per cent of full-time workers were non-professional
while in academic libraries the proportion was 50 per cent. (Great
Britain. Department of Education and Science, 1982, p10)  (See Tables
2.1 and 2.2 in Chapter 2)  The percentages are even higher when full-
time and part-time staffing are taken into account. Over the whole range
of types of library, 65 percent of library workers are non-
professionals. Thus, non-professional personnel constitute a significant
proportion of the total workforce. Yet this would not be apparent from
the literature on jobs in libraries, at least in the U.K.

We noted in previous sections that library work has a demonstrably large
clerical element, yet there is still a certain resistance by some
professionals to bringing in more clerical assistance at the expense of
professional posts. This might tentatively suggest either that the

professional is not aware of the true nature of his work, or that he does not want to acknowledge it. On the other hand, it could be that the professional sees a threat to his own job security. The situation also reflects the fact that there has been a tendency to undervalue the role played by non-professional staff. For instance, librarians have not shown much interest in the education of non-professionals. Davinson (1982) refers to this disinterest as 'professional protectionism', and feels that part of the answer lies with the "sheer culture of British professional education generally, where the professional associations and corporations have traditionally been so dominant". (p37)   He goes on:

> "In terms of evolving strategies for the training and development of their non-professional colleagues the record of British professional librarianship is not good. The waste of resources, the damage to the public relations with the library's users and the frustration of non-professional staff arising out of the lack of attention to informing them of the broader issues and roles of libraries must be considerable." (p42)

The professional protects his job, and the jobs of other professionals, by enshrouding the tasks carried out with (sometimes) the semblance of a professional mystique, and by maintaining lines of demarcation. The clerical assistants are left with the routine and repetitive tasks.

It must be added that the picture is not all black. There are many librarians who do value the work carried out by the clerical assistants, and who make some effort to provide interesting and varied jobs for them. Several library authorities have redressed the balance in the work carried out, by restructuring their organisations and introducing job enlargement and job enrichment schemes. These will be discussed later.

Goode (1961) observed that "the dividing line between professional and non-professional is obscure....[The] public does not see, and it is

doubtful whether librarians themselves can agree, just what is the knowledge mastery which creates that dividing line." (p313) Musmann (1981) argues that "in many [U.S.] public libraries, there is little difference between the work of the librarians and the work of the library clerks they supervise." (p69) Russell (1985), who investigated the job satisfaction of a group of non-professional library staff in a sample of academic and public libraries, reports a considerable degree of resentment by them of the attitude of professional staff. (p301-303) There was a feeling that much of the work done by librarians could *just as easily be done* by the library assistants. (This writer's emphasis) This opinion has also been observed by the writer both in her working experience and in certain views expressed by some of the respondents in her own fieldwork for this thesis. That there is an element of misunderstanding, of both the purpose of library education and the duties of librarians, by non-professionals is apparent. But little is being done to rectify the matter.

The relationship between the two types of worker is also an unknown quantity to the user. The library assistant at the issue or discharge desk is, to the user, just as much a 'librarian' as the person manning the reference desk. As Kaplan (1979) observes, "clients are being served both by persons who are graduates of library schools as well as by those who have received only training on the job; if the latter serve them poorly they have no way of knowing that a better-trained librarian might have served them more satisfactorily." (p22) This predicament would not happen in a hospital or doctor's surgery, for example, since the patient will assume, without needing to be told, that the receptionist is a clerk. In the majority of visits to the library, the user/client's only direct contact with library personnel will be with clerical assistants

(for example, when taking out or returning items) because he has no apparent need for any other type of service.

The majority of non-professional library staff do not want to become professional librarians. Those that do, accept their library assistant duties as a pre-requisite to library school education. Without intending to generalise, many of the former will want a reasonably fulfilling job and one that offers some opportunity for promotion. Library assistants tend to have a sound educational background. Many of them will have been attracted to the job by the mere prospect of working in a library, since it has a comfortable middle-class image. Junior library assistants are normally put into compartmentalised positions, performing a specific and isolated part of a complex process. Thus the tasks will be more circumscribed than that of a professional or even an experienced senior library assistant, and may be carried out with limited awareness of the end product.

Staff structures within most U.K. libraries allow a certain career progression for clerical staff. Certainly there is a need for supervisory grades, since it is feasible for an experienced library assistant to be given fairly responsible administrative duties (suitably remunerated, of course) of a non-professional nature. They can be deployed to relieve the professional of a certain amount of routine library tasks which border on the traditional distinctions between professional and non-professional duties, including the supervision of junior staff. This is only possible where professional staff fully appreciate the worth of the non-professional, and where they do not themselves feel threatened by such activity. In the U.S. it was recognised in the late 1970s that librarians spent a considerable

proportion of their time on non-professional duties, and this provided

the  main spur to the development of a recognised sub- or para-

professional staffing level, together with suitable training programmes.

The para-professionals undertake duties of a practical and supervisory

nature, and will normally be college graduates without library

qualifications. To date the class of para-professional staff has not

evolved in U. K. libraries, at least not in the formal sense, although

many librarians will acknowledge the need for such an intermediate

position.

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SUMMARY


This chapter has aimed to describe the nature of work in libraries. Some

attempt to categorise the tasks undertaken into professional, non-

professional and administrative duties has been made, using the four

functional subsystems of acquisition, organisation, exploitation and

administration as specific groupings of work.


One particular feature of the work is the preponderance of files and

record keeping of various kinds, in order that certain basic library

activity may be carried out. As a consequence, much of the work involves

the maintenance and upkeep of these files. There is thus a high level of

clerical, routine work even at professional level.


The question of whether librarianship is a profession was addressed. The

barriers to full traditional professional status seem to include the

lack of a body of specialised knowledge and the lack of a true service

orientation. Librarianship appears to have a poor public image, and librarians themselves do not always rate their job highly in relation to other occupations. An alternative professional model for librarianship was reviewed based on client-centred librarians. In conclusion, this writer concludes that librarianship is moving towards professional-isation, but whether it will, or should, succeed in obtaining that commendation remains to be seen.

Tentatively, this writer would suggest that the relationship between the professional and non-professional is peculiar, if not unique, to libraries and a significant characteristic when looking at the organisation of work. Few occupations, that strive towards professionalism, have such a seemingly close correspondence between the skilled and non-skilled personnel. Within the library, the professional and non-professional are fully aware of their expected roles. Viewed from the outside, the difference in roles is not so readily apparent, nor would it be always clearly understood even if an explanation were forthcoming. In comparison, the general public is perfectly aware of the roles of the nurse vis-a-vis the doctor, and the clerk vis-a-vis the lawyer. A solution to the quandary for the library worker, would seem to be a reassessment of the roles of the professional and the non-professional, and at the same time a hard look at the tasks carried out. In other words, the situation seems to call for a consideration of the redesign of the jobs in libraries, to make the most of available manpower resources. As Sergean (1977) argues:

> "The matching of people to jobs depends upon continuous selection, assessment, training and allocation; and the matching of jobs to people upon a continuous process of work, job and systems design."
> (p2)

This chapter has concerned itself with the tasks undertaken in libraries. In order to complete the picture of work in libraries we will look next at what library personnel want from their jobs in terms of job satisfaction and job preferences. We will also look in more depth at the characteristics of library work.

CHAPTER 4

JOB PREFERENCES AND CHARACTERISTICS

This chapter is about what people who work in libraries and similar

types of organisation want from their jobs; what satisfactions they

obtain from them; and what characteristics the jobs carried out in

libraries possess. In order to do this several published research

findings will be consulted. We will also look briefly at the attitudes

of library workers to change; at occupational choice; at career

patterns; and, job mobility. An attempt will be made to bring the

various research findings together so that we can gain a more complete

picture of the job preferences of librarians and library workers

People's motivation and orientation to work affects their performance in

carrying out that work. Good and effective performance (in libraries)

also depends on professional and other skills and abilities, but the

quality of that performance will in turn depend on how far library

workers are motivated to use their talents. By their nature, libraries

are very dependent upon their human resources for their effective

functioning. Thus, consideration of human satisfaction in working

situations may be said to be one of the prime responsibilities of

library management. But, as Stewart (1982) points out, "there is no

particular utility in trying to increase the satisfaction of all

employees in the library service. There is... considerable more utility

in trying to increase the strength of the relationship between

satisfaction and performance." (p16)

Since work in libraries is the provision of a largely personal service

in a variety of demand environments, performance feedback from the user

population might provide some indication of the general satisfaction or dissatisfaction of the library workforce. According to Roberts (1973), the user "is the ultimate measure of a library's efficiency and effectiveness." (p98) Such user studies are often undertaken in-house and by their very nature are very specific to an individual library. They also tend not to be reported much in the literature. For the purposes of this research such studies will not be investigated, since we are very much more interested in the personal views of library personnel to their work.

## STUDIES OF LIBRARIANS AND LIBRARY WORKERS

Several studies of the job satisfaction of librarians and library workers have been examined for the purposes of this research. These will be described and briefly summarised - within the context of the chapter. Additionally, other surveys covering the occupational choice, career patterns, job mobility, and occupational image of library workers were consulted. In each of these, questions were included which sought respondents' views concerning their level of job satisfaction or the 'best' and 'worst' aspects of their job. An attempt will then be made to bring together the results so as to produce a total view of the library worker.

### THE VAUGHN AND DUNN STUDY

Vaughn and Dunn (1974) conducted a study of job satisfaction in six U.S. university libraries. The researchers administered the Job Descriptive Index (JDI) to the employees of these six libraries.

The JDI was devised by Smith, Kendall and Hulin and it aimed to measure the principal features of satisfaction, whilst recognising that not all components can be examined within a brief questionnaire. (Source: Cook, et al, 1981, p49) The JDI asks respondents to describe their work, using a set of descriptors covering five different aspects of the job. Part of the description sought is in terms of explicitly evaluative words (e.g. satisfying, good), where the distinction between job-reference and self-reference is small. Other descriptions are in terms of more objective features which are either clearly factual (e.g. on my feet) or involve evaluative interpretations of facts (e.g. strict supervision). Five separately presented sub-scales are measured, using 72 items, covering the aspects of Satisfaction with Type of Work, Pay, Promotion Opportunities, Supervision and Co-workers. Each item is an adjective or phrase, and respondents indicate whether it describes the job aspect in question. Responses are Yes, Uncertain, or No. It is also possible to sum the five sub-scales to create an Overall Job Satisfaction score. Vroom (1964) considered the JDI, in its developmental phase in the early 1960s, to be "without doubt the most carefully constructed measure of job satisfaction in existence" at that time (p100).

The Vaughn and Dunn analysis is presented in terms of the relative numbers of employees in each of the six organisations who are satisfied with various aspects of their jobs. 265 employees participated in the research. The comparative analysis is based upon the numbers for all six libraries. Percentages are derived by calculating the proportion of employees scoring above the composite JDI means. Job satisfaction within the six libraries averaged 33.34%, 47.84%, 52.92%, 53.70%, 54.60%, and 62.10%. Overall, satisfaction was greatest with People (i.e. co-

workers), followed by Supervision, Work, Pay, and Promotion. The
relative strengths and weaknesses of each participating library was
inferred, since the pattern of satisfactions varied within each. For
example, the library with the satisfaction score of 33.34% showed a wide
variation among the five criteria, namely, Pay (16.67%), Promotion
(16.67%), Supervision (50%), Work (66.68%), and People (83.35%). This
pattern shows relative strengths in the areas of people, work, and
supervision, but weaknesses in pay and promotion. The library with the
highest overall score, of 62.10%, produced the following variation:
People (35.10%), Promotion (43.20%), Pay (49.95%), Work (70.20%),
Supervision (71.55%). ·This pattern indicates that job satisfaction
levels are depressed in the categories of pay, promotion, and people. No
one library scored consistently high or low on all dimensions of satis-
faction.


According to the researchers, this study demonstrates how the JDI may be
used to produce a job satisfaction audit in a library. They consider
such an audit to be only one step in the process of organisational
development. Management then needs to examine the dimensions of
satisfaction that are positive as well as those that are negative. This
study does not actually tell us much about the job satisfaction of
library workers, as indicated in the title of the publication, but
rather it tells us how respondents' perceptions of certain
characteristics of the job environment may be measured. The results
certainly indicate that job satisfaction characteristics can vary
considerably according to local circumstances from one library to the
next. Vaughn and Dunn argue that, "from a managerial perspective, it is
best to view satisfaction as a multidimensional phenomenon because the

determinants and consequences of each dimension are likely to be different." (p175)

## THE PLATE AND STONE STUDY

Plate and Stone (1974) used Herzberg's two-factor theory of job satisfaction as the conceptual basis for their study. Herzberg's Motivation-Hygiene theory has been used many times in studies of job satisfaction, and the library field is no exception. The theory proposes that the determinants of employee satisfaction are factors intrinsic to the work that is done – recognition, achievement, responsibility, advancement, and personal growth in competence. (Herzberg, Mausner and Snyderman, 1959, p113) These factors are called "Motivators" because employees are motivated to obtain more of them, for example, through good job performance. Dissatisfaction is seen as being caused by "Hygiene factors" that are extrinsic to the work. Examples include supervision, interpersonal relations, physical working conditions, salary, company policies and administrative practices, benefits, and job security. The two groups of factors can be distinguished in terms of what a person does, and the situation in which the work is done.

Plate and Stone conducted an investigation into the job satisfaction of two groups of librarians, based on Herzberg's theory. 237 librarians attending two separate workshops completed the forms. One group was American, the other Canadian. The main aim of the study was to ascertain whether librarians responded similarly to other groups to which Herzberg's theory had been applied. The respondents were asked to analyze their job in terms of its satisfactions and dissatisfactions. The resulting lists were then analyzed in order to determine what

percentage of the satisfiers were motivating factors (99%) and what

percentage were hygiene factors (81%). Achievement and recognition

appeared to be most important in job satisfaction followed, in order of

importance, by position-related factors such as work itself, respons-

ibility, advancement, and professional or personal growth. Among the

hygiene factors listed as satisfiers, only interpersonal relationships

(two respondents) and salary increases (one respondent) were mentioned

at all. It was found that factors such as achievement, work itself, and

most of the satisfiers were interrelated. Institutional policy and

administration, supervision, and interpersonal relationships were found

to be the three major·dissatisfying factors, followed by the lack of the

motivational factors, achievement and recognition. According to the

researchers, these results would seem to indicate the need for improved

human relations skills in the library organisation. In their conclusion,

the Plate and Stone state:

> "The findings suggest that librarians respond positively to such
> motivational factors as a sense of achievement, recognition, and
> work that is intrinsically satisfying. Many library jobs are not
> rich in self-achievement potential and tend to be impersonalized to
> the extent that incumbents infrequently experience personal
> recognition from clients and colleagues. Furthermore, many jobs
> contain elements of repetitive work. When the job content is
> deficient in one or more of the motivational factors, lack of
> motivation will almost certainly result. Such deficiencies can be
> remedied to a large extent by planned organisational development
> that involves enriching the work." (p108-109)


*THE WAHBA STUDY*


Wahba (1975) used a slightly modified version of Porter's Need

Satisfaction Questionnaire (NSQ). Porter drew upon Maslow's theory of

motivation in order to measure managers' perceived deficiencies in

Security, Social, Esteem, Autonomy, and Self-Actualisation Needs.

(Source: Cook, et al, 1981, pp46-47)  The NSQ used in Wahba's research

consisted of thirteen items reflecting these needs. For each item, subjects were asked to give three responses:

1. How much of the characteristic is there now?

2. How much of the characteristic do you think there should be?

3. How important is the characteristic to you?

Each response was made on a seven point scale with high value representing maximum points. As constructed, the NSQ provided three types of scores respectively: the *NEED FULFILLMENT SCORE* (the higher the value of the need fulfillment score, the higher the percieved satisfaction and vice versa); the *NEED DEFICIENCY SCORE*, i.e. the difference between what should be and what is now (the higher the score, the higher the deficiency or the dissatisfaction of the need and vice versa); and the *NEED IMPORTANCE SCORE* (the higher the score, the higher the importance of the need and vice versa). Wahba used this latter score, not to measure need fulfillment or deficiency, but rather to explore sex difference in the judged importance of various needs.


The sample used included 202 librarians from twenty-three U.S. academic libraries. The overall conclusion was that women were more dissatisfied than men. Men and women showed similar levels of fulfillment in lower-order needs, that is, social and security needs. But women expressed significantly lower levels of fulfillment than men in the esteem and autonomy needs. Women indicated larger deficiency needs in all categories except for the social need, which was similar for both sexes. Both men and women ranked autonomy and self-actualisation needs as having the highest importance of all need categories (although for women, these had lower importance in contrast to the men).

Chwe (1978) undertook a comparative study of the job satisfaction of a group of cataloguers versus a group of reference librarians, from a sample of 91 U.S. university libraries. The primary purpose of the study was to determine whether there was generalizable evidence supporting the hypothesis that reference librarians attained a higher level of job satisfaction than did cataloguers. The instrument used for collecting the data was the Minnesota Satisfaction Questionnaire (MSQ), which was developed by the Industrial Relations Center of the University of Minnesota. The MSQ was designed to measure actual satisfaction with various aspects of work and its environments. The twenty job-related dimensions are:

> ability utilisation, achievement, activity, advancement, authority, company policies and practices, compensation, co-workers, creativity, independence, moral values, recognition, responsibility, security, social service, social status, supervision-human relations, supervision-technical competence, variety, and working conditions.

The sum scores of all twenty dimensions is represented by general satisfaction. The MSQ comes in two forms, long and short. The long form was selected for this study, which involved a 100-item scale, with five items tapping each of the twenty dimensions. A Lickert format five-point system was used to score each item.

The major conclusions were that there was no difference in overall satisfaction between cataloguers and reference librarians in the university libraries studied. Cataloguers were found to be significantly less satisfied than reference librarians about (1) the aspect of creativity of their job (that is, the chance to try out their own

methods of doing the job); (ii) the social aspect of their job (that is, the chance to do things for other people); and (iii) the aspect of variety of their job (that is, the chance to do different things from time to time). Reference librarians were found to be most satisfied on their jobs with the aspects of moral values, social service, and activity; whereas cataloguers were most satisfied with the aspects of moral values, activity, and achievement. Reference librarians were found to be least satisfied on their jobs with advancement, library policies and practices, and compensation; whilst cataloguers were least satisfied with advancement, library policies and practices, and working conditions. Lastly, of the seven control variables (department worked in; age; sex; marital status; income; length of service at the present library; and, total length of service as a professional librarian) only income was found to be significantly correlated with general satisfaction, but its accountability was only about 3% of all other undetermined variables.

*THE D'ELIA STUDY*

D'Elia (1979) also used the Minnesota Satisfaction Questionnaire in his study of recently qualified librarians. But in addition he also utilised two other related instruments: the Minnesota Importance Questionnaire (MIQ), which was used to measure the vocational needs of the librarians in his sample; and, the Minnesota Job Description Questionnaire (MJDQ), which was used to measure a librarian's perceptions of the characteristics of his job environment. All three instruments measure the same job-related dimensions which are listed above in the Chwe Study.

D'Elia selected a group of recently qualified librarians from six library schools as his sample. Thus, the study is really one of beginner librarians rather than one of people with work experience. The author explains that he wished to limit the study to non-supervisory librarians; that he is interested in the adjustment of new librarians to the job environments of librarianship; and that he wished to minimise the possible effect of withdrawal from the profession by new librarians. 228 respondents completed the MJDQs and MSQs, whilst only 193 completed the MIQs. (The MIQ, it seems, is considerably longer than the other two questionnaires).

The principal objective of the study, according to D'Elia, was to identify those factors which are most highly related to job satisfaction among librarians. Contrary to Wahba, D'Elia found no differences in the degree of job satisfaction experienced by male and female librarians. The two job characteristics most highly related to job satisfaction tended to be the supervision-human relations and ability-utilisation scales. These two scales were found to be representative of two underlying dimensions within the data, which were identified as the supervisory climate of the job environment and the intrinsic factors related to mastery of the job itself, such as ability utilisation, achievement, creativity, responsibility, autonomy, and recognition. D'Elia views these results as contradictory to the conclusions of the Plate and Stone study, since they indicate that there is a positive relationship between job satisfaction and a job environment which is characterised by good supervisory climate and the presence of factors related to mastery of the job itself. A good supervisory climate appeared to be a necessary precondition for librarians (in the sample)

to experience satisfaction with the characteristics related to mastery of the job.

*THE CENTRE FOR LIBRARY AND INFORMATION MANAGEMENT (STEWART) STUDY*

The Centre for Library and Information Management (CLAIM) distributed a questionnaire to some 180 U.K. library workers - both qualified and un-qualified - which was designed to investigate their opinions towards their job. (Stewart, 1982) The libraries included in the survey were chosen as representatives of a wide range of library organisations. A closed question technique was used. The survey covered employee attitudes towards various areas of their work, the library organisation, its policies and administration, the methods and quality of management, relationships with other individuals and groups, personal circumstance that are related to work, employee commitment to corporate objectives, the availability and flow of information, the amount of cooperative teamwork, the involvement in decision-making, and the adequacy of training. The researchers used Herzberg's two factor theory as their framework.

The survey examined the background characteristics of the repondents in order to determine possible influences of age, sex, professional experience and other individual traits or attitudes relating to the factors considered. It was significant that over three-quarters of respondents thought that they were too well qualified for the work that they were expected to perform.

The major factor to emerge was that attitudes in general towards the job tended to be favourable rather than unfavourable. The opportunity for

decision-making was relished by over 80% of respondents, since the democratic manager who sought the opinions of staff was the one people preferred to work for. When asked to compare the factors which constitute an ideal job with the one they have, 82% of professionally qualified respondents in public and university libraries expressed job satisfaction. The percentage in polytechnic libraries was found to be slightly less. The analysis demonstrated little relationship between age, sex or education and general opinions about the employing library organisation, but found that length of employment in the present position and type of previous experience did bear a significant relationship to attitudes towards facets of employment and hence job satisfaction. The primary dissatisfaction in public libraries was pay and in academic libraries lack of recognition. Consultation and communication at all levels and in all types of library organisation appeared to be unsatisfactory. Training and induction were also criticised. There was a high degree of dissatisfaction with regard to career advancement in university libraries.

The dissatisfaction with pay in public libraries was seen by the researchers as a significant deviation from Herzberg's findings. It seems that the employees opportunities to gain additional intrinsic rewards from carrying out duties more effectively were limited by the controlled nature of library work. Also, opportunities to assume new, more interesting duties by working harder in the existing post were curtailed by predetermined workflows. The bulk of the rewards for non-managerial workers were determined not by performance, but by factors largely or totally beyond personal control. Library managers compared with non-managers tend to have more flexibility in gaining intrinsic rewards from their jobs based on their efforts and performance. Their

jobs usually involve considerably greater variety and hence more opportunity to achieve a sense of completion and worthwhile accomplishment.

*THE PRESTHUS STUDY*

Change, including technological change, produces a response from those affected. Librarianship is a labour intensive occupation. Cultural values, group norms, and training will all contribute to the response of the profession when facing change. A major research in this area was carried out by Presthus (1970). Between 1968 and 1970, he directly administered a questionnaire to 1110 librarians and clerical assistants in thirty-six libraries in the U.S. and Canada.

There is a vast amount of data available from the findings. Presthus warns of making generalisations about librarianship from his work, since (as in all research of this kind) it is subject to the limitations of the particular sample. However, library workers were found to have a typical service orientation to their work role. "Self-realization" was ranked first among preferred job values, followed by such intrinsic values as "helping people", "contributing to knowledge", "building a new collection", and "introducing new methods of work". Extrinsic satisfactions, such as "prestige" and "income" were much less salient. Women, generally, were found to have a higher valence towards intrinsic rewards. Job commitment was found to be generally marginal, with "family" and "leisure" preceding or matching "career" satisfactions, except among male librarians for whom "career" was a second priority. Incentives for entering the field included "just drifting into the

field"; followed closely by "affection for books" and "appreciation of librarianship as a significant field".

Attitudes and value preferences of librarians towards professional-isation were found to be rather high. Variations occurred among types of service, with those in cataloguing and acquisitions in public libraries ranking highest on this dimension. There were also some regional differences.

The marginal career position was documented further by the respondents' rankings of a "job satisfaction" scale. The largest proportion of the sample fell in the middle to low portion of the scale. Those in cataloguing and acquisitions, regardless of type of library, tended to rank lowest, along with administrators in special libraries. Specific reasons for this result included (i) the lack of patent objective criteria for evaluating performance; (ii) the felt absence of a career ladder in the field; and, (iii) some tension between their ideal bases of promotion and going norms. Some variations appeared with administrators who, for example, placed somewhat more weight upon interpersonal skills and less on technical competence, compared with those in technical services roles.

Presthus found that most of the library workers in his sample reacted positively to the prospect of automation in its several forms. Regarding the individual's reactions to the actual introduction of change in their own workplace, two-thirds had an ambivalent attitude, ranging from "reluctant acceptance" to a "wait and see" posture. Only a small proportion indicated "positive acceptance". Overall, he concluded that there was some doubt that change would be accepted easily. The majority

of his respondents had a background in the humanities and social sciences. Presthus came to the conclusion that librarians seemed to have personality attributes which were "inapposite to a felicitous acceptance of change and innovation". (p108) Prominent among these attributes were a widespread preference for order in their work situation, reinforced by a pervasive disposition to "wait and see" when confronted by new ways of handling information. Conflict avoidance, order, and dependency were apparantly common needs among his sample, of whom eighty percent were female. He found that there was a certain amount of uncertain career commitment and personal service orientation which was often a characteristic of female occupations. There was only a marginal degree of job satisfaction amongst his respondents, with two-thirds of them indicating that, given another chance, they would not choose the same occupation. Presthus considered that this negative condition, of itself, might provide an impetus towards change together with the acceptance by the individual of the need to "re-tool" him- or herself in the new language and technology of information science and computer operations.

*THE LIBRARY MANAGEMENT RESEARCH UNIT STUDY*

The Cambridge Library Management Research Unit (LMRU) undertook a survey of senior and intermediate staff deployment in 1971. (Smith and Schofield, 1973) The findings covered existing staff establishments in the libraries surveyed, at that time; annual rates of external appointments; growth in establishments; responsibilities of all respondents; subject background of respondents; and duties. Opinions of staff on the work they did and on the use of their qualifications were also sought. One in five of the respondents felt that their subject

knowledge was not used at all, whether it had been gained through formal qualifications or out of personal interest. One in five thought that their professional education was wasted in their current duties. Professionally qualified staff were asked to specify those aspects of library work for which their professional training had prepared them best or worst. Training in cataloguing and classification was thought to have been best by 46% and 34% of graduates respectively, and 48% and 44% of non-graduates respectively. Training in use of bibliographic aids and reference enquiry work was next for both groups. Training in administration was considered by both groups to be the worst aspect (34% and 54% respectively). All respondents were asked to name the aspects of library work which they most liked or disliked. Most respondents favoured some aspect of contact with readers - reference and enquiry work, information work, instruction of readers, etc. Routine clerical work was by far the least liked, followed by management (administration?) and cataloguing. Reference and enquiry work were seen by a proportion of respondents as being most difficult, followed by management and classification. An even larger proportion found cataloguing, together with reference and enquiry work, to be the easiest aspects.

*THE ROBERTS STUDY*

Roberts (1973) reports on a follow-up study of graduates of the Sheffield Post-graduate School of Librarianship and Information Science. Respondents were asked to rate, on a three point scale, their various posts in terms of job satisfaction. 81% gave a positive rating to their job, 11% were neutral, and 7% were negative. Analysis indicated that overall job satisfaction was increased as librarians settled into their

work, making job and duties adjustments and, as experience and confidence was gained, leaving situations which gave rise to dissatisfaction. Respondents were asked to specify those factors (against a checklist) contributing significantly to their own job satisfaction. For respondents in first posts, the majority (58%) considered "colleagues" to be the factor leading to greatest job satisfaction, followed by the "further development of professional experience" (47%) and "salary" (also 47%). The frequency pattern changed for second posts, in that "colleagues", whilst still top of the list, accounted for only 44% of responses. In second place was "further developing professional expertise" (42%), followed by "using specialised subject knowledge".

Job dissatisfaction factors were also sought. Respondents were simply asked to write down these factors without the prompt of a checklist. Top of the list was the "nature of the work" (that is, clerical, routine, undemanding, non-professional), mentioned by 35%. Next highest was "working conditions" (that is, noise, buildings, layout, accommodation generally), which was mentioned by 25%. The third factor was "lack of responsibility", given by 19%. Overall, the survey revealed that the overwhelming majority of the graduates were satisfied with their work and working situations. There was a suggestion that women graduates were less likely to equal men in terms of job satisfaction.

*THE JONES AND JORDAN STUDY*

Jones and Jordan (1975) undertook a survey of librarianship students of Leeds Polytechnic, one year after they had graduated. The purpose of the survey was to find out how successful they had been in obtaining posts,

what types of job they were doing and their degree of job satisfaction.

The three most important factors leading to job satisfaction were

"initiative and freedom to develop one's ideas", "exercising

responsibility", and "colleagues". (No figures or percentages associated

with the responses were given). Job dissatisfaction centred around two

areas: the content of the job, and the attitudes of superiors. A number

of people were concerned about the amount of routine and non-

professional tasks which had to be carried out. This resulted in several

complaints about low status and boredom. Lack of opportunity to use

foreign languages, or to make use of specialised knowledge learnt on the

course were also mentioned as a cause of dissatisfaction. Superiors were

sometimes accused of too much interference in minor matters and of

restricting a person trying to develop his or her own ideas.


*THE SHEFFIELD MANPOWER PROJECT*


The Sheffield Manpower Project, which was referred to in Chapter 3, was

funded by the British Library Research and Development Department, and

was an extensive and detailed survey of staffing requirements for

librarianship and information work. (Sergean, McKay and Corkill, 1976)

The research team used an instrument which they developed themselves -

the Job Analysis Questionnaire (JAQ). 1012 people (73% of whom were

female), from 157 different organisational units, completed the

questionnaire. The research was concerned with the qualitative aspects

of manpower planning, and it was viewed, basically, as an exercise in

job description. In other words, it was assumed that the determination

of personnel requirements or staffing needs depended upon adequate job

descriptions. Certain aspects or variables which characterise jobs in

libraries and information units were identified, and for each variable a

scale or categorisation was devised on which any job could be scored or coded. The JAQ involved the total job situation, where "Job" had the definition: "Work, i.e. the combination of all the tasks in which a person is involved, and the environment in which the work is carried out." (p9) The level of description of jobs was deliberately non-technical so that it would be possible to compare technically different jobs. The descriptions were made by the jobholder him- or herself. Information was collected about the jobholder in terms of biographical particulars. Specific attitudes to particular aspects of the job were identified, as well as overall attitudes to the work, the job, and the profession.

Responsibility in work was considered in relation to seven variables:

   freedom of choice in work;

   type of supervision received;

   need for improvisation;

   independence/interdependence;

   involvement with costs;

   general responsibility for others;

   immediate responsibility for others.

Overall, jobholders described their work as offering freedom of choice, freedom from close supervision, and opportunity for improvisation. The work was also characterised by the need for teamwork rather than for individual and solo effort. Direct work-determined contact with people was a prominent feature of the job for over 80% of the sample.

One section of the JAQ aimed at assessing the jobholder's overall satisfaction with, and adaptation to, their work, their job (post) and the profession. 78% considered that their present work gave them a

chance to do the things they were best at. There was a preference for
work with high user contact, and for work involving either special
materials or a subject emphasis. 70% rated their overall level of
satisfaction with their present post favourably. Attitudes to the
profession were also favourable, with 57% of respondents viewing library
work as better than their original expectations of it, and 49% stating
that they would not want to work in any other field. But 13.4% of
respondents who were graduates considered themselves over-qualified for
their job. Views on the best and worst features of library work were
sought. Favourable comments outweighed unfavourable comments by 57% to
43%. Nearly 84% of favourable comments concerned factors which are
intrinsic to the work itself. Prominent among these were "involvement
with users", "variety", a "sense of service", "intellectually
satisfying", and "personal development". 49% of the unfavourable
comments concerned work-centred factors. The remainder arose from
working conditions (21.9%), and terms and conditions of service (27.9%).
Prominent among the worst features were "routine work", "length and
arrangement of working hours", "physical demands of the work",
"difficulties of, or lack of involvement with, users", and "lack of
status".


*THE SLATER STUDY*


Slater (1979) conducted extensive research into the career patterns and
occupational image of librarians. This research was assisted by funds
from the British Library Research and Development Department. The
results are very comprehensive, but the aspect of the research that we
shall concentrate upon concerns the results of a workers survey: 303
members of the library and information work profession completed a

questionnaire on work motivation, expectations, experiences and self-image.

Respondents were asked to list those aspects of their job which they liked best, and those aspects which they liked least. Of the best liked aspects, 47% placed "feeling useful" or "the service ethos" first; 42% put "meeting the public" (involvement with users?) next; followed by, "intellectual challenge" (38%); "reference and enquiry work" (31%); "freedom and responsibility" (28%); and, "variety, lack of routine" (25%). Aspects that were disliked were more diffuse than the positive "like" pattern. The most significant worst aspects were: "non-professional element" (27%); "organisation on personal/social level" (22%); "monotony, routine, dull" (19%); "low status" (16%); "stress, work pressure" (13%); "no challenge, under-utilisation" (13%); and, "poor prospects" (13%).

*THE RUSSELL STUDY*

Few studies of library workers specifically investigate the views of the clerical assistant. Russell (1985), whose report was mentioned in Chapter 2, presents some interesting data concerning the relationship between professional and non-professional, which in fact suggests the need for change, to the benefit of both parties. In a study of the job satisfaction of a sample of clerical staff, which Russell undertook in 1983, the topic which evoked most comments was this question of the relationship between the two categories of worker. Specifically, the respondents commented on the way non-professionals were treated by professionals, and on how they themselves viewed professionals. There seemed to be a deep resentment of the attitude of professional staff.

There was an unwillingness on the part of the professionals to give credit where it was felt to be due, and a lack of concern for the feelings of the library assistant. There seemed to be a belief that the professional librarians took the interesting jobs leaving the rest for the non-professionals. Criticisms of the professionals included the view that some librarians did not work very hard, and that much of the work done could just as easily be done by library assistants.

Three factors emerged as indicating the need for change in the relationship between professionals and non-professionals. The first concerned the amount of professional time spent on routine, clerical duties. The second was the observation that the ever-increasing pressure on library budgets, most often felt on allocations for staff, was bound to reach a stage where managers would compare the cost of professional and non-professional library staff. The third factor is the clerical-isation of certain hitherto professional activities, such as cataloguing within an automated cooperative, and certain types of reference and periodical collection duties. Russell concludes that "the proportion of professional to non-professional staff does not reflect the amount available of what would generally be recognised as 'professional' work." (p304) He calls for a reassessment of task and responsibility assignments. A wider range of non-professional duties would incorporate varying levels of responsibility and require varying levels of expertise, undoubtedly leading to several grades of library assistant, the top grade overlapping the bottom grade of librarian. This would provide a career ladder for the non-professional which is lacking at the present time.

SUMMARY & DISCUSSION OF THE RESEARCH ON LIBRARIANS AND LIBRARY WORKERS

An attempt will now be made to produce some tentative conclusions, at this stage in the thesis, about library workers and their attitude towards library work and their individual jobs. Each of the research projects discussed above provided a "snap-shot" of the various respondent groups, at a particular time and at a particular point in their working lives. Attitudes and feelings about the job appear to be influenced by several factors, which in themselves will vary from individual to individual, and from library to library.

*POSITIVE CHARACTERISTICS OF LIBRARY WORK*

For the purposes of this present exercise, the level of job satisfaction achieved by the library workers involved in these projects is not of primary concern. The fact that a fairly high degree of job satisfaction is reported, or inferred, is gratifying. Rather, we are concerned, in the first instance, with the positive characteristics of the work. To aid in this discussion, we will look at those aspects of the jobs which appear to contribute to job satisfaction by attempting to summarise the findings from the literature reviewed above. Selected results are presented in tabular form. It has not been possible to do this for all the studies, as sometimes there was insufficient information reported to make such an exercise appropriate. The actual scoring is not considered important, in this instance, even though certain factors were found to considerably outweigh others. The tables attempt to bring together, as far as possible, comparable data. Table 4.1 summarises a set of factors that were specifically reported to contribute to job satisfaction in library work. Table 4.2 provides a summary of the best features, or most

satisfying aspects, of work in libraries, which if present in a particular job would lead, we might assume, to good feelings about the job and to job satisfaction.

There is a good level of agreement amongst the various studies. The general importance of human relations in both job content factors and in working conditions is very evident. Library workers enjoy the service orientation of library work and the involvement with people that this entails, either through direct contact with the user, or through work activity, such as user education programmes, and reference and enquiry work. Colleagues are an important source of satisfaction, and within the context of the job they are something over which the individual has little control. A preference for working in teams was noted.

The work itself is considered one of the best features of library work and it accounts for much of the job satisfaction gained. Specific functions of the job - cataloguing, classification, user education, reference and enquiry work - were mentioned in this respect. Library workers place a high value on work that leads to personal intrinsic gratification. They like work which is intellectually satisfying; has much variety; allows them to display initiative; and, more importantly, gives them a sense of achievement. It seems that it is very important for library workers to undertake work which allows them to exercise responsibility and, to a lesser extent, authority. They require, and receive, a certain amount of independence and freedom to develop their own ideas. It is also a source of satisfaction to library workers to be able to use acquired professional expertise in carrying out their job. They need to have the opportunity to develop both professionally and personally.

| ROBERTS (1973) | PLATE & STONE (1974) | JONES & JORDAN (1975) | CLAIM ✵ (1982) |
|---|---|---|---|
| (Second posts) | | | |
| Colleagues. | Sense of achievement. | Initiative & freedom. | Responsibility. |
| Professional development. | Recognition. | Responsibility. | Achievement. |
| Using acquired prof. expertise. | Work itself. | Colleagues. | ? |
| Responsibility & authority. | Responsibility. | Salary. | ? |
| Participation in planning/ admin. | Advancement. | Participation in admin. | |
| Salary. | Professional/) personal ) growth. ) ) Interpersonal) relations. ) | Using profess- ional expertise. | |

✵ This study included both professionally qualified and clerical workers.

Table 4.1 Summary of factors that contribute to job satisfaction in library work.

Many library workers, irrespective of a professional orientation to their work, obtain satisfaction from participation in planning and developing the library service, and in management and administration. External rewards or acknowledgements, such as salary, recognition and advancement, do not rate high in the list of satisfactions or best features of library work. It is a well-documented fact that professional library work is not highly paid, so the lack of satisfaction in this area is not surprising. Lack of advancement and lack of recognition (by

others?) does not detract from a feeling of satisfaction from personal achievement.

On the whole, "hygiene" factors (as defined by Herzberg) are not particularly evident in these summaries of satisfactions or best features of the work of library personnel, with the exception of interpersonal relationships and salary.

| SMITH &<br>SCHOFIELD<br>(1973) | SHEFFIELD<br>MANPOWER.<br>PROJECT *<br>(1976) | CHWE<br>(1978)<br><br>*Cataloguers* | *Ref.*<br>*Librarians* | SLATER<br>(1979) |
|---|---|---|---|---|
| Reference &<br>enquiry work. | Involvement<br>with users. | Moral values. | Moral values. | Service. |
| Management. | Variety. | Activity. | Social service. | Involvement<br>with users. |
| User education. | Service. | Achievement. | Activity. | Intellectual<br>challenge. |
| Contact with<br>users. | Intellectually<br>satisfying. | Co-workers. | Achievement. | Reference &<br>enquiry work. |
| Cataloguing. | Personal<br>development. | Independence. | Co-workers. | Freedom &<br>responsibility. |
| Classification. | Books & library<br>materials. | Responsibility. | Variety. | Variety. |

* This study included both professionally qualified and clerical workers.

Table 4.2 Summary of the "best" features, or most satisfying aspects, of library work.

The characteristics of library work are not all good. Bad aspects can lead to job dissatisfaction, and they need to be investigated along with the good aspects in any study of the job preferences of library workers. Factors that lead to job dissatisfaction are also not necessarily the opposite of those factors that lead to job satisfaction. From the results of some of the research described above, an attempt has been made to extract comparable data concerning sources of job dissatisfaction. Table 4.3 summarises the factors that were reported to lead to job dissatisfaction, and Table 4.4 summarises what were regarded as the worst features, or least satisfying aspects, of library work.

The most commonly mentioned aspect of the work which contributes to job dissatisfaction is, not surprisingly, its routine, clerical nature. For the professional worker, this also includes the non-professional element of his or her work. This is quite clearly the worst aspect of library work as well as being a significant characteristic. Associated with this finding, we note that several studies reported that a proportion of their respondents felt themselves to be overqualified for the work they were doing. Other job content factors are more diffuse. Interaction with the user is sometimes disliked, and yet at other times lack of contact can be a source of dissatisfaction. Library workers do not like their skills and expertise to be underutilised, nor do they like there to be no challenge in the work. The physical demand of the work, and some technical aspects, such as cataloguing and classification, may be disliked by some, but on the whole, we might assume that the non-routine/non-clerical elements of the work (particularly that of the

professional worker) are not normally felt to be sources of job

dissatisfaction.

| ROBERTS (1973) | PLATE & STONE (1974) | JONES & JORDAN (1973) | CLAIM * (1982) |
|---|---|---|---|
| Routine. | Institution policy & administration. | Routine. | Lack of recognition. |
| Working conditions. | Supervision. | Low status. | Lack of consultation. |
| Lack of responsibility. | Interpersonal relationships. | Boredom. | Lack of communication. |
| Organisation of work. | Lack of achievement. | Lack of opportunity to use expertise | Salary. |
| Lack of participation. | Lack of recognition. | Supervisors. | ? |
| Infrequent contact with users. | Working conditions. | ? | |
| * This study included both professionally qualified and clerical workers. | | | |
| Table 4.3 Summary of job dissatisfaction factors in library work. | | | |

Several aspects of the job context are disliked, and contribute to

feelings of job dissatisfaction. In particular, the actual working

conditions seem to be a major source in this respect, that is, the hours

of work, the physical environment, accommodation, noise, buildings and

layout.

Much dissatisfaction with regard to the status of the job is indicated. This feeling might be a reflection, for example, of the individual's own perception of the job, or of the attitude of others, particularly users. Perhaps associated with this aspect is concern with low salary, which was mentioned in several studies. Linked to this is lack of recognition and lack of appreciation for the work done. There is also disquiet with poor prospects and lack of advancement.

| SMITH & SCHOFIELD (1973) | SHEFFIELD MANPOWER PROJECT * (1976) | CHWE (1978) Cataloguers | Ref Librarians | SLATER (1979) |
|---|---|---|---|---|
| Routine & clerical, | Routine, | Advancement, | Advancement, | Non-professional element, |
| Cataloguing, | Hours of work | Library policies & practices, | Library policies & practices, | Personal/social organisation, |
| Management, | Physical demand, | Working conditions, | Compensation, | Routine, |
| Issue Desk work, | Lack of user involvement, | Compensation, | Supervision - technical, | Low status, |
| Classification | Low status, | Social status, | Supervision - human relations, | Stress, ) ) ) ) |
| - | Management/ organisation, | Supervision - human relations, | Working conditions, | No challenge/ underutil- isation ) ) ) |
| | | | | Poor prospects, ) |

* This study included both professionally qualified and clerical workers,

Table 4.4 Summary of the "worst" features, or least satisfying aspects, of library work.

Interpersonal relationships, as well as being sources of job satis-
faction, appear to be sources of job dissatisfaction. Specifically,
supervision by, and of, others is a major problem, and perhaps indicates
a need for management training and development of interpersonal skills
at different levels in the library. Managerial and organisational
aspects, such as institutional policies and practices, and lack of
communication and consultation, were also reported to be sources of dis-
satisfaction.

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SUMMARY

This chapter has undertaken a review of several studies of librarians
and library workers as reported in the literature. The aim has been to
determine, as far as is possible, the job preferences of library
workers, and to gain a greater understanding of the characteristics of
library work.

The majority of library workers like to work with other people, both
colleagues and users. They enjoy the service orientation of the job,
which permits them to be of assistance to the untrained user. In
addition to the human element, they want to be able to use their
professional expertise and to practice the specialist skills of
librarianship. They also like a variety of work which is intrinsically
satisfying in a number of ways, as well as intellectually challenging,
allowing them a sense of responsibility and achievement.

In many instances the job preferences of the library worker are satisfied by the work carried out. The characteristics of the work in libraries are such that the library worker often has the opportunity to do a satisfying job. However, the high level of routine, clerical tasks in many jobs is a major source of discontent, particularly for the professional worker. The physical working conditions also seem to be poor features. Dissatisfaction with the status of the profession, and lack of recognition for the work done, are negative aspects. (Is it significant that the status of librarianship was not mentioned as an important satisfier in any of the studies reviewed?) Such characteristics may also contribute to the general low remuneration awarded to library workers by their employing organisations, despite representations by the professional associations.

The findings of this chapter support those of the preceding one, and point to the need for a thorough examination of the work done in libraries, not only with the aim of making the job more satisfying for the library worker but also to rationalise the work, so that there is a clearer, recognisable and logical distinction between professional and non-professional duties. In addition, it would seem that there is a need to scrutinise the routine clerical aspects of the work, in order to find out how they might be reduced, if not replaced, by other methods of work (such as, the use of computers).

The next chapter will review the development of automation in libraries, and will investigate what impact automation has had on the structure and organisation of libraries and on the nature of the work processes.

CHAPTER 5

AUTOMATION IN LIBRARIES

The first part of this chapter will provide a brief historical account

of the development of automation in libraries, with particular emphasis

on the housekeeping functions of cataloguing, acquisitions and

circulation. This background is considered necessary to any under-

standing of the effects of automation on libraries. The second part of

the chapter will review the literature on automation in libraries, so

that some understanding may be gained of the effects of automation on

the tasks carried out, as well as on the structure and organisation of

libraries.

Fine (1986) argues that libraries were amongst the first public

institutions, particularly in the U.S., to recognise the potential of

computer technology for the management of information. (p84)  This

technological revolution has been a complex experience for librarians.

Hundreds of articles and books in the library and information science

literature describe the various ways in which this has taken place. Many

of the accounts are descriptive; others are analytical or critical;  and

many are optimistic of the future, although there were some

practitioners at the start who predicted dire outcomes. The total number

of working systems that have existed (or are still in existence) is

probably unknown. According to Woods (1982), 200 libraries developed

automated systems in the U.K., in the period up to 1982.  The number in

the U.S. must be many times bigger. Some systems have never been written

up, some were not described until after they had become obsolete, and

others were reported as operational long before their first successful

run. It is not the purpose of this chapter to summarise these accounts,

but rather to highlight the significant stages in the use of computers in libraries.

Montague (1978) divides the development of automation into three phases: the Development Phase, the Operational Phase, and the Integrative Phase. Montague's article was written in the late 70s and is based on the experience of U.S. libraries, but the distinction between the stages, corresponding loosely to each of the last three decades, is considered by this writer to be a useful one for presenting this review. It should be appreciated that the division into these phases is contrived and, to an extent, arbitrary. The beginning and end of a phase is indistinct, and in terms of technological advances, there is a degree of overlap between them.

AUTOMATION IN THE 1960s: THE DEVELOPMENT PHASE

In the 1950s, many writers in the professional literature were discussing the possibilities of automation in its widest sense. Kesner (1982) notes that during the 1960s public and academic libraries, particularly in the U.S., underwent an unprecedented period of growth. The need for rapid manipulation of data seemed pressing, and the funding appeared to be available to those who were willing to experiment. The computer was recognised as a great manipulator of numerical data, and some in the library world realised that this facility could be used in a similar way on bibliographical data. This Development Phase was a period of trial and error, experimentation, and learning.

Many librarians who experimented with computers at this time became disillusioned by their limitations. Koenig (1987) points out that the

technology at this stage was not actually very appropriate to library applications, since such systems "are far more dependent upon storage and communication capabilitites than upon computational capabilities" (p4). Technological advances in disk storage capacity and telecommunications did not start to appear until the late sixties.

Local, batch processing systems dominated the early approach to automation, primarily because that was what the available technology could support. A characteristic of this early experimentation in automation was that the libraries concerned would normally use spare capacity on the large, expensive mainframe computers held by their parent institutions. Many libraries as a result came to rue the dependence on the centralised facility. Library applications were not treated seriously by many computer managers, and once pressure on the computing facilities began to mount, as inevitably it did, library processing was put on a lower priority. There was a general under-utilisation of computational capabilities, and a lack of understanding by the computing professionals of the size, scope and potential of library automation.

The prime candidates for automating during this phase were serials listings, circulation control, acquisitions, bookfund accounting, and occasionally cataloguing. Choice of application depended upon such factors as the interests of library management, the interests of funding sources, available expertise, the particular pressures being felt in the institution, the (initial) interest of the computer centre personnel, and the computing services being made available. Very often the success of a project would depend upon the enthusiasm and hardwork of particular individuals within the library. Relatively few libraries were touched by

the technology and in those that were, the new processes affected only small sections of the total library operations. Often the automated systems were merely superimposed on existing manual systems, with little change to clerical procedures, or any attempt at integration.

The batch processing systems created during this period had limited capabilities. There was no easy way to share systems, and library networks and cooperative endeavours were the dreams of a small number of forward-thinking people.

AUTOMATION IN THE 1970s: THE OPERATIONAL PHASE

According to De Gennaro (1983), three major developments occurred in the early 1970s which had profound and far-reaching effects on the course of library automation and library management. These were: (i) the emergence of the first relatively cheap (in comparison to mainframes), powerful minicomputers; (ii) the growth of sophisticated online reference databases, such as those marketed by the National Library of Medicine (MEDLINE), Lockheed Information Systems (DIALOG), the System Development Corporation (ORBIT), and Bibliographic Retrieval Services (BRS); and (iii) the development of powerful telecommunications capabilities. Koenig (1987) supports this view, noting that the advent of "shared communication capabilities, particularly packet switching" resulted in a "significant but one-time drop in communication costs". (p5). In addition, Koenig also observes that a characteristic of this stage is the exponential growth of storage capacity.

As a result, many of the pioneering libraries purchased their own machines, thereby becoming independent of the centralised computing

facility of their parent institution. This move towards "distributed processing" was very attractive to library managers, who realised that it would allow local direction and control, and in turn flexibility in processing and in the assignment of job priorities. Many had become disenchanted with the enormous data processing costs of mainframes, and the lack of progress being achieved. These large computers required special cooling and power sources, constant care and attention, and nearly continuous running to make them cost effective. Minicomputer systems, on the other hand, were economical, relatively maintenance free, easy to operate, and afforded immediate user access. Sometimes use would still be made of· the central mainframe, particularly in the manipulation of large amounts of bibliographic data when updating library catalogues prior to printing them out onto paper or computer output microform - a task which requires an enormous amount of computer memory and processing power.

A significant feature of this stage was the widespread adoption of the MARC (MAchine Readable Cataloguing) format for cataloguing data. The MARC project was piloted by the Library of Congress (LC) in the U. S. in 1966. The project team's basic objective was to automate the production of LC catalogue cards, on which many American libraries were dependent at that time. From this initial experiment, a MARC format was developed which has since been taken up by the British National Bibliography (which later became part of the British Library), and thus in turn by many British libraries, and by national libraries in many other countries. In addition to automating the production of catalogue cards, where that was required, the various MARC distribution services permitted the sharing of machine-readable data across computer systems, within national boundaries as well as between countries. Whilst

individual MARC formats may have certain differences, it is notable that all cataloguing systems developed since 1970 are classed as either MARC based or non-MARC based.

The availability of MARC data from the national bibliographic agencies lead to the emergence of large computer utilities and service networks, all of which were based largely on shared cataloguing. Libraries had both the technical means and the economic incentives to band together to develop large cooperative networks. These cataloguing cooperatives permitted the sharing of resources between members, who in turn benefitted from economies of scale, and shared expertise. Many libraries were able to reduces backlogs of new accessions awaiting cataloguing. Some mounted extensive retrospective cataloguing programmes, thereby enhancing the value of the union databases. Sometimes it was possible to redeploy staff in the technical services area onto other duties. Processing was usually carried out on large mainframes in a batch mode or online, and output could be catalogue cards or computer output microform. Local online systems were still too expensive and too complex for the majority of libraries to develop and operate themselves. The cooperative networks helped distribute the costs of the technology among a large number of users. Thousands of libraries were thus able to experience computerised systems, preparing the market for the pervasive use of new technology in the next decade.

In North America, the library world suffers from the sheer size of the country and the comparative isolation of the different groups of state and regional libraries from each other. It was natural for libraries relatively close to one another to set up (automated and non-automated) cooperative ventures of various kinds, such as interlibrary lending

schemes, joint acquisition projects, shared cataloguing networks, and so on. Pioneer utilities in North America include the Online Computer Library Center Inc. (OCLC), the Research Libraries Group and their Research Libraries Information Network (RLIN), the Washington Library Network (WLN), and the University of Toronto Library Automation Systems (UTLAS). Boss (1984) estimates that by the early 1980s, nearly 3000 libraries in North America were undertaking automated cataloguing using one of these four cooperatives. (p5) De Gennaro (1983) observes that more than twenty regional service networks were established in the 70s, primarily to broker the services of the biggest utility – OCLC. (p77) OCLC provided its first online service to a single library with one terminal linked to OCLC's sole computer in 1971. By the end of the decade, Flaherty (1981) notes that OCLC was serving nearly 3000 terminals in nearly 2000 libraries and its network system required a complex of 30 mainframe and mini computers. (p116)

In the U.K., there has for a long time been a philosophy of interlibrary cooperation on a national scale, demonstrated by the setting up quite early on of local, regional and national inter-lending schemes. Gradually libraries in the U.K. started to adopt the new methods that they saw demonstrated across the Atlantic. Several cooperative automation projects were formed, initiated by groups of local academic and public libraries. For example, Birmingham Libraries Cooperative Mechanisation Project (BLCMP) was formed in 1969, initially to develop a shared cataloguing network; South Western Academic Libraries Cooperative Automation Project (SWALCAP) was also set up in 1969, to plan and implement a shared circulation facility; London and South Eastern Library System (LASER) was formed in 1970 to develop a computerised interlending system between members; and, the Scottish Libraries

Cooperative Aútomation Project (SCOLCAP) was formed in 1976, as a shared acquisitions and cataloguing utility.

De Gennaro (1983) notes that the goal of the pioneering libraries of the 1960s was to develop the total integrated library system which would include all library housekeeping functions. Some advocated developing the total library system as a single package, whilst the more practical ones set out to design and implement the various modules one at a time and to eventually link them all into the total system. The technology available at first would not support online processing, and experience soon showed that it would cost more to develop, operate and maintain these systems than most single institutions could afford. Thus in the Operational Phase the major thrust of library automation shifted from developing self-sufficient local systems to developing multifunction systems that could be shared by a group of libraries in a network environment. But by the end of the Phase, there was a growing consensus that circulation, acquisitions, serials control, and the public access catalogue would be better and more economically provided on local systems rather than by the large networks.

Another dream of many librarians early in this period - on both sides of the Atlantic - was that of the development of a national bibliographic network, to act as the basis for the longed-for total integrated library system. The idea was for all individual networks to link together with the national bibliographic agency to provide a single network. However, this vision too has crumbled because of the enormous complexities of the task, which include lack of agreement on standards and copyright/ licensing issues. Also, recent advances in telecommunications capabilities allow alternative and more economic strategies, including

the linking of different computer systems, whilst the systems themselves
are maintained separately and independently.

In summary, we can see that a significant feature of this stage is the
development of local systems (on a relatively small scale) and network
systems (on a large scale) in parallel.

AUTOMATION IN THE 1980s: THE INTEGRATIVE PHASE

The 1970s saw the appearance of commercial suppliers in the local
library system market. These "turnkey" systems represent an arrangement
whereby a single vendor provides all the software and hardware for the
functions to be automated and assumes responsibility for system
installation and maintenance. Most of the early turnkey installations
were circulation control systems, and these provided librarians the
opportunity to use automated technology in their own environment to
exercise control over their own collections. By the early 1980s, turnkey
integrated library systems based on powerful minicomputers, that could
be operated at the local site, were being marketed by the commercial
sector. An integrated system is a multifunction system in which the
functions share a common bibliographic database.

The locus of initiative and influence in determining the direction of
library automation and networking had shifted from the bibliographic
utilities and networks - which were seen to be becoming increasingly
inflexible and unresponsive to the changing needs of their users - to
these commercial concerns. The eighties have brought a new era of
austerity to libraries. Savings have to be made where before there had
seemed to be, if not generous, at least adequate funding. Inevitably,

library managers see their staffing budgets rising, their bookfunds reducing or at best stabilising, and computer technology advancing and making possible even cheaper means of automating library processes.

Computers have got smaller, cheaper, and more powerful. Microcomputer systems and products are flooding the library community. Inexpensive mass storage facilities have been developed. Significant computer processing power is becoming available to even the smallest of libraries. The microcomputer can also be used as part of a larger minibased system, as well as linked to other machines in a local area network. They can be used as sophisticated terminals particularly in online information retrieval activities. Library work generates reports, correspondence and newsletters, for which spreadsheets, word processing and other administrative packages can be utilised.

Thus libraries no longer need to join the large networks to get the benefits of automation. Hildreth (1988) notes that librarians are being "increasingly driven by the urge toward self-determination and control to exploit locally available technology to solve local problems." (p228) This trend towards decentralisation and local initiative does not necessarily reflect a reduced commitment to cooperation and resource sharing among libraries. There is a continuing need to share limited resources and maintain a professional allegiance to cooperative goals and endeavours. Membership of the cooperatives has therefore not decreased, and in many cases has increased. For example, OCLC now serves more than 3000 libraries, world-wide, and its database stands currently at about 20 million records (which is considerably larger than that available through any other bibliographic utility, including the various national library databases).

The cooperative networks and bibliographic utilities have responded to the commercial drive of the turnkey suppliers, by adopting new strategies and in turn developing local systems. Whilst the initial impetus for this came from the demands of the membership, the actual customer base is usually wider, and non-members too can buy these local systems and use them in standalone mode or linked to the central database for the sharing of bibliographic data. OCLC markets its local library system LS2000. BLCMP has introduced its own integrated system, BLCMP Library System (BLS), which is still under development. SWALCAP market their integrated library system, which is known as Libertas. The competition and appearance of new products from these various sources are a reflection of the larger number of librarians at all levels who have become quite sophisticated in their knowledge of computer technology as applied to local library functions and resource sharing activities.

The integrated local systems are developing along with the technology of networking hardware and software, and telecommunications capabilities. These will encourage the continuing process of decentralisation. The mid-1980s have also seen the emergence of optical discs as a significant revolution in information storage and retrieval. Several online database hosts have made their databases - either whole or in part - available on Compact Disc-Read Only Memory (CD ROM) either as a once-only purchase or updateable on a subscription basis. Access is achieved through a special reader attached to a microcomputer. For the user the interaction with the disc is similar to the online service, except that there are no communication costs. The impact of this technology has been phenomenal. The commercial sector and the bibliographic utilities have quickly recognised the potential of CD ROM for the storage and distribution of

bibliographic data. OCLC, the Library of Congress, the British Library and others are experimenting with, or actually producing, CD ROM products. CLSI amongst the turnkey suppliers has recently announced a CD ROM facility in its cataloguing module.

A major change in emphasis in the development of automation in libraries has come about in the Integrative Phase. The focus of the 1960s and 70s was on the housekeeping functions, that is, those operations performed by technical services. This focus has now moved into the area of public and reader services, with the emphasis on online public access catalogues and other computer-based reference services provided directly to the public. Cochrane (1983) and others, see the success of these ventures depending on collaborative effort between reader and technical services, which will eventually have an effect on the organisation of library staff.

There are now many options open to libraries for automating their services. The challenge for the manager is to acquire the appropriate technology which best fits their particular situation and circumstances, which fits the resources available, and which is the simplest technique that will get the job done. It seems likely that more libraries will opt for turnkey systems, which are becoming more comprehensive and more reliable. A typical scenario might be as follows. The library will perform in-house, and on standalone computers, the various housekeeping tasks of ordering, bookkeeping, original cataloguing, circulation, serials control and financial control. Gateways will be available to several external online information retrieval systems. Library staff will have access to the bibliographic databases of one or more utilities for acquisitions and interlibrary lending purposes and to share

cataloguing records. In the academic library, access by users to local

holdings information, including the lending status of sought items, will

be possible through any terminal on the campus computer network. Access

to the holdings of other academic libraries will be accomplished via

packet switching methods or national networks. At the time of writing,

in the U.K., the Joint Academic Network (JANET) links the online

catalogues of several universities such as Durham, Edinburgh and

Cambridge. Individual users at home can have access to the library's

local databases using the telecommunication capabilities of their

personal computers. Within the library, messages between staff can be

transmitted via terminals located on their desks, scattered throughout

the building, using electronic mail. JANET and BT GOLD make possible

electronic personal communication on a national scale. Services to users

might include the creation of online local community information systems

geared to the particular needs of the user population.


The use of computers prior to this stage had been mostly limited to the

storing of records, and the retrieval and reporting of portions of these

stored records as required, with little in the way of record transform-

ation. The Integrative Phase has brought with it the ability to provide

reliable management information systems, to permit the library manager

to plan effectively not only for the future needs of their service, but

also for the optimum use of resources in the present. Circulation

statistics highlight pressures on existing stock to aid book selection,

as well as indicate non-used stock for possible relegation to remote

stores or even withdrawal. Patterns of use between different user groups

are valuable information. For example, in academic libraries this data

provides insight into cross disciplinary use of material, which aids the

allocation of the budget between subject areas. Decreasing funds

necessitate the continual monitoring of expenditure, to ensure that the

library not only keeps within the budget, but also does not underspend.

The cost of periodicals and other serials consume an ever greater

proportion of the budget. Prediction of future expenditure and commit-

ment is essential in the preparation of estimates, and indicates the

level of cancellations that may be needed in the next financial period

just to stay on an even keel.

Another facet of the move towards integration and decentralisation, is

the marketing of online systems by book and serial agents. These systems

are the offshoots of the agents' own housekeeping systems. A library

will be given access to the agent's database, enabling it to search the

file for appropriate information on books or serials, and then transmit

orders for new titles to the company's computer for subsequent process-

ing. Some serial systems permit the library to maintain all their

periodical and serial order records (sometimes regardless of source) on

the agents own computer, as well as payment records and check-in files.

Other systems utilise microcomputers locally to do the daily housekeep-

ing routines, and provide either direct lines or dial-up facilities for

the interrogation of the host database. These services are often made

available to non-customers on a subscription basis.

AUTOMATION - THE FUTURE

Prediction of the future as far as automation in libraries is concerned

is fraught with dangers and unknowns. The position now is very different

to what many would have thought possible just ten years ago. Integration

and decentralisation, mass storage devices and the microprocessor are

only part of the matrix. Acceptance of international standards such as

Open Systems Interconnection (OSI) will make possible the linking of different computer systems regardless of hardware and software compatibility. Telefacsimile has already had a limited but substantial impact in the rapid and economical transmission of documents for interlibrary loan or other purposes. There is presently much debate and research in the field of electronic document delivery systems. Many publishers now use the new technology in their production processes. Text prepared and stored in machine-readable form, with the object of being printed out electronically onto paper, can also be made accessible online if suitably indexed. Research into the economic feasibility of transmitting and receiving the full text of material by means of tele-communications facilities, including satellite, is underway in the U.K. with the involvement of the British Library and several publishers.

Blunden-Ellis (1987), in a market survey of library automation systems in the U.K., sees a slowing of growth in the market towards the end of the decade which he predicts will lead to more competition between the system suppliers. In addition to a change in emphasis towards improved services, cost controls and product quality, there could be several new focuses for competition, such as the small library market, new information technology applications and specialist services. New product development will in turn become very expensive. Blunden-Ellis sees several implications in these predictions for the library customer, whom he sees as becoming increasingly experienced and informed in the area. The customers should benefit from the increased competition. For example, libraries should experience enhanced buying power, since suppliers will regularly offer advantageous terms, either to upgrade current systems or indeed to switch to another supplier. But it will

become more difficult to differentiate between available products, since

the technology itself draws competitors' products together.


WHY AUTOMATE?


The previous sections have attempted to trace the evolutionary process

of automation, specifically the use of computers, in libraries from the

1960s to the present. At this stage it might be appropriate to discuss

the question of 'Why automate?' in the first place.


Few will argue against the view that the technology associated with

automation can support a whole range of services to the user not

possible within a manual system. In an article in 1969, Cuadra (1969)

argues that:

> "libraries need to concern themselves with technology not just
> because it can help to meet some current needs, but because it can
> help to create new needs to be satisfied. In a rapidly evolving
> technical society like ours, a service function that does not create
> new needs can justifiably be suspected of being out touch with its
> users and perhaps out of touch with reality."   (p760)


Mackenzie (1981) - Librarian of St. Andrews University Library -

summarises ten reasons that have been used at one time or another - some

rather more respectable than others -  to justify automation. These are,

briefly:

> Keeping up with the (academic) Joneses; because it's there
> (technical challenge); professional advancement; professional
> advancement, with a research grant available to meet the cost; using
> spare machine capacity; manual system breaking down; removing
> drudgery from staff; giving staff a chance to learn new techniques;
> giving users a better service; and, saving staff (and hence money),
> or containing the cost of future expansion. (p3-6)

All these reasons, or variations of same, either singly or in multiples,

can be found in the literature. The last two - improving services and

saving money — are the most often repeated. Naylor (1987) — Librarian of University of Southampton Library, which itself has been a leading institution in library automation in the U.K. — adds a third factor to these two, one which he calls 'the Everest factor'. He explains that some library automation initiatives can only be understood fully "as further proof of man's tendency to want to do something if in fact it is thought to be possible — and, preferably, difficult." (p6)

Whether automation is cost effective has not yet been satisfactorily established, since many librarians do not seem to agree on what constitutes the economic benefits of automation. Studies have been carried out, and there are various respectable methods of comparing the cost of automated systems versus manual or semi-automated ones. For example, Buckle (1983), based on his considerable experience in BLCMP and then in OCLC, provides the theory behind a costing model and is quite convinced of the demonstrable benefit of automation. It has already been noted that the cost of buying computers is coming down rapidly, but labour costs continually rise. Another important point is that it is extremely difficult to acquire just enough computing capability to take over or speed up the chosen manual process(es). Often additional capabilities are provided that go some way beyond the original specification and the needs of most users. Since many of these 'extra' features are highly desirable, libraries naturally tend to take advantage of them. Hence, the cost of performing a single task may be reduced, resulting in a reduction in certain unit costs, but total operating costs rise because more work is being done. Veaner (1981) observes that "when there is capacity to perform more work, there is a demand for more work." (p34)

Gorman (1985) sees automation as a tool for the library manager. He argues that it is not fundamentally different from any of the other solutions to the problems faced by libraries that have been used in the past. He goes on:

> "[Automation] is a way of doing things more rationally, it is a way of abolishing useless work, it is a way of doing more work with less money and sometimes more work with fewer staff." (p4)

Improving services to users does seem to be ostensibly one of the most compelling reasons to automate, but one must not assume from this that automation is necessarily always the best solution to a library's problems. Boss (1984) urges that the library must "define its problems and identify and evaluate all available alternatives" (p8) before making any decisions. Veaner (1981) advises that "it is always best to apply an appropriate technology, one that fits both the work to be done and the budget available to pay for it" (p35), and the 'appropriate technology' he has in mind need not always be complex to be effective (that is, he does not advocate computing technology as always being necessarily the correct solution to a problem). Raitt (1984) suggests:

> "Automation is, however, not to be undertaken lightly. It is a function of, amongst others, the number of books and journals taken by the library, the number of transactions, the number and quality of staff, the financial resources, the pattern of library and information use, the facilities for computer installation and the degree of backup required and available." (p10)

Mackenzie (1981) advocates that if the present manual system is not performing adequately, then the first option to be considered, and in his opinion quite possibly the best, is "to change to a different manual system." (p7) Veaner (1981) warns that:

> "the application of an expensive new technology can sometimes be disappointing - it can be discovered that a significant portion of the 'savings' could have been realized through more effective management of manual systems, through clarification of goals and objectives, by the selection of better trained and better qualified employees, by better supervision." (p34)

Boss (1984, p8) asserts that one of the most significant decisions of a library manager's career is the decision to automate one or more functions of a library, bearing in mind the capital investment involved, and the associated organisational changes that go with it.

## LIBRARY EXPERIENCES OF AUTOMATION - A REVIEW OF THE LITERATURE

This review will concentrate on the impact of automation on the organisational structure of libraries and on the nature of the work carried out. Reference will be made to some studies that have been undertaken and to other published sources. There has been comparatively little research done in the field of the human and psychological consequences of the introduction of automation in libraries. Consequently, the evidence that has been identified as being relevant to the main thrust of this research is limited. When looking at this material, it is important to understand the context in which the studies will have been carried out.

The 1960s were characterised, as we have seen, by the dominance of limited batch processing systems, utilising spare capacity on the local computer centre's mainframe machine. Later in the decade examples of online systems began to appear, although these were few in number. Librarians, on the whole, required the assistance of specialised computer personnel to program and operate their systems. The programming personnel were often provided by the local computer centre, although such people were not necessarily committed to library automation, since their professional commitment would normally be to the computer world. Systems analysts did not always appreciate the complexity and extent of a library's computing needs. Access to adequate computer power was often

the deciding factor in the progress made in any project. Woods (1982),
in his review of library automation, notes that promising systems were
abandoned when the computer manager realized how much of the computer's
store would be needed to hold a small catalogue. (p23)

Comparatively few librarians learnt to program, though many saw the need
to study the basics of systems analysis and design. It was not really
envisaged that librarians would ever need to become expert in using and
handling computer systems. De Gennaro (1968) argued for the assembling,
training, and holding of experienced library systems people, although he
recognised that to attract competent computer staff libraries would have
to pay higher salaries than was normal for other lines of library work.
His library automation group would consist of several different types of
personnel, with different kinds and levels of qualifications, including
a project head, systems analysts and programmers. Interestingly,
De Gennaro spoke out on behalf of the support workers:

> "In any consideration of library automation staff, it would be a
> mistake to underestimate the importance of the role of keypunchers,
> paper tape typists, and other machine operators; it is essential
> that these staff members be concientious and motivated persons. They
> are responsible for the quality and quantity of the input, and
> therefore the output, and they can frequently do much to make or
> break a system." (p84-85)

Weber (1971) supports the idea of the team of experts for the design of
any computer system, and adds a statistian and/or a financial expert as
well as a librarian to De Gennaro's list. Weber, Rogers (1972), Jacob
(1972) and others advocated specialised training courses (either
externally organised or in-house) for librarians responsible for
computer systems, in order for them to be able to communicate
effectively to the computer professionals. Many thought it was important
for the library to maintain control over their data processing
activities and that such activities should not be delegated solely to

data processing personnel. This view was carried forward very much into the 1970s and 80s, and a new 'breed' of librarian appeared - the systems librarian - whose primary responsibilities within a particular library mostly concerned the investigation of new technology and its successful application if appropriate.

When computers first began to be used, the majority of library staff were unaffected by the new processes since the computer systems implemented more often than not replaced existing manual ones. Batch processing involved the completion of data forms, for example, which were little different to the previous manual forms. Spyers-Duran (1979) notes that automation in this period primarily affected the unskilled or semiskilled library employees by performing routine tasks. Data preparation was mostly carried out on paper tape or 80-column cards, either by trained keyboarders or retrained typists. Checking by supervisors or professionals involved the same care and attention as previously given to manually typed operations, with perhaps the additional checking of codes for data processing. Output would be on conventional computer printout or, as in the case of cataloguing systems, on the traditional 5" by 3" cards.

Some recognised that there was a potential problem in library automation concerning the introduction of new techniques into a functioning organisation. For example, Markuson (1972), in reviewing automation developments in the 1960s, expounds three facets to this problem:

> "1. the reorganisation of routines to permit effective use of computers,
> 2. the retraining or shifting of staff to permit more effective use of people, and
> 3. the introduction of new operations in such a way they do not disrupt the vital functions of the library." (p46)

Markuson recognised that, as library computer systems were still very new at that time, evaluative data about the impact of the computer was not generally available, and she urged that more attention should be given to the human and organisational aspects of automation in the next decade.

The 1970s saw an explosion of activity in the field of automation, and a consequent growth in the literature on the subject. The new online systems produced varied and significant changes in the libraries concerned, and involvement in cooperative networks helped spread expertise and knowledge. Often network membership was a stimulus for the development of other automated activities at the local level. But some-times inhouse experience of automation preceded active participation in the networks. Montague (1978) observes that automated systems generally became more flexible in the 70s, allowing a library to perpetuate local idiosyncracies and procedures if wished.

The importance of OCLC, and the extent of its impact in the U.S., is demonstrated by the number of studies which have been carried out in individual libraries and user networks, and the number of articles which have been written about its implementation and use. A team of cataloguers from Kent State University conducted a study of twelve state university library members of OCLC, covering the period 1971 to 1973. This period included two years operational experience of the online cataloguing system. The study (Kent State Univerity, Cataloguers Group, 1975) was a limited one, and aimed to describe and to analyse results of the transition from manual to automated network cataloguing. The team found that on the whole there had been no substantial changes in the libraries related specifically to system requirements. Growth or decline

in staffing totals, alterations in work flow, departmental mergers or

reorganisations were found to be mostly determined by the mission of,

and constraints on, an individual library. But there had been many

small, though significant, adaptations. Staff found themselves freed

from the more menial tasks of the manual systems. Other lower level

tasks were reduced. Professionals were released from routine tasks and

from much clerical detail, and found that as a consequence they had more

time to engage in intellectual activity, such as the cataloguing of

difficult materials and the solving of problems. The study concluded

that there were many qualitative changes, particularly amongst the

professional workers. It was difficult to quantify the changes

experienced, and to attribute these solely to participation in OCLC.


Hewitt conducted a much more extensive survey, in 1974, of the 47

charter (founder) members libraries of the Ohio College Library Center

(now OCLC) after three years operational experience of using the shared

cataloguing network. Hewitt (1976a) discovered that the impact of the

network varied enormously between libraries, although each participating

library had access to identical services. The reason for this, he

concluded, was that each library entered the network with its own set of

pre-existing conditions and interacted with the network in its own way

(p268). Hewitt (1976b) found that there were four major pre-

implementation fears concerning working conditions and morale, which

were mostly dissipated after actual experience of the system. These

were:

> Apprehension concerning continuation of employment following
> automation.
> Apprehension concerning the ability of the employees to cope with
> the new demands of the job.
> Apprehension that the new procedures would routinize or 'dehumanise'
> the job.
> Apprehension that the new system would not perform well in support

of the cataloguing operation. (p263-266)

A few staff could not handle the new methods, and were transferred to
other duties. In some cases fears and apprehensions continued to exist
after implementation, and these most frequently involved staff who did
not have direct contact with the terminals in their work. Most of the
respondents had found that the system enhanced the variety and challenge
of their job, although there were some who felt that a degree of
routinization had occurred. Mostly these were professional cataloguers
who with the new system spent a significant proportion of their time
operating terminals. 44% of the non-professionals reported that their
work had become more ·demanding, requiring a higher level of skill and
training. Supervisory responsibilities had also been augmented. Some
non-professional work was reported to have become easier, although no
less demanding. In other words, a higher level of productivity could be
sustained with greater ease, once mastery of the operations had been
obtained. A tight scheduling of terminal use had become necessary in
some of the libraries, which was not considered to be desirable. The
increase in the challenge and interest of the job of the non-
professional had not led necessarily to improved morale, since some had
not been regraded to a level which, in their view, reflected the
increase in skills. This had led to a certain amount of resentment and
lowered morale. The responses of the professionals were more varied. Two
separate factors were involved. One was the effects of the system on the
day to day work, and the other concerned general professional activities
and outlooks. Few professionals reported that their work was more
demanding, but it was considered more interesting, and some felt that
there was enhanced status involved with working with the system. Some
considered that the focus of administrative attention on the cataloguing
area was an unanticipated benefit. The negative effects which were

reported mostly concerned a feeling that the work was dehumanized and routinized, and that there was now a 'frustration' level due to dependence on terminals resulting in a lessening of personal control over daily activities. Overall, positive effects outweighed the negative aspects.

Whilst the installation of online cataloguing introduces numerous changes in workflows and procedures, Hewitt found that only 20% of the libraries (nine out of the fortyseven) had reorganised the departmental structures of their technical services units, and of these the majority were large libraries. The type of organisational changes were divided into either (1) increased formal departmentalisation or greater sectionalisation of function, with the formation of new departments or units; or (2) integration of functions, where one or more departments had been merged. Some libraries reported that reorganisation had been postponed until other technical services functions, not just cataloguing, had been automated.

Markuson (1976) conducted a survey of eighty OCLC libraries in 1974. There is a wealth of information in the report about the OCLC system and its impact within the libraries surveyed. Three levels of staff were questioned: top administration, middle management, and terminal operators. Top administrators were questioned about organisational changes due to OCLC. Fifty-six libraries reported some organisational changes. In about half, staff had been eliminated; in others, jobs had been changed, staff transferred, or new positions created (in such areas as acquisitions, cataloguing, card preparation and filing, interlibrary loan and circulation). In general, the administrators rated staff attitudes to the system as highly favourable. Middle managers identified

several areas where OCLC had had an impact on cataloguing. These included: greater use of external cataloguing records, increased use of paraprofessionals and clericals for cataloguing, greater adherance to standard cataloguing practices, and elimination of many manual routines. The terminal operators surveyed included personnel within the clerical, technician, and professional categories. Concerning use of terminals, it was concluded that the physical location of terminals was an important factor in the successful operation of an online system. Internal communications was identified by most of the respondents as being a major problem area. The operators felt that they did not receive all the internal information they believed was important for them to have in carrying out their work. Overall, 96% of the operators held positive attitudes towards the use of the system, with 88% believing that the use of the terminal had increased the importance and value of their contribution to the operation of their library. 83% believed that the work was more interesting than other clerical jobs.

Spyers-Duran (1979) undertook a survey of 130 head cataloguers in the U.S. in 1977, in order to examine the effects of automation on organisational change, staffing, and human relations of professional cataloguers and support staff. 80% reported an organisational change after automation. The most frequent type was the merger of units which had traditionally been separate, such as the cataloguing department with the bibliographic searching unit (previously a part of acquisitions, or a separate unit). Cataloguers reported improved workflow, more efficient work space organisation, reduced backlogs, and increased productivity. The most significant change which was reported concerned support staff. Changes in work assignments resulted in an expansion of duties and a greater independence for those who worked on the computer terminals.

Changes in traditional working hours were reported, with work on the terminals rescheduled to include early morning and early evening shifts. This came about primarily because of poor response times in peak periods and because often fewer terminals had been purchased than were actually needed to cope with the workloads. Spyers-Duran points out (p32) that automation of the cataloguing department represented an opportunity to redesign the work of employees and the workflow, but unfortunately he does not explain how this may be done. Various issues were highlighted in the study. Occasionally conflict arose between staff who could not or would not accept automation and those who did. In general there was an increase in the responsibilities of the non-professional staff. The greater participation of clerical and paraprofessional workers in procedural decision-making was not always viewed with much enthusiasm by the professional cataloguers. Employment-related fears were the most frequently reported staff issues. All libraries indicated there was some anxiety about dislocation from duties, changes in work schedules, and lack of opportunities for advancement in a department with fewer positions. There was also some uncertainty about future employment, particularly amongst the non-professionals. Many of these fears were found to diminish after one or two years following implementation. Skill- and knowledge-related concerns also peaked in the initial stages. Fear of the computer and a reluctance to learn and accept new technology and to give up old ways were reported, particularly amongst older employees. In spite of the problems, the survey found overwhelming support and commitment among those who had automated. Spyers-Duran concluded that staff-related problems associated with automation were preventable by proper planning, meaningful involvement, and staff development programmes. He also considered that "organizational change

mandated by automation ... must be viewed as both an institutional and professional opportunity that can be rewarding and challenging." (p38)

Horny (1974), writing about her library's experience when automating, reports that implementation was accomplished without additional staffing, despite the technical services section being understaffed in the previous manual mode. It became necessary to redefine or reallocate certain positions within the technical services division. Terminals were operated by general library staff assigned in short shifts, who returned to their regular duties with a broader understanding of the total system. This arrangement provided variety in job assignments, and helped to sustain peak efficiency. Another benefit gained from using library personnel as terminal operators rather than trained keyboarders was their grasp of the format and importance of bibliographic data. A positive decision to emphasise communication encouraged cooperation between staff and sections, promoted special efforts, and reduced anxieties. Walker (1976) reports that installation of OCLC provided Cornell University with the chance to simplify and improve long-standing procedures. Two departments were combined, and terminal operators found their work more varied. Two of the goals in implementing OCLC had been to reduce the cost of processing in proportion to the total library budget and to make better use of personnel by automating clerical and repetitive tasks. There had been several staff reductions and reassignments which would have been difficult to manage in the manual setup, and there had been no build-up of backlogs even though there had been no reduction in new titles catalogued.

Kallenbach and Jacobson (1980) describe how their library changed from one automated system (OCLC), after seven years of use, to another

(RLIN). Of their experience with OCLC, it was reported that staff fears

and anxieties associated with computers and technology - such as:

computers replacing people, the dehumanisatiom of tasks, the need for

specialised training and skills to operate the machines - quickly faded

as the benefits and rewards of automated cataloguing became apparent.

Tedious manual and clerical tasks had been reduced, throughput time

decreased, and backlogs processed, without any staff reductions or major

readjustments of work flow.


Luquire (1983) reports on research which he undertook in the mid-1970s.

The purpose of the study was to identify selected variables and to

determine to what extent they affected librarians' perceptions or

evaluations of innovative systems. It was found that the greater the

participation by respondents in the library decision making process, the

more positive was the evaluation of the innovation. It transpired that

for many respondents the participation did not need to result in "real"

input into the process, provided there was "perceived" input. Overall

evaluation of the new system (which was OCLC) was higher as the rank of

the respondent, chances for promotion, and variety and interest of the

work became higher. It was observed that the organisation and size of

the library had pronounced effects on the acceptance or rejection of the

system. The larger the library by volume count, the less positive was

the evaluation, and staff in the larger libraries perceived that fewer

benefits were derived from the system. There was some suggestion that

the organisation of the local library was the single most important

factor in how well or how poorly the system operated and how favourably

the staff reacted to it. Regarding attitudinal or psychological

preparation, it was found that the more familiarity the staff had and

the earlier they had become acquainted with the new system, the more

positive was the evaluation. It was pointed out by respondents that there was a strong need for continued assurance of job security for staff at all levels during implementation.

There are many who view the use of computers as offering librarians a great opportunity to improve the social position of librarianship, by creating a new, high technology image. Nielson (1980) suggests that online bibliographic searching may be a professionalising force for librarians. From his own research, Nielson found that online activity had an impact on time, on client relations, and on intradepartmental relations. Librarians involved in online searching had to spend a large amount of time conducting pre-search interviews with clients as well as doing the actual searches, and additional time for learning how to use the many database hosts and relevant vocabulary. Other work activity, particularly on the reference/enquiry desks was displaced as a consequence, and this work was being delegated more and more to non-professionals. The length and nature of the client-librarian interaction had an impact on how the client viewed the librarian, and served to redefine their role in the minds of the users, giving the librarians a greater sense of their own importance. The use of the online services brought with it a changing relationship between librarians and the support staff. It was noted that, whilst the work of the non-professional had changed now that they were manning the reference desks, they were also resentful of the attention being focussed on online activity and of the novelty and prestige of working with the computer.

EFFECTS OF AUTOMATION ON THE STRUCTURE OF LIBRARIES

From the findings of some of the studies just mentioned, we may surmise
that there appears to be a variety of institutional responses to the
introduction of automation. During the Development and Operational
Phases of library automation, with their emphasis on housekeeping
functions, the traditional division into technical and reader (public)
services sections tended to be reinforced, with computer systems
personnel being added or appended, more often than not, to the former.
We have seen that one of the commonest structural changes in U. S.
libraries, in the 1970s, was to regroup departments, either by
disbanding some completely or by combining two or more together. This
came about primarily because of the availability of shared online
catalogue records, which meant that much less time was needed to devote
to original cataloguing, but more time was required for the clerical
tasks of searching and retrieving records from bibliographic databases.
These reorganisations primarily affected the internal arrangements of
technical services sections. The total library's organisational pattern
would often remain untouched. The role of technical services departments
took on more importance in this decade, and the terms of reference for
Heads of Technical Services widened in many cases. For example,
responsibility for the stock file requirements of a circulation system
would be given to technical services (since such stock records could be
created as a by-product of the cataloguing process, manual or
automated); and sometimes responsibility for the computing developments
for the organisation as a whole would be given to the Head of Technical
Services.

McLean (1981) argues that the advent of automation has not had a significant influence on organisational structure in U.K. libraries. According to McLean, early computer developments had a limited perception of their aims, in that most projects were designed to solve particular problems within fairly tight budgetary constraints. Thus, as we have seen, the different systems - cataloguing, acquisitions, serials, circulation - developed independently of each other, and their success or failure had little impact on the library organisation as a whole. Most projects were implemented without a great deal of analysis of existing manual systems, and often they reflected the old way of doing things. Gradually, it became clearer that the different systems did interact with each other and that any attempt to change one system had a ripple effect on others.

The concept of the integrated - that is, fully automated - library system means all functions will revolve round a single database containing bibliographic records for all the library's holdings and records of all activities to do with those materials, such as acquisitions, circulation, binding, and so on. All hitherto dispersed information about the library's collection will be brought together and made available to everyone. This also leads to the observation that, as a consequence, the work in libraries can be restructured without regard to where the information is stored. This is in stark contrast to the organisation of work in a manual or partially automated setup, where the files the workers frequently used would have to be located near or at their workplace. Acquisitions staff needed to be close to the on-order records, to files concerning invoices and goods received, to supplier details, to bibliographies, and so on. Cataloguers needed to be close to their subject and name authority files (in a card file or perhaps on

hardcopy paper printout), to the locally produced subject index to the classification scheme (most libraries, particularly in the U.K., incorporate local variations to the standard schedules), to work-in-progress files, and to the public card catalogue. Periodicals staff had to have ready access to their holdings records, order records, supplier files, binding records, etc. Circulation staff naturally had to be adjacent to the borrower records, in order to issue and discharge items quickly. Thus, procedures and functions, jobs and departments would logically be designed around the appropriate information store. In the integrated computer system, information can be delivered, to some extent, in real time to the place where it is required, when it is required. This factor alone has implications for organisational design and job design in libraries in the future.

During the Operational Phase in the 1970s, the trend was towards centralisation of support services, since this fitted the nature of batch processing and the technology which was available. The acquisition, cataloguing, and frequently classification processes were removed from the point of service to some central administrative point. The greatest impact of this trend was found in large library organisations, particularly those with multi-site or departmental structures. Uniformity of practices (standardisation) emerged in place of a variety of local systems, and site staff would often have to face a reduction in their autonomy concerning day to day operations, for example, placing priorities on acquisitions or newly received material awaiting cataloguing, in response to local user demands. McLean (1981) considers that the management techniques and communication level between the various parts of the structure often failed to grapple with the problems generated by the new systems, and this situation would be

aggravated by the fact that the benefits were not always self evident.

He continues:

> "The situation has been exacerbated by the fact that the staffing of
> many central units was at the expense of departmental or site
> libraries and an apparent movement from what appeared to be reader
> services to technical services has met within a certain amount of
> resentment at the local level." (p9)

The Integrative Phase allows all departments - remote or otherwise - or

sites to have direct access to computer files and records, invalidating

the previous arguments for centralisation. A new range of problems

arises for library management in the decentralised scenario, if they

take this route, and different control and coordinating mechanisms will

be called for. It seems likely that this factor will have an impact on

the staffing of technical services departments, since less personnel

will be required if some of the workload becomes distributed.

The Integrative Phase has brought the era of online public access

catalogues and online reference services as well as a greater emphasis

on other computer-based services direct to the user. As a consequence,

we have another factor which may have a profound affect on the

traditional pattern of organisation in libraries, since the public

service librarians have tended to sit on the sidelines of housekeeping

automation. Now their knowledge and experience of the user will be

needed in order to perfect the public access files. This process in

itself might bring the two divisions closer together.

Busch (1985a) conducted a survey of the 117 members of the Association

of Research Libraries (U.S.) in 1984, which was designed to explore the

extent to which research libraries had reorganised (with particular

attention to the integration of public and technical service functions)

and the role played by automation in planning organisational change.

Eighty-one of the 117 libraries responded. To his surprise, Busch found

that there did not appear to be any massive move towards integration of

functions at that time. It was clear that the libraries recognised the

importance of increased communication and involvement between service

functions, but more than 50% indicated that they were still organised

according to the strict technical/public services split. A variety of

methods were reported for integrating staff, and some libraries used

more than one method. Multiple roles (which is defined as one individual

performing more than two major functions) was the most common occurrence

(29.6%). Dual function positions (for example, half cataloguing, half

reference) were reported by 14.8%. Job rotation was used at 5% of the

libraries. Eight possible factors contributing to organisational change

were posited, and libraries were asked to assign a priority to each (see

Figure 5.1). Most libraries ranked integrated systems first, although

other automation-related activities did not receive particularly high

rankings.

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1. Integrated systems.
2. Changes in administration.
3. Improved staff performance.
4. Online catalogues.
5. Economic factors.
6. Mission (that is, service to users).
7. Bibliographic utilities. )
8. Staff development/morale. )


Figure 5.1 Possible factors contributing to
    organisational change, in rank order.
(Extracted from: BUSCH, B.J. Technical services
practices. *RTSD Newsletter*, 10(3), 1985, 25-26.)

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Some other factors were added to the list, namely, interrelationship of

functions, a new building, and decentralisation of access to

bibliographic work files. Busch concludes, from his findings, that "many

libraries have heretofore concentrated their efforts on technical

aspects of automation, rather than on the reorganization that automation

may require or allow." (p26) On the whole, Busch concludes that there

was little real experimentation, with most change being of the order of

'simple tinkering' with the same system. He acknowledges that, while the

integration of functions was the focus of his survey, it is only one

possible model of reorganisation:

> "Other types of reorganization offer alternative routes for the
> future. Subsequent researchers will need to explore such alternative
> organizational patterns as collection development as a line
> function; movement of some technical processing units to collection
> development; integration of technical services units; elimination of
> duplication of tasks between public and technical services; systems
> as a line function, sometimes including planning and technical
> services within its scope; circulation...moving from public services
> to technical services; ...increased use of committees and task
> forces to address mutual public/technical services concerns without
> changing the organizational structure; and multiple reporting
> relationships..." (p26)

The preoccupation with the technical aspects of library automated

systems has been recognized by several writers in the field. Malinconico

(1983a) echoes many current views when he observes that "the challenge

is no longer to specify the functional details of automated systems, but

rather to design appropriate organizational structures that will operate

effectively when these systems are introduced into them." (p112)


EFFECTS OF AUTOMATION ON THE NATURE OF LIBRARY WORK


The jobs that computers perform well are those which involve repetition

of many simple operations on data, as well as organising, storing and

displaying information which has a definite structure. Within the

library context, for example, repetitive circulation data, involving

matching details of books with borrowers' identities and return dates;

and acquisitions data, involving the transmission of bibliographic data,

quantity and other order information to a supplier, together with the

necessary bookkeeping, lend themselves to computer processing. The basic

catalogue record is highly structured and, with a degree of effort, it

can be manipulated very efficiently by computer. Manual systems

generally demand some kind of manual dexterity or refined mechanical

skills. That is, one must write neatly, type accurately, handle papers

without tearing them, and sort, arrange and often interfile papers,

documents, catalogue cards, and so on. Computer terminals require manual

dexterity, in a similar way to the handling of typewriters, but they

also require a new and totally different set of mental and emotional

skills. Veaner (1981) notes that:

> "employees must conform their work habits and job sequences to the
> rigid and unyielding environment of the machine and these machines
> have little tolerance for error or deviation from correct
> procedure." (p35)

It may no longer be possible for some procedures to be done in a variety

of sequences, which manual systems tend to permit, and work may seem

less creative and no longer personal in style as a result. This rigidity

in work pattern and work processes may also conflict with the way in

which the professional, in particular, wants to work. In a manual

system, the worker controls the speed of the interaction, but in the

computer system the machine controls the speed of the interaction. The

response time of a terminal may be much slower than the worker wishes to

work, and this may lead to frustration and loss of attention, which can

in turn lead to an increase in errors. Sometimes the pace of the machine

may be too fast, and the worker can feel pushed to perform at a greater

speed than is comfortable. The opportunity for taking the occasional

pause in order to think about what one is doing, as well as casual

interaction with fellow workers, may be minimized. Terminal work demands a particularly acute focus of concentration, and full involvement is required. Altogether, the final result may be a feeling of the machine being in control, rather than the worker. In a fully automated environment, the workers are totally machine dependent. When the machine is down for a period (either through breakdown or because of routine maintenance) no one can get any work done.

There has also been much written - some of it contradictory - about the possible effects of working with VDUs, and this in itself, regardless of any changes to work processes, may raise anxieties in people who do not know which evidence to believe. In addition, operators seem to show a wide individual variance in tolerance for and enjoyment of work at terminals. Some can sit enthusiastically at the terminal for most of the day without apparent drop in concentration and accomplishment. Others may go glassy-eyed after little more than an hour of keyboarding input. Library management has to be aware of these issues and, as well as responding to people's worries sympathetically, should consult with staff about their own sense of accuracy and accommodation to terminal work. At the least, management ought to take due consideration of such ergonomic factors as the best location for the terminals, lighting requirements, appropriate seating arrangements, and adequate work space.

Not everyone accepts easily the requirement to learn the new disciplines, new procedures and even the new vocabularies of computing technology. To some, and particularly the older established staff, it can appear that their whole body of expertise is no longer valued, and they become as naive and unskilled as the most junior member of staff. If these stalwarts of the old methods remain unconverted, then library

management may have a severe problem on its hands. Horny (1985),
however, from her own library's experience, is convinced that staff are
never really 'too old to learn'. When the longer serving staff accept
the changes, they will potentially have the greatest sense of the new
technology's benefits, since they will be able to recall the limitations
of the former systems.

It was noted earlier that, in the 1970s, most computer systems were
single function ones, often merely superimposed on top of manual
processes. Procedures did not vary significantly from what had been done
in the manual environment. The reliance on bibliographic utilities for
shared cataloguing, by many types of library, and online multifunctional
processing systems now demand a different approach to the work,
primarily because the older ways are no longer appropriate. McLean
(1981) predicts that, at the very least, there is likely to be a
restructuring of work within technical services departments in that
"online cataloguing will demand a rethinking of most existing work
flows." (p11)  The computerised systems of the 1970s were relatively
crude compared with the capabilities of the integrated systems of the
1980s, and some claim that the full potential of the new technologies in
libraries has yet to be realized.

In the integrated environment, if access to the different subsystems is
provided from any work station throughout the library, then everyone
will have to be informed about the whole of it, and will have to be kept
informed of any changes which occur. Previously, in the manual/semi-
automated situation, workers from other sections did not have to know
about the minutia of the operations (or were deliberately uninformed - a
kind of 'departmental protectiveness') in order to perform their own

tasks, except where such activities had a direct bearing on that work. Online access to the integrated files will probably need to be controlled in order to prevent any unauthorised use by library workers (as well as the public!), and other means introduced to protect important and confidential data. Workers who rarely do a certain kind of activity or seldom apply a complex procedure are also less likely to do it with the accuracy or efficiency of those familiar with it. Thus decisions will have to be made as to which tasks do not require specific expertise or immediate supervision and so may be distributed to all appropriate places throughout the library, and those which still require a specialist function. But as Eyre (1979) points out, the computer in the integrated system provides an unprecedented ability to monitor its operation, **and** check on the staff using the system. Those entering data "can be monitored for error rates, speed of operation, and productivity... All this information means that, for the first time, librarians have the ability to react quickly to changes in the system." (p8) In turn, the workers (professional and/or clerical) will know that their work can be checked in a way never possible with a manual or even batch system, which for many will be an uncomfortable and stressful situation. Freedman (1984) notes that the computer's capacity to supply management data provides better support for decision making and enhances the professional's judgement. But to an extent, this same facility can also be used to advantage by the clerical workers, since they can be trained to respond to certain feedback from the computer, and to seek advice from more senior staff in exceptional cases. Differences between departments will be based on professional and specialist responsibil-ities, and "not on the custody of and control over access to physical files." (Freedman, 1984, p1203)

The introduction of automation almost always requires the changing of work groups in libraries. Teams of people who have worked together using manual systems often have to re-group, perhaps leading to a breakdown of good working relationships and job satisfaction. Hopefully such breakdowns will be temporary since, over time, new relationships will eventually build up in the new workgroups. The physical layout of certain parts of the library may also need to be changed, to house terminals, printers and other computing equipment. People's territorial rights will have to be accommodated, and their various likes and dislikes as regards position, light, noise, heating, and so on.

Evidence from the literature presented above - albeit from the 1970s - indicates that, following successful implementation, library workers view automation favourably, even if at first the new methods are treated with suspicion and maybe fear. Familiarisation with the new systems seems to have a positive effect on attitudes. Many librarians reported that they had been released from the routine and clerical tasks associated with the traditional manual methods of work and often found, in their place, work that was more intellectually demanding and which required more of their talents as professional workers than heretofore. Non-professionals reported that much of their work had become more interesting, sometimes more demanding, and frequently more varied and challenging, although a degree of routinisation had had to be taken on board. Both types of worker reported improved workflow and increased productivity. There were negative aspects, too. Work was sometimes considered dehumanized and routinised as a result of automation, and expectations of regradings, associated with the increased skills involved, were sometimes dashed leading to lowered morale and resentment.

There are many who predict that more extensive use of computing technology will result in a change in the traditional roles of library workers. (But it is recognised that there are also other pressures on library organisations, besides technology, which are producing this change). The evidence indicates a greater reliance on non-professionals in libraries, particularly in technical services operations. Veaner (1981) points out that technology "acts to constantly transfer complex functions downward in the work hierarchy." (p36) Automation, as we have noted already, eliminates much of the lower-level or semi-skilled work, and it certainly speeds up the clerical operations. This may result in an eventual reduction in the number of clerical staff employed, or a reallocation of such staff into other service areas, or delegation of certain responsibilities and duties from professionals. A higher degree of skill will be required of the non-professionals who are left and one might speculate whether this will have a knock on effect upwards in the hierarchy. Certain functions previously performed by librarians can be reassigned to the non-professionals. For example, within the cataloguing department, since the bulk of cataloguing data for new titles may be obtained from a bibliographic utility, the routine processing of this material can be assigned to clerical staff, leaving the smaller amount of original cataloguing to the professional. Some of the clerical workers, in the studies looked at, reported an enhanced status to their jobs and felt that *their* contribution to the operation of their library had increased in importance and in value. Following their experience in implementing a computerised serials control system, Presley and Robison (1986) concluded that "the automated environment became the catalyst for changing [their] expectations of support staff and their roles in the administrative process." (p37)

Some librarians may find this shift in responsibilities troubling or threatening. They might see their job at risk. For instance, if there is less original cataloguing to do then it seems reasonable to assume that fewer professional cataloguers are going to be required. Librarians are just as likely to be as uncertain about their own changing roles and the new skills and knowledge which will be required of them, as the clerical assistants.  Veaner (1981) observes that the functions being driven downward tend to be task or procedure oriented, whilst still of a complex nature. The majority of these 'lower level' professional tasks have traditionally often been done by the librarian trainee or newly qualified worker in their first professional post. Where these responsibilities are transferred to clerical assistants, there may be a reduced need for junior professional positions, and this may in turn have implications for the career development of librarians.

Technology also creates new and unforeseen challenges for the professional staff. For example, Veaner (1981) sees these new functions as including "planning, decision making, supervision and management, assessment of alternative choices following carefully reasoned study, research and publication." (p37)  Repp (1986) argues that the role of the cataloguer is becoming more and more that of manager, supervisor and planner. Horny (1985) considers that the managerial role of the professional has been substantially enhanced by technological developments. She observes that management responsibilites have been "literally forced upon many who never expected to find themselves in an administrative role." (p56)  Many librarians - following the introduction of automation, with all the attendant changes to jobs and responsibilities - will have to come to terms with the potential conflict between their new managerial roles and their established

professional roles. It is a problem area that has not been satisfactor-
ily addressed to date.

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## SUMMARY

In this chapter, the development of library automation, specifically the
use of computers, has been traced from the Development Phase in the
early 1960s, through the Operational Phase in the 1970s, to the
Integrative Phase in the 1980s.

Computing capabilities in the 1980s together with a wide range of
sophisticated software and extensive telecommunications technology,
provide libraries with many options when planning to automate. The
challenge for the library manager is to acquire the appropriate
technology which best fits the particular local situation and
circumstances, which fits the resources available, and which is the
simplest technique that will get the job done.

The reasons for automating in the first place are many, but improving
services and saving money (primarily through the staffing budget) are
usually given as the most compelling motives.

Library experiences of the introduction and use of automation were then
reviewed, concentrating on the impact of automation on the
organisational structure of libraries and on the nature of the work
done. We may summarise the findings as follows:
- There is a variety of institutional responses to the introduction of

automation, although few libraries have undergone significant
reorganisation as a consequence.

- The introduction of automation in libraries does not bring about
  changes in organisational structure, of itself, but rather offers
  libraries a catalyst for making such changes.
- Automation is but one of many agents for change in libraries;
  amongst the others are changes in administration, efforts to improve
  worker performance, economic factors, and service aspects.
- The computer can take over many of the clerical, repetitive tasks in
  libraries particularly those involved with the creation,
  manipulation and maintenance of files of records.
- The computer demands a different set of mental and emotional skills
  from those involved in manual systems, and introduces a degree of
  routinisation as well as machine pacing and machine dependency into
  the workflow.
- In the integrated computer environment, it becomes possible to
  decentralise some, if not all, of the library's housekeeping
  functions, since information held on the single core bibliographic
  database may be delivered in real time to the place where it is
  required, when it is required. All departments and sections of the
  library may therefore have direct access to any of the computer
  files and records.
- The computer in the 1980s can monitor its operation and provide a
  check on the staff who are using its systems in a way unprecedented
  in a manual or semi-automated environment.
- The introduction of automation can demonstrably improve productivity
  in libraries, by speeding up processing, by simplifying and
  improving procedures and by eliminating many manual clerical
  routines.

- The introduction of automation can have a direct impact on the work of the professional and the non-professional.

For the non-professional, automation removes many of the lower-level or semi-skilled work. Delegation of certain tasks from professionals and new procedures associated with the computer systems may bring an expansion of duties, involving an increase in responsibilities and greater independence.

For the professional, automation can release them from some of the non-professional, clerical tasks associated with traditional manual methods of work (mostly through delegation to non-professionals). The need for some professional activity may diminish, such as original cataloguing. A new role for some professionals may emerge, involving supervisory tasks, planning, decision making and other managerial functions.

In conclusion, it seems that there is no one best way to organise the work in libraries following the introduction of automation. Automation is an agent of change in libraries, providing library management with the opportunity to alter traditional organisational structures so that they will perform more effectively when the new systems are introduced into them. In addition, automation offers the possibility of changing fundamentally the roles of the professional and non-professional, and the distribution of tasks and jobs between them.

Chapter 6, which follows, will investigate the potential of job design as a change strategy in libraries, so that the full benefits of automation may be achieved.

# CHAPTER 6

## JOB DESIGN AND WORK ORGANISATION

Among the major issues that have emerged so far in this investigation about the organisation of work in libraries are the following:

1. The structure and organisation of the majority of libraries are inherently bureaucratic;

2. Much of the work is clerical and routine, some of it at the professional level, with its reliance on files and other means of record-keeping;

3. The relationship between the library professional and non-professional, with its seeming conflict of roles, is a significant characteristic of the organisation of work;

4. Automation is introduced normally to save money (principally staffing costs) and/or to improve library services to users;

5. The computer, amongst other things, can take over much of the routine, clerical work, particularly in the creation, manipulation and maintenance of files;

6. Contemporary automated systems provide a mechanism for the integration and control of library operations at a scale way beyond that achievable in a manual or semi-automated situation;

7. There is a variety of responses to the organisation of work upon the introduction of automation;

8. Automation has the potential to alter fundamentally the roles of the professional and the non-professional, including the distribution of tasks and jobs between them.

How should libraries as organisations respond to the impact of change on work processes associated with the introduction of automation? To date,

some have responded with a piecemeal approach to the problem, changing details of work organisation as needed. Others have reorganised departments and staffing levels, and in many respects fitted the workers to the jobs that needed to be done. With some notable exceptions, there is little evidence that the content of jobs in a computerised library environment has been analysed to any great extent. This chapter aims to investigate the potential of job design as a change strategy in libraries, in order that the full benefits of automation in libraries may be achieved and, at the same time, the quality of working life for all library workers improved.

The first part of the chapter will undertake a brief historical overview of job design. This will be followed by a short discussion of the relationship between job design theory and the Quality of Working Life Movement. We will then review traditional approaches to job design in libraries, as well as some less orthodox methods. The potential application of two contemporary theories of job design in libraries will be investigated, namely, job restructuring; and work organisation, based on socio-technical systems analysis. Lastly, as job redesign is not easy to accomplish, we will look briefly at some of the difficulties that can arise when undertaking such an exercise.

WHAT IS JOB DESIGN?

Job design has been of interest to a large number of people, particularly economists and engineers, and more recently psychologists and sociologists, for many years. Much has been written about the subject, and different techniques and methods for the design of jobs have been developed and applied, with varying degrees of success. For years people

believed that jobs were too complex and should be broken down into specific, narrowly defined tasks, including the fewest possible functions, and incorporating repetition, simplicity, close supervision, and the division of labour. These traditional approaches were derived from the economic demands and imperatives of the Industrial Revolution in the Seventeenth Century. In the early 1900s, Frederick Taylor constructed a unified approach to the design of work based on these views, which became known as the school of Scientific Management. In the interests of worker productivity and efficiency, techniques such as work study, including time and motion studies, human engineering methods, systems analysis, and operations research have evolved. Originally the principles of scientific management were applied to manual workers in various types of production industries, resulting in the classic "assembly line" process, but gradually they were introduced into clerical work routines as well.

Scientific management has had a profound effect on the organisation of work throughout the industrial world. There are many who consider that it still remains the predominant mode for designing jobs. Buchanan and Huczynski (1985) summarise the advantages of Taylor's methods as:

1. Individuals do not need expensive and time consuming training;
2. Specialization in one small task makes people very proficient;
3. Lower pay can be given for unskilled work;
4. It simplifies the problem of achieving controlled performance. (p63)

During the 1930s and 1940s, managers began to realize that, despite the efficient ways of working, there were several serious problems associated with the rationalisation and fragmentation of work, including "boring tasks, unchallenging work, and employee alienation." (Robbins, 1983, p248) Work was seen as having little meaning for people. Buchanan

and Huczinski (1985) describe the disadvantages to task fragmentation as:

1. The work is repetitive and boring;
2. The individual's part in the organization is small and meaningless;
3. Monotony creates apathy, dissatisfaction and carelessness;
4. The individual develops no skills that might lead to promotion.
(p63)

From these concerns, a new school of management thought emerged, known as the Human Relations movement. This movement was characterised by its emphasis on group norms and standards. However, the approach has had limited success since it attempted to deal with the symptoms rather than the causes of the problems. Davis (1966) argues that "its narrow approach...completely overlooks job content and the interaction between social, organizational, and technological requirements..." (p25)


In the late 1940s and early 1950s, attention began to shift to consider the human needs of employees, and to the question of motivation in the work situation. As a result alternative methods of job design, besides specialisation and fragmentation, were developed. Among the early proposals for altering the content of jobs were job rotation and job enlargement. Each attempted to expand the variety of tasks performed by workers, the former by shifting people from job to job, and the latter by increasing the number of tasks performed by each person. These techniques once again had only limited success, primarily because each dealt with only one deficiency in job content: the lack of task variety. The work of the psychologists Abraham Maslow and Frederick Herzberg, amongst others, were highly influential in developing job design methods which considered the psychological and motivational needs of the worker. These new designs were known as job enrichment programmes, and they laid the foundations for the Quality of Working Life movement and

contemporary theories of job design and work organisation which will be
described in more detail later in the chapter.

Because of its importance in job design, a brief description and
critique of Herzberg's job enrichment approach is considered necessary.
Herzberg's original study of job attitudes used a white-collar sample,
and indeed his concept of job enrichment, or *vertical role integration* -
an alternative term advocated by Kelly (1982, p146) - has been applied
to white-collar workers more than any other form of job redesign.
Herzberg's theory is known as the 'Motivator-Hygiene' or 'two factor'
theory. From research into factors linked with job satisfaction and
dissatisfaction, Herzberg and associates discovered that the events
leading to job satisfaction were separate and distinct from events
leading to job dissatisfaction. (Herzberg, 1968) The former are known
as 'motivators', 'satisfiers' or 'content factors', and include
achievement, recognition, responsibility, advancement, growth and the
work itself. The latter are termed 'dissatisfiers', 'maintenance
factors', 'hygiene factors' or 'context factors', and include salary,
company policy and administration, supervision, status, security and
working conditions. Herzberg argues that human nature requires, through
work, to satisfy certain basic 'animal' needs (through the hygiene
factors) and to satisfy the desire for psychological growth (through the
motivators). Improving any or all of the hygiene factors will probably
not motivate workers to greater productivity (but may prevent
dissatisfaction and poor performance), whereas improving some or any of
the motivators probably will. Thus, enhancing the motivator
characteristics of the job through job enrichment is seen as the answer
to improving the individual's job satisfaction and thence his work
performance. Hackman and Oldham (1980) argue that Herzberg's theory is

important in that it points directly to the considerable significance of

the *work itself* as a factor in the ultimate motivation and satisfaction

of workers. (p58)  According to Buchanan (1979), job enrichment, as

defined by Herzberg, represents the first attempt to base the practice

of job design on an explicit theory of motivation, and he refers to the

approach as 'orthodox job enrichment' to distinguish it from another

approach based on expectancy theory. (p61)


Herzberg (1968) suggests seven principles of vertical job loading as

starting points for job enrichment. These principles are related to the

motivator factors, and are:

    A. Removing some controls while retaining accountability;
    B. Increasing accountability of individuals for own work;
    C. Giving a person a complete natural unit of work (module,
    division, area, and so on);
    D. Granting additional authority to an employee in his activity; job
    freedom;
    E. Making periodic reports directly available to the worker hinself
    rather than to the supervisor;
    F. Introducing new and more difficult tasks not previously handled;
    G. Assigning individuals specific or specialized tasks, enabling
    them to become experts. (p59)

Herzberg (1968) concludes that job enrichment is not a one-time

proposition, but is a "continuous management function." (p62)  But he

also argues that not all jobs can be enriched, nor do all jobs need to

be enriched.


There are many critics of Herzberg's research methodologies as well as

his basic motivator-hygiene theory. Hackman and Oldham (1980) note that

the original division of aspects of the work into motivators and hygiene

factors may have been partly due to "methodological artifact." (p58) A

number of researchers have been unable to provide empirical support for

the major tenets of the theory. Some aspects of the work may serve at

times as motivators and at other times as hygiene factors. For example,

praise from a supervisor or an increase in pay would not be defined as motivators in the theory, yet such actions might help motivate an employee if he sees them as recognition for achievement. Hackman and Oldham suggest that the status of the various factors will depend in large part on the dynamics of the particular organisational situation. As a consequence, the measurement of the degree to which the motivating factors are present or absent in existing jobs is difficult. Another major criticism of the approach is that it pays insufficient attention to individual differences in how people react to their jobs and in turn how they might respond to more responsible and demanding jobs. Buchanan (1979) notes that orthodox job enrichment is a management technique for improving employee motivation and performance while leaving organisational structures largely intact. (p51) He also argues that as its application can involve the minimum of worker participation, it may become a political tool used by management to control employees. (p52)

Job design may be defined differently by many people depending upon their particular interest in the topic. At its simplest level, job design refers to the way that tasks may be combined to form complete jobs. Jobs differ in the way their tasks can be combined, and in turn these different combinations can create a variety of job designs. Thus, some jobs are routine because the tasks involved are standardised and repetitive; others are nonroutine. Some jobs are closely prescibed by very exact procedures, whilst others allow workers substantial freedom in how they may carry out the work. Some jobs are more effectively carried out by groups of workers; others by individuals. Umstot and associates define job design as "the deliberate, purposeful planning of the job, including any or all of its structural or social aspects." (Umstot, Bell and Mitchell, 1976, p379). The central concern of job

design, according to Buchanan and Boddy (1983), is "to take human skills, abilities and motivation into account in allocating tasks and organising work." (p26)

Louis E. Davis (1966), a major contributor to the field of job design, considers technology as an operant variable in job design studies which, as a consequence, are concerned with the interaction between personal, social, and organization requirements and technology as manifested in jobs. The techniques described earlier take technology as given and therefore do not consider it as a variable to be examined. Davis (1966) defines the process of job design as:

> "...[the] specification of the contents, methods, and relationships of jobs in order to satisfy technological and organizational requirements as well as the social and personal requirements of the job-holder." (p21)

It is generally agreed that there are two distinct approaches to job design. One approach relies upon analysis of the content of individual jobs, and is most commonly referred to as 'Job Restructuring' (or Job-centred studies); the second takes the primary work group (or section or department of an enterprise) as the basic unit of analysis, and is referred to as 'Work Organisation' (or Work Systems Design). (Buchanan, 1979, p5) The former, which involves job enrichment, and to a lesser extent job enlargement, techniques has been developed and applied principally in North America. The latter, which is based on socio-technical systems theory, has been developed in Britain and Scandinavia. Davis himself was initially primarily interested in the content of individual jobs but, through developing his theories of job design and because of his concern with the total organisational environment, he was

'converted' to the systems perspective of organisations and the socio-technical systems approach to the design of work.

Buchanan (1979) advocates that job design theories must provide answers to four basic questions:

1. What motivates people to work?
2. What job characteristics are significant?
3. How are job design alternatives to be identified?
4. What job design changes are to be implemented? (p4)

A degree of understanding about why people behave as they do in organisations is essential. Assumptions must be made about the nature of human needs, and how these can be satisfied or modified in the work context. In order to improve organisational effectiveness through job design, Buchanan argues that assumptions must be made about the nature of organisational structure and functioning. Consideration should be given to the nature of the organisational components, which aspects of the organisation are fixed and which are open to change, and the relationships between organisational components and how these will be affected by design changes. Lastly, methods or techniques for achieving the best 'person-environment fit' are required, although there are usually several ways of incorporating a particular characteristic in a specific job. According to Buchanan, the four questions form the basic components of job design theories and are related to each other as indicated in Figure 6.1.

So far, we have discussed the concept of job design. Since invariably a job design exercise involves changing work in an already existing organisation, it would be more accurate to use the term 'job redesign'. Indeed, whenever a job is changed, perhaps because of a new piece of equipment (or new technology), a whim of a manager, a changeover of

personnel, or whatever contingency, it may be described as being

'redesigned'. Hackman (1977) refers to Job Redesign as "any activities

that involve the alteration of specific jobs (or independent system of

jobs) with the intent of increasing both the quality of the employees'

work experience and their on-the-job productivity." (p98)



Figure 6.1 The four basic components of job design theories.
(From BUCHANAN, David A. *The development of job design theories
and techniques*. Gower, 1979. p5)
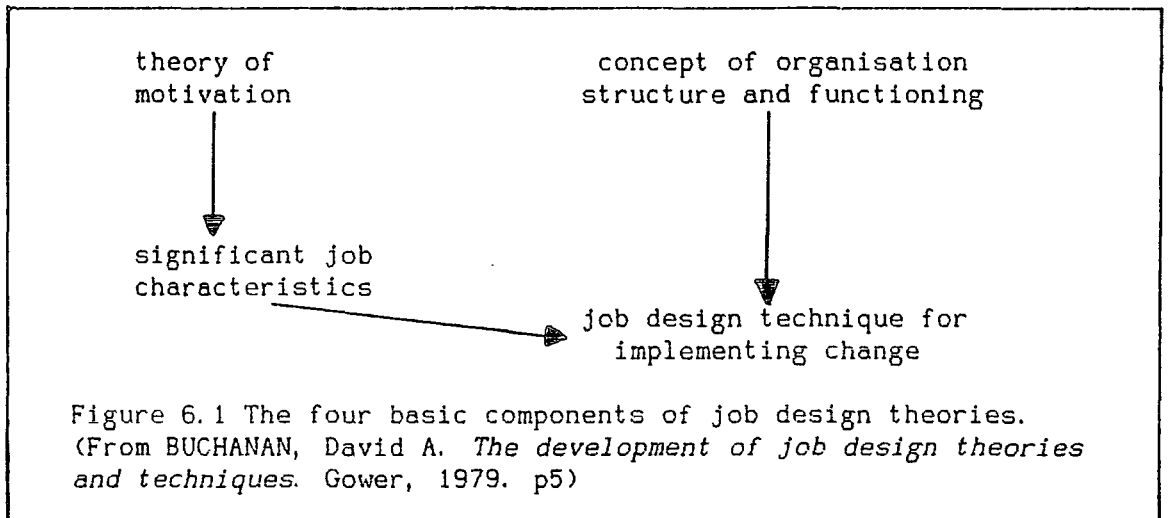
THE QUALITY OF WORKING LIFE

It has been noted that there are important links between developments

affecting job design and work organisation and the Quality of Working

Life (QWL) movement. QWL principally addresses the problem of creating a

humane working environment whilst at the same time improving

productivity. Robbins (1983) argues that, regardless of the humanistic

values involved in the search for more meaningful work, there has to be

some economic payoff, otherwise there would be no incentive for managers

to implement job redesign programmes. Thus, QWL must blend employee

welfare goals with economic goals. In addition to increased job

satisfaction, there needs to be improved productivity or at least
decreases in tardiness, absenteeism, and turnover.

Suttle (1977) points out that the areas of concern of QWL are broad and
diverse, and that the many terms that can be used to describe aspects of
it imply different things to different people, such as: industrial
democracy, increased worker participation in decision-making, more
humane and healthier working conditions, and concepts related to
humanizing work, job satisfaction or individualising organisations. He
focuses his definition of quality of working life on the characteristics
of individual workers:

> "...the degree to which members of a work organization are able to
> satisfy important personal needs through their experiences in the
> organization." (p4)

This definition implies that people's most important needs have to be
identified or measured in some way, and then satisfied through their
experiences in their work environment.

Walton (1975) proposes eight major conceptual categories that provide a
framework for analysing the quality of working life. These criteria are
fairly comprehensive and incorporate characteristics of the individual's
work experience and work environment. They may be stated as:

> 1. *Adequate and fair compensation* - since the typical impetus to
> work is to earn a living, the quality of working life will be
> affected by how well this aim is achieved, based on socially
> determined standards of sufficiency or the subjective standard of
> the recipient;
> 2. *Safe and healthy working conditions* - incorporating reasonable
> hours of work and perhaps issues of comfort, such as minimizing
> odours, noises, or visual annoyances;
> 3. *Immediate opportunity to use and develop human capacities* - jobs
> differ in how much they enable the worker to use and develop his (or
> her) skills and knowledge, affecting his involvement, self-esteem,
> and the challenge obtained from the work. Questions to ask cover
> autonomy in the job; the opportunity to learn and exercise multiple
> skills; the availability of meaningful information and feedback;
> does the job embrace a whole task rather than some fragment of a
> task; and are there opportunities to plan as well as implement

- 188 -

activities;
4. *Opportunity for continued growth and security* – allowing for advancement and career opportunities;
5. *Social integration in the work organization* – the worker's sense of personal identity and self-esteem is influenced by such attributes, in the climate of the workplace, as freedom from prejudice, the absence of stratification in the organisation, the existence of upward mobility, membership of supportive work groups, a sense of community, and interpersonal openness;
6. *Constitutionalism in the work organization* – what rights does the worker have, and how can he/she protect them? There may be wide variations in the extent to which the organisational culture respects personal privacy, tolerates dissent, adheres to high standards of equity in distributing rewards, and provides for due process in all work-related matters;
7. *Work and the total life space* – providing a balanced role of work, so that work schedules, career demands, and travel requirements do not take up leisure and family time on a regular basis;
8. *The social relevance of work life* – organisations seen not to be acting in a socially responsible manner cause increasing numbers of workers to depreciate the value of their work and careers. Is the organisation perceived to act in a socially responsible manner, for example, in its products, waste disposal, marketing techniques, employment practices, and so on?  (pp93-97)

Seashore (1975) argues that conventional research methods into individual job satisfaction or dissatisfaction have a limited and narrow perspective, because they do not make allowances for past conditions or future consequences; they assume a narrow scope of relevant factors concerning the job and the present attributes of the worker, which do not take into account changing and potential attributes of people over time; and they assume that the individual job can be adequately described and analysed on its own in order to determine the quality of a person's working life, despite the fact that jobs may occur in sets or sequences, and in interdepedencies with other jobs in the organisation and with other nonjob roles. QWL programmes should, therefore, make allowances for changes in organisation, jobs, and persons, and should incorporate a much broader conception labelled "effectiveness in work roles." (p108)  Seashore argues that there are three distinct perspectives for evaluating such effectiveness, and these are that of

the employers, that of the workers themselves, and that of the community or the society. There is a recognition of both the importance of work to the individual worker's life and of the importance of life, for example, family, health, and community esteem, to the individual's work.

Charles Martell is a leading proponent, in the U.S., of the Quality of Working Life movement in libraries. Martell suggests that librarians, along with many American workers, are expressing a growing degree of job dissatisfaction. (Martell and Untawale, 1983, p339) Some library staff feel that the quality of their working life is unsatisfactory. Librarians talk of being bored, that they lack challenge, that work does not have the same meaning for them that it did at first, and that they lack a sense of commitment. Martell feels that the humanization of work in libraries may be achieved using job design techniques such as job enrichment, quality circles and socio-technical systems design. In a series of articles in the *Journal of Academic Librarianship* (see the Bibliography) he discusses various themes related to QWL and presents case studies of library job restructuring in practice.

There are many techniques in addition to job design which may be used to improve the quality of working life for people. Bailey (1983) offers a summary of the interrelationships between job design and work organisation and these other techniques as shown in Figure 6.2 below:

Communication _____ Management
system                                     style

                        Organisation
                           design

            Job                         Organisation
        structure                          climate

                        QUALITY

Consultative                                    Working
   system               OF WORKING           conditions

                           LIFE

                    Work organisation

   Personnel                                Hours of
     policy                                    work

                        Remuneration
                           system
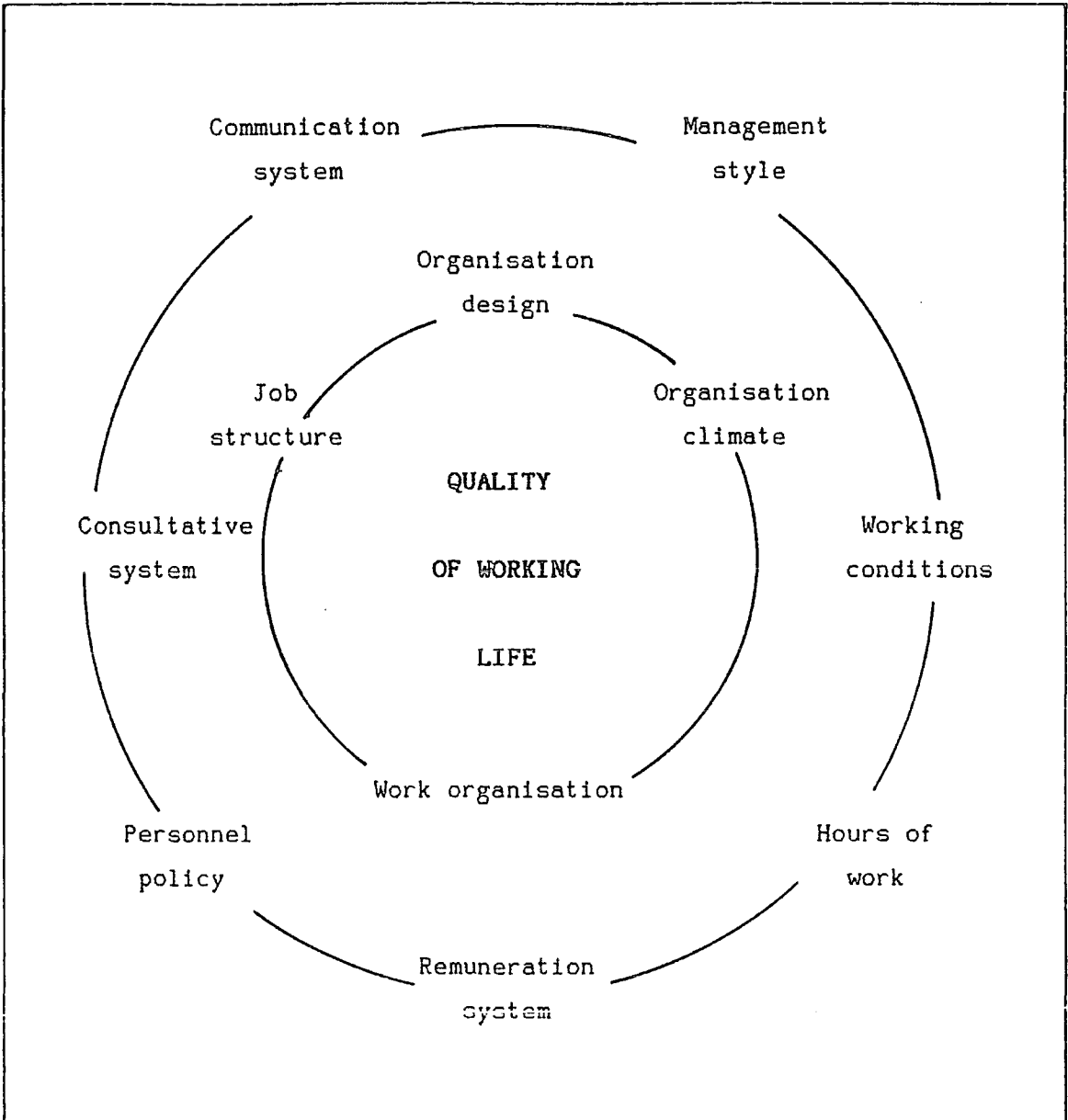
Fig. 6.2 Quality of Working Life
(From BAILEY, John. *Job design and work organization: matching
people and technology for productivity and employee involvement.*
Prentice-Hall, 1983. p267)

TRADITIONAL APPROACHES TO JOB DESIGN IN LIBRARIES

This section will attempt to synthesise evidence from the literature on
the topic of job design in libraries. A major portion of this material
is American. In fact the debate about quality of working life issues in
libraries has been carried out almost exclusively in the U.S.. Examples
of the practical application of the various job design techniques, from
both sides of the Atlantic, is not extensive. Many libraries have
incorporated new work arrangements without explicitly calling then job
enlargement or job enrichment programmes. It seems logical to assume
that there must be many more examples of job redesign in libraries than
have been reported in the literature. The success or failure of job
redesign in libraries is thus difficult to assess. Much of what follows,
concerning practises in the U.K., comes from this writer's own work
experience and from observation.

Previous chapters have illustrated that libraries as organisations are
very traditional in their approaches to organisational structure,
service goals, recruitment, the nature of the work done, and so on. A
review of the literature on job design indicates that this traditional
perspective is also reflected in the patterns of jobs and work
organisation found in libraries, particularly in clerical operations.
For example, the design of work in libraries that are structured by
function is based on the principle of job specialization, in which
employees carry out a series of tasks associated with that function.
Thus, the acquisitions librarian will oversee all tasks within the
acquisitions section, where the majority of the workers will be
clerical; the chief cataloguer will supervise the cataloguing section,
comprising a certain number of clerical and professional (cataloguer)

posts, of whom the latter may commonly be organised on a subject basis, by category of material, or by language; the librarian in charge of the circulation desks will supervise the issuing and discharging processes and associated clerical tasks. Each person will have their own duties and responsibilities (which may or may not be formally defined by job description), and there will be no crossing of job boundaries. In the acquisitions section, the work will usually be organised such that the bulk of the clerical tasks are done in batches: requisitions for new material will be sorted and checked in batches; order slips will be prepared by supplier in batches; status reports from suppliers will be collected together until there is a bundle and then dealt with in one go; items will be unpacked, matched with delivery notes, and loaded onto trolleys ready for batch checking against order files; and lastly, labelling, ownership stamping and other initial preparation tasks will be done by trolley load, prior to the cataloguing stage. In the cataloguing section, duplicate copies, new editions, and continuations will be processed in batches, and even original cataloguing will often be carried out in stages by the professionals. For example, the cataloguer will often take a pile of new material and perform the descriptive cataloguing task first for the whole pile, followed by subject analysis (classification and/or subject headings) and subject indexing. The checking of catalogue cards and their subsequent filing in the card catalogue will be done by batches. Much of the circulation work is demand based, that is dealing with the user as he/she appears with items to be borrowed or returned, but other tasks (such as checking for reservations or overdues) can be dealt with in batches.

Efforts to add significant variety to work roles in such a set-up are restricted by the organisation design. The emphasis on job

classification schemes, job analysis and job descriptions indicates an
adherance to such traditional principles as scientific management. The
bureaucratic setting in which many library organisations find themselves
lends itself to such techniques. Libraries are relatively stable
organisations. Periods of transition and instability happen more often
than not sporadically. When they do occur, these may have come about as
a function of changes in the economy; changes in the market for the
services provided by the library; changes in the legislative context;
and/or, changes in the labour market. For the most part, organisational
change is externally induced. But pressures for changes do originate
from inside the library organisation, too. New senior library personnel
often bring with them new ideas and innovations, and these can result in
reorganisations of departments or of work procedures. New equipment and
new technology necessitate changes to longstanding work arrangments. The
library workers themselves can, sometimes unwittingly, instigate changes
in work processes, by showing various dissatisfactions with the existing
situation, for example, through high turnover, apathy, lack of
enthusiasm for their work, absenteeism, low morale, and so on.

*JOB ROTATION*

Job rotation is perhaps the simplest form of job redesign, and it is
commonly used in libraries. It involves rotating people systematically
between jobs on the same horizontal plane. Workers gain increased skill
variety and increased knowledge of a wide range of jobs, albeit on the
same level. Within sections different jobs may be rotated, such as the
various batch acquisitions jobs outlined above, perhaps hour by hour, by
trolley-load, or on some other regular basis. Rotation between sections
may also be practised, whereby clerical assistants are moved, for

example, from serials to book acquisitions, or between acquisitions and cataloguing, on a periodic basis, thereby building up on their knowledge of the clerical routines in technical services. It is also a technique used in many libraries as a training or orientation device, to give a new employee (clerical or professional) an understanding of the various jobs and activities performed throughout the library, and to develop managerial talent.

Job rotation does not involve changes to job content or methods, but concerns the way in which work as a whole is organised. Buchanan (1979) classifies it consequently as a work organisation approach to job design, and one which does not rely upon an explicit theory of motivation or concept or organisation. Robbins (1983) argues that the strength of job rotation is that it reduces boredom through diversifying the employee's activities, whilst at the same time indirectly benefitting the organisation since employees with a wider range of skills permit greater flexibility in scheduling work, adapting to changes, and filling vacancies. The drawbacks to job rotation include the costs of shifting people around, the disruptions within work groups of changing personnel, and its limited impact on enhancing job meaningfulness. Job rotation does not really change the job, merely the job-employee mix. The motivational outcome of one boring job is not enhanced significantly if a sequence of several boring jobs are required to be done instead.

Schanck (1985) argues that job rotation should be considered for professionals, as a routine staff development device, quite apart from its training purpose. He thinks it desirable that librarians should be encouraged to transfer laterally into new posts, and thereby become

reinvigorated through performing new tasks and responsibilities, and

gain new perspectives on the library's practices and policies. Such

moves would benefit not only the people concerned, but also the library

and users.

*JOB ENLARGEMENT*

Job enlargement is another relatively simple technique which has been

applied with some degree of success in libraries. It involves combining

a number of tasks on the same level, producing a horizontal expansion of

responsibilities. The effect of enlargement, according to Robbins

(1983), is to give increased skill variety and more meaningful task

identity to the worker by adding similar tasks to an existing job. The

degree of specialization is reduced. The extent to which enlargement is

viewed positively is related to the current skills, capacities and

attitudes of employees. Grouping several boring jobs together merely

makes a larger boring job. This effect may have some validity in

manufacturing firms and in some clerical areas of work. But, Schanck

(1986) argues that when applied to higher professional levels of work,

"in which discretion, knowledge, creativity, and judgement are involved,

an expansion of tasks surely results in qualitative as well as

quantitative changes." (p385)  Thus, to be effective in performing the

larger number of tasks, the librarian will have to have a greater fund

of knowledge and more varied experience, and may make more decisions in

a greater variety of situations.

An example of enlargement (particularly in the U.K.) includes the

situation whereby cataloguers perform some public service duties on a

regular basis (not just covering for sickness or absences), such as

manning information/reference desks. In this way they are able to use their expertise in bibliography and their knowledge of the catalogues in answering users' subject enquiries, and in return gain more awareness of the wider library service and the needs of users, as well as knowledge about reference sources and methods. Sometimes the position will be reversed, and reference/information librarians will be required to take on cataloguing duties, allowing for a more fuller cross-fertilisation of work experience. A number of libraries, particularly in the academic field, assign librarians to subject areas in which they have full responsibility for collection development, (original) cataloguing, and reference work. From necessity, small libraries with only a few professional workers will also combine various functions, though it is recognised that such libraries would not necessarily be the target of job redesign. Job enlargement can also be appropriate for non-professional workers. In many large libraries all clerical assistants are assigned to work for a proportion of their time on the issue and discharge desks, usually on a regular timetabled basis, and will undertake their assigned duties in the other departments and sections the rest of the time. Most assistants appreciate the contact with the users that such an arrangement provides, and their behind-the-scenes activities become perhaps a welcome relief from the busy desks and less tedious as a result.

Where job enlargement is practiced at the group rather than at the individual level, *integrated work teams* result. For jobs that require teamwork and cooperation, this approach can increase diversity for team members. Specific examples in libraries are difficult to identify in the literature. In many single-site libraries, such as in branch libraries in the public library field, in department/site libraries in

polytechnics and universities, or in colleges of further education, clerical workers may often be organised into integrated work teams (although this will not be explicitly stated). The relatively limited nature of the operations of these smaller libraries precludes specialisation by function, and the small contingent of clerical assistants will share all the routine tasks involved in the day-to-day business of running the library: for example, shelving, shelf-tidying, issuing, discharging, filing, processing, repairing books, and so on.

*JOB ENRICHMENT*

Job enrichment is the technique which has received the widest attention in the search to improve the quality of working life. Enriched jobs are expanded vertically so that essentially the employee takes on additional responsibility to plan, execute, and inspect that work. (Robbins, 1983) Bailey (1983) explains that the aim and effect of this type of change is to enhance the motivational content of the jobs in terms of increased autonomy, decision making, responsibility, recognition and individual development. Job enrichment has implications in terms of organisation, since it is gives employees greater involvement in decisions that have traditionally been the responsibility of supervisors, management or specialist functions. According to Robbins (1983), there is much evidence that job enrichment provides direct benefits to the organisation, such as lowered absenteeism and reduced turnover costs.

Some applications of what may be described as job enrichment in libraries are reported in the literature. Interestingly, not one application uses Herzberg's approach explicitly, and probably few of the exercises involved were necessarily intended to be 'job enrichment'

experiments as such. Significant examples in the U.K., which do in fact have an impact on organisational structures, have been the introduction of team structures (or matrix management) into several public library authorities. The usual pattern involves redeploying professional workers, previously employed as branch librarians (which in many cases includes a high proportion of routine non-professional work), as part of professional teams. Each team will normally have functional and specialist or subject responsibilities (such as, children's services, local studies, and adult education), as well as a geographic responsibility for a number of service points in an area. Hinks (1977) in describing his library's experiences in setting up a team structure, reports that the matrix approach is "very effective in terms of job satisfaction, motivation and career development, as well as maintaining a flexible, user-centred approach to the public service." (p71) One of the aims of team restructuring is to allow the librarians involved to use and develop their professional knowledge and expertise, freed from excessive routine administration. The responsibility for running the day-to-day operations of a branch or group of branches is normally given to senior clerical assistants. Such work involves supervisory and even line management duties, which were previously the responsibilities of the branch librarians, and this in turn usually results in job enrichment for the non-professionals involved. One of the disadvantages of team structuring is that the librarians in the teams do not gain experience of staff supervision and basic management practices, skills which will often be required for more senior posts within their authority and other posts in other library systems.

A recent approach to job design is the quality circle. A quality circle is a voluntary group of workers, usually a normal work crew, who have a shared area of responsibility. The group meet together weekly to discuss their quality problems, investigate causes, recommend solutions, and take corrective actions. The group is responsible for solving its own quality problems, and for generating and evaluating their own feedback. Part of the concept of the quality circle is to teach all the group members the necessary skills that are needed to perform well together, such as communication skills, various quality strategies, and measurement and problem-analysis techniques. The quality circle integrates job design with the behavioural idea of extensive employee participation.

Quality circles have been used extensively within Japanese industry since the mid-1960s. Bailey (1983) notes that, whilst developed initially around the need to improve quality, they have broadened to take into account many factors relating to costs, safety and productivity. Group members have more say over aspects of their own work organisation. The contents of individual jobs are not changed by quality circles, and neither is there any change in the authority structure of the organisation. Quality circles are thought to contribute considerably towards improved motivation and improved relationships between the company and its employees, creating a constructive climate in which necessary changes in technology, jobs and organisation can take place. For these reasons they are now being applied rapidly in other countries, including the U.K. and the U.S.A..

Quality circles have not been used yet in libraries, to any great

extent, although some writers have been quick to propound their

advantages, particularly the potential impact they could have on team

building. Martell and Tyson (1983) view quality circles as being a major

part of QWL strategies in libraries:

> "They can be effective mechanisms for involving library employees in
> the decision-making process and improving morale and, equally
> important, product/service quality." (p285)

*OTHER WORK RELATED TECHNIQUES*

There are other work-related techniques, such as *flexi-time* and *job*

*sharing*, which have been applied successfully in libraries. Although

these will not on their own significantly enrich jobs, they do provide

workers with a sense of greater control over their work lives. Flexi-

time is a work scheduling system whereby employees are required to work

a number of hours a week, but are free to vary those hours of work

within certain limits. Usually there is a common core set of hours in

which people are required to work, with flexible bands surrounding the

core. Employees can accumulate the 'flexible' hours from before and/or

after the core time, and sometimes extra hours can be built up and

turned into a 'free' day off periodically. There are a number of

variations in how flexi-time is arranged. Within a flexi-time scheme

people at all levels gain a degree of discretion over, if not how they

can do their work, when they can do it. In a library set up, the core

times and flexible bands have to be set up carefully to take into

account the normal opening hours of the library, and timetabling of the

issue/discharge desks will have to be done fairly so that all assistants

have a chance to take advantage of the flexible hours. Evening and

Saturday working in libraries can complicate the organisation of flexi-

time, so it is often common practice to exclude such shift work from the flexi-time system.

Job sharing is a means by which more than one individual can hold the same post. Often this is accomplished by having two half-time workers carry out the same functions. The technique helps those people who, for one reason or another, prefer part-time work. As we noted in Chapter 2, libraries in the U.K. employ a large proportion of part-time workers (nearly 27% of the total workforce in 1981), although only a small percentage of these are professional workers. This is because much of the part-time assistance is required for Saturday and evening work, where the bulk of the tasks will be clerical (shelving, manning issue/discharge desks, and so on). Part-time hours in this context may vary from a few hours per week to thirty or so. Job sharing would not necessarily be appropriate for such activity, but it may become more common in libraries, particularly for professional workers.

LESS ORTHODOX APPROACHES TO THE REDESIGN OF JOBS IN LIBRARIES

Many libraries have introduced changes in the organisation of work which do not follow a particular orthodox job redesign technique. The impetus for these changes will have come about for a variety of reasons, many of them local and peculiar to the individual libraries concerned, such as institutional pressure to reduce the staffing budget, or the introduction of new equipment, or the amalgamation of different libraries. Often such new arrangements will have been planned well in advance, with or without full participation of the staff concerned, and in other cases the need to reorganise will have been unanticipated, and so hurriedly undertaken. There will be a spectrum of cases in between.

Over the years a number of people have advocated the redesign of library jobs based usually on their own views of the nature of professional work. Some of these proposals have not actually been put into practice, others have been adapted or partially taken on board by some libraries, and others have been successfully implemented. A common theme in many of these approaches is an emphasis on client-centred services. The development of a closer client relationship seems to be considered a fruitful route to professionalisation.

Smith (1971) argues for the formation of a librarian-specialist, which bears some resemblance to the subject specialist which was identified in Chapter 2. Smith calls for considerable changes in academic libraries, so that his specialists may perform effectively. (p60) First, the dominant concern and goal of the library should become sophisticated bibliographical and information service. Second, the librarians who are to provide this service must not be tied to the functional divisions which form the basic components of library organisation, nor should they be tied to bureaucratic restrictions such as fixed work schedules, explicit routines, and close supervision. Third, the librarian-specialists should be organised in a flexible way so that they can relate directly to sections of the collection on the one hand and to the clientele using that collection on the other. They also must involve themselves in all library activities related to that collection and clientele, such as collection building, cataloguing, and reference activities. Smith sees a continuing need for functional organisation, based on the flow of materials through the library, since material will still have to be acquired, processed, and circulated. Professionals who are involved in this area, Smith argues, do not belong there, since they are overqualified for such work. He calls for the use of more non-

professionals in such positions, which would give them a much more
substantial career ladder. In this way, people could be appointed with
management and personnel training and experience, and it would place
library housekeeping in the hands of those trained for and suited to
such activities. Smith notes that the introduction of automation and the
application of systems analysis is speeding such changes in libraries,
come what may. Many of the activities of the librarian-specialist have
been taken on board by the creation of subject librarians, but not many
libraries have taken the route advocated for non-professionals.

Hanks and Schmidt (1975), whose proposal for an open systems model of
professionalism for librarianship was introduced in Chapter 3, call for
client-centred roles for librarians, where the traditional functional
organisation of the library will be replaced with one based on types of
clients served. Functional operations would be carried out either by a
centralised unit or by functional workers in each client-centred
department. In either case, functional operations would be subordinated
to the client-centred concerns. Practitioners of the functional roles
would require less formal qualifications than those undertaking client-
centred roles, and they would perform basic cataloguing and reference
work as well as other functional tasks. Hanks and Schmidt's client-
centred librarians are different from Smith's librarian-specialists in
not performing the cataloguing and reference tasks for the client
groups.

Saunders (1986) argues that far too many librarians' jobs, particularly
at the middle grade, "consist of a whole series of small, often low
level, often unrelated tasks, which have to be regularly repeated."
(p21) Saunders defines a task as a job with a beginning and end. Whilst

library management is partly to blame for continuing organisational

structures which inhibit both professional commitment and recognition,

he believes librarians have the means to create more fulfilling roles

for themselves, but that this demands flexibility. He contends that many

librarians, in a way, accept without murmur the low professional jobs

that are required of them, thus contributing to the continuing

degradation of the librarians' status and skills. He believes that

motivation to improve librarians' jobs "stems from the individual being

able to determine the task, his/her role and personal commitment in

determining how the task should be fulfilled, and the ability to carry

through the task with the acceptance of responsibility for success or

failure." (p22)  He proposes a library structure based on task

orientation. The main aim will be to identify, separate and then

concentrate the line skills and objectives, divided into a variety of

task teams. There would be main task teams and sub-task teams, with some

interchangeability of personnel for training, experience and development

of specialities. Each team would consist of an appropriate allocation of

personnel consisting of a team leader, a number of librarians on

equivalent grading, and a number of clerical and administrative posts.

Teams would define the problems and organise themselves to undertake

their main and sub-tasks. Non-professional activities would have a

parallel structure, but these would be likely to be much more job

oriented. Lastly, librarians must be prepared to relinquish the non-

professional parts of their jobs, so that it is possible to create

sensible and rewarding work for clerical and administrative personnel as

well as improve the quality of professional work.


Martell, in a series of articles in the *Journal of Academic

Librarianship* on the subject of the Quality of Working Life, presents

various case studies of work reorganisation. A University library set up

a project team to merge two serials departments, to resolve problems of

duplication of effort and lack of user seating space. (Martell, 1984b)

The strategy adopted was deliberately designed to be consistent with QWL

principles, in that all library personnel in the two units concerned

were expected to participate actively in making decisions about the

merger, and in designing jobs, workflows, files, and procedures for the

new unit. In another university library a task force was set up to plan

the merger of two large and distinct science collections, into a new

purpose-built building. (Martell, 1984a)  In the process of designing

the reference services in the new library, one subgroup of the task

force (consisting of librarians from both libraries) made decisions in a

collaborative way about the scope of the reference collection, its

optimal size, the configurations of staffing, resources, services,

seating, equipment, and workspace. The experience was found to be

enriching for all participants, enabling them to adjust to each other

and to the new library environment. A collegial management structure was

successfully introduced, in the early 1970s, into one of the campus

libraries of the California State University. (Martell and Kunselman,

1984)  Elections are held for middle management positions, every three

years. The practice has encouraged managers to be more sensitive to the

concerns of their fellow organisational members, and the library has

been able to establish a more suitable climate for the development of

strong ties of commitment and loyalty. Each department is supervised by

an elected chair and each section by an elected coordinator. (Both the

University Librarian and the University President have the right of veto

on an appointment, although no such action has so far occurred.)  The

system of election has been found to lead to a group consensus style of

decision making and to encourage the free flow of ideas, and to result

in a general concern for the health and well-being of the library.


Michael Gorman, a prominent figure in librarianship and advocate of the

use of computers in libraries, has for some years argued for the

integration of public and technical services, not just as a result of

automation but also for economic and professional reasons. For example,

he finds it anomolous that cataloguers, who have a tremendous knowledge

of the subject field in which they work, are seldom or never used in

reference activity. (1979a, p435)  He proposes a reorganisation of

libraries, based on similar lines to Smith's librarian-specialist idea.

In his library of the future there would be groups of librarians formed

round services or subjects or languages, or combinations of these, in

which each professional would perform all appropriate professional

functions including selection, collection development, reader advisory

and reference services, original cataloguing, and bibliographic

instruction. Technical services departments would continue to exist, but

probably under a different name, and they would be primarily staffed by

non-professionals. Gorman has been able to put his ideas into practice

in the Library of the University of Illinois at Urbana-Champaign where

he is Director of General Services. The Library is described as being

the largest library of a state institution in the U.S., with more than

35 departmental libraries and an Undergraduate Library. (Gorman, 1983a;

and Martell, 1983c)  Progress with implementation of the scheme has been

gradual and dependent upon the introduction of an online catalogue

throughout the University's campus. Decentralisation of the professional

work, throughout the network of departmental libraries, has been

balanced by the reinforcement of the centralisation of clerical and

automation-based aspects of library operations, including circulation
and maintenance of the automated systems.

CONTEMPORARY APPROACHES TO JOB DESIGN AND WORK ORGANISATION, AND THEIR
APPLICATION IN LIBRARIES

This chapter, of necessity, can only present a very brief overview of
job design theories and practices. Having reviewed some traditional
approaches to job design and work organisation in libraries, including
less orthodox methods, we will look at more recent research activity in
these areas and consider their possible application in libraries.

*JOB RESTRUCTURING*

Job restructuring, as described earlier, involves the analysis of
individual jobs. What characteristics or attributes are desirable in
individual jobs? How can the job itself contribute to satisfaction and
motivation for the individual worker? The Expectancy theory of
motivation is a general theory of motivation which has been developed as
an approach to work motivation by several American organisational
psychologists. (Buchanan and Huczynski, 1983, p57) Briefly, Expectancy
theory states that human behaviour results from a conscious decision
making process that is based on the individual's perceptions concerning
the results of alternative behaviours. It helps to explain individual
differences in motivation and behaviour, and attempts to measure the
strength of an individual's motivation to behave in particular ways and
to predict the resulting behaviour.

The Job Characteristics Model is a job enrichment strategy which has developed from the Expectancy theory. Hackman and Associates have developed the model from the analysis of a large number of jobs and the identification of basic dimensions that could apply to any job. Hackman and Oldham (1975 and 1976) have further extended and revised the theory, emphasising how it could be applied to job redesign activities. The model describes systematically the links between job characteristics, the individual's experience of these job characteristics, and the resultant outcomes in terms of motivation, satisfaction and performance. Job characteristics theory focuses on jobs that are done independently by individuals working more or less alone. Hackman and Oldham (1980) admit that the theory offers little guidance about how work should be designed for interacting teams of workers, nor does it address social, technical, and situational factors that affect how work systems function. (p61)

The Job Characteristics Model posits that there are three psychological states which are critical to high work motivation, job satisfaction and performance. These three states are:

1. *Experienced meaningfulness:* The individual must perceive his work as worthwhile or important by some system of values he accepts
2. *Experienced responsibility:* He must believe that he personally is accountable for the outcomes of his efforts.
3. *Knowledge of results:* He must be able to determine, on some fairly regular basis, whether or not the outcomes of his work are satisfactory. (Hackman and Oldham, 1976, p256-257)

The more these three conditions are present, the greater will be the employee's motivation, satisfaction and performance on the job, and possibly the lower his absenteeism and likelihood of turnover. These states are also internal to a person and therefore are not directly manipulable in designing or managing work.

Five core characteristics are identified which elicit the three

psychological states. These are defined as:

Towards experienced meaningfulness:
1. *Skill variety*, which is the degree to which a job requires
the worker to perform activities that challenge his skills and
abilities.
2. *Task identity*, which is the degree to which the job requires
completion of a whole and identifiable piece of work.
3. *Task significance*, which is the degree to which the job has a
substantial and perceivable impact on the lives or work of other
people.
Towards increased responsibility:
4. *Autonomy*, which is the degree to which the job gives the
worker freedom, independence and discretion in scheduling work
and in determining how he will carry it out.
Towards knowledge of results:
5. *Feedback*, which is the degree to which a worker, in carrying
out the work activities required by the job, gets information
about the effectiveness of his efforts. (Hackman and Oldham,
1976, p257-258)1

The five characteristics may be considered separately, or they may be

combined into a single index which will reflect the overall potential of

a job to foster internal work motivation. The index provides a

Motivating Potential Score (MPS). A high MPS will not *cause* workers who

undertake that job to be internally motivated, to perform well, or to

experience job satisfaction. But, a job high in motivating potential

*creates conditions* such that if the jobholder performs well he/she is

*likely to experience positive feelings and reinforcement*. Poor

performance in such a job is likely to lead to very unhappy feelings.


The complete job characteristics model as finally developed by Hackman

and Oldham (1980) is presented in Figure 6.3. In addition to internal

work motivation as an outcome of enriched work, there are two other

personal outcomes which are *growth satisfaction* and *general job*

*satisfaction*. The major work outcome of an enriched job is improved *work*

*effectiveness*, which is defined as including both the quality and the

quantity of the goods and services produced.

```
┌─────────────┐        ┌──────────────┐        ┌──────────────┐
│  CORE JOB   │━━━━━━━▷│   CRITICAL   │━━━━━━━▷│ PERSONAL AND │
│ DIMENSIONS  │        │PSYCHOLOGICAL │        │ WORK OUTCOMES│
│             │        │    STATES    │        │              │
└─────────────┘        └──────────────┘        └──────────────┘
```

Skill variety

Task identity            Experienced          High internal
                         Meaningfulness       work motivation
Task significance        of the Work
                                              High "growth"
                                              satisfaction

                         Experienced
Autonomy ───────────────▷Responsibility
                         for Outcomes         High general
                         of the Work          job satisfaction

                         Knowledge of the
Feedback ───────────────▷Actual Results of    High work
                         the Work Activities  effectiveness

```
┌──────────────────────────────┐
│ Moderators:                   │
│ 1, Knowledge and skill        │
│ 2, Growth need strength       │
│ 3, Work context satisfaction  │
└──────────────────────────────┘
```

Figure 6.3 The complete Job Characteristics Model of work motivation.
(From HACKMAN, J. Richard and Greg R. OLDHAM. *Work redesign.* Addison-
Wesley, 1980. p90)

Hackman and Oldham (1980) identify three moderators which should be
taken into account when making changes to jobs. These moderators provide
an understanding of how people respond to their work, and are defined
as: knowledge and skill; growth need strength; and, satisfaction with
the work context. (p82-88)  If the level of *knowledge and skill* required
by a person to perform well on a job, with high MPS, is sufficient then
the person will experience positive feelings as a result of their work
activities. But people who are not competent enough to perform well will
experience a good deal of unhappiness and frustration.  On the other

hand, if a job has a low MPS, then internal motivation will be low, and one's feeling will not be affected much by how well or how badly one does, regardless of one's skill and knowledge.

Not everyone is able to become internally motivated in his work. People have varying needs for personal accomplishment, for learning and developing themselves, for being stimulated and challenged. The links between the job dimensions and the outcomes are moderated or adjusted for by the strength of the individual's *growth need.* Those with high growth need strength will more likely experience the three psychological states described above if their work is adequately designed and enriched, than those with low growth need strength. Individuals with low needs for growth may not recognise the opportunities presented by enriched work, or may not value them, or may find them threatening.

Lastly, depending upon how satisfied people are with aspects of the *work context* then this may also affect their willingness or ability to take advantage of the opportunities for personal accomplishment by enriched work.

*JOB RESTRUCTURING IN LIBRARIES*

Of primary interest to the writer at this stage is how enriched work might be designed in libraries based on the job characteristics model. As yet there has been no actual experimentation, although some writers have referred to Hackman's theories when discussing library job redesign. Hackman and associates recommend that a systematic diagnosis should be carried out using a variety of methods to collect data, such as questionnaires, interviews, and observations. (Hackman, Oldham,

Janson and Purdy, 1975; Hackman and Oldham, 1980) To aid the multi-method diagnosis Hackman and Oldham developed a data collection instrument, known as the Job Diagnostic Survey (JDS). (Hackman and Oldham, 1975) The JDS taps each major class of variables in their theory of work motivation, as illustrated in Figure 6.3, with the exception of the two concepts of level of knowledge and skill, and employee work effectiveness. (Hackman and Oldham, 1980, p103) They consider these factors to be idiosyncratic to particular work settings, thereby defying meaningful measurement across organisations. In addition the JDS measures two extra job characteristics, not covered by the motivational theory. These are *feedback from agents* ("The degree to which the employee receives clear information about his or her performance from supervisors or from co-workers"), and *dealing with others* ("The degree to which the job requires employees to work closely with other people in carrying out the work activities..."). (Hackman and Oldham, 1980, p104)

Hackman and Oldham (1980) argue that two key issues need to be addressed prior to job restructuring. These are:

> 1. Whether there is a demonstrable need for the redesign of work, or whether some other approach to change (or none at all) is more appropriate.
> 2. Whether it is feasible to redesign individual jobs, given the present structure of those jobs, the characteristics of the people who do them, and the state of the organizational milieu in which they are done. (p109)

Specific questions that should be asked in assessing the need for work redesign are as follows:

**Question 1. Is there a problem or an exploitable opportunity?**

In the course of this thesis it has become apparent that there is a problem regarding the work done in libraries, particularly in the

case of qualified librarians vis-a-vis their aim for professionalisation, and the distribution of tasks between them and clerical library staff. This problem is not necessarily an important issue for every library nor every librarian. But at a general level, these characteristics of the work appear to be widespread. This writer recognises that there may be other problem areas concerning the work carried out in libraries that have not been identified in this thesis.

Be that as it may, this writer posits that there is enough evidence to suggest that in many respects the design of library jobs merits some scrutiny, and that the opportunity to reassess the work done, and especially the relationship between the 'professional' and the non-'professional', exists following the introduction of automation.

The introduction of automation on its own presents an opportunity for libraries to consider the restructuring of jobs in a systematic way, since the computer has an intrinsic effect on the basic work undertaken.

Question 2. Does the problem or opportunity centrally involve employee motivation, satisfaction, or work effectiveness?

In Chapter 4, we noted - from a review of several research projects - that librarians, on the whole, demonstrate a fair degree of job satisfaction. It would be dangerous to generalise, since the level of job satisfaction will vary not only from one library to another, but from one individual to another (and within one individual, the degree of job satisfaction may vary over a period of time). Application of the JDS within an individual library would determine whether or not motivation and satisfaction are at issue in that

setting at that time.

Work effectiveness is closely tied to the aims and objectives of the individual library, and may only be judged by the senior library management concerned. There is mounting pressure in libraries of all types to be efficient and cost effective, not just in terms of budget expenditure, but also in terms of service provision. Performance itself will not remain static, and so there is a need for periodic reviews. Computers are, more often than not, introduced into libraries in order to improve procedures and to provide improved services to users. By implication, it is anticipated that the computer will have some positive impact on work effectiveness. To ensure that this will come about in a planned way, the new work processes need to be designed appropriately.


**Question 3. Might the design of the work be responsible for observed problems?**

According to Hackman and Oldham (1980), work redesign is an appropriate change strategy only if there is reason to believe that observed problems may have their roots in the motivational properties of the work itself. (p111) Utilising the JDS, one may determine the Motivating Potential Score of an individual job, and compare it with national norms (if these exist) or with scores for other jobs within the organisation. One could also interview the employees about how they see their jobs, and form an assessment that way.

For our purposes, this question may only be answered within the context of an individual library, even taking into account the generalised nature of library work.

The introduction of automation within a particular library is

very much a local affair. There are no hard and fast rules about how it should be done, although as we have seen there are precedents that the wise library manager may follow. New working practices that will be set up may depend very much on the way work was structured and organised prior to automation. It may be performed in a haphazard way, producing unsatisfactory work for some people, which in the short or long term could lead to problems in staff job satisfaction and motivation. On the other hand, jobs could be redesigned in a planned way to alleviate real or potential problems of job dissatisfaction.

**Question 4. What aspects of the job most need improvement?**

This question seeks to identify the specific strengths and weaknesses of a job, and to pinpoint the focus of any changes there should be in the job. An important part of this process is to make sure that there is rough agreement, between those who perform the job and those who supervise it, about its best and worst features.

Regarding the characteristics of library work, some attempt was made in Chapter 4 to determine what are felt to be the best and worst aspects. Such feelings are, once again, subject to variation from individual to individual, but a certain pattern is discernable. A major feature, and one which job redesign could alleviate, is the high level of routine, clerical work which is required of the professional. If such work were effectively delegated to clerical workers, the professionals would then be able to concentrate their effort on those aspects of library work for which they have been educated and trained. Whilst the emphasis of most of the research in this area has been on the work of professional librarians, it must be remembered that the role of the clerical worker is equally

important to the efficient running of a library. Automation of basic library routines provides the opportunity to redesign the manual clerical jobs that remain in a meaningful way.

Hackman and associates present five principles for implementing work redesign, each one being an action step aimed at improving both the quality of working experience for the individual and his work productivity. They are:

**Combining tasks.** The employee is given more than one part of the work to do, thus increasing the variety of the job and the contribution that the individual makes to the product or service.

In the acquisitions section, for example, a clerical assistant could be assigned responsibility for the orders placed with a particular supplier. That assistant would then deal with any queries, reports, deliveries and invoices from that supplier. (It may be that the job would have to be shared between two or more assistants depending on the use made of the supplier.) Other library personnel chasing the status of a request would approach the appropriate assistant(s) directly.

As already indicated, a common way for the cataloguer in the academic library to gain increased skills and task identity, is for him or her to be given responsibility for cataloguing and classification in a specific subject area, and in addition be required to undertake reference and enquiry work in that section of the library on a regular basis. In Gorman's restructured library, the professional, amongst other things, selects new material for a particular client body, and in addition performs the cataloguing and classification of that material.

Forming natural work units. The employee is given a meaningful
sequence of work to perform, rather than a fragmented part of what
is required, thus increasing the contribution that the individual
makes to the work, and increasing the significance of the job.

In the library context, information services may be formed on a
geographic basis (for example, by area in the public library; by
site library in the academic environment); or, by client group (for
example, children's services, ethnic groups, house-bound readers in
the public library; faculty, department or subject groupings in the
academic library). In acquisitions, work units may be formed based
on supplier; by requesting body (where requests emanating from a
particular librarian or group of librarians, or from a particular
site or branch, are dealt with by one assistant); by country of
origin (that is, language) of publisher (since some foreign imprints
have to be acquired from specialist suppliers); or by form of
material (since some material, particularly non-book formats, may
only be obtained from certain specialist suppliers, or require
special procedures, etc.).

Establishing client relationships. The employee is given
responsibility for making personal contact with others within and
outside the organisation for whom and with whom he works. This
increases variety, gives the person freedom in performing the work,
and also increases the opportunity for receiving feedback.

The formation of client relationships is probably one area for
which libraries are most suited and very well able to do, by the
very nature of the type of services offered. Having set up some form
of grouping of services, based on similar examples to above, the
formation of client relationships may proceed fairly smoothly. Users

will naturally go to the specialist librarians they recognise as dealing with their specialisms; acquisitions assistants will contact the suppliers they deal with direct, and in turn the suppliers will know to contact particular library personnel with any queries they might have.

**Vertically loading the job.** The employee is given responsibilities normally allocated to supervisors. This gives the employee autonomy in his work.

Library personnel may be given some discretion in setting their work schedules, in determining how they will carry out the work, in assigning priorities, and in making decisions about their work.

**Opening feedback channels.** The employee has a direct relationship with clients and thus gains job-provided feedback on performance.

Where client relationships have been established, this often provides the library worker with natural and direct feedback on how well the service is meeting the needs of the client. Such feedback should aim to encourage the librarian or clerical assistant to carry out their work more effectively. In cases where such communication channels exist, it is important that the job-provided feedback is not always negative. Within acquisitions, for example, poor performance from a supplier should not be the cause of criticism directed at the assistant responsible for those orders, since the matter may be totally outside his or her control.

The job restructuring approach to work redesign, just described, takes the individual job as the basic unit of analysis. The work organisation approach, on the other hand, takes the primary work group as its basic unit of analysis.

The work organisation approach is based on the concept of the organisation as an open socio-technical system. Development of the socio-technical system theory of organisation has taken place mainly in Britain and Scandinavia, and much of the work has been carried out by the Tavistock Institute of Human Relations. As we have already noted, an enterprise or organisation can be conceptualised as an open system where the social and technological aspects are interdependent. A production system requires a technological organisation - of equipment, plant and layout - and a social organisation - of people who operate the technology. A third factor is the economic environment of the enterprise, which in turn provides a measure of overall system effectiveness. (Buchanan, 1979, p89) Enterprises are purposive, goal seeking entities with an ultimate goal of survival.

According to Buchanan (1979), the central argument of the work organisation approach to job design is that work in groups is more likely to provide meaningful work, to develop responsibility, and to satisfy human needs in general than is work which is allocated to separately supervised individuals. (p108) The approach itself has several similarities to that of job restructuring, but a job design technique unique to the work organisation approach is the formation of

autonomous work groups. The work organisation approach is summarised by

Buchanan, as shown in Figure 6.4.

The human needs (for affiliation, achievement, control, and so on) are

those considered relevant to behaviour at work. Given these needs, the

main psychological requirements of jobs are defined as:

1. The need for the content of a job to be reasonably demanding of
the worker in terms other than sheer endurance, and yet to provide a
minimum of variety (but not necessarily novelty);
2. The need for being able to learn on the job and to go on
learning;
3. The need for some minimal area of decision making that the
individual can call his own;
4. The need for some minimal degree of social support and
recognition in the workplace;
5. The need for the individual to be able to relate what he does and
what he produces to his social life;
6. The need to feel that the job leads to some sort of desirable
future. (Emery and Thorsrud, 1969, p105)

The six psychological requirements can be met through the design of

individual tasks or through group working. The design of jobs - that is,

the ways in which tasks may be more effectively put together to form

jobs - is based on thirteen hypotheses, compiled by Emery. (Reprinted

in Hill, 1971, 208-210). At the individual level, tasks should provide:

1. Optimum variety of tasks within the job.
2. A meaningful pattern of tasks that gives to each job a semblance
of a single overall task.
3. Optimum length of work cycle.
4. Some scope for setting standards of quantity and quality of
production and a suitable feedback of knowledge of results.
5. The inclusion in the job of some of the auxiliary and preparatory
tasks.
6. The inclusion in the job of tasks requiring some degree of care,
skill, knowledge or effort that is worthy of respect in the
community.
7. The job should make some perceivable contribution to the utility
of the product for the consumer.

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│                      ┌─────────────────────────┐                 │
│                      │ HUMAN NEEDS             │                 │
│                      │                         │                 │
│                      │ 1. Affiliation          │                 │
│                      │ 2. Achievement          │                 │
│                      │ 3. Control              │                 │
│                      │ 4. Curiosity            │                 │
│                      │ 5. Security             │                 │
│                      └─────────────────────────┘                 │
│                                   ▽                              │
│              ┌──────────────────────────────────────────┐       │
│              │ PSYCHOLOGICAL REQUIREMENTS OF JOB CONTENT │       │
│              │                                           │       │
│              │  1. Variety and challenge                 │       │
│              │  2. Continuous learning                   │       │
│              │  3. Decision making                       │       │
│              │  4. Social support and recognition        │       │
│              │  5. Relationship between work             │       │
│              │                     and social life       │       │
│              │  6. Desirable future                      │       │
│              └──────────────────────────────────────────┘       │
│                      ↙                         ↘                 │
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**INDIVIDUAL JOBS SHOULD PROVIDE:**

1. Optimum variety
2. Meaningful task
3. Optimum work cycle
4. Control over work standards & feedback of results
5. Preparation & auxiliary tasks
6. Use of valued skill, knowledge & effort
7. Contribution to end product

**WORK GROUP ORGANISATION SHOULD PROVIDE:**

1. Job rotation or physical proximity where individual tasks:
   (a) are interdependent
   (b) are stressful
   (c) lack perceivable contribution to end product.

2. Grouping of interdependent jobs to give:
   (a) whole tasks which contribute to end product
   (b) control over work standards & feedback of results
   (c) control over boundary tasks.
3. Communication channels
4. Promotion channels

Figure 6.4 The work organisation approach to job design
(From BUCHANAN, David A. *The development of job design theories and techniques.* Gower, 1979. p112.)

Work group organisation should provide for interlocking tasks, job rotation or physical proximity, where:

8. there is a necessary interdependence of jobs;
9. the individual jobs entail a relatively high degree of stress;
10. the individual jobs do not make an obvious perceivable contribution to the utility of the end product.

Where a number of jobs are linked together by interlocking tasks or job rotation, they should as a group:

11. (a) Have some semblance of an overall task which makes a contribution to the utility of the product;
    (b) Have some scope for setting standards and receiving knowledge of results
    (c) Have some control over the boundary tasks.

Work group organisation should provide for:

12. Channels of communication so that the minimum requirements of the workers can be fed into the design of new jobs at an early stage;

13. Channels of promotion to foreman rank which are sanctioned by the workers.

Along with almost every other job design theories, the socio-technical approach has its critics. However, Buchanan (1979) argues that to date the approach is the "most comprehensive theory of job design available" (p134), because it incorporates the four basic components which were outlined in Figure 6.1.: namely, a theory of motivation; the identification of significant job characteristics; a concept of organisation structure and functioning; and a technique for carrying out job design.

*WORK ORGANISATION IN LIBRARIES*

In applying the work organisation approach to job design, the Tavistock researchers formulated a procedure based on a socio-technical systems analysis. There is a nine step method for production tasks and a seven step method of role analysis for use in service or administrative

departments. The latter method is obviously more appropriate to the

library setting, and so will be considered here.


Hill (1971) describes the role analysis method as follows:

1. *Initial scanning.* A brief general overview of the department to
be analysed, covering its inputs, outputs and transformation
processes, including its objectives, its work and its organisational
structure and location within the overall organisation, as well as
the geographic layout of the department.
2. *Objectives of the department.* Defining objectives clearly and
specifically, so that all activities in the department can be judged
against them. This involves a detailed analysis of all inputs to and
outputs from the department and of all steps taken to transform
inputs into outputs...
This analysis should result in a set of appropriate hypotheses
covering responsibilities, authorities, information/communication
links with others, and key methods and procedures.
3. *Analysis of roles.* Defining objectives of individual roles, using
the same procedure as in Step 2, starting at the top with the
manager's role and working downwards.
4. *Measurement of roles against psychological needs.* Obtaining the
manager's and the workers' own perceptions of how far their existing
jobs or roles meet psychological needs.
5. *Grouping of roles.* Identifying necessary job interaction links
which may lead to ideas for a different grouping of roles.
6. *Proposals for change.* Gathering ideas for change into an action
programme, which will have to relate to the wider environment of
which the department is a part.
7. *Management by objectives.* Introducing a framework for management
by objectives at department, section and role levels, including the
development of measurements of performance, the setting of targets
and appropriate feedback channels. (p130 and p244-247)


According to Buchanan (1979), the method of role analysis does not

directly identify job design alternatives. (p126)  Instead, it is a

process of analysis which is to be used as a useful framework for

stimulating ideas in the minds of the analysts.


Much of the research into library job characteristics, which was

reviewed in Chapter 4, concluded that the majority of library workers

like to work with other people, both colleagues and users. This may

indicate a preference for working in groups or teams. The introduction

of the team structure and matrix type management into U.K. public

libraries has mostly met with success. To date there has been no

reported application of socio-technical systems analysis in the redesign

of library jobs, although as a method of job design, it has generated

some discussion in library literature. For example, Shaughnessy (1977)

argues that the technological changes affecting libraries together with

other environmental turbulences, as well as the "psychosocial response

of librarians to their work", are demanding immediate steps toward job

design. (p272)  He advocates that the socio-technical systems approach

provides an appropriate theoretical framework within which work may be

organised and the quality of working life in libraries improved.


Martell has formulated a library organisation based on socio-technical

principles, which unfortunately remains untested. In his doctoral

thesis, Martell (1979) recommends an experimental design for the

restructuring of an academic research library based on small client-

centred work groups. There are three essential components to Martell's

design:

> 1. The library's structure is predicated on a division based on
> clien-centred units;
> 2. The client-centred units are small and each unit is allied with a
> different client group;
> 3. Librarians within the client-centred units act in a multi-
> function capacity. (p135-136)

Typically, the small, client-centred groups would consist of three to

five librarians plus a few support staff. Client-centred activities

would include advanced reference activities, collection development,

computerised literature searching, user instruction, original

cataloguing, and other forms of information service. The support

activities would include circulation services, shared cataloguing,

acquisitions work, ready reference (for example, directional enquiries),

and serials processing. Not all librarians would be located in the work

groups, since there is still a need for supervisory roles in central

administration, and in other centralised technical or reader services

units. In order to foster a high degree of autonomy in the client-

centred units, Martell proposes that the traditional lines of authority

and responsibility are changed. Coordinating councils, serving a set of

related client groups, and a governing council, for the whole library,

would provide the major mechanisms for control. Martell describes in

detail the assumptions behind his design, and suggests how the prototype

work group might be implemented and evaluated.


Martell's orientation towards the client is not a new concept (compare

Gorman's ideas, for example), nor indeed is the notion of group working.

Many writers (mostly American) advocate a greater awareness of user

needs and requirements, and call for more direct user services. The

emphasis on the user in this respect seems to be an unorthodox approach

to library service in North America, which is taken much more as read in

the U.K.. The point about Martell's thesis is that, first and foremost,

he is basing his design upon standard work organisation principles, with

the aim of making work more satisfying and challenging for library

workers whilst at the same time improving the effectiveness of the

library service.


Other forms of group working are feasible. For example, departmental or

divisional teams could be set up. Depending on the size of the library,

these might consist of all acquisitions personnel in one team, all

cataloguing personnel in another, and so forth. Reference or information

teams could be formed divided by subject, or geographic area, or even by

floor in a multi-level library building, for instance. As autonomous

teams, the members would collectively establish goals, divide and rotate the team's duties, work jointly on some assignments, develop new projects, determine their own priorities, and set work schedules.

Schanck (1986), however, warns that there may be a number of problems associated with the formation of autonomous groups consisting of professionals and non-professionals. He argues that "status differentials, based on career aspirations and on professional education, socialization, and knowledge" would tend to gradually transform the team back into the traditional hierarchical structure. (p400) Even if this did not happen, Schanck considers that lack of rational power relationships might create ongoing conflicts in the team. Also, rotation of duties, which is an essential characteristic of autonomous work groups, would be particularly impractical in such a set up.

This writer considers that such problems may be overcome by either forming professional groupings separate from clerical groups (particularly feasible in larger library systems), each with their own responsibility areas; or by structuring the autonomous team so that there are distinct sub-groupings when it comes to carrying out and rotating allocated tasks - one for professionals and one for clericals - but that for all other purposes the team as a whole establishes its goals, determines work priorities, set schedules, and so on.

Martell (1979) argues that automation of the various housekeeping functions permits libraries to experiment in new designs, particularly ones which are independent of the traditional centralised approach to library operations. The opportunity for decentralisation, which is

possible through the capabilities of the new computing technologies, was

demonstrated in Chapter 5. Since tasks and workflows are affected by the

introduction of automation, the chance to form novel regroupings of

library personnel around, and peripheral to, the computer systems is

presented.


DIFFICULTIES IN JOB REDESIGN PROJECTS


Before concluding this investigation of job design theories and their

possible application in libraries, it would be appropriate to have a

brief discussion of the difficulties that might arise in the redesign of

jobs.  There is no universal answer to the question of which job design

method to use. There is also no guarantee that whichever one is chosen

will be a success.


Child (1977) summarises the common deficiencies in implementation of job

enrichment programmes as:

> 1. An inadequate diagnosis of existing jobs to see whether they are
> suited to enrichment and/or a failure to assess how receptive
> employees are likely to be to changed jobs;
> 2. A failure to change jobs at all;
> 3. Development of unexpected side effects, such as supervisory
> resistance to change;
> 4. Inattention to systematic evaluation which leads to the
> discrediting of projects in management eyes;
> 5. Inadequate education of the managers and staff responsible for
> carrying out projects to redesign jobs;
> 6. An eventual reassertion of bureaucratic procedure which stifles
> the additional discretion offered as part of the job enrichment.
> (p39).

Child argues that the successful implementation of changes in the design

of jobs requires careful planning, analysis of how the change can be

located within the wider organisational system, the allocation of

trained and experienced people to manage the change, some involvement of

those affected by the change, and adequate arrangements for monitoring

and evaluating the change.


Buchanan (1979) notes that despite the apparent potential of job design

techniques, applications do not seem to be widespread. He explains that

this is probably due to the number of difficulties associated with the

implementation of job design changes. These difficulties can arise from:

1. Managerial attitudes and assumptions;
2. Trade union suspicion;
3. Organisational inertia;
4. Problems of dealing with individual differences in the working
population;
5. Problems in conducting properly controlled experiments;
6. Problems of finding operational definitions for job design
prescriptions. (p8-9)

Buchanan also identifies six key problem areas which job design theories

seem to have in common. These include:

1. The limited ability of the theories to predict the effects of job
design on other parts of the organisation;
2. The difficulty in defining significant job characteristics in
operational terms;
3. The difficulty in transferring theory and practice from one
organisational setting to another;
4. Difficulty in implementing job design changes that cater for
individual differences;
5. The difficulty in calculating the durability of change;
6. The difficulty in evaluating the effects of job design on the
quality of working life. (pp138-141)


Sometimes it turns out that those aspects of the work that most need to

be improved are not readily changeable.  Hackman and Oldham (1980) argue

that, prior to undertaking work redesign, it is necessary to assess the

readiness of the people for change and the hospitality of the

organisation to getting the changes installed. (p117)  In any work

situation, measurement of the three moderators identified by Hackman and

Oldham (1980) - see Figure 6.3 -  provide some level of understanding of

how ready the people will be for change. Questions to ask might be:

1. Do the employees have the requisite knowledge and skill?

In the library situation, inexperienced personnel may not have the knowledge and skill to cope with too much job autonomy and skill variety. As such skills are gained over a period of time, then individuals may become more receptive to enriched work. (In this context, group working might provide considerable benefit since the more experienced members of the group would be able to help and support the new member.)

In Chapter 5, it was observed that the introduction of automation may cause, at least initially, even experienced personnel to fear that they will not be able to cope with the new knowledge and skills that will be involved. Redesigning work in such an environment, if not handled carefully, may result in an even greater build-up of anxiety and stress in certain people.

2. Do the employees have strong growth needs?

A well-established staff, accustomed to an autocratic library management style, can pose problems, since they might have difficulty in accepting responsibility for making their own decisions or in working independently. Their needs for growth may have been stifled. This situation may also apply where clerical staff have been allowed little autonomy, by the professionals, in carrying out their work. Similarly, people who have worked in one section of the library for a long period might find the prospect of working in other areas threatening and stressful. Such people should still be given the opportunity for job enrichment, even if progress is slow.

3. Are employees satisfied with the job context, that is, the
overall working conditions?

Such factors as pay, job security, co-worker relationships,
supervision, and environmental conditions, may affect the employees
reaction to being asked to take on more difficult and varied work.


Concerning the hospitality of the organisation to needed changes,
Hackman and Oldham (1980) argue that rigidities built into the
technological, personnel, and control systems of an organisation can
seriously compromise the magnitude of changes that can be made in how
work is designed. The *technological system*, defining the technology of
the organisation, can constrain the feasibility of work redesign by
limiting the number of ways that jobs within the technology can be
designed or changed. If work is to be meaningfully redesigned either the
technology must be of the type that provides some degree of employee
discretion or the technology itself must be changed to be compatible
with the characteristics of enriched work. As we have seen, the decision
to introduce automation into libraries is not usually based on criteria
associated with the job enrichment of the library staff. Computerised
library systems may impose certain rigidities into workflows and methods
of working, but they are designed primarily to take over routine manual
and clerical processing and to provide control and monitoring
facilities. Thus they may be considered as (sophisticated) tools to be
utilised by the library personnel in the furtherance of the service's
objectives.


The *personnel system* deals with employee recruitment, selection,
placement, and training. An inflexible personnel system will make it
virtually impossible to alter the design of jobs. This factor is

particularly crucial in the library context. For example, in the U.K.,
all public library systems, colleges of arts and technology, many
colleges of further education, and all polytechnic libraries (until
April 1989) are subject to their local government authorities. The
personnel system will normally be outside the direct control of the
library. Recruitment and appointment procedures will be prescribed by
the local authority, although the library will in many cases be able to
select whom it wants. Regradings or alterations to the library's
establishment may be difficult to accomplish, and will often involve
long negotiations, consultations with unions, and thorough
justifications. Sometimes the library may be fortunate enough to be
given a staffing budget within which it has a certain amount of
flexibility, provided adequate consultative mechanisms are employed.
Since library staff do not have their own union, alterations to grades
and salaries in the library may have a snowballing effect in other local
authority divisions as their personnel seek comparative agreements.
Also, however committed senior library management may be to improving
the quality of working life of their staff, this ideal may not be viewed
particularly favourably by their bureaucratic 'masters'. New technology
agreements, negotiated by local unions, may also restrict how
computerised systems can be implemented within a library.

*Control systems* within organisations include budgets and cost accounting
systems, production and quality control reporting systems, attendance
monitoring, and other means by which organisational performance might be
measured. In addition to the personnel system, a local government will
normally apply these control systems on all departments and services,
including libraries, within its boundaries, even though some (or all) of
them may be inappropriate to a library setting. For example, purchasing

within local government, and in particular capital expenditure on computer equipment, is controlled by strict tendering procedures. A library may have difficulty in justifying the purchase of its favoured computerised system, if that system happens to be more expensive than another less satisfactory one, since its criteria for selection may not be totally understood by the authority's purchasing section.

The majority of the research in the area of job design and work organisation focusses on blue collar (or production) work or on clerical, white collar work, and is directed towards industry or business. Research into professional job enrichment and its impact on work effectiveness, productivity and job satisfaction in service organisations appears to be lacking. In the case of libraries, any job redesign exercise will have to look separately at the two distinct groups of workers - professionals and non-professionals. For the former, they will surely have both personal and 'professional' needs in relation to their job. Some might argue that the professional, by the nature of his or her training and education, should be sufficiently self-motivated to achieve job satisfaction from their own effort. However, tasks and responsibilities are more often than not bounded by rules and regulations, and job demarcations may be built into job descriptions. If the professional is not permitted to use his or her professional judgement and discretion, then job dissatisfaction is likely to arise. A person is not necessarily imbued with professionalism just because of professional training and education. A library assistant may have greater work aspirations than remaining a clerk for all of her working life. Individual differences have to be taken into account. No job design is ideal for every person. There are some people who are actually

content with repetitive, monotonous and boring tasks, and who would resist strongly the opportunity to take on more demanding jobs.

Lastly, most jobs have some less attractive features about them. The library field is surely no exception in this respect. It may not be possible for automation to remove all such features. Sergean (1977) concludes that "no amount of job redesign or work restructuring will get rid of every unpleasant task." (p38)

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SUMMARY

In this Chapter we have reviewed the potential of job design as a change strategy in libraries. The aim was to demonstrate how job redesign could be employed to help the library respond to the impact of change on work processes following the introduction of automation. In this way the full benefits of automation may be achieved, and the quality of working life for all library workers improved.

A brief historical review of the design of jobs indicated the impact of theories of motivation within the work environment, and in particular the importance of Herzberg's motivator-hygiene theory and his technique of job enrichment. We noted that the work itself is a significant factor in the ultimate motivation and satisfaction of workers. Job design may be described as being concerned with the content, methods and relationships of jobs, in order to satisfy organisational and technological requirements as well as the personal and social requirements of job-holders. Theories of job design fall into two

distinct bands. The first is job restructuring, which analyses the content of individual jobs. The second is work organisation, which analyses the jobs of the primary work groups of an enterprise.

The links between job design theories and the Quality of Working Life movement were noted. Concern with the humanization of work in general, and in libraries in particular, was seen to be growing.

The application of job design in libraries was explored. Many of the traditional forms of job design, such as job rotation, job enlargement, and job enrichment (to an extent) have been tried. There was also some discussion of less orthodox methods of changing the jobs in libraries, some of which have been put into practise whilst others remain theoretical. Contemporary theories of job restructuring and work organisation were examined and their possible use in libraries explored. Both techniques were found to be potentially employable, although there has been no actual experimentation in libraries with either.

Lastly, it was noted that job design is not an easy thing to achieve. It requires a lot of commitment from both management and the workers them-selves. Various difficulties can arise when undertaking a job redesign exercise. Some of these issues, within the context of libraries, were discussed. In particular, the lack of research into the impact of job design on 'professional' workers was pointed out. In any job redesign exercise, the importance of individual differences has to be taken into account.

It was not possible, within the limitations imposed upon this research, to test a particular job design strategy in a library following the

introduction of automation. Instead, the field research undertaken was restricted to investigating some of the job characteristics and preferences of a sample group of library workers, together with their views of the effects of automation on their own jobs and on the jobs of others. The next chapter outlines the research methodology employed, and the two successive ones will present the results and analyses of the findings.

# CHAPTER 7

## THE FIELD RESEARCH METHODOLOGY

To recapitulate, the preliminary review exercises, undertaken early on
in the course of this thesis, resulted in a focussing of interest on the
following issues:

1. The characteristics of the job which lead to job satisfaction in
library workers - both professionally qualified and clerical;

2. The way in which automation has affected the organisation of the
work carried out by professional and clerical library workers;

3. The application of job redesign principles in libraries,
following the introduction of automation, in order to optimise job
satisfaction and productivity.

The reviews and subsequent analyses left a number of unanswered
questions. At this point it was decided that a field exercise should be
undertaken to corroborate, or not, the findings from the literature and
to test certain ideas. A questionnaire was devised and a survey
population determined. These are described below. Restrictions on
resources in the carrying out of the field exercise, meant that it was
only going to be possible to explore trends within a limited population.
There was no intention at this stage of developing models which could be
applied in every library setting.

The aims of the field research were defined as follows:

1. To determine from a sample population of library workers, who
spent a large proportion (if not all) of their time working in the
technical services sections of their library, what aspects of their
jobs might contribute to individual job satisfaction. To
differentiate these aspects into those which are intrinsic to the

jobs themselves (Job Content factors) and those which are extrinsic to the jobs (or Job Context factors).

2. To determine the attitudes of the sample group to the use of computerised techniques in libraries in general and in the technical services sections in particular.

3. To determine in what way the sample group expected their jobs and the jobs of others to be affected by the introduction of computerised techniques.

4. Finally, to test the proposition that the introduction of computerised systems in technical services sections requires a fundamental change in the design of jobs in libraries, in order to optimise job satisfaction and productivity.


QUESTIONNAIRE DESIGN


Questionnaire and interview techniques were employed to collect data for several reasons. A structured questionnaire was considered desirable in order to provide comparative data across several libraries. In designing the questionnaire it became apparent that what was being sought was a mixture of fact and opinion. Many of the questions were laid out as rating scales. Oppenheim (1966) considers that, whilst the use of ratings may invite grave dangers and possible errors if handled badly, they can be used in a subjective, projective way, to tell us something about the rater, and his or her precepts and attitudes. The writer was interested in obtaining a library worker's subjective attitude to their job. Thus rating scales seemed an appropriate method of collecting this particular data. However, at another point in the questionnaire a more open-ended approach was considered necessary in order to find out the respondent's personal view of the work of others and of the use of

automation in libraries, and in this respect the use of rating scales did not seem applicable.

The field study was thus essentially an opinion survey, providing rich, descriptive, and enumerative data. According to Moser and Kalton (1971), the study of opinions is much more troublesome than that of facts, since there is the uncertainty whether the respondent actually knows the correct answer, in any meaningful sense, and since a person's opinion on any issue is probably many-sided. There is perhaps no one correct answer. In some instances, the respondent may give a reply that will depend on that aspect of the problem which may be uppermost in his or her mind. On any given topic, some people feel strongly, some are indifferent, some have consistent views, and others are highly changeable in their attitude. Answers to opinion questions are more sensitive to changes in wording, emphasis, sequence and so on, than are those to factual questions. The results of an opinion survey rarely indicate what people can or ought to do, but they usually give some indication of behaviour, that is, they show what they will (or may) do at that point in time. Opinions are also closely tied up with habit, and they change very slowly. They cannot therefore be precise.

For these reasons, it was decided that direct personal contact between interviewer and interviewee would be desirable, in order to provide richer, interpretive information.

Several drafts of the questionnaire were made before a pilot run was held in the writer's place of employment. The pilot resulted in several changes being made in the way the questions were laid out and presented. Initially, it had been the writer's intention to complete each

questionnaire personally, by reading out the question and then filling in the respondent's reply. The trial run indicated that this would not be the best method since the use of rating scales on certain questions made the direct application of those questions cumbersome and open to interviewer-bias in terms of inflection and unconscious emphasis in speech. The questionnaire was re-written to be a mixture of self-administered questions of a closed nature (those with a rating scale) and a group of open-ended questions administered by the writer in interview mode. In this way, it was hoped that a flexible and responsive manner could be achieved in the collection of the survey data. Also, it would permit the respondents to qualify their responses to the closed questions, as they wished, since the writer was free to make additional notes as appropriate. It was also hoped that using an interview method rather than a postal survey would result in a certain amount of trust developing between each respondent and the writer, so that there would be a reasonable degree of truthfulness as well as frankness in the opinions being expressed.

One aim of the field study was to investigate the impact – actual or anticipated – of automation on the jobs of a group of library worker. In selecting the libraries to be involved in the survey, an important criterion was that they should be committed to automation programmes that affected the basic and traditional housekeeping tasks, such as those done in technical services sections.  In determining the survey population, it was decided to limit the study to those staff on the lower to middle ranges of the organisational hierarchy, who worked for a large proportion (if not all) of their time in the technical services areas of the institutions, and including a mixture of professional and non-professional posts. By intention, senior management posts were to be

excluded from the sample, since they would not normally undertake the basic housekeeping routines (professional or otherwise) found in the technical services areas.

THE QUESTIONNAIRE

The final questionnaire was made up of two documents. (See Appendices A.3 and A.4) Interview Document I was the main research instrument, divided into three sections:

1. Part A (twelve questions) covered the personal details of respondents, including job titles, brief job descriptions, length of service, experience, educational qualifications, age and sex. These questions were completed by the writer since they were factual and straightforward.

2. Part B (nineteen questions) was to be a self-completed, closed response section, covering job preferences and characteristics. The objectives of this section were not to determine whether or not respondents were satisfied with their jobs. Rather the objectives were to discover which job characteristics were significant to the group, distinguishing between professional librarians and library (or clerical) assistants, and which particular characteristics might influence job satisfaction. A study of job characteristics is considered by this writer to be an important prerequisite of any job redesign exercise.

Several published research instruments were consulted in developing the questions for this section. A detailed investigation of the job characteristics of library workers, such as the application of the Job Diagnostic Survey (JDS), devised by Hackman and Associates, was outside the scope of this study. The JDS was a major influence, nevertheless,

since it seemed particularly appropriate to the aims of the present study.

Two questions aimed, respectively, to ascertain which features of the jobs in libraries lead to intellectual stimulation in connection with the work, and which aspects might contribute to job satisfaction in the library workers. Then a selection of questions, with scaled responses, were set in order to test various job characteristics, such as: variety; degree to which the job was challenging; autonomy; and feedback from the job.

Two questions were included in this section that sought subjective views about (1) disturbances in the job, and (2) factors that might improve the quality and prestige of work in libraries. The last three questions introduced the topic of the use of computers in libraries, and required respondents to rate how much they had been affected by computers in their own job; what the major reactions of their work group were to automation; and, what their own reactions were.

3. Part C (eight questions) sought attitudes towards automation in libraries and the jobs of others. These questions were open-ended, and respondents could answer them in their own words. Interview mode was employed, to allow greater flexibility in recording the replies. The questions sought subjective views concerning the advantages and disadvantages of using computers in libraries; views concerning the work of clerical assistants or professional librarians, depending on whether the respondent was a librarian or a clerical assistant; and views concerning the future role of (1) the professional cataloguer, and (2) the clerical assistant, within a computerised system.

All respondents were asked about their future intentions regarding work in libraries. Lastly, respondents were free to add any other views

about the use of computers in libraries that might not have been covered in previous questions.

Interview Document II was a single sheet on which the writer was able to note additional comments, qualifications or elaborations concerned with the responses to any of the questions as this arose.

Copies of the standard letter and information sheet, which were sent to prospective libraries, together with the Interview Documents are to be found in Appendices A.1 and A.2.

THE SURVEY POPULATION

The study was conducted in member libraries of the Scottish Libraries Cooperative Automation Project (SCOLCAP). Membership of SCOLCAP provided the libraries in the sample with a common technology base, although each was at a different stage in its implementation of the systems then available, and hence each had achieved a different level of expertise and knowledge.

SCOLCAP was formed in 1973 by a group of librarians representing the National Library of Scotland, three university libraries (Dundee, Glasgow and Stirling) and two public libraries (Edinburgh and Glasgow). In 1975 the British Library Research and Development Department provided funds for SCOLCAP to investigate alternatives for an online bibliographic processing system in Scotland. Some of SCOLCAP's requirements were met initially by using the Local Cataloguing Service (LOCAS) - for batch shared cataloguing and for COM fiche production - of the British Library Automated Information Service (BLAISE). But some

processes, such as acquisitions, were not available on BLAISE and so needed to be developed by SCOLCAP. Funding was eventually provided in 1979, for implementation of the local processes, by the Scottish Education Department. Development of a comprehensive and sophisticated software package for online acquisitions, cataloguing, information retrieval and management information got underway, and partial implementation started in 1982.

Ten libraries, representing a cross section of the membership of SCOLCAP, were approached to gain their agreement to participate in the study. All ten libraries were using the batch cataloguing service available through LOCAS, and some were involved in testing the new online system (although none were in fact operational). It had been hoped that a sample size of about fifty respondents would be achieved. In the event, only eight libraries were willing to cooperate in the research. This reduction in the sample size was not considered to be too critical, since the survey was, by intention, a limited one. The survey was restricted to a specific time in the life of the libraries visited, and their length of membership in SCOLCAP varied.

Of the eight libraries which agreed to participate in the survey, there were two city library systems, one major reference (public) library, two college libraries, two 'ancient' university libraries, and one 'red-brick' university library. Three of the libraries were founder members of SCOLCAP.

After management approval had been gained, a contact person in each institution was appointed through which the individual visits were arranged. The contact person offered suggestions as to the appropriate

personnel for interview, and paved the way for the visit. It was stressed that participation in the survey was expected to be voluntary, and that there would be complete confidentiality of responses. Due to sickness and other contingencies, some of the prospective interviewees were not available at the time of the visit. In total, thirty-six interviews were carried out, which was somewhat less than had been anticipated.

PERSONAL DETAILS AND WORK EXPERIENCE OF SAMPLE POPULATION

The background characteristics of the survey respondents are reported here, for information. With a larger sample it may have been feasible to determine possible influences of age, sex, work experience and other individual traits or attitudes to the study.

Twenty-one of the respondents (eight males and thirteen females) held professional librarian posts in their libraries, and fifteen (one male and fourteen females) held library assistant or clerical posts. The terms 'Clerical' or 'Clerical Assistant' will be used to denote the non-librarian posts, for ease of presentation. The distribution of the personnel is detailed in Table 7.1. The proportions of male to female are not dissimilar to the national averages for full-time library workers (See Great Britain, Department of Education and Science, 1982).

The ages of the respondents ranged from twenty to fifty-five. The actual distribution is detailed in Appendix A.5 in the *Appendices* section. 36% were under thirty years of age, whilst 17% were over 45 years. All the librarians were over 25 years, but 40% of the clerical assistants were under 25 years.

| Library Type | Librarians | Clerical | Total |
|---|---|---|---|
| Public Library | 4 | 6 | 10 |
| Public - Reference Library | 2 | 1 | 3 |
| Academic - College | 5 | 3 | 8 |
| Academic - University | 10 | 5 | 15 |
| | 21 (58%) | 15 (42%) | 36 |
| Female | 13 (62%) | 14 (93%) | 27 (75%) |
| Male | 8 (38%) | 1 (7%) | 9 (25%) |

Table 7.1 Distribution of respondents by type of library, status and sex

Only two of the respondents (both clerical) had not had a previous job in a library. Work experience varied from two and a half years to twenty-eight years, whilst length of time in the present job ranged from one month to ten years. (See Appendix A. 6). 75% of respondents (62% librarians, and 93% clericals) had been in their present job for five years or less.

All but one of the librarians were professionally qualified. There was one trainee librarian holding a clerical post. The highest educational qualifications held by the respondents varied from R. S. A. Typing certificate to Postgraduate Diplomas in Librarianship or Teaching and one further degree (Ph. D. ). The range of qualifications is listed in the Appendix A. 7. 64% of respondents held professional qualifications, 39% at postgraduate level. 56% of respondents had first degrees, the majority of whom were librarians.

There were twenty-five different job titles in the group interviewed, which seems to indicate a certain lack of standard terminology for job titles. All respondents worked in the technical services areas of their

libraries, although some had regular duties in other sections, or were required to assist in other areas if there were staff shortages. A list of these different job titles, with brief job descriptions, may be found in Appendix A.8.

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SUMMARY

This chapter has provided an account of the research methodology employed in carrying out this study.

Following extensive reviews of the literature, the focus of the research centred on three issues: factors concerned with the job satisfaction of library workers;  how automation is affecting the work done in libraries; and, the application of job redesign principles in libraries following the introduction of automation. It was decided to undertake a field survey to test certain ideas concerned primarily with the first two issues.

A questionnaire was designed, tested, and revised, and then applied in a sample of eight members of the Scottish Libraries Cooperative Automation Project. Thirty-six interviews were carried. The personal details and work experience of respondents were described.

The next two chapters describe the main body of the research findings.

# CHAPTER 8

## RESEARCH FINDINGS - JOB PREFERENCES AND CHARACTERISTICS

The first part of this chapter will provide a systematic analysis of Section B of the  questionnaire which dealt with library workers' job preferences and job characteristics. The second part will form a discussion of the findings in relation to the first objective of the field survey, namely:

- to determine from a sample group of library workers what aspects of their jobs might contribute to individual job satisfaction.

At the same time, it is hoped that trends may be discerned and links with other research findings made.

The term 'librarian' will be used to denote professional posts, and the terms 'clerical' or 'clerical assistant' to denote the non-professional posts, for ease of presentation.

In Chapter 7, it was pointed out that this study was an opinion survey and some of the drawbacks associated with this kind of research were outlined. The writer has had to interpret the views and opinions expressed in order to provide the necessary analysis. Any misinterpretation of these views and opinions is entirely the fault of the writer. It should also be noted that, whilst we know what was reported by respondents, we do not know what was suppressed. Such self-screening might be expected in any research of this nature.

JOB PREFERENCES AND CHARACTERISTICS

This section of the questionnaire was the self-completed one. Respondents worked through the questions, marking appropriate answers from a selection of pre-determined ones. If they wished to, respondents could expand on a particular answer, and they were able to query any ambiguities they felt were present in any of the questions set. Similarly, in the open-ended questions (numbers 27 and 28), the interviewer was able to clarify the answers given, for later analysis. Often a mini discussion would ensue.

*SOURCES OF INTELLECTUAL STIMULATION*

Respondents were asked to mark in order of preference three sources from which they obtained the greater part of their intellectual stimulation in connection with their work. Eleven 'sources' were offered, with the option to add others if they so wished (none were added to the list). Replies for all respondents were further subdivided according to whether they were librarians or clerical assistants. The score for a single source was calculated using weighting factors as indicated by the following formula:-

3 × (No. of times given first) + 2 × (No. of times given second)

+ 1 × (No. of times given third).

The scores were then ranked. The results are tabulated in Table 8.1.

One clerical assistant would not answer this question.

The source which ranked first overall was found to be Colleagues. This was followed by Work Itself. The scores for these two sources were very

| Item | All Respondents | | | | | Librarians | | | | | Clericals | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | Score | Rank | 1st | 2nd | 3rd | Score | Rank | 1st | 2nd | 3rd | Score | Rank |
| a) Colleagues | 12 | 13 | 3 | 65 | 1 | 9 | 7 | 1 | 42 | 1 | 3 | 6 | 2 | 23 | 2 |
| b) Supervisor | 4 | - | 5 | 17 | 4 | - | - | - | - | - | 4 | - | 5 | 17 | 3 |
| c) Chief librarian | - | 1 | - | 2 | 10 | - | 1 | - | 2 | 8 | - | - | - | - | - |
| d) Other professionals | 1 | 3 | 3 | 12 | 5 | - | 2 | 3 | 7 | 5 | 1 | 1 | - | 5 | 5 |
| e) Books and journals | 1 | 8 | 5 | 24 | 3 | 1 | 5 | 2 | 15 | 3 | - | 3 | 3 | 9 | 4 |
| f) Professional meetings | - | 1 | 4 | 6 | 8 | - | 1 | 4 | 6 | 7 | - | - | - | - | - |
| g) Visits to other libraries | - | - | 3 | 3 | 9 | - | - | 2 | 2 | 8 | - | - | 1 | 1 | 6 |
| h) Academic staff | 1 | 2 | 2 | 9 | 6 | 1 | 2 | 2 | 9 | 4 | - | - | - | - | - |
| i) Student/readers | 1 | 1 | 3 | 8 | 7 | 1 | 1 | 2 | 7 | 5 | - | - | 1 | 1 | 6 |
| j) Agents/suppliers | - | - | 1 | 1 | 11 | - | - | 1 | 1 | 10 | - | - | - | - | - |
| k) Work itself | 15 | 6 | 6 | 63 | 2 | 9 | 2 | 4 | 35 | 2 | 6 | 4 | 2 | 28 | 1 |

NB   One missing observation (Clerical Assistant)


Table 8.1   Sources of intellectual stimulation in connection with the job

close, and they were considerably higher than any other source. In fact, 80% of all respondents indicated Colleagues as one of their three sources, whilst 77% gave Work Itself. 58% marked both items as two of their three sources of intellectual stimulation. Librarians on their own produced a similar result (81% - Colleagues, 71% - Work Itself; 57% gave both), whilst for the clerical assistants the position of the two factors were reversed (79% - Colleagues, and 86% - Work Itself; 64% gave both).

Looking at all respondents again, three sources may be grouped together next according to their scoring. These are Books and Journals (ranked third), Supervisor (ranked fourth), and Other Professionals (ranked fifth). The remaining sources were mentioned five times or less, and this resulted in lower scoring.

When librarians were looked at separately from clerical assistants a different pattern emerged. Librarians ranked Books and Journals third. Fourth, on scoring, was Academic Staff (respondents in these cases were all from academic libraries). Joint fifth were Other Professionals and Students/Readers.

Clerical assistants, on the other hand, ranked Supervisor third, which was not mentioned at all by any of the librarians. Books and Journals ranked fourth. The source, Other Professionals, ranked fifth but was mentioned by only two respondents.

Table 8.2 lists the sources of intellectual stimulation in rank order.

|     | All Respondents | Librarians | Clericals |
|-----|-----------------|------------|-----------|
| 1.  | Colleagues | Colleagues | Work Itself |
| 2.  | Work Itself | Work Itself | Colleagues |
| 3.  | Books & Journals | Books & Journals | Supervisor |
| 4.  | Supervisor | Academic Staff | Books & Journals |
| 5.  | Other Professionals | Students/Readers ) | Other Professionals |
| 6.  | Academic Staff | Other Professionals ) | Visits to Other ) |
|     |  |  | Libraries ) |
| 7.  | Students/Readers | Professional Meetings | Students/Readers ) |
| 8.  | Professional | Visits to Other ) |  |
|     | Meetings | Libraries ) |  |
| 9.  | Visits to Other | Chief Librarian ) |  |
|     | Libraries |  |  |
| 10. | Chief Librarian | Agents/Suppliers |  |
| 11. | Agents/Suppliers |  |  |

Table 8.2 Sources of intellectual stimulation in connection
with the job, in rank order.

*SATISFACTIONS DERIVED FROM THE JOB*

Respondents were asked to rank, from a list of nine specific items, the

three most important satisfactions they derived from their job. This was

not intended to be a measure of a respondent's current job satisfaction.

Rather, the aim was to highlight those factors which might contribute

towards job satisfaction. Additional sources of satisfaction could be

specified, if respondents so wished. Two items were added to the

original list - Intellectual Stimulation, and Working Towards an

Improved Product. Scores based on weighting factors were calculated as

before. The results are detailed in Table 8.3.

One clerical assistant would not answer this question.

| Item | All Respondents | | | | | Librarians | | | | | Clericals | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | Score | Rank | 1st | 2nd | 3rd | Score | Rank | 1st | 2nd | 3rd | Score | Rank |
| a) Completed job | 9 | 7 | 9 | 50 | 1 | 4 | 5 | 2 | 24 | 2 | 5 | 2 | 7 | 28 | 1 |
| b) Satisfied client | 10 | 6 | 2 | 44 | 2 | 8 | 3 | 2 | 32 | 1 | 2 | 3 | – | 12 | 3 |
| c) Successful enquiry | 2 | 5 | 2 | 18 | 6 | 2 | 3 | 1 | 13 | 5 | – | 2 | 1 | 5 | 7 |
| d) Interaction with other people | 3 | 2 | 12 | 25 | 4 | 2 | 1 | 11 | 19 | 3 | 1 | 1 | 1 | 6 | 5 |
| e) Working in a team | 2 | 4 | 1 | 15 | 7 | 2 | 1 | 1 | 9 | 6 | – | 3 | – | 6 | 5 |
| f) Working independently | 3 | 4 | 6 | 23 | 5 | – | 3 | 2 | 8 | 7 | 3 | 1 | 4 | 15 | 2 |
| g) Working to best of ability | 5 | 5 | 2 | 27 | 3 | 2 | 4 | 1 | 15 | 4 | 3 | 1 | 1 | 12 | 3 |
| h) Supervising others | – | 1 | – | 2 | 9 | – | – | – | – | – | – | 1 | – | 2 | 8 |
| i) Progressing through organisation | – | – | 1 | 1 | 11 | – | – | 1 | 1 | 10 | – | – | – | – | – |
| j) Intellectual stimulation | – | 1 | – | 2 | 9 | – | 1 | – | 2 | 9 | – | – | – | – | – |
| k) Working towards improved product | 1 | – | – | 3 | 8 | 1 | – | – | 3 | 8 | – | – | – | – | – |

NB   One missing observation (Clerical Assistant)

Table 8.3   Important satisfactions derived from the job

253

The item receiving the highest score overall was Completed Job. 71% of respondents gave this factor as one of their three most important satisfactions. It was followed fairly closely, on scoring, by Satisfied Client. 51% gave this item as one of their three most important satisfactions. (However, in order of most importance, Satisfied Client was rated first by 29% of respondents, just ahead of Completed Job (26%).) 31% of all respondents indicated both items as two of their three most important satisfactions.

The next three items in rank order received fairly close scoring. These were Working To Best Of Ability (ranked third), Interaction With Other People (ranked fourth), and Working Independently (ranked fifth). It should be noted that nearly half of the respondents (47%) gave Interaction With Other People as one of their three top satisfactions, but as 71% of these rated the item third in order of importance it received a lower score than Working To Best Of Ability (which was mentioned by 34% overall, with 83% of these rating it either first or second in order of importance). Similarly, Working Independently received a lower score than Working To Best Of Ability, even though it was specified by 37% of respondents.

When librarians are looked at separately from clerical assistants, differences emerge. For librarians, Satisfied Client ranked first and Completed Job second. Third in rank was Interaction With Other People, even though this item was mentioned by the largest percentage (67%) of librarians as one of their three satisfactions. 79% of those who offered it, rated it third in importance, which reduced its final score. Working To Best Of Ability ranked fourth, and Successful Enquiry ranked fifth.

All clerical assistants, who responded to this question, specified

Completed Job as one of their three most important satisfactions, and it

scored considerably higher than all other factors, with 36% rating it

first in importance. Second highest for the group was Working

Independently (57% mentioned this item). Joint third in rank were

Satisfied Client and Working To Best Of Ability.


Table 8.4 lists the satisfactions derived from the job in rank order.


| All Respondents | Librarians | Clericals |
|---|---|---|
| 1. Completed Job | Satisfied Client | Completed Job |
| 2. Satisfied Client | Completed Job | Working Independently |
| 3. Working to Best of Ability | Interaction With Other People | Satisfied Client |
| 4. Interaction With Other People | Working to Best of Ability | Working to Best of Ability |
| 5. Working Independently | Successful Enquiry | Interaction With Other People |
| 6. Successful Enquiry | Working in a Team | Working in a team |
| 7. Working in a Team | Working Independently | Successful Enquiry |
| 8. Working Towards Improved Product | Working Towards Improved Product | Supervising Others |
| 9. Supervising Others ) | Intellectual Stimulation | |
| ) | | |
| 10. Intellectual ) Stimulation ) | Progressing Through Organisation | |
| 11. Progressing Through Organisation | | |

Table 8.4 Important satisfactions derived from the job,
in rank order.


*JOB CHARACTERISTICS*


(The full enumerated analysis of the questions in the second part of

this section is available in Appendix A.9)

*REACTIONS TO EVERYDAY PROBLEMS:* 31% of the library workers in the survey were not bothered about everyday problems at work, whilst 69% did worry about them to varying degrees. Clerical assistants seemed to worry to a much greater extent than librarians, with 27% of the former claiming that they probably worried more about them than others did. Only one librarian expressed *worry* over everyday problems.

*FREEDOM TO CARRY OUT OWN IDEAS:* It was important to all respondents to have the freedom to carry out their own ideas in their work. 58% overall (71% of the librarians; but only 40% of the clerical assistants) felt it was of considerable importance or more. 75% overall claimed that they had some chance or more to actually try out their own ideas, but nearly 14% felt they had no chance at all. 19% of the librarians felt that they had either no chance or not much chance to do so, compared to 33% of the clerical assistants.

*VARIETY IN TASKS UNDERTAKEN:* Some 80% of the respondents felt it was of considerable importance or more to have variety in the tasks they undertook, whilst 3% of the total considered it of no importance. However, only 61% of all respondents (75% of librarians; and 40% of clerical assistants) felt that they had a fair amount, to a lot, of variety in their work. 14% of the librarians and 7% clerical assistants indicated that they did not have much variety.

*CHALLENGE IN THE JOB:* More than 58% of all respondents considered their present job to be a challenge to what they thought they could do. The proportion was approximately the same for both categories of worker - librarians, 57%, and clerical assistants, 60%. But, 33% overall (librarians, 38%; and clerical assistants, 27%) claimed that they did

not have much of a challenge, whilst 8% (librarians, 5%; and clerical assistants, 13%) had no challenge at all.

*OPPORTUNITY TO LEARN IN THE JOB:* About 70% of respondents had some chance or more to learn things in their job in which they were interested. 24% of librarians and 33% of clerical assistants felt that they did not have much chance. 7% of the latter indicated that they had no chance at all. 56% of all respondents (but only 43% of the librarians as against 73% clerical assistants) felt that the things they were learning were helping to train them, to some degree or more, for a better job in the organisation. 24% of the librarians did not consider that the things they were learning were helping at all to train them for a better job in the organisation. The major reason given for this view was that there was a general lack of opportunity for promotion within their library for professional staff. The respondents recognised that much of what they were learning would be of benefit when seeking jobs in other libraries.

*CHANCE TO DO THINGS THEY ARE BEST AT:* 44% of all respondents (52% of librarians and 33% of clerical assistants) claimed to have a fair, to a very high, chance to do the things they felt were best at in their job. 25% overall (14% of the librarians and 40% of the clerical assistants) felt they had no chance or not much chance to do this. Two reasons commonly given for this view were mismatched jobs and personnel, and lack of opportunity in the job because of restrictions in job specifications.

*FEEDBACK IN THE JOB:* Everyone received feedback to a greater or lesser degree on how well they were doing in their job. 33% claimed to have a

fair amount, to a lot, of feedback, whilst 36% claimed not to get much feedback. The proportions between the two categories of worker were about the same. Feedback did not always come from a supervisor or from library management. For example, some respondents obtained feedback from library users.

*IMPORTANCE OF JOB:* 92% of all respondents considered their job to be of some importance or more, with 38% of librarians and 7% of clerical assistants rating it very important. But, 5% of librarians and 13% of clerical assistants did not rate their job very highly.

*ATTITUDE TO THE JOB:* 89% overall liked their job fairly well or more. 11% considered themselves indifferent about it. 19% of the librarians and 33% of clerical assistants liked it very much indeed. No-one disliked their job.

*DISTURBANCES IN THE JOB*

Respondents were asked to write down, in their own words, what three things disturbed them most about their jobs, in order of importance. Factors that effect people in carrying out their jobs may be divided into those aspects which are intrinsic to the jobs themselves (or Job Content) and those which are extrinsic to the jobs (that is, the Job Situation or Job Context). Such a distinction will be made in the following analysis. Job context factors were sub-divided into factors concerned with Working Conditions or those concerned with Terms and Conditions of Service. An analysis of the responses, further broken down between librarians and clerical assistants, is presented in Table 8.5. Ranking of the responses (within their sections and overall) was

| Item | All Respondents | | | | | | Librarians | | | | | | Clericals | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | Score | Sect-ion Rank | Over-all Rank | 1st | 2nd | 3rd | Score | Sect-ion Rank | Over-all Rank | 1st | 2nd | 3rd | Score | Sect-ion Rank | Over-all Rank |
| **JOB CONTENT:-** | | | | | | | | | | | | | | | | | | |
| The Job Itself | 1 | 1 | 2 | 7 | 4 | 13 | - | 1 | 1 | 3 | 2 | 11 | 1 | - | 1 | 4 | 5 | 10 |
| Lack of Achievement | 1 | - | - | 3 | 7 | 19 | - | - | - | | | | 1 | - | - | 3 | 6 | 11 |
| Lack of Intellectual Stimulation | 1 | - | - | 3 | 7 | 19 | 1 | - | - | 3 | 2 | 11 | - | - | - | | | |
| Lack of Personal Development | - | - | 1 | 1 | 10 | 25 | - | - | - | | | | - | - | 1 | 1 | 8 | 17 |
| Lack of Recognition | 1 | 2 | 2 | 9 | 2 | 8 | 1 | 1 | 2 | 7 | 1 | 5 | - | 1 | - | 2 | 7 | 13 |
| Lack of Responsibility | 1 | 2 | 1 | 8 | 3 | 10 | - | - | - | | | | 1 | 2 | 1 | 8 | 2 | 4 |
| Monotony/Repetition | 2 | 1 | 2 | 10 | 1 | 6 | - | - | - | | | | 2 | 1 | 2 | 10 | 1 | 2 |
| No End Product | 1 | 1 | - | 5 | 6 | 16 | - | - | - | | | | 1 | 1 | - | 5 | 4 | 8 |
| Undemanding | 2 | - | - | 6 | 5 | 15 | - | - | - | | | | 2 | - | - | 6 | 3 | 7 |
| User involvement | - | 1 | 1 | 3 | 7 | 19 | - | 1 | 1 | 3 | 2 | 11 | - | - | - | | | |
| Job Content Totals: | 10 28% | 8 22% | 9 26% | 55 | | | 2 10% | 3 14% | 4 20% | 16 | | | 8 53% | 5 33% | 5 33% | 39 | | |
| **JOB CONTEXT:-** | | | | | | | | | | | | | | | | | | |
| **WORKING CONDITIONS** | | | | | | | | | | | | | | | | | | |
| Automation | 4 | 3 | 1 | 19 | 3 | 3 | 4 | 3 | - | 18 | 3 | 3 | - | - | 1 | 1 | 7 | 17 |
| Bookfund Allocations | - | - | 1 | 1 | 11 | 25 | - | - | 1 | 1 | 11 | 19 | - | - | - | | | |
| Declining Professional Standards | - | - | 1 | 1 | 11 | 25 | - | - | 1 | 1 | 11 | 19 | - | - | - | | | |
| Financial Situation | 1 | 1 | 2 | 7 | 8 | 13 | 1 | 1 | 2 | 7 | 4 | 5 | - | - | - | | | |
| Heavy Workload | 2 | 1 | - | 8 | 6 | 10 | 1 | 1 | - | 5 | 5 | 7 | 1 | - | - | 3 | 5 | 11 |
| Interpersonal Relations | 1 | 2 | 3 | 10 | 5 | 6 | - | 1 | 1 | 3 | 9 | 11 | 1 | 1 | 2 | 7 | 3 | 5 |
| Interruptions | 1 | - | 1 | 4 | 10 | 17 | 1 | - | 1 | 4 | 7 | 9 | - | - | - | | | |
| Lack of Caretaker Support | - | - | 1 | 1 | 11 | 25 | - | - | 1 | 1 | 11 | 19 | - | - | - | | | |
| Lack of Communication | 5 | 6 | 4 | 31 | 1 | 1 | 3 | 4 | 3 | 20 | 1 | 1 | 2 | 2 | 1 | 11 | 1 | 1 |
| Lack of Consultation | 3 | 3 | - | 15 | 4 | 4 | 1 | 1 | - | 5 | 5 | 7 | 2 | 2 | - | 10 | 2 | 2 |
| Management & Organisation | 5 | 3 | 1 | 22 | 2 | 2 | 5 | 2 | 1 | 20 | 1 | 1 | - | 1 | - | 2 | 6 | 13 |
| Physical Environment | 1 | 2 | 1 | 8 | 6 | 10 | - | 1 | 1 | 3 | 9 | 11 | 1 | 1 | - | 5 | 4 | 8 |
| Staff Attitudes | - | 1 | 2 | 4 | 8 | 17 | - | 1 | 2 | 4 | 7 | 9 | - | - | - | | | |
| Staff Facilities | - | - | 1 | 1 | 11 | 25 | - | - | - | | | | - | - | 1 | 1 | 7 | 17 |
| Sub-total: | 23 64% | 22 61% | 19 54% | 132 | | | 16 76% | 15 72% | 14 70% | 92 | | | 7 47% | 7 47% | 5 33% | 40 | | |
| **TERMS & CONDITIONS OF SERVICE** | | | | | | | | | | | | | | | | | | |
| Job Insecurity | - | 1 | 1 | 3 | 3 | 19 | - | 1 | 1 | 3 | 2 | 11 | - | - | - | | | |
| Lack of Training | - | - | 2 | 2 | 5 | 24 | - | - | - | | | | - | - | 2 | 2 | 2 | 13 |
| Promotion Prospects | 2 | 1 | 3 | 11 | 1 | 5 | 2 | 1 | 1 | 9 | 1 | 4 | - | - | 2 | 2 | 2 | 13 |
| Undergraded | 1 | - | - | 3 | 3 | 19 | 1 | - | - | 3 | 2 | 11 | - | - | - | | | |
| Underpaid | - | 4 | 1 | 9 | 2 | 8 | - | 1 | - | 2 | 4 | 18 | - | 3 | 1 | 7 | 1 | 5 |
| Sub-total: | 3 8% | 6 17% | 7 20% | 28 | | | 3 14% | 3 14% | 2 10% | 17 | | | - | 3 20% | 5 33% | 11 | | |
| JOB CONTEXT TOTALS | 26 72% | 28 78% | 26 74% | 160 | | | 19 90% | 18 86% | 16 80% | 109 | | | 7 47% | 10 67% | 10 67% | 51 | | |

N.B.   One respondent (Librarian) gave only two disturbances.

Table 8.5. The most important disturbances in the present job

achieved using the same weighting factors as previously. One librarian

gave only two disturbances in reply to this question. Individual

respondents could, and did in several instances, indicate different

aspects of the same factor in their replies. Sometimes, where written

answers were vague or of a general nature, respondents were asked to

elaborate verbally upon them, so that a greater understanding of the

particular disturbances was made possible.


Table 8.6 lists the disturbances in rank order, to provide a useful

comparison between librarians and clerical assistants.


Three-quarters of all respondents mentioned factors which referred to

the Job Context as one of their three major disturbances. The majority

of factors were concerned with Working Conditions rather than Terms and

Conditions of Service. Factors concerned with the Job Content accounted

for a quarter of the responses.


The disturbance factors reported ranged over a wide area, and some were

only specified once or twice in total. The most frequently mentioned

disturbance was Lack of Communication, and it is perhaps significant

that this factor was ranked first by both librarians and clerical

assistants. Replies indicated that there was concern not only with the

lack of communication downwards from the top, but also lack of

communication across divisions and departments, and sometimes even

within the same department. Some comments received were:

```
    "Not enough free flow of information"              (Librarian)
    "Lack of communication about library policy decisions"  (Librarian)
    "Lack of communication from management"       (Clerical assistant)
    "Lack of internal communication"                  (Librarian)
    "Lack of communication between different services within library"
                                                       (Librarian)
    "Lack of communication from all levels"       (Clerical assistant)
```

| All Respondents | Librarians | Clericals |
|---|---|---|
| 1. Lack of Communication | Lack of Communication ) | Lack of Communication |
| 2. Management & Organisation | Management & Organisation ) | Lack of Consultation ) |
| 3. Automation | Automation | *Monotony/Repetition* ) |
| 4. Lack of Consultation | Promotion | *Lack of Responsibility* |
| 5. Promotion | Financial Situation ) | Interpersonal Relations |
| 6. Interpersonal Relations ) | *Lack of Recognition* ) | Underpaid |
| 7. *Monotony/Repetition* ) | Lack of Consultation ) | *Undemanding* |
| 8. Underpaid ) | Heavy Workload ) | *No End Product* ) |
| 9. *Lack of Recognition* ) | Interruptions ) | Physical Environment ) |
| 10. Heavy Workload ) | Staff Attitudes ) | *Job Itself* |
| 11. Physical Environment ) | Interpersonal Relations ) | *Lack of Achievement* ) |
| 12. *Lack of Responsibility* ) | Physical Environment ) | Heavy Workload ) |
| 13. Financial Situation ) | Undergraded ) | Promotion ) |
| 14. *Job Itself* ) | Job Insecurity ) | Lack of Training ) |
| 15. *Undemanding* | *Job Itself* ) | *Lack of Recognition* ) |
| 16. *No End Product* | *Lack of Intellectual Stimulation* ) | Management & Organisation ) |
| 17. Staff Attitudes ) | *User Involvement* ) | *Lack of Personal Development* ) |
| 18. Interruptions ) | Underpaid ) | Automation ) |
| 19. Undergraded ) | Bookfund Allocations ) | Staff Facilities ) |
| 20. Job Insecurity ) | Declining Professional Standards ) | |
| 21. *Lack of Intellectual Stimulation* ) | Lack of Caretaker Support ) | |
| 22. *Lack of Achievement* ) | | |
| 23. *User Involvement* ) | | |
| 24. Lack of Training | | |
| 25. Bookfund Allocations ) | | |
| 26. Declining Professional Standards ) | | |
| 27. Lack of Caretaker Support ) | | |
| 28. *Lack of Personal Development* ) | | |
| 27. Staff Facilities ) | | |

Table 8.6 Disturbances in the job, in rank order.
(Items in italics are Job Content (Intrinsic) factors.)

"Lack of inter-departmental communication"                    (Librarian)

Communication in this context included not only management and policy

decisions affecting the whole library, but also general awareness topics

and everyday matters affecting all staff.

Aspects of Management and Organisation ranked second overall. Some of

the views expressed, for example, included concern about the

relationship of the library with its parent body; the assignment of

tasks (e.g. not taking into account either people's views, or their

abilities and experience); lack of leadership both in the library and in

the parent organisation; and senior library management. This factor

seemed to be of most concern to librarians, who ranked it joint first

with Lack of Communication, and only one clerical assistant reported it

as a disturbance (specifically, the unfair allocation of tasks following

a reorganisation within the library, which meant that some people were

overworked whilst others were underworked).

The third highest factor overall was Automation, but there was no

consensus on which aspect caused the most disturbance. Comments ranged

over concern about the costs of automation; the lack of resources; the

system itself; the hostility and distrust of staff towards automation;

dependence on an outside agency; delays in implementation; and a fear of

deprofessionalisation. Once again, this factor was of most concern to

librarians, with only one clerical assistant mentioning it

(specifically, concern about the lack of resources).

Lack of Consultation ranked fourth overall, although it was second in

rank for clerical assistants. This factor was sometimes linked in the

same reply to Lack of Communication, perhaps indicating a close

connection between the two. Respondents commented about lack of

consultation from colleagues or from management, either about matters of

general concern or about aspects of work.

Next in rank (fifth) was discontent with Promotion or Career Prospects

either within the library or outside. Librarians seemed to be more

concerned about this than clerical assistants, and ranked it fourth.

Joint sixth in rank overall were Interpersonal Relations and the Work

Centred factor of Monotony/Repetition. The latter was not mentioned at

all by librarians, and for clerical assistants on their own it ranked

jointly in second place with Lack of Consultation. Views expressed were:

> "Repetition of tasks on a weekly rota"
> "Get some variety, but not enough"
> "Lack of opportunity to do a different job"
> "Repetitive to a certain extent/not enough mobility"
> "Occasional monotony".

Examples of comments referring to Interpersonal Relations included:

> "Jealousy of some colleagues" - regarding large amount of effort and
> resources put into the cataloguing area.              (Librarian)
> "Backstabbing amoungst staff. People do not seem to have faith in
> the competence of other staff"              (Librarian)
> "Attitudes of members of staff to each other" - e.g. "that's not my
> job, it is somebody else's"              (Clerical assistant)
> "Attitudes of some professionals"              (Clerical assistant)

Other factors which were reported by at least 10% of respondents

included: Salary ("low paid", "underpaid"); Lack of Recognition ("Lack

of recognition of importance of our work", "Lack of appreciation of

routine tasks at managerial level", "Status of department"); Lack of

Responsibility; the Job Itself; Heavy Workload/Backlogs; the Physical

Environment ("Open plan offices", "Department isolated from other parts

of library", "Physical conditions", "Unpleasant atmospheric

conditions"); and, the Financial Situation ("Financial restrictions",

"Cuts in library services due to government policy", "Competing priorities between needs of suppliers and political funding").

In some instances in the above discussion, it was indicated that there were differences in the ranking of responses between librarians and clerical assistants. Regarding their most important disturbance, clerical assistants were approximately evenly divided between Job Content and Job Context factors. In comparison, only 10% of librarians reported Job Content factors as first in importance. With respect to Job Context factors, no clerical assistant indicated any aspect of Terms and Conditions of Service as first in importance (although they were mentioned in second and third places), whilst 14% of librarians did so. Three-quarters of the librarians reported factors to do with Working Conditions as first in importance.

If we look at the top six disturbances, as listed in Table 8.6, the only factor which is common to both librarians and clerical assistants is Lack of Communication, and this factor ranked first for both. For librarians, the top three factors - Lack of Communication, Management and Organisation, and Automation - obtained very close scoring. The next three factors - Promotion, Financial Situation, and Lack of Recognition - also were fairly close together in their scores, but were cited by less than half the number that cited the first three. Lack of Recognition (of the work being done!) is the only Job Content factor in the librarians' top six disturbances. It is interesting that clerical assistants did not mention at all the factor concerned with the Financial Situation (Job Insecurity - in the light of the financial constraints - was a related factor, but listed separately, and again only librarians mentioned it as a disturbance). Apart from Lack of

Communication, none of the other four factors appeared to cause much of a disturbance to clerical assistants.

Clerical assistants indicated a fewer number of disturbances in total. Their top six were all close in scoring, with no factor or group of factors standing out exceptionally from the others. On ranking, Lack of Communication was followed by two factors in joint second place - Lack of Consultation and Monotony/Repetition (including lack of variety). A second Job Content factor - Lack of Responsibility - came third. Disturbance with Interpersonal Relations was followed by dissatisfaction with Pay. Comparing these findings with the responses of librarians, the two Job Content related factors - Monotony/Repetition and Lack of Responsibility - were not mentioned at all by librarians. Also, dissatisfaction with Pay was not reported as being particularly important to librarians.

Further discussion on these results will follow below.

*HOW TO IMPROVE QUALITY & PRESTIGE OF WORK IN LIBRARIES*

Respondents were asked what they thought might improve the quality and prestige of work in libraries. Responses were divided into Job Content and Job Context factors. A breakdown of the responses is shown in Table 8.7.

Items intrinsic to the job accounted for 15% of the suggestions made. The major factor centred on improved involvement with the user, through increased user education activity and through developing a greater

|  | All | Librarians | Clericals |
|---|---|---|---|
| **Job Content Factors:** | | | |
| Improve Involvement with Users: | | | |
| User Education | 5 | 5 | - |
| Awareness of User Needs | 2 | 2 | - |
| Improve Access to Professionals | 1 | - | 1 |
| Upgrade Work of Professionals | 1 | - | 1 |
|  | 9 | 7 | 2 |
|  | 15% | 17% | 10% |
| **Job Context Factors: Working Conditions** | | | |
| Improve Communication & Consultation | 9 | 3 | 6 |
| Improve Public Relations Activity | 11 | 4 | 7 |
| Make User Aware of Role of Library | 4 | 4 | - |
| Marketing of Library Services | 3 | 3 | - |
| Increase Resources | 2 | 1 | 1 |
| Automation: | | | |
| Improves QWL | 1 | 1 | - |
| Improves Procedures & Communication | 4 | 2 | 2 |
| Up To Date Methods | 1 | 1 | - |
| Improve Status of Librarians | 1 | 1 | - |
|  | 36 | 20 | 16 |
|  | 58% | 48% | 80% |
| **Job Context Factors: Terms & Conditions of Service** | | | |
| Improve Qualifications (& the L.A.) | 2 | 2 | - |
| Improve Salaries/Grading | 3 | 3 | - |
| Better Management Training | 2 | 2 | - |
| Staff Development & Training | 3 | 2 | 1 |
| Better Recruitment | 3 | 3 | - |
| Better Career Structure | 1 | - | 1 |
| Continuing Education | 2 | 2 | - |
| More Women in Higher Positions | 1 | 1 | - |
|  | 17 | 15 | 2 |
|  | 27% | 36% | 10% |

Table 8.7 Factors that might improve the quality and prestige of work in libraries.

awareness of their needs. One librarian suggested upgrading the work of professionals.

Job Context factors were divided between those concerned with Working Conditions (58% of total) and those concerned with Terms and Conditions of service (27% of total). Of the former, there was considerable support (especially by clerical assistants) for increased public relations and other activities so that existing and potential users might become more aware of the role of the library. Linked to these was the marketing of library services. Not surprisingly, a quarter of respondents suggested improving communication and consultation within libraries, which also included improving the relationship between professional and non-professional staff. Automation was mentioned by 17% of respondents, primarily as a means to improve work procedures and communication (that is, the flow of information).

Terms and Conditions of Service factors included: improved qualifications for professional librarians; improved salaries and gradings; better recruitment; better management training and staff training in general; greater emphasis on continuing education for librarians; and an improved career structure (including more women in higher positions).

A selection of the responses given is as follows:

    "Education of the general public"                      (Librarian (L))
    "Greater awareness of user needs by library staff"            (L)
    "Greater emphasis on user education"                          (L)

    "Better relationships with library users" (Clerical Assistant (C/A))
    "PR - improving readers awareness of what we do"             (L)
    "PR - sees highly qualified staff sitting around doing menial tasks"
                                                                 (L)
    "More aggressive selling of library's services"             (L)
    "Improving libraries as information centres"                (L)

"Less division between professionals and non-professionals"     (L)
"Better communications between professional and non-professional
staff"                                                          (C/A)
"Improve communication between professional and assistants"     (C/A)
"Better communication between senior and junior staff"          (C/A)
"More communication between senior staff and assistants regarding
management in the library"                                      (C/A)
"More communication and discussion of policy in whole organisation"
                                                                (L)

"Keeping abreast of automation"                                 (L)
"New technology - to improve procedures and get answers quickly"
                                                                (C/A)

"Reorganise the Library Association"                            (L)

"...more cynically, highly paid professions are invariably
respected"                                                      (L)
"National salary scales for all levels"                         (L)

"Better qualifications for future librarians"                   (L)

"Less dependence on qualifications in choosing staff"           (L)
"Better, and more variously qualified, entrants"               (L)

"Staff development - more movement from section to section and
indeed from library to library"                                (C/A)

"Improve career structure for clericals"                        (C/A)

"Continuing education for librarianship"                        (L)

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DISCUSSION OF FINDINGS - JOB PREFERENCES AND CHARACTERISTICS


The sample size is too small to make inductive statements, derived from

this study, concerning the total population of library workers. Any

conclusions that may be made are highly tentative. But for the purposes

of illustration an attempt will be made to discern trends and to compare

with other research in the area.


On the whole, the attitudes of library workers to their jobs were most

favourable. The majority liked their jobs, regardless of any

disturbances they might have felt towards them, and most rated their

jobs as important (at least from their own viewpoint). We gain a picture

of a fairly conscientious group of people, who liked variety in their

jobs as well as some freedom to develop their own ideas, and who liked

challenge and the opportunity to learn on the job and who welcomed

feedback. In practice, not all the jobs matched up to these

expectations. Certain characteristics were apparent. Some people were

restricted in carrying out their own ideas, or in doing the things they

were best at due to circumscribed job descriptions, and sometimes

because they had been appointed to the wrong job. Some jobs were lacking

in variety and challenge, and often feedback from supervisors or senior

library personnel was wanting.


Referring to the lists of intellectual stimulations and sources of

satisfaction, we note that librarians gained satisfaction from their

clientele, their job and interaction with others, including working in a

team, and received intellectual stimulation from colleagues and from the

work itself. The nature of the work undertaken by professional workers

tends to involve a great deal of interaction with other people, that is,

with the library's clientele; with external agencies such as book

suppliers, periodical agents, service providers, and so on; with other

professionals in other libraries; or, with colleagues and other co-

workers. The work is people-oriented. On the other hand, their work also

involves printed materials in the form of books and journals, and so

intellectual stimulation and satisfaction may also be gained from them.


For the clerical assistant the work is more task oriented, and thus a

completed job becomes more satisfying. Intellectual stimulation was

derived from the work itself and this may be associated with the general

function of the library, involving as it does the handling and processing of large numbers of books and other materials. Working independently is also closely associated with the more routine clerical nature of the job, where one can pace oneself and determine one's own work pattern, to a greater or lesser extent. The functional grouping of tasks in libraries may lead to strong feelings of group identity and, in turn, to teamwork. Helping clients was also a source of satisfaction to the clerical assistant. Colleagues as well as supervisors were major sources of intellectual stimulation.

The aspects of the job which cause a disturbance to library workers may not always result in job dissatisfaction, although they will probably contribute towards it. These aspects provide a picture of the characteristics of library work, in the same way as those aspects which produce job satisfaction. The emphasis on poor communication at all levels is a curiosity. Library workers are in the business of 'information', yet they do not seem to be very good at passing information between themselves. (But, it may be that their standards in this area are very high.) Much time and effort can be expended in passing on information and in communicating effectively. Sometimes too much information can be as bad as too little. A balance has to be reached. Also, communication is a two-way process and it could be that all library workers at whatever level need to learn to communicate more effectively with each other (including not only between sections, but also between professionals and clericals), and upwards too. It is important for senior management to know what is going on at the 'chaulk face'.

Librarians appeared to be much more disturbed with their library's management and organisation than clerical assistants. This factor illustrates a possible conflict that librarians may feel between their role as 'company' worker and that as professional worker. The management style and philosophy of the chief librarian impinge directly on his or her attitude towards communication and consultation, and these in turn may often be influenced by the pattern set by the parent body. It is also interesting that no librarian cited 'supervising others' as one of their three sources of satisfaction, nor did any specify it as a disturbance.

Whilst various aspects of automation were mentioned by some respondents (all librarians), automation per se did not appear to be much of a disturbance. Looking at the views which were expressed, we may make the following scenario: "Cooperative cataloguing leads to an ever greater dependence on external agencies (e.g. SCOLCAP and the British Library), and with more emphasis on shared cataloguing data, the need for the traditional cataloguing skills of the professional librarians may diminish. Lack of adequate resources might limit the capabilities of the shared computer system, leading to frustration by library workers at the restrictions imposed by the system and possible delays in implement-ation." This is supposition, based on limited data. But each persom will see a different aspect of the problem - perhaps that one uppermost in their mind at that moment, or one that particularly affects them in their day to day activity.

Lack of promotion was associated with some other factors, including (for librarians) concern with the financial situation and with staff attitudes (for example, "sourness" and "frustration" were mentioned).

Tighter finances in library authorities or in parent organisations leads to greater scrutiny of expenditure heads, often resulting in one or more of the following: frozen posts, staff cuts, downgrading of posts, or re-assignment of duties. Job mobility and promotion prospects become limited. Poor career prospects can lead to frustration, anger, and so on, along with concern with lack of recognition and appreciation of the work being done, particularly if there is the threat of downgrading or axing of vacant posts.

Clerical assistants expressed greater concern with more job related factors. Monotony and repetition of tasks were linked with dissatisfaction with the amount of responsibility allowed. A certain level of discontent with interpersonal relationships was indicated, particularly concerning the attitudes of others (supervisors, peers and professional staff) in the work situation (rather than in a social context).

If we compare the list of disturbances with the factors that respondents suggested might improve the quality and prestige of library work, there appears to be some connection between them. Aspects of internal communication and consultation are common, as well as funding levels, salaries, gradings and staff development. Use of automation was suggested as a means to improve some of the work processes. Only one respondent specified upgrading the work done (by professionals) in libraries as a factor that might lead to improved status, whilst a large proportion suggested various public relations activities (in order to 'inform' the public about their work, and about the services that libraries could offer).

COMPARISON OF FINDINGS WITH PUBLISHED RESEARCH RESULTS

The top six most important satisfactions derived from the job in the Graham study were compared with the corresponding summaries from the published research on job preferences and characteristics, as detailed in Tables 4.1 and 4.2. This comparison of sources of satisfaction in the job is set out in Table 8.8. The rankings of the librarians in the Graham sample are listed alongside those of all respondents, since these may provide a more appropriate comparison with the published research findings, which mostly concerned professional views. We may observe that there is a fair amount of agreement between the two sets of summaries.

The Completed Job and Successful Enquiry relate to a Sense of Achievement, Using Acquired Knowledge and other intrinsic aspects of the Work Itself. Satisfied Client relates perhaps to the satisfaction gained from being of Service to others, as well as to a Sense of Achievement and to Recognition. The importance of human relations in library work is again emphasised with the factors - Interaction With Others (users and colleagues) and, for librarians, Working In A Team, Working To Best Of Ability and Working Independently are intrinsic job content factors.

| GRAHAM (1983) | | SOURCES OF JOB SATISFACTION - SUMMARY CHAPTER 4 |
|---|---|---|
| All Respondents | *Librarians* | (No Precise Order of Importance) |
| | | Human Relations: |
| | |   Service Aspects |
| Completed Job | *Satisfied Client* |   Contact With Users |
| | | Work Itself: |
| Satisfied Client | *Completed Job* |     User Education |
| | |       Programmes |
| Working To Best | *Interaction With* |     Reference & Enquiry Work |
|   Of Ability | *Others* | Colleagues |
| | | Work Itself |
| Interaction With | *Working To Best* | Other Intrinsic Aspects: |
|     Others | *Of Ability* |   Achievement |
| | |   Independence |
| Working | *Successful Enquiry* |   Variety |
|   Independently | |   Responsibility |
| | |   Intellectual Challenge |
| Successful Enquiry | *Working In A Team* |   Initiative & Freedom |
| | |   Using Acquired Knowledge |
| | |   Recognition |
| | | Professional Development |
| | | Management & Administration |
| | | Salary |
| | | Advancement |

Table 8.8 Comparison of sources of satisfaction in the job,
Graham Study versus published findings.

In a similar way to the sources of satisfaction in the job, the top six disturbances in the job, from the Graham study, were compared with the corresponding summaries from the published research, as provided in Tables 4.3 and 4.4. The comparison of sources of disturbance in the job is presented in Table 8.9.

| GRAHAM (1983) | | SOURCES OF JOB DISSATISFACTION - SUMMARY - CHAPTER 4 |
|---|---|---|
| All Respondents | *Librarians* | (No Precise Order of Importance) |
| Lack of Communication | *Lack of Communication* | Routine/Non-professional Work |
| | | Low Status |
| | | Working Conditions |
| Management & Organisation | *Management & Organisation* | Interpersonal Relations |
| | | Management & Organisation |
| | | Other Intrinsic Aspects; |
| Automation | *Automation* | Lack of Recognition |
| | | Underutilisation |
| Lack of Consultation | *Promotion* | Lack of Achievement |
| | | Salary |
| Promotion | *Financial Situation* | Poor Prospects |
| | | User Involvement |
| Interpersonal Relations | *Lack of Recognition* | Lack of Participation & Consultation |

Table 8.9 Comparison of sources of disturbance in the job, Graham Study versus published findings.

There is agreement with aspects of Management and Organisation, Promotion and Career Prospects, Interpersonal Relations, and Lack of Consultation. Lack Of Communication appears to be a major problem for the Graham sample. Librarians in the Graham study did not express discontent with the routine, clerical nature of professional work (although other intrinsic factors were mentioned), whilst the clerical assistants were disturbed by the monotonous nature of their work.

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SUMMARY

This chapter has presented the findings of the first half of the field
research, which covered the job preferences and job characteristics of a
small sample group of library workers. The primary objective was to
determine what aspects of their jobs might contribute to job
satisfaction.

We may summarise the job preferences of the library workers in the
sample as follows:

- Job content factors are very important to library workers. For
  example, variety, freedom to carry out own ideas, independence,
  challenge, recognition, achievement, and so on.

- Work itself is a major source of satisfaction, dealing as it does
  with users/clients on the one hand, and with books and other
  materials on the other.

- Library workers gain satisfaction from interaction with others -
  colleagues and peers, users, supervisors, suppliers,...

- A completed job is important to the majority of library workers.
  Thus, whole tasks, each with a perceivable beginning and end, should
  be assigned whenever possible.

The job characteristics, on the whole, have the potential to match
reasonably well with the preferences of the library workers. The service
orientation of library work and the opportunity for interaction with
other people is a positive feature. The discontent that was expressed,
by both librarians and clericals, with various intrinsic aspects of the
job is something that can be resolved by judicious management policies
within the libraries concerned, including job redesign. Disturbances in

the job were fairly diverse, with about three quarters of the comments
made referring to job context factors. This seems indicative of certain
failings in local management practices (particularly with respect to
personnel management, communication and consultation) or organisational
restrictions (such as job insecurity, low pay and low grades). Many of
these factors are within the direct control of library management,
whilst others will not be so. Within the context of this section,
aspects of automation were not significant, in terms of the proportion
of respondents who mentioned them as a disturbance in the job, and no
one factor appeared to be particularly important.

These findings were found to correspond fairly closely with the findings
from the published research results discussed in Chapter 4.

The next chapter will present the findings from the last section of the
questionnaire, concerning respondents attitudes to automation in
libraries.

# CHAPTER 9

## RESEARCH FINDINGS - AUTOMATION IN LIBRARIES

The first part of this chapter will systematically report on the
responses to the section of the questionnaire which dealt specifically
with automation in libraries. The second part will be a discussion of
these findings in relation to the second and third aims of the field
research, namely:

- To determine the attitudes of the sample group to the use of
  computerised techniques in libraries in general and in the technical
  services sections in particular.

- To determine in what way the sample group expected their jobs and
  the jobs of others to be affected by the introduction of
  computerised techniques.

## AUTOMATION - THE USE OF COMPUTERS IN LIBRARIES

Respondents were asked how much the use of computers had affected their
job. Overall 36% replied that it had affected them a great deal.
Librarians seemed to have been more affected than clerical assistants,
with 33% of the clerical assistants stating that they had not been
affected at all (as against 5% of the librarians).

*MAJOR REACTIONS TO AUTOMATION*

Respondents were asked to indicate from a set of closed responses what
were the major reactions to automation among their own work groups, and
then what were their personal views about automation. The responses are

listed in Table 9.1. Multiple responses were invited, and respondents
were asked to explain or expand upon their replies.

When looking at their own work group, a large proportion of the
respondents felt that, whilst many of their colleagues considered change
inevitable, automation was viewed with a certain amount of anxiety which
in turn caused some resistance. Nevertheless, respondents felt that some
of their colleagues still looked forward to the new methods of work
regardless of any anxiety they might feel. The anxiety was broken down
into areas that impinged on the job, such as job satisfaction and
boredom; and job context factors, such as job security, fear of the
unknown, uncertainty about new methods of working (and whether they
could cope with them), and lack of confidence in the computerised
systems being implemented. Some anxiety was felt about the health and
safety aspects of VDUs. Resistance was expressed in the form of un-
cooperativeness, particularly by older staff and union members. For
example, it was reported that some people refused to use the new
equipment or to learn about the new methods. When the views were broken
down between librarians and clerical assistants, there was little
difference in the outcome (except a larger proportion of clerical
assistants seemed to recognise that change was inevitable).

Respondents themselves seemed much more relaxed about automation, with
more than half of them looking forward to the new methods of working.
Some anxiety was still expressed, which mostly concerned job security,
fear of the unknown and uncertainty over new procedures. Clerical
assistants seemed to be more troubled about automation than librarians,
although they did not express any resistance. Some of the librarians
claimed to be resistant to any change, but more than half were looking

| | Work Group's views | | | | | | Respondents' views | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All | | Librarians | | Clericals | | All | | Librarians | | Clericals | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| a) With a certain amount of anxiety | 25 | 69.4 | 15 | 71.4 | 10 | 66.7 | 14 | 38.9 | 7 | 33.3 | 7 | 46.7 |
| b) With a certain amount of resistance | 17 | 47.2 | 10 | 47.6 | 7 | 46.7 | 3 | 8.3 | 3 | 14.3 | - | |
| c) With a feeling that it cannot happen here | 2 | 5.5 | 2 | 9.5 | - | | - | | - | | - | |
| d) With a recognition that change is inevitable | 21 | 58.3 | 10 | 47.6 | 11 | 73.3 | 18 | 50 | 8 | 38.1 | 10 | 66.7 |
| e) With a sense of pleasure at new methods of work | 11 | 30.6 | 6 | 28.6 | 5 | 33.3 | 20 | 55.6 | 12 | 57.1 | 8 | 53.3 |
| f) other (see Text for explanations) | 5 | 13.9 | 4 | 19.0 | 1 | 6.7 | 6 | 16.7 | 4 | 19.0 | 2 | 13.3 |

Table 9.1 Reactions to automation

forward to the new methods of work. 67% of clerical assistants felt that change was inevitable, as against 38% librarians.

Other views mentioned, included - for the workgroup - the feeling that there had been too much change too quickly and that experience [of automated systems] tempered enthusiasm. One clerical assistant commented that her colleagues hoped that un-computerised jobs would not be totally boring.

Respondents views concerning their own reactions included appreciation of efficient work methods; pessimism over developments in automation; and interest in how the new systems would work.

*VIEW OF OWN JOB WITHIN A COMPUTERISED SYSTEM*

Respondents were asked how they viewed their own job within a computerised system.

*LIBRARIANS' VIEWS:* 44% of librarians thought that the job would improve. Specific improvements mentioned were that: they would have greater control over their job; it would be made easier or quicker, and more efficient; there would be less paperwork and less clerical work; and job satisfaction would increase. Some were not sure of the full effects, but were optimistic about automation.

38% did not have a particular view since they had had little involvement to date. They hoped it would improve. Some looked forward to it since learning new things would make the job more interesting.

18% were uncertain or anxious about their job. There was some worry that they would be required to work with VDUs, and that there might be a

reduction in professional knowledge. One respondent felt that there had been insufficient planning of the effect of computerisation on the work.

*CLERICAL ASSISTANTS' VIEWS:* 67% considered that their job would improve. Reasons given for this were that the job would be made easier and quicker, and more efficient; that there would be less paperwork; that there would be less routine clerical work; that there would be increased accuracy; and that job satisfaction would increase, as well as interest in the job.

13% did not know what their job would be like, but they hoped it would be better and were looking forward to it.

20% expressed some uncertainty or anxiety, which was mainly concerned with working with VDUs, and losing control over their jobs. The view was expressed that some clerical tasks would still need to be done within a computerised system.

*ADVANTAGES OF AUTOMATION*

Respondents were asked what they thought the major advantages were of using computers in libraries and in technical services sections in particular. Almost all responses, from both librarians and clerical assistants, concerned Job Context factors. Automation was thought to improve efficiency, not only in the carrying out of repetitive and routine clerical tasks but also in providing quick access to accurate and needed information. More efficient use could be made of the staff time freed, either in the department or in other sections. Procedures could be streamlined or standardised, and perhaps simplified. The quality of cataloguing would improve. Automation would cut out duplication of effort within a single library as well as between groups

of libraries and would permit greater cooperation. There would be less errors because of greater control over input data. The service to the user would be improved. Work could become more interesting, and job satisfaction could increase.

Some respondents felt that the image of the library and librarians would be greatly improved using computers; and that automation would help bring staff together (to "gang up against the computer").

*DISADVANTAGES OF AUTOMATION*

Respondents views on the disadvantages of using computers were mostly divided into system considerations and job security aspects. There were many comments on the forced dependency on a machine; lack of flexibility due to prescribed procedures; "garbage in - garbage out"; loss of personal contact with users; and limitations of access to required information when the system is unavailable due to breakdown and downtime (particularly if this affected public service points, which in turn might result in bad public relations). Loss of personal knowledge and expertise were mentioned, together with the view that information may be lost in the machine because of system faults or through human error. There was the view that the manual work that would remain might be more boring and more routine, and require less thought since "the machine would be doing the work". Computers were thought to sometimes produce a barrier to communication between departments, and between those people who were involved and those who were not.

Other disadvantages were seen to be lack of resources and inadequate financial planning. There were comments about the physical barriers of

using microfiche readers and VDUs, for both staff and users, as well as the potential health and safety hazards of using VDUs. The work involved with the changeover from a manual to an automated system and the disruption associated with the actual implementation of the new system were felt to be disadvantages.

Finally, there were many comments about the possible threat to job security, especially by clerical assistants.

*VIEWS OF THE WORK OF THE PROFESSIONAL/CLERICAL ASSISTANT*

(These views were sought in the questionnaire at this point primarily because the writer is of the opinion, supported by evidence presented in Chapter 3, that there is a certain level of misunderstanding and non-understanding between librarians and clerical assistants concerning their respective roles. Such issues would have to be tackled in any job redesign exercise, particularly in connection with the introduction of new methods of work such as those brought about by automation.)

*CLERICAL ASSISTANTS' VIEWS OF THE WORK OF PROFESSIONAL LIBRARIANS:* Clerical assistants' opinions ranged from very positive to very negative. The good aspects included such comments as: the work was crucial and important; the work was impressive; the work required a certain level of intelligence; and, the work was interesting, demanding, and varied. But on the negative side, there were several views that the work was boring and repetitive ("just like everyone else's job"); that it did not look important; and, that it was somewhat removed from the clerical assistant's job. However, there were some respondents who commented that they did not know what kind of work was done by

librarians. Others wondered why they needed all the qualifications. Some

felt that they did not do as much work as they made out they had. A few

respondents thought that they could do the work themselves. One

respondent considered that the work of the professional was changing

because of the computer, and that more emphasis was being put on helping

users. Additionally, professional work might become less interesting.


*LIBRARIANS' VIEWS OF THE WORK OF CLERICAL ASSISTANTS:* Librarians, on the

whole, thought the work of the clerical assistant was routine, limiting,

and even boring, but that often the work was unavoidable. Many were of

the opinion that, nevertheless, the work of the clerical assistant was

crucial and very important to the library. Some felt they were underused

and undervalued, and that the work was unfair to them. A few respondents

wondered if, in fact, clerical assistants got much job satisfaction. It

was suggested that the work could be made more interesting by delegating

work to them or by allowing them some variety in the tasks they

undertook. The point was also made that efficient clerical staff were

"worth their weight in gold".


*CONTINUING ROLE FOR THE PROFESSIONAL CATALOGUER WITHIN A COMPUTERISED*
*SYSTEM?*


*LIBRARIANS' VIEWS:* All librarians but one saw a continuing role,

although there was a certain amount of uncertainty expressed. Many

foresaw a reduced role, where professional activity would be confined to

classification, subject indexing, and original cataloguing (since there

would always be some records not available through the network). It was

suggested that clerical assistants could undertake supervised

cataloguing activity, since most of the work was not really of a

professional nature. Some felt that the professional librarian would be needed to maintain quality and standards, since cataloguing rules were more complex within a computer system, although there was also the view that there was far too much detail in most cataloguing rules. One respondent thought that a new generation of professional editors was required, to remove the errors of present cataloguers! There was a recognition that the nature of the job was changing. There would be opportunity for redeployment and attempting other tasks, and there would always be supervisory work for the professional to undertake.

One respondent considered that there would be no role for the professional since trends in automation indicated that even classification might become redundant. He also felt that library schools were not foreseeing this trend.

*CLERICAL ASSISTANTS' VIEWS:* Two respondents thought there would definitely be a continuing role, since it was felt that the professional's experience was needed to keep a sense of perspective about the work in the section and because classification was considered very important. Three (20%) did not know, partly because they anticipated that peoples' jobs in general would be taken over to some extent by the computer. The rest (67%) saw a continuing, but reduced, role. The professional would be a supervisor who would only undertake difficult cataloguing and classification tasks, since the bulk of the work would be done by library assistants. One respondent felt that this was one reason why librarians did not let clerical assistants know about their work, since they saw their role threatened. The redundant cataloguer would need to be re-trained or move over to reader services jobs.

*LIBRARIANS' VIEWS:* Some respondents were not sure what role the clerical

assistant would have, partly because they were not sure what clerical

tasks would need to be done in an automated system. Some hoped their

role would expand and increase in importance, although most expected

that the work would still be boring and routine. The work might be more

interesting at first because it would be new and different. Much would

depend on how the work was organised. Some thought there might be a

reduced role, with some posts merging with professional posts - although

there was a contrary opinion that there would be more clerical

assistants in place of the professionals. This posed a threat to the

professional librarians. Several respondents thought that as there would

be a lot of data input activity, then VDU operators would be needed

rather than clerical assistants, although some added that library

assistants would be better at the VDU tasks than typists because of

their training and experience. Some thought that VDU tasks would not be

interesting, and that the work might be downgraded as a result.

*CLERICAL ASSISTANTS' VIEWS:* Less than half thought the work would become

more interesting. Some thought that there would be more varied work,

provided keyboarding tasks were mixed with other tasks, and that there

would be less form-filling and no filing to do. One respondent thought

that the role could become more important, possibly overlapping with

professional work. Regarding VDU operation, many thought that such work

would be boring and routine, and that they would no longer be library

assistants. Some uncertainty was expressed, with the role of the

clerical assistant depending on the type of work that needed doing and

the outputs. One respondent felt it was important that the whole process

was known and understood. Another commented that, whilst the work would not get more interesting, it would not necessarily become more boring.

*OTHER VIEWS ABOUT THE USE OF COMPUTERS IN LIBRARIES*

A quarter of the respondents repeated their view that the use of computers was inevitable, since libraries had to move with the times and computers were becoming an important part of everyday life. But more than half felt they were a good idea in themselves, particularly for information retrieval work and in cataloguing and acquisitions areas. There was a variety of unfavourable responses, however, such as: computers were not necessarily good for public relations; computers could be overused; concern over health and safety factors; library users like personal contact; people are first priority, and therefore computers should not replace them; and, computers should take the drudgery out of work, but not replace human intellect. It was also felt that computers should be used cautiously, to exploit them to their full potential. One respondent thought that librarians were shockingly ignorant of computers, and that there was insufficient compromise between the computer's requirements and the library's requirements in system design.

*ANTICIPATED FUTURE WITH RESPECT TO WORK IN LIBRARIES*

81% of librarians and 73% of clerical assistants intended to stay in library work, either in their present organisation or in another, if the opportunity for advancement or a change of job appeared. Most liked the work they were doing. Some librarians had registered, or were about to do so, for further degrees. Two librarians did not know, since it would

depend on circumstances or promotion prospects. Another two librarians would not stay in library work, one because he considered librarianship to be a non-critical profession and therefore unimportant, and the other because he wished to do a further degree full-time because of the subject interest. More than a quarter of the clerical assistants did not intend to stay in libraries, and would move when the opportunity presented itself. One clerical assistant felt that lack of qualifications precluded a future for her in libraries.

DISCUSSION OF FINDINGS - AUTOMATION IN LIBRARIES

The general attitude towards automation was positive. Use of computers was seen as being a good idea, even if inevitable, and more than half of the respondents entertained a sense of pleasure at the new methods of work. The computer was seen as a means to improve efficiency, particularly in the carrying out of repetitive clerical tasks. Speed of processing and of access to information were considered to be other major advantages. Staff time saved could be used effectively either in other (manual) tasks or in direct user services. The increase in efficiency was also seen as contributing to an improved service to the user. In addition to a positive impact on the image of the profession, as well as libraries, it was anticipated that automation could also make work more interesting and increase job satisfaction.

There was some anxiety expressed about the use of computers. Partly this was due to worry about using VDUs, from a health and safety point of view, and from a fear that the job could be downgraded. Regarding the health hazards of VDUs, there has been a lot written which has tended to sensationalise the issues. Many of the comments received in this study

indicated that respondents were reacting to what they had heard or read, rather than what they had experienced. Anxiety about the use of computers was also associated with job security fears, particularly amongst the clerical assistants who, whilst accepting the efficiency benefits of automation, recognised that it could do them out of a job. This view was tempered by the opinion that staff who were made 'redundant' could be redeployed into direct user service duties.

Although not specifically expressed by all respondents, there was a definite recognition that the organisation of the work of library workers was going to change with automation. There was a certain consensus between librarians and clerical assistants about what these changes would be, although librarians were less positive than clerical assistants that their own job would improve in an automated system. There was a degree of uncertainty expressed about the impact of the new systems which seemed to be primarily due to lack of sufficient personal knowledge on which to base opinions. Nevertheless, the majority saw a continuing role for the professionally qualified cataloguer, not so much as a practitioner but more as a manager of a cataloguing section, directing and supervising the work of experienced clerical assistants; maintaining standards and quality control; and, undertaking the more difficult original cataloguing, classification and subject indexing. None of the librarians expressed any feelings - either of relief or regret - about this change in role. Some of the clerical assistants saw this as an opportunity for them to get more interesting jobs, even though many of them admitted that they did not really know what the professional cataloguer did.

Whilst a number of librarians were not sure what clerical tasks would need to be done in a computerised system, most expected that the tasks would not be much different from those in the manual system, that is, they would continue to be boring and routine. Clerical assistants were split in their views, with half expecting the work in general to be more interesting, and the other half expecting it to be more limited, boring and stressful. The majority of all respondents anticipated that a large portion of the work of clerical assistants would be involved with VDUs. The anxiety that was associated with this is quite significant. There was a strongly held view that VDU work would be boring, particularly if not mixed with other tasks. In addition to the general comments already mentioned above, some clerical assistants also feared that as VDU operators they would cease to be library assistants. A number of respondents commented that the future role of the clerical assistant depended very much on how the work would be organised.

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SUMMARY

The aims of this last section of the questionnaire were to determine the attitudes of the sample group to the use of computerised techniques in libraries, and to determine in what way the sample group expected their jobs and the jobs of others to be affected by the introduction of computerised techniques.

Attitudes towards the use of computerised techniques were found to be positive. Use of computers was regarded as a good idea, even if inevitable. Work procedures would be made more efficient and jobs might

become more interesting and more satisfying. The major disadvantages of using computers were thought to be the forced dependency on a machine and machine pacing (and routinisation) of work. Some anxiety was expressed about working with VDUs, and about job security since some people might be made redundant as a consequence of automation.

Regarding the way jobs might be affected, there was a general consensus that the organisation of work in libraries would change, particularly the split of tasks between professional and non-professional. Many saw a reduced but continuing role for the professional cataloguer, not so much as a practitioner, but rather as manager of the cataloguing unit. Whilst the numbers of professionals in cataloguing may be reduced, some librarians saw this as an opportunity to take on other jobs in other sections of the library. Librarians and clerical assistants considered that certain professional tasks, in cataloguing, could be delegated to clerical assistants, thus giving them the opportunity to take on more interesting work. There was still a view that much of the clericals' work would remain routine and boring, and that VDU work would not be particularly interesting.

A majority of the respondents were intending to stay in library work. The reasons given for wanting to leave such work were mostly associated with lack of career prospects, lack of long term interest in the work, or a desire to undertake further education.

The next chapter will bring together the various facets of this discussion of the effects of automation in libraries on the organisation of work, drawing on the findings from the literature and from the field research.

# CHAPTER 10

# THE EFFECTS OF AUTOMATION IN LIBRARIES: DISCUSSION & CONCLUSIONS

This chapter will attempt to synthesize the various facets of this study into the effects of automation in libraries, and the implications for work organisation and job design, and will formulate certain conclusions in the process. An attempt will be made to place the subject of library automation within the wider context of the impact of technological change in general on libraries. Such change is not transitory. There will be long term effects. How should change be managed? What kinds of change might be expected? What is the future of libraries and librarians, bearing in mind current advances in computing and information technologies. The chapter will end with a small number of recommendations for further research.

## ORGANISATIONAL CONSIDERATIONS

The library, in open system terms, is in constant interaction with its environment. The most demanding of the external influences on a library is probably its community of users, although its parent organisation is also very important in shaping its character. The most significant pressure on the library in the 1980s is the economic situation, which is affecting not only what range of services may be provided, but also what types of material, and how much, the library may purchase to satisfy the demands of its users. Library management may adopt various coping strategies, not least amongst them being the introduction of automation, in an effort to make the most of the available resources, and to increase the productivity of its workers and in turn the effectiveness of the library organisation.

Automation is a facet of the much broader technological change. Appropriate technological advances have usually been taken on board in libraries, where this has been feasible (bearing in mind the resources available), more often with willingness than with reluctance, and sometimes out of necessity. Regarding computing technology and automation, which are our primary concern, Child (1977) argues that;

> "[they]...introduce the most far-reaching pressures for reorganisation out of the whole gamut of technological changes."
> (p185)

What then are the implications for libraries as organisations of such innovations?

As we have seen in Chapter 2, there are two broad schools of thought concerning the relationship between technology and organisation structure. One argues that technology determines the nature of work, the organisational hierarchy, and the skills, values and attitudes of the workers, and is termed 'Technological Determinism'. The second school is that of 'Strategic Choice', where it is argued that technology has no determinate effects and that organisation structures reflect the perceptions, orientations and objectives of management.

In the review of the effects of automation on the structure of libraries in Chapter 5, this argument in favour of managerial choice seemed to be borne out. The introduction of automation did not, of itself, directly lead to a reorganisation of the existing structures of those libraries studied. Library management had an apparent choice over whether they undertook a reorganisation or not and, if they did take the former path, they had a choice over the extent of the reorganisation. **We may conclude, then, that automation acts as a catalyst for change, rather than being an instigator of change.**

Libraries are in the business of providing various services (lending services, reference services, information services, or whatever) to their particular communities , based on the acquisition, organisation and exploitation of information sources. Organisational goals may emphasise the library's role in, for example, leisure, education, research, or manufacturing. A library's organisational characteristics and features may influence how the library will adapt to the introduction of automation.

The service orientation of the library implies that the strategic decisions of management may be modified by the needs and requirements of the client/user body and the library service. Service ideals are influenced by the professional ethic, which might at times conflict with the goals of library management. The latter may need to take a particular course of action based on economic contingencies, whilst the professionals will argue that the choice should be based on *their* considered view of the needs of the user and the service. Changes wrought, for example, by automation will be assessed on their likely impact on the client/user body and on the level of service provided.

The bureaucratic structure and orientation of the library may perhaps be the biggest constraining factor when dealing with the management of change. Many people appear to feel comfortable with bureaucracy, and will resist changes in their work if these seem to conflict with what they are familiar with and used to. In the library, this view will be most often held by clerical assistants, although not exclusively so, at least in this writer's experience. The library may also be constrained by the larger bureaucratic organisation, of which it is a part, from instigating substantial changes in the organisation of work. For

example, alterations to the library establishment or to gradings might be difficult to achieve since such changes, particularly if they involve redefining work responsibilities associated with certain grades, might have repercussions elsewhere, in other sections of the parent institution.

THE NATURE OF WORK IN LIBRARIES

**The nature of work in libraries is unlikely to alter substantially following the introduction of automation, at least in the short to medium term.** The basic functions of acquisition, organisation, exploitation, and administration, as exemplified in Figure 3.3, have not so far been transformed by computerised processing. A particular feature of library work is the preponderance of files and record keeping which is undertaken. Many of the tasks involved in maintaining these records are ideally suited to computer processing. Contemporary integrated systems still maintain the functional arrangement. The finer detail of certain tasks and procedures may alter, and some manual ones may actually disappear, but the basic activities remain even if undertaken by machine.

The question of whether librarianship is a profession is still being debated, and perhaps will not be resolved easily. The important factors, from the viewpoint of this study, are the poor public and self images of librarianship; the traditional nature of professional work which has tended to include a high quantity of clerical activity; and the relationship between the professional and non-professional in terms of the distribution of tasks and responsibilities between them, and the seeming lack of understanding, and appreciation, of each others roles.

Following the introduction of automation, we may surmise - from both the reported experiences of the libraries looked at in Chapter 5 and the views of the respondents in the field research - that these factors may be significantly affected. New technology and computerisation have a certain prestige associated with them, which may prove beneficial to the image of library work. The computer takes over much of the low level, routine tasks of the clerical assistant and, to some extent, certain activities formerly regarded as professional (for example, monitoring expenditure in acquisitions, authority control in cataloguing, and information retrieval via online databases as opposed to the hardcopy versions). This provides the library with the opportunity to reassess the relationship between professional and non-professional work, and to redistribute some of the tasks and responsibilities from the former to the latter. This 'redesign' of library jobs should have positive benefits in terms of a mutual understanding of professional/non-professional roles by the library workers concerned.

JOB PREFERENCES AND CHARACTERISTICS

Most library workers like to work with other people, both colleagues and users. The service orientation of the job is seemingly a positive characteristic. In addition, the nature of the work carried out appears to have many good features, which result in many workers achieving a fair degree of job satisfaction. The poor characteristics of library work point to the high level of routine, clerical tasks undertaken, particularly by the professionals; the large element of monotony in the non-professionals' work; lack of appreciation of the work done; and, dissatisfaction with certain job context factors, such as the physical working conditions, management policies and practices, the status of the

job, and low pay. In the case of the field research, in particular, major dissatisfaction was reported with poor levels of communication (both horizontally and vertically) and consultation. Automation was not found to be an important aspect of library workers' job preferences, nor was it found to be a significant source of dissatisfaction.

Automation may provide the opportunity to improve some of the poorer aspects of the work done in libraries, depending upon how it is implemented, and how the work is organised around it.

Some of the libraries studied in Chapter 5 indicated the importance of good communication when facing the introduction of automation. Communication within and between sections, and upwards and downwards in the hierarchy were all mentioned. The staff who are going to be affected by the new computer systems should be given as much information as possible throughout all stages in the planning and implementation processes. Such information is vital to the people actually involved if they are to fully understand the part they and others are to play, and it will help to allay fears and uncertainties as well as misconceptions. A certain amount of information should also be given to those not directly involved, so that they too know what is happening within their organisation.

The field survey indicated a degree of anxiety about working with VDUs, and the effect that this would have on their jobs. Some library workers consider automation to be dehumanising. Computerised processing does have undoubted benefits to the user in terms of efficiency of operation and improved control, but some users might complain of the impersonality of using VDUs to interrogate the catalogue, or the speed of issuing

books which reduces their contact time with the library assistant. It is an aspect of the organisation of work which may be dealt with by careful job 'design'.

## AUTOMATION IN LIBRARIES

It seems reasonable to assume that different technologies will make different demands on the people who work them and that, to varying extents, they will influence the nature of the work in an organisation as well as the structure. Buchanan and Huczynski (1985) present three sets of strategic choices in the process of technical change. (pp220-221) Firstly, there are choices in the actual design (that is, capabilities) of the equipment, tools and machines to be used. Secondly, there are choices in the goals and objectives that the technology is used to achieve (in other words, why the technology is used). Lastly, there are choices in how the work may be organised around the technology. The outcomes or consequences of the choices will have some effect on the people in the organisation, and the organisation itself. There will also be financial outcomes, in terms of the costs associated with whichever technology is chosen, and in terms of improved efficiency and productivity. Lastly, the decision making process is affected by past decisions, which might make the adaptation to the technological change difficult. The management decision making process involved in technical change, adapted from a model presented by Buchanan and Huczynski (1985), may be shown diagrammatically as in Figure 10.1.

Figure 10.1 Technical change; the management decision making process.
(Adapted from: Buchanan, David A. and Andrzej A.Huczynski, *Organizational behaviour; an introductory text*, Prentice-Hall, 1985, p284)
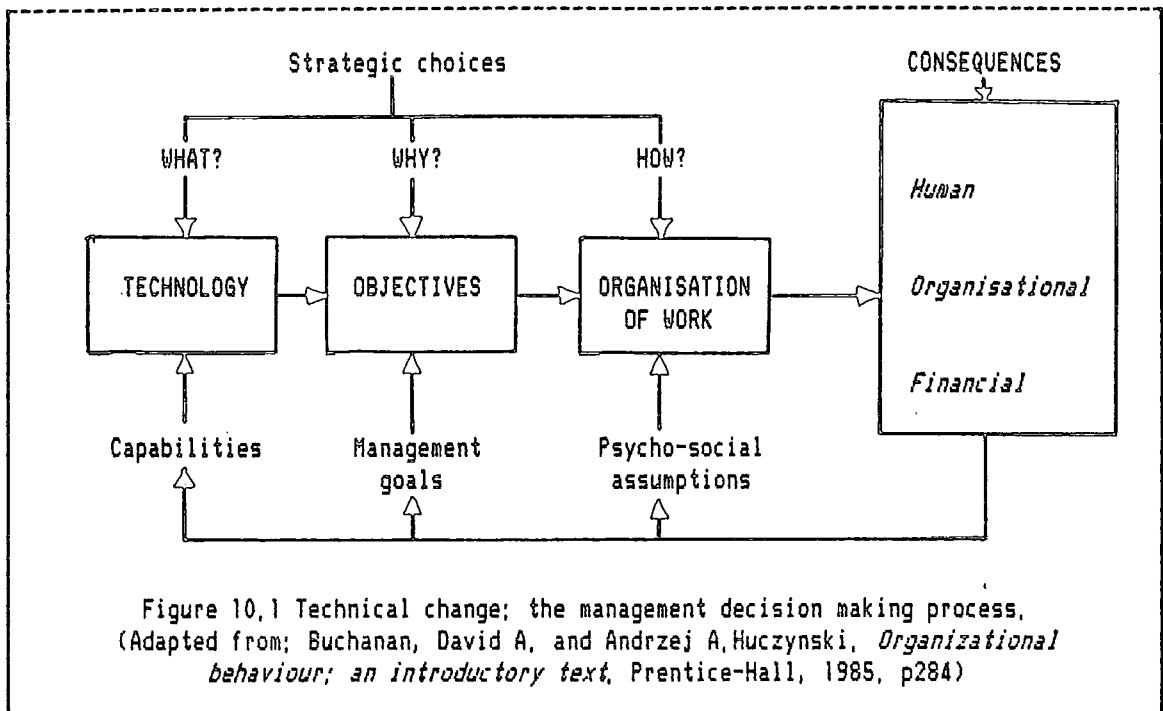
The capabilities of library computing technologies, as has been demonstrated, are continually changing and developing. Even as far back as 1968, De Gennaro (1968) pointed out that "automated systems are never finished - they are open-ended. They are always being changed, enlarged, and improved; and program and system maintenance will consequently be a permanent activity." (p87) Library automated systems now available on the market have a certain sameness. They each perform the basic housekeeping operations expected of them, with perhaps some variations of detail. They may individually have extra facilities or idiosyncracies that are used primarily as selling devices or gimmicks. Apart from cost, often the only criteria used to distinguish between different systems will be the personal and professional preferences of the librarians involved. Whichever route is taken to automate a particular library, be it a do-it-yourself job, a turnkey system, or membership of a network, there is a medium-term commitment involved. To change from an in-house

system to a turnkey one, or from one cooperative to another is possible, and indeed occurs quite regularly. The evidence from the literature reviews and from the writer's own experience indicate that seldom will a library revert to a manual system having taken the automated path.

The reasons for taking the computerised route in libraries were covered in Chapter 5, and in practice one might find several variations of those reasons being used in any one particular situation. The choice of computer system appears to depend on several factors besides the actual capabilities since, realistically, many libraries will operate under a variety of restrictions: personnel, economic, organisational, administrative, and so on. Management goals would normally take such factors into account. In practice these goals may often be tempered, within the library context, by professional values and judgements. Library management will have to make a choice, depending on the total budget, between competing priorities - staffing, equipment (including automation), materials (that is, books, periodicals, and so on), and services. Some librarians would argue that the current economic realities, faced by the majority of libraries, mean that few can afford to pay people to do work which is much better done by machine, nor can they afford to underemploy or inappropriately employ the people who are left. Others will resist strongly an apparent deterioration in service provision for the user, or substantial cuts in the materials budget, in order to fund technological innovations.

The strategic choices of library management are interrelated. The reasons for automating will be closely linked to the capabilities of the technology. Management goals may have to be modified if the particular techniques that are wanted are not (yet) available. On the other hand,

if the capabilities are greater than expected then goals and objectives
might be augmented. How the work is organised around the technology may
be affected by the reasons for automating. If the objective is to reduce
staffing in some way, then some posts may disappear and the work of
those posts will be redistributed to others. If the objective is to
improve services to users, then work priorities within different
sections might be changed, resulting in a different organisation of work
with reduced staffing levels in some sections and increased staffing
levels in others. We may now begin to adapt the model presented in
Figure 10.1, to the library situation, as shown in Figure 10.2. To
complete the model, we will now look in more depth at the consequences
of technological change, related to changes in the organisation of work.
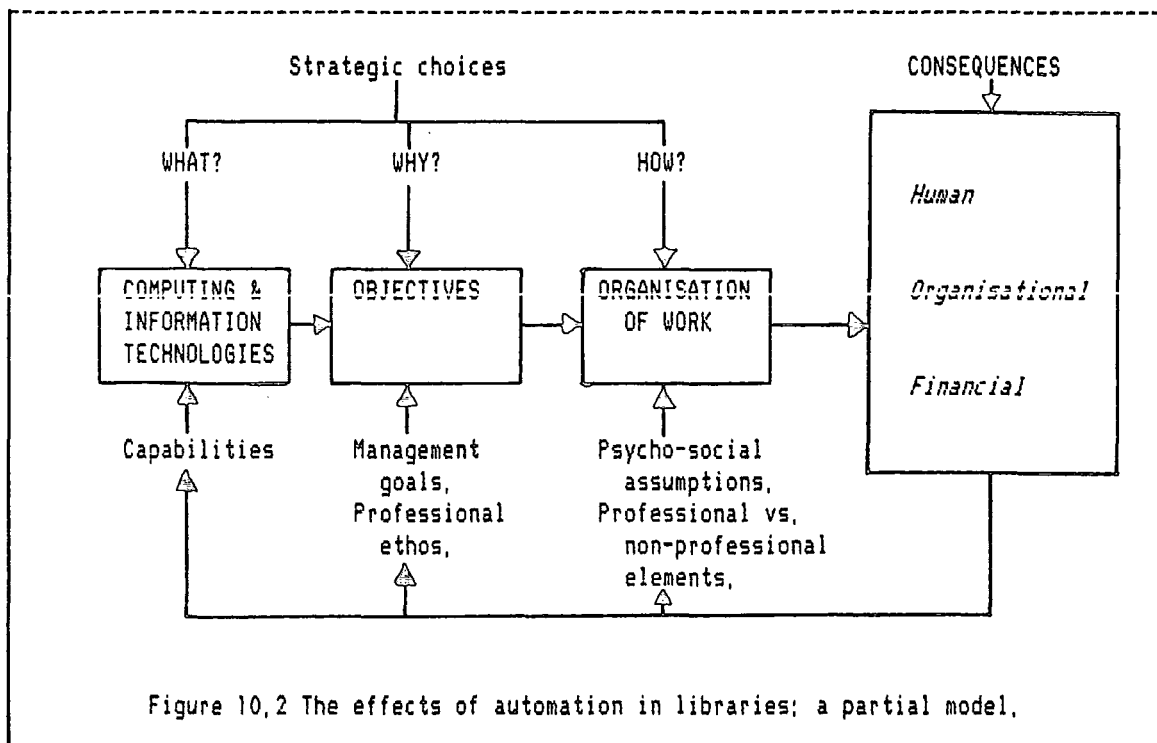
Figure 10.2 The effects of automation in libraries: a partial model.

THE IMPACT OF CHANGE

The management of change is a subject area which has produced a large
amount of literature in its own right. For our purposes, it is important
to recognise that some of the effects of automation in libraries will be
due to the impact of *change* in the work environment, independent of
factors concerned with the computer per se. In order that these factors
may be differentiated, we will look briefly at the human impact of
change in an organisational setting.

Judson (1966), when discussing the management of change (which he
defines as "any alteration that is initiated by management in an
individual's work situation or work environment" (p6)), outlines three
kinds of effects that any change will have on people. These are
behavioural, psychological and social effects. The behavioural effects
are whatever alterations people must make to the way in which they
perform their work. Successful implementation of change will usually
depend on such alterations of behaviour. Judson (1966, p11) notes that
"the precise alterations desired will come about only with the active
cooperation of those directly involved, and the extent and nature of
their cooperation will depend in part on their attitudes." The formation
of these attitudes, in his view, will be profoundly influenced by the
psychological and social effects of the change. The psychological
effects are whatever alterations are made to the way in which
individuals relate to and regard their work. Change creates uncertainty,
and the questions that will be asked concerning the change, and the
intensity of the individual's feelings about it, depend on the
individual's personality and experiences. The social effects are the
changes that take place in the individual's established relationships

with others in his or her work group and between them and the
organisation.


There are several factors which influence the attitude of an individual
to any change. Whilst attitudes may affect the behaviour of people, the
relationship between them is not a direct one. As Judson (1966) points
out, someone who feels apprehensive and resistant towards a change may
not necessarily resist it in a manner which directly reflects his or her
attitude. He or she might behave in a way that apparently may be quite
unrelated to his/her actual feelings. The influencing factors delineated
by Judson are, briefly, as follows:

1. An individual's predisposed feeling about any change.
2. The extent of an individual's feelings of insecurity.
3. Cultural beliefs and norms of behaviour that might be in conflict
with the change.
4. The extent of the individual's trust in his management, union and
workgroup.
5. Objective historical events relevant to the change.
6. The individual's specific apprehensions and hopeful expectations
about the change.
7. The manner in which a change is introduced and implemented.
(pp17-39)


People react to change in a variety of ways. The spectrum of behaviour
goes from acceptance, through indifference, to passive resistance and
then active resistance. The extent of the resistance which develops will
also be a function of one's feelings of aggression and frustration
towards the change taking place.


AUTOMATION AND THE EXPERIENCE OF WORK IN LIBRARIES


Attitudes towards automation, that is, the use of computer technology,
were found to be generally positive amongst library workers. The
majority of the sample group, in the field survey, were looking forward

to the new methods of work, even where the changes were considered
inevitable. Employee reaction to the introduction of library automation,
and the resulting changes in work, varies from individual to individual,
and will probably vary within a particular individual over time. For
some, the experience of moving from a manual to a computer based system
is greatly beneficial. Others, hopefully a minority, distrust and resent
the machine on which they are being asked to work. Anxiety may be raised
regarding job security, since the computer can replace a certain amount
of human labour - both professional and non-professional. At the same
time, the new skills involved in operating computerised systems may lead
to enhanced job mobility, both inside and outside librarianship, because
such skills tend not to be unique to library automation. Often, initial
negative views are modified, if not reversed, after a few years
experience of automation.  As we have seen, there may be such positive
behavioural effects as the elimination of tedious clerical repetition;
increased delegation of tasks especially from professionals to
clericals; an increase in the quantity and quality of information
available on which to base decisions; a greater knowledge and
understanding of various library procedures; and a higher quality of
final output, by both professional and clerical workers. Some of the
negative effects reported include the removal of individual discretion
in the carrying out of tasks; increased routinisation; faster work pace
and more stringent control; and isolation.


A major finding from both the review of the literature and the field
research is that the introduction of automation in libraries affects the
organisation of work between the professional and the non-professional.
Automation helps to bring into focus the traditional breakdown of tasks
and responsibilities between professionals and non-professionals, and

raises the question of whether such an arrangement in the machine
environment should continue to remain valid. The general consensus
appeared to be that there would be a need for fewer practising
professionals, particularly in the housekeeping side of libraries, an
increased role for the professional as administrator, and a greater
dependence on non-professionals for much of the day to day operation of
the library. This has implications for the relationship between the two
levels of personnel. **Professional librarians involved in implementing
and supervising computerised systems may, therefore, have to accept a
managerial role for themselves, regardless of any apparent conflict that
this may generate vis-a-vis their professional ideal.** The skills
involved in running an automated system do not necessarily require
professional knowledge. Alternatively, senior clerical assistants could
take on the responsibility for doing this work, but it could result in
the professionals losing, or seeming to lose, a certain degree of
control over library operations which form the basis of the library
'service'. This might not be acceptable to the majority of librarians.
**We may conclude that the way in which work responsibilities are
determined in the automated environment may depend very much on the
professional orientation of the local library management, and on their
opinion of the role of the non-professional within the library.**

Some of the effects of automation are inherent in the technology itself,
and most are heavily dependent on the systems design. Even when the
technology demands a particular set of tasks or method of working, this
is not to say that that technology is the only one applicable.
Traditionally the application of computer techniques in libraries
involved starting with the available technology and then designing the
jobs and work systems around it. But there is an increasing demand that

certain basic criteria for the job are taken as fixed and that
technological choice and systems design are altered to fit in with these
parameters. Instead of squeezing human beings to fit technology designed
by other human beings, the managers have to come to terms with the needs
of those people whose jobs will be effected by it.


JOB DESIGN AND WORK ORGANIZATION


This thesis has concerned itself primarily with the consequences of how
work is organised in libraries once automation has been introduced. In
this respect, we were particularly interested in changes to the total
work environment, that is, the ways in which tasks or work activities
may be changed as well as the environment in which this work is carried
out. According to Gorman (1979):

> "automation is a powerful force operating on the library as a whole,
> bringing predictable and unpredictable changes in the nature of
> library processes, and implying a reconsideration of all our
> traditional ideas on how the library should be run and how work
> should be allocated." (p52)

How may the work be organised? Some libraries adopt a piecemeal
approach, adjusting workflows and procedures to accommodate computerised
processing, based on local management expertise, preferences, and goals.
Others may tackle the problem more systematically, planning for work
changes carefully and judiciously - though not necessarily according to
any theories of motivation and job design. Chapter 6 demonstrated that
Job Design techniques offer a strategy for dealing with changes in the
organisation of work brought about by automation. Such a strategy has
the potential not only to optimise the successful implementation of
automation, but also to redesign the structure and content of jobs so
that library workers gain increased quality of working life and at the
same time become more productive.

Productivity is, in all probability, still the dominant focus of
management, despite a growing awareness of, and interest in, the quality
of working life of employees. The computer is a powerful tool in
organisational life. It can replace human effort, and it can enhance it.
Looking specifically at libraries, automation has been developed
primarily to facilitate the handling of large amounts of data (some of
which is highly volatile, such as borrower information, and some
relatively stable, such as stock records) and to cut down on the human
effort involved in maintaining these various databases. It is important
to understand the nature of technological change in libraries, which are
principally service organisations. The computer is not used to generate
products in the sense that a manufacturing firm manufactures goods, or a
chemical processing plant produces chemicals. The computer is used to
organise information about a variety of publications - surrogates for
the real things - and to provide the means to exploit the use of these
items. The computer may also be used to control and monitor certain
processes. Productivity within libraries may, without doubt, be improved
with automation since procedures can be streamlined and speeded up, and
generally made more efficient. One cannot say that profitability will
improve, since where does a profit come from in a service organisation?
One may aim to provide a quality service, good value for money (that is,
budget) spent, the effective use of personnel, and such like. The
service ethic is supposedly paramount in libraries, and benefits to the
user from the application of computerised systems are unquestionable.
The evidence presented in this thesis would indicate that seldom has the
introduction of automation been done, first and foremost, in order to
improve the quality of working life in libraries, yet research shows
that such improvements may have profound effects on organisational
effectiveness. New departments have been created, new posts established,

new duties and procedures drawn up, in the attempt to assimilate library computerised systems. Such changes have not necessarily altered the ways in which libraries function. The nature of the work itself is unlikely to change much at least in the short term, but the organisation of work may be substantially altered.

Reorganisation of the work should include not only a redistribution of tasks (new and old) between the professional and non-professional, but also a reassessment of the traditional skills and knowledge required by the professional. This has implications in turn for curriculum development in library schools and the educational policy of the professional associations.

The application of contemporary Job Design theories, whilst not an easy solution, offers library management a systematic means to reorganise the work in an effective manner. It is acknowledged that there has been no reported field research involving either the application of job restructuring or work organisation techniques within a library, particularly following the introduction of automation. Such action requires both a library willing to act as a guinea pig, and a library management open to experimentation. Additionally, it was noted that there is a general lack of research into professional job enrichment and its impact on work effectiveness, productivity and job satisfaction in service organisations, which limits the theoretical foundation on which to assess the efficacy of job redesign in the library.

Tentatively, it seems to the writer that, bearing in mind the nature of work and the job preferences of library workers, there appears to be three choices for library management in approaching the redesign of

jobs:

(1) To look at individual jobs, determine their characteristics, and restructure them along the lines promulgated by Hackman and his associates;

(2) To look at the library organisation as a whole, and undertake a socio-technical systems analysis, with a view to forming autonomous work groups, as advocated by the work organisation approach to job design.

(3) To look at the library organisation from both angles.

The nature of the professional's role is such that the work could be performed equally well individually or as part of a team. Many of the positive job characteristics, as highlighted in Chapter 4 and in the writer's field survey, would appear to be independent of how the work is organised, provided the librarian has the opportunity to interact in some way with others and to serve the client. Much of the work of the non-professional, on the other hand, is more suited to group working where, even after the introduction of automation, the unavoidable routine, clerical tasks can be shared or rotated amongst team members. More demanding tasks, allowing some discretion and responsibility, could be similarly shared and rotated and used to generally improve the quality of working life for the group as a whole. Consequently, it might be appropriate to look at professional jobs using job restructuring techniques, and clerical jobs using the work organisation approach.

The job redesign schemes proposed above cannot be successfully demonstrated without actual experimentation by a library (or libraries) which is (or are) also in the process of automating. Further field

research into job design in libraries is called for, in order to prove its viability as a change strategy in such an environment.

## THE EFFECTS OF AUTOMATION IN LIBRARIES

If we accept the strategic choice argument, then the introduction of automation offers library management the *opportunity* to change fundamentally the design of jobs in libraries (and in technical services sections in particular), thus supporting the major proposition of this thesis. The redesign of jobs may be done in such a way that the quality of working life of all library workers may be improved, along with their productivity, and that it may help to achieve the primary objective of the successful implementation of automation.

How the work is organised may depend, amongst others, on library management's assumptions concerning human nature in the work situation; the amount of control they wish to exercise; their views on efficiency and effective work performance (which may already be stated in the goals they wish to achieve); and their views on the roles of professionals versus non-professionals.

This thesis provides support for the views of Buchanan and Boddy (1983), who offer a good summary of the foregoing discussion. They view technology as a key determinant of the experience of work, and would expect it to influence demands on knowledge and skill, attitudes, job satisfaction, motivation, and the quality of working life. They come to the conclusion that:

> "...changes to job characteristics that accompany technological change reflect partly the capabilities of the technology, and partly the objectives and expectations of management. Computing technologies make demands on human information processing and

decision making skills, reduce the need for some manual effort and skill, and introduce new forms of work discipline and pacing. The extent to which responsibilty, discretion, challenge and control increase, however, depends on managerial decisions about the organisation of work. Control objectives are again influential, leading to forms of work organisation that may interfere with operators' ability to use the technology effectively." (p246)

We may now make an attempt at completing the model of technological change in libraries, as depicted in Figure 10.3: The effects of automation in libraries. The consequences of the strategic decisions, regarding the introduction of automation in libraries, as presented here are not necessarily exhaustive.

Figure 10.3 The effects of automation in libraries.
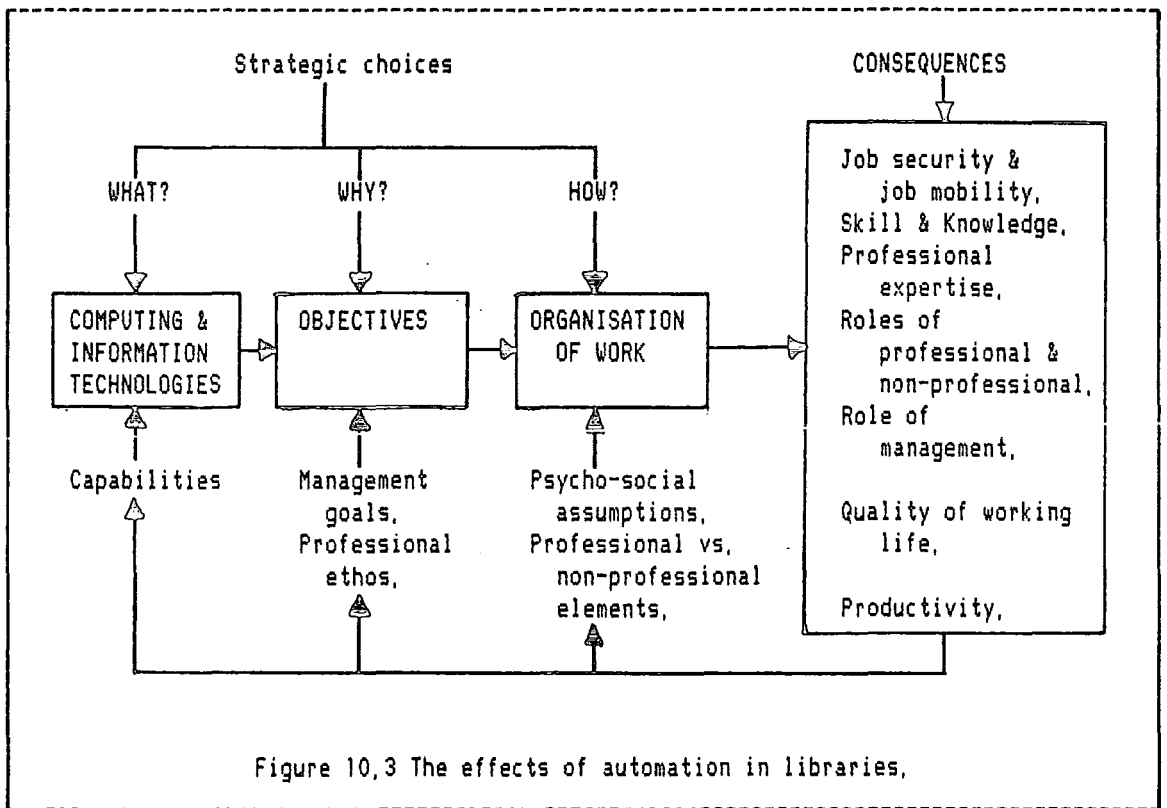
THE FUTURE OF LIBRARIES AND LIBRARIANS

Is the electronic age the precursor of the end of libraries and librarians? Many eminent professionals have debated this possibility over the years, and there appears to be no consensus. F.W. Lancaster, one of the most respected visionaries, foresees little future for the library, in its present form. He sees the emergence of a paperless society, wherein the library will become deinstitutionalised. (Lancaster, 1979). In other words, he foresees that librarians, as information specialists will no longer need to function within the four walls of a library, and that computer terminals will instead give them access to vast 'electronic' libraries. In a later article, Lancaster (1983) argues that the librarian/information specialist will become essentially an information consultant, performing an "information analysis" function on behalf of clients, and playing a more active role in education and training. (p750) He goes on:

> "There will also be other tasks for information specialists: the planning and design of electronic publications, the design and operation of electronic networks, the organisation of electronic information files (for institutions and, perhaps, for individuals) devising and implementing new types of information services, and keeping clients aware of new information sources as they become available." (pp750-1)

De Gennaro (1982), on the other hand, concludes that libraries will continue to be "a critical link in the chain that produces, preserves, and disseminates the knowledge that has created and sustains our information society." (p1054) Regarding Lancaster's scenario, De Gennaro argues that not only libraries, but also the institutions and scholars they serve, may become obsolete. Such speculation, De Gennaro claims, cannot be treated seriously, and planning for the future should be on a much shorter scale. Librarians will survive and continue to play

an essential, but limited, role in the future; "there simply is no
chance that they will become the principal handlers of information as it
is defined in the context of the information society." (p1048)

Rapid developments in computing and information technologies are
affecting every aspect of society, not just librarianship. The
librarians' role has been that of transmitters of (printed) information;
they do not normally initiate technological changes, nor are they
producers of information. But several writers hope that in the growing
information society, libraries will become more important than
heretofore, even if their relative share of the market declines. (For
example: De Gennaro, 1982; Musmann, 1978). Nielson (1980) predicts that
technological and economic factors make it appear likely that there will
be "a declining role for librarian intermediaries in the future" (p219),
particularly in the area of online searching, since database hosts are
developing user-friendly systems - often with the assistance of
librarians - that make their services straightforward to use directly.
The ethos of the professional is service to the user. It seems that in
the professionals' endeavours to perfect information flow (through
online public access catalogues, networking, resource sharing, and so
on) for the user's ultimate gain, he or she is doing him/herself out of
a job!

Thompson (1982) argues that with technological progress the true tasks
of librarians and libraries - the selection, the storage, the
organisation and the dissemination of information - will remain what
they have always been, but that they will need to evolve with the
changes in order to survive. His conclusions are:

> "These librarians in libraries will be providing skilled access to,
> and exploitation of, online information sources; they will be

responsible, on a local basis, for a variety of specialized materials; they will constitute a crucial bridge during the imminent, *but likely to be long drawn out*, transition from a society based on the printed word to an electronic society; they will continue to loan books, and items in other formats, for recreation and study purposes; they will be foci for community information services; and they will aim ... to widen and expand access to knowledge." (p118) [This writer's emphasis]


RECOMMENDATIONS FOR FURTHER RESEARCH


The topic of this thesis - the effects of automation in libraries - was found to be much broader than was fully appreciated at the beginning. Limitations had to be set at the start, some self-imposed and others dictated by lack of time and resources. As a result, the writer acknowledges that there are gaps in the coverage of the thesis.


Some aspects of the topic which have been omitted or treated superficially include (not in any order of importance):

1. The concept of the library as a *semi-profession*, as defined by Etzioni and others (1969), where a semi-profession is characterised by a preponderance of women.

   Women's studies is a large area of research in its own right. If it is accepted that librarianship is a professionalising occupation, what impact does the predominance of women in libraries have on the process, and how does this affect the organisation of work and the impact of automation?


2. Factors concerned with occupational choice.

   We have looked at the job preferences of library workers within this thesis. What attracts people into librarianship?  What type of person chooses to become a librarian?  Further research in the area

of occupational choice, and the impact of automation on this choice, is called for.

3. Factors concerned with the adaptability of libraries, as organisations, and library workers to technological change?

4. Research into library manpower planning, following the impact of automation and the possible future of libraries and librarians.

5. Factors concerned with the attitudes of senior library management to organisational change, following the introduction of automation, and their willingness to experiment in non-traditional job design and work organisation.

There appears to be little incentive for library management to look in depth at the organisation of work, with a view to improving the quality of working life of library personnel. Superficially, increases in productivity through the use of computers, associated with minimal disruption to existing structures and workflows, seem to satisfy the demand for greater efficiency.

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CONCLUDING REMARKS

This chapter has presented a discussion of the various facets of this study into the effects of automation in libraries, and has presented a model which outlines the management decision making processes involved.

Automation is an aspect of technological change. There are various **strategic choices** involved in the process of technological change, which include choices in the capabilities of the technology used, choices in why it is used, and choices in how work is organised around the technology. The goals and objectives of management, in making the particular.technological choice, will be influenced and perhaps modified by the professional ethos of the library. Management may be motivated by economic or organisation-based goals, whilst the librarians will tend to be motivated by their professional values and judgements.

The way work is organised around the technology is not standardised across the whole range of libraries. At the least, the organisation of work will have to take into account the professional and non-professional elements of the nature of work in libraries, much of which will probably not change with automation, at least in the short term. Job design techniques offer library management a strategy for dealing with such work changes, and also have the potential to increase the quality of working life of library employees and increase productivity. The element of choice in this process of change must be emphasised. The evidence presented in this thesis would indicate that library management may ignore the opportunities provided by automation at their peril.

The effects or consequences of automation on the library worker may include such factors as:
- anxiety about job security;
- increased job mobility through enhanced skills brought about by using the computer;
- changes to the traditional skills and knowledge base of library workers;

- changes and adjustments to the traditional expertise of the professional;

- changes in the roles of professionals and non-professionals, including the distribution of tasks between them, which in turn may affect their relationship;

- a possible increased role for the professional as manager, which may have repercussions further up the organisational hierarchy, as well as in professional education and training;

- a potential increase in the quality of working life for all library employees.

Within the library as a service organisation, the introduction of automation may lead to increased efficiency and productivity.


The future of libraries and librarians in the electronic age cannot be predicted with absolute certainty. It is likely that there will be long term effects on the organisation of work. Some forecast a paperless society in which the librarian's role will centre on access via a terminal to a wide range of online databases, rather than on a specific library collection. Others foresee a continuing but reduced role in the evolving information society. There is no absolute consensus to such long term speculation.

# GLOSSARY OF LIBRARIANSHIP TERMS

With acknowledgement to *Harrod's librarians' glossary and reference book.*
5th ed. Gower, 1984.

(This selected list of librarianship terms is included primarily to aid in the understanding of task related terms used in this thesis.)

ACCESSIONING
: The assigning of a unique number to an item to record its addition to the stock of a library. The entering in an ACCESSIONS REGISTER of the particulars of each item in the order of its acquisition.

ACCESSIONS LIST
: A list produced by a library showing recent stock acquisitions, often appearing in some kind of subject order.

ACQUISITION
: The processes of obtaining books and other documents for a library, through purchase or exchange, etc. Hence ACQUISITIONS SYSTEM.

AUTHORITY FILE
: 1. File giving the correct and accepted form of a name heading for a library or network's catalogue.

: 2. A list in classified order of classification symbols or numbers which have been allocated to books, with their corresponding index entry.

BOOK SELECTION
: The process of choosing books (and other items) for inclusion in a library with a view to providing a balanced increase in stock.

BOOKSELLER
: A dealer having a varied selection of books covering a wide range of subjects and of all types.

CATALOGUE
: A list of books, documents, maps, and other items, arranged in some definite order. It records, describes and indexes (usually completely) the resources of a collection, a library or a group of libraries. Each entry includes the class number or shelf mark to enable the item to be found, as well as sufficient details (such as author, title, date of publication, editorship, illustrations, pagination and edition) to identify and describe the item.

CATALOGUING
: The process of making entries for a catalogue; it may also cover all the processes involved in preparing books for the shelves, or simply the preparation of entries for the catalogue.

CHARTERED LIBRARIAN
: One who has become fully qualified professionally, and been admitted to the Register of Chartered Librarians maintained by the (U.K.) Library Association.

CIRCULATION SYSTEM
: The method or set of procedures used in keeping records of the loan of items. Normally the term (originally American) is given to computerised methods. Also known as ISSUE SYSTEM.

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| CLASSIFICATION | 1. The arrangement of things in logical order according to their degrees of likeness, especially the assignment of books to their proper places in a scheme of book classification. |
| | 2. A scheme for the arrangement of books and other material in a logical sequence according to subject or form. |
| | 3. A "coding" system within which the series of symbols indicating a concept are subject to certain order relationships. |
| COLLECTION | All materials comprising the intellectual content of the library. |
| COLLECTION DEVELOPMENT | The process of planning a stock acquisition programme not simply to cater for immediate needs, but to build a coherent and reliable collection over a number of years, to meet the objectives of the service. |
| COM | Computer Output Microform, either microfilm or microfiche. A generic term embracing the processes - or the result - of transferring computer data on magnetic tape onto microform at very high speed. |
| COOPERATIVE ACQUISITION | A system for organising and coordinating acquisitions between two or more libraries at a local, regional, national or international level to ensure that one copy of each publication is held in the geographical area concerned. |
| COOPERATIVE CATALOGUING | The sharing by a number of libraries of the cost and/or labour of cataloguing to avoid the duplication of effort common to each. |
| COOPERATIVE SYSTEM | A group of independent and autonomous libraries cooperating by informal or formal agreements or contracts which stipulate the common services to be undertaken. |
| CURRENT AWARENESS | A system, and often a publication, for notifying current documents to users of libraries and information services, e.g. selective dissemination of information, bulletin, indexing service, current literature. |
| DISCHARGING | The cancelling of a loan record when a book or other item is returned to the library. |
| DISPOSAL OF MATERIAL | To discard library material when it is in poor physical condition, beyond repair and unfit for binding, or when the content is out-of-date or superseded by a new edition, or when it has outlived its popularity. See also WITHDRAWAL OF MATERIAL. |
| EXCHANGE | An arrangement whereby an organisation exchanges its publications for those of another organisation. |

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| INDEXING | The preparation of an organised or systematic list which specifies, indicates or designates the information, contents or topics in a document or group of documents. |
| INFORMATION | Any set of symbols or any representation with meaning which can be communicated. |
| INFORMATION WORK | The collection, evaluation and organized dissemination of scientific and technical information. Also being used more and more in academic libraries, to describe the in-depth information service to specific groups of users (normally defined in terms of the academic divisions of the particular institution). |
| INTERLENDING | Where one library borrows material directly from another. |
| LIBRARIAN | One who has the care of a library and its contents, selecting the books, documents and non-book materials which comprise its stock, and providing information and loan services to meet the needs of its users. |
| LIBRARIANSHIP | The profession of the librarian. |
| LIBRARY SCIENCE | A generic term for the study of libraries and information units, the role they play in society, their various component routines and processes, and their history and future development. |
| LIBRARY SERVICE | The facilities provided by a library for the use of books and the dissemination of information. |
| MATERIALS | All media, both print and non-print, visual and audio, which comprise the intellectual content of the library and the equipment necessary for their use. |
| NETWORK | A system of physically separate computers with telecommunication links, allowing the resources of each participating machine to be shared by each of the others. |
| NON-BOOK MATERIAL | Those library materials which do not come within the definition of a book, periodical or pamphlet and which require special handling, e.g. audio-visual materials, vertical file materials, microforms or computer software. |
| OPEN ACCESS | Applied to a library where readers are admitted to the shelves. |
| OPAC | Online Public Access Catalogue. |
| PROCESSING | The carrying out of the various routines such as stamping, labelling, numbering, etc., before a book is ready for the shelves, but it may include all the processes involved in so preparing a book. |
| PUBLIC SERVICES | See READER SERVICES. |
| READER SERVICES | A part of a library's establishment devoted to the provision of assistance, advice, and other services to the library's users. Usually found in tandem with a Technical Services unit and most common in academic libraries. |

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|---|---|
| RECORD | The complete set of data referring to a transaction within a circulation system, or a book or other item described in a catalogue. |
| REFERENCE LIBRARY | A library or department containing books which may not normally be used elsewhere than on the premises. |
| REFERENCE WORK | 1. That branch of the library's services which includes the assistance given to readers in their search for information on various subjects. |
| | 2. The work of the Reference Library. |
| | 3. A book, or work, compiled to be referred to rather than for continued reading. |
| | 4. Personal assistance given by the librarian to individual readers needing information. |
| SELECTIVE DISSEMINATION OF INFORMATION | Known by its abbreviation - SDI. An automated system of information retrieval utilising a computer for disseminating relevant information to users. Interest profiles (consisting of terms which are likely to appear in relevant documents) for each user are compiled; stored on magnetic tape for computer processing; and then matched against key words representing documents. |
| SHELVING | The act of putting books away in their proper places on the shelves of a library. |
| TEAM LIBRARIANSHIP | The organisation of professional staff into small groups responsible for various service functions or for several functions, within a certain geographical area or over the whole of a library system. It removes professional staff from the daily routine of responsibility for a service point, and provides opportunities for organisational and individual development through joint setting of priorities and solving of problems. |
| TECHNICAL SERVICES | All the activities and processes concerned with obtaining, organising and processing library material for use. |
| TURNKEY PACKAGE | A computer system where the hardware and software are supplied as a unit and where it can be switched on and used with little preparation and expertise. |
| UNION CATALOGUE | A combined or master catalogue of the holdings of all libraries within a cooperative or all branches within an individual organisation. |
| USER EDUCATION | A programme of information provided by libraries to users, to enable them to make more efficient, independent use of the library's stock and services. |
| WITHDRAWAL OF MATERIAL | The process of altering or cancelling records in respect of books which have been withdrawn from the stock of a library. |

APPENDICES

## A. APPENDICES CONCERNED WITH THE FIELD RESEARCH

A. 1.    Letter sent to selected SCOLCAP Libraries, seeking their cooperation in the research.

A. 2.    Summary paper outlining the original ideas concerned with the research, which was sent with the letter in Appendix A. 1..

A. 3.    Effects of Automation in Libraries: Interview Document I.

A. 4.    Effects of Automation in Libraries: Interview Document II.

A. 5.    Effects of Automation in Libraries: Research Findings. Age range of respondents.

A. 6.    Effects of Automation in Libraries: Research Findings. Work experience of respondents in libraries.

A. 7.    Effects of Automation in Libraries: Research Findings. Highest qualification obtained by respondents.

A. 8.    Effects of Automation in Libraries: Research Findings. Job titles of respondents and brief job descriptions.

A. 9.    Effects of Automation in Libraries: Research Findings. Detailed breakdown of responses to Questions 15-26, and 29.

## B. SUMMARIES OF THREE DESCRIPTIONS OF PROFESSIONAL AND NON-PROFESSIONAL DUTIES IN LIBRARIES

B. 1.    LIBRARY ASSOCIATION. *Professional and non professional duties in libraries*. 2nd ed. L. A., 1974.

B. 2.    SERGEAN, R., J. R. McKAY and Cynthia M. CORKILL. *The Sheffield Manpower Project: a survey of staffing requirements for librarianship and information work*. University of Sheffield, 1976, pA51-A58.

B. 3.    RICKING, Myrl and Robert E. BOOTH. *Personnel utilization in libraries: a systems approach*. American Library Association, 1974.
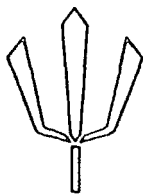
# Newcastle upon Tyne Polytechnic

4th February 1983

I am writing to ask a favour of you. At the present time, I am registered
at Durham University for a further degree, the subject of my research being
the effects of automation in libraries. I have, to date, concentrated on
reviewing the literature on organisational theory and the introduction of
automation. I now need to gather data from the "field" and to this end,
I would like to visit your library within the next month or so, in order
to interview some of your staff.

I enclose a paper which will provide you with a summary of my ideas. I
hope it will be of interest. I have to admit that I am quite biased in
my (good) opinion of the work of technical services personnel. Consequently,
I wish to interview some professional and clerical staff in your Cataloguing
and Acquisitions sections. Each interview would last about half an hour. If
you agree to my request, would you be able to provide me with an organisational
chart and/or a list of staff in those sections? I will contact you in about
a week's time to obtain your answer and to discuss further details.

Many thanks, in anticipation.


                        Yours sincerely,



                        M. E. Graham (Mrs)
                        Technical Services Librarian

ENC:

## EFFECTS OF AUTOMATION IN LIBRARIES

The Library field has experienced - along with others - a high degree of social and technological change, to which it has had to adapt in order to survive as an organisational unit. The ubiquitous information explosion and the limited size of a library building have meant that it is not possible to acquire and hold all material that a user population (which itself is continually changing) may require. This has resulted in the concept of resource sharing, which in turn has influenced the formation of library co-operatives - where groups of libraries share the effort and cost of creating bibliographic databases, interlibrary loan networks and other subsystems.

The reasons why automation has been introduced into libraries have principally been for cost effective and resources (human, financial, stock) purposes. The library is a labour intensive organisation. Manpower costs have escalated, whilst computer hardware costs, particularly storage, have steadily decreased in comparison. Human operating speeds are virtually constant, but computer speeds are increasing. The library's major functions of ordering, storing and retrieving information lend themselves particularly well to automation. Vast numbers of books, periodicals and other forms of material are involved and the means of cataloguing, processing and controlling them are highly repetitive and standardised. The Library Literature abounds with descriptions of computerised systems ranging from local installations, through formal co-operative networks, to national schemes. The main emphasis of much of what has been written has tended to be concern with the machine and its capabilities, and the effects on the user and on the services provided by the library. Little consideration has been given to the change of role that automation will require of the library worker.

Traditionally, librarianship in the United Kingdom has been characterised by a two-tier personnel structure, made up of qualified professional librarians on one level and non-qualified clerical assistants and support staff on the other. Tasks have been allocated according to whether they are considered professional or otherwise, although it is generally recognised that the qualified librarian undertakes some jobs which are clerical in nature. There is a substantial difference in career potential and remuneration between the two levels.

Librarianship as a profession has long been (and will continue to be) questioned and debated by librarians and others. The qualified librarian, whilst considering herself professional, contends with a poor public image and a continual battle to achieve respect and recognition for the work undertaken. Clerical work in the library, with some exceptions, is essentially the same as clerical work done in other organisations.

The Technical Services department of a library normally undertakes the housekeeping functions of ordering and receipt of material, including financial control; cataloguing and, sometimes, classification, and other routine processing tasks. The section provides back-up support to the public services librarians offering direct services to the users. The introduction of automation has its greatest impact in this section. The most obvious effect on staff is the requirement to work differently, which implies a change in an individual's skill and knowledge base. The social relationships within the existing workgroup may be altered. There will be an overall change in the role of each member of staff affected by the new systems, which in turn will have an impact on motivation and job satisfaction. In the longer term, automation will inevitably result in a change of emphasis in training and education for work in libraries. These developments may have a profound impact on the status and professional mystique of the qualified librarian.

The purpose of this research is to investigate the change in role that automation brings for the library worker - both professional and non-professional. It is hypothesised that if the library worker perceives her change of role in a positive manner then automation will be accepted and implemented smoothly and successfully. If, on the other hand, automation is viewed as having a negative effect on the person's role, then this will result in adverse repercussions upon its implementation.

M E Graham

EFFECTS OF AUTOMATION IN LIBRARIES

INTERVIEW DOCUMENT I

Date :
Time of interview :

Introduction

Thank you for agreeing to be interviewed.
I am conducting research into the effects of automation in libraries and in
particular how the staff themselves view automation.   I am confining my
study to the technical processing side of the library service, and have been
interviewing staff of libraries which are currently members of SCOLCAP - the
Scottish Libraries Co-operative Automation Project.
I am going to ask you questions concerned with automation in libraries and how
you feel about it.   But, firstly, I want to know a little about you and your
personal preferences when it comes to your job.   Your own views are very
important and your answers will he held in the strictest confidence.   From
time to time I will ask you to tell me why you have answered as you have done;
this is only to help me understand your answers more fully.

PART A:   PERSONAL DETAILS

1.   Library : _____          1. Cols 1-4

2.   Interviewee : _____          1. Cols 5-7

3.   Job Title : _____          1. Cols 8-9
     _____

4.   Is this a professional post?                         1. Cols 10/ 0
              or clerical?                                              1

5.   Please give me a brief description of your job:
     _____
     _____
     _____
     _____
     _____

6.   How long have you had this particular job?           1. Cols 11-12

7.   Have you had any other jobs in libraries?            1.14/ 0   YES
                                                                1   NO

8.   If yes, in what other sections have you worked?

     a) Reader Services                                    1.14/ O

     b) Acquisitions                                       1

     c) Cataloguing                                       2

     d) Reference/Information                     3

     e) Periodicals                                         4

     f) Inter-library loans                      5

     g) Other  (specify : _____      6

     _____ )

9.   If yes, how long have you worked in libraries?     1. Cols 15-16

10.  Would you give me details of any formal educational qualifications you may have obtained?  (N.B.  CODE HIGHEST OBTAINED)

     a) C.S.E                                          1.17/ O

     b) O levels                                      1

     c) A levels                                       2

     d) Lowers                                        3

     e) Highers                                     4

     f) City and Guilds                          5

     g) Degree  (Subject: _____

                                        6
        _____ )

     h) Further degree  (Subject: _____

                                        7
        _____ )

     i) Postgraduate diploma                  8

     j) Other?  (specify: _____
                                        9
        _____ )

11.  What is your age?                           1. Cols 18-19

12.  Sex?                                     1. 20/ O Male

                                            1 Female

PART B:  JOB PREFERENCES & CHARACTERISTICS

       (Self-completion section)

| | *Respondent's code.* |
|---|---|
| | *Please ring the* |
| | *appropriate answer* |

13.    From which THREE of the following sources do you
       obtain the greater part of your intellectual
       stimulation in connection with your work?

       a) Colleagues                                 1.22/ 0

       b) Supervisor                                      1

       c) Chief Librarian                              2

       d) Other professionals                       3

       e) Books and journals                      4

       f) Professional Meetings                  5

       g) Visits to other libraries           6

       h) Academic Staff                           7

       i) Students                                     8

       j) Agents/suppliers                         9

       k) Work itself                             1.23/ 0

       l) Other  (specify: _____       1

                    _____ )

       Please number your replies 1 to 3 in order of their
       importance to you

14.    What are the THREE most important satisfactions you
       derive from your job?

       a) Completed job                            1.25/ 0

       b) Satisfied client                          1

       c) Successful enquiry                      2

       d) Interaction with other people       3

       e) Working in a team                      4

       f) Working independently               5

       g) Working to best of ability        6

       h) Supervising others                    7

       i) Progressing thro' organisation     8

       j) Other  (specify : _____   9

                    _____ )

       Please number your replies 1 to 3 in order of their
       importance to you

Respondent's code.
Please ring the
appropriate answer

15. How do you generally react to everyday
    problems at work?

    a) They do not bother me           1.28/ 0

    b) They bother me a little        1

    c) I worry about them            2

    d) I probably worry more about them than     3
       others do

16. How important is it to you in your work to have
    freedom to carry out your own ideas?

    a) It is of utmost importance       1.30/ 0

    b) It is of considerable importance     1

    c) It is of some importance         2

    d) It is of little importance        3

    e) It is of no importance          4

17. How important is it to you to have variety in
    the tasks you undertake?

    a) It is of utmost importance       1.32/ 0

    b) It is of considerable importance     1

    c) It is of some importance         2

    d) It is of little importance        3

    e) It is of no importance          4

18. To what extent is your present job a challenge to
    what you think you can do?

    a) It is a challenge to a very high degree    1.34/ 0

    b) It is a challenge to a fairly high degree   1

    c) It is a challenge to some degree      2

    d) It is a not much of a challenge       3

    c) It is no challenge at all         4

19. How much chance do you have in your job to learn
    things you are interested in?

    a) I have a very high chance        1.36/ 0

    b) I have a fairly high chance       1

    c) I have some chance            2

    d) I do not have much chance        3

    e) I have no chance at all          4

*Respondent's code.*
*Please ring the*
*appropriate answer.*

20. Are the things you are learning in your present
job helping to train you for a better job in
the organisation?

    a) They are helping me very much            1.38/ 0

    b) They are helping me a fair amount        1

    c) They are helping me to some degree      2

    d) They are not helping me much          3

    e) They are not helping me at all         4

21. Do you have much chance to try out your own
ideas on your job?

    a) I have a very high chance           1.40/ 0

    b) I have a fairly high chance          1

    c) I have some chance               2

    d) I do not have much chance           3

    e) I have no chance at all             4

22. Does your job give you a chance to do the things
you feel you are best at?

    a) It gives me a very high chance        1.42/ 0

    b) It gives me a fairly high chance       1

    c) It gives me some chance            2

    d) It does not give me much chance      3

    e) It gives me no chance at all        4

23. To what extent do you get feedback on how well
you are doing in your job?

    a) I get a lot of feedback            1.44/ 0

    b) I get a fair amount of feedback       1

    c) I get some feedback              2

    d) I do not get much feedback         3

    e) I do not get any feedback         4

24. How do you feel about your work; does it rate as
an important job with you

    a) It is a very important job          1.46/ 0

    b) It is a fairly important job        1

    c) It is important to some extent      2

    d) It does not rate as much of an important job   3

    e) It is not an important job         4

*Respondent's code.*
*Please ring the*
*appropriate answer*

25. How much variety is there in the tasks you undertake?

    a) There is a lot of variety            1.48/ 0

    b) There is a fair amount of variety                1

    c) There is some variety                        2

    d) There is not much variety                   3

    e) There is no variety                        4

26. How well do you like the sort of work you are doing?

    a) I like it very much indeed             1.50/ 0

    b) I like it a good deal                     1

    c) I like it fairly well                     2

    d) I am indifferent about it               3

    e) I dislike it                            4

27. What THREE things disturb you most about your present job? (In order of importance)

    1. _____    1.52/

        _____

    2. _____    1.53/

        _____

    3. _____    1.54/

        _____

28. What do you think would improve the quality and prestige of librarianship/work in libraries?

     _____    1.56/

     _____    1.57/

     _____    1.58/

     _____

29. How much would you say the use of computers in libraries has affected your own job in your own area of the library service?

    a) It has affected it a great deal        1.60/ 0

    b) It has affected it quite a bit               1

    c) It has affected it to some extent           2

    d) It has not affected it very much           3

    e) It has not affected it at all               4

*Respondent's code.*
*Please ring the*
*appropriate answer*

30. When automation is or has been discussed what are the major reactions among your own work group?

    a) A certain amount of anxiety              1.62/ 0

    b) A certain amount of resistance                  1

    c) A feeling that it cannot happen here            2

    d) A recognition that change is inevitable       3

    e) A sense of pleasure at new methods of work    4

    f) Other  (Specify: _____      5

         _____

         _____ )


31. How do you view automation?

    a) With a certain amount of anxiety             1.69/ 0

    b) With a certain amount of resistance              1

    c) With a feeling that it cannot happed here      2

    d) With a recognition that change is inevitable    3

    e) With a sense of pleasure at new methods of work   4

    f) Other  (Specify: _____   5

         _____

         _____ )

PART C:  AUTOMATION IN LIBRARIES

32.  How do you view your own job within a computerized system?

33.  What do you think are the major advantages of using computers in libraries
     and in technical services in particular?

34.  What do you think are the major disadvantages of using computers in libraries?

35.  How do you view the work of the    (i)  clerical assistant in technical services?
     (ii)  professional librarian in technical services?
     (Note: (i)  if interviewee is professional  (ii)  if interviewee is clerical)

36. Do you see a continuing role for the professional cataloguer within a computerised system?

37. How do you view the role of the clerical assistant within a computerised system?

38. Where do you see yourself going in the future with respect to work in libraries?

39. Have you any other views on the use of computers in libraries?

Appendix A.4

Library :

Interviewee                                                    Page _____ of _____

| Qu. | Comments | Analysis |
|---|---|---|
|  |  |  |

Appendix A.5.     Effects of Automation in Libraries: Research Findings.
                  Age range of respondents

| Age | 20-24 | 25-29 | 30-34 | 35-39 | 40- |
|---|---|---|---|---|---|
| No. of Respondents | 6 (17%) | 7 (19%) | 9 (25%) | 8 (22%) | 6 (17%) |
| *No. of Librarians* | - | *5* | *7* | *7* | *2* |
| *No. of Clericals* | *6* | *2* | *2* | *1* | *4* |


Appendix A.6.     Effects of Automation in Libraries: Research Findings.
                  Work experience of respondents in libraries.

| | Less than 1 year | 1-5 | 6-10 | 11-15 | 15- |
|---|---|---|---|---|---|
| **Years in a Library:** | | | | | |
| No. of Respondents | - | 12 | 13 | 7 | 4 |
| *No. of Librarians* | - | *3* | *10* | *5* | *3* |
| *No. of Clericals* | - | *9* | *3* | *2* | *1* |
| | | | | | |
| **Years in Present Job:** | | | | | |
| No. of Respondents | 4 | 23 | 9 | - | - |
| *No. of Librarians* | *3* | *10* | *8* | - | - |
| *No. of Clericals* | *1* | *13* | *1* | - | - |


Appendix A.7.     Effects of Automation in Libraries: Research Findings.
                  Highest qualification obtained by respondents

| Highest Qualification Obtained | Librarians | Clerical |
|---|---|---|
| O Levels | - | 3 |
| RSA Typing | - | 1 |
| SCOT BEC | - | 1 |
| Highers | 1 | 4 |
| City & Guilds Certificate | - | 2 |
| L.A. Professional Exams I & II | 3 * | 2 |
| First Degree in Librarianship | 3 | 1 |
| Postgraduate Diploma in Librarianship | 13 | - |
| Postgraduate Teaching Certificate | - | 1 |
| Further Degree (Ph.D) | 1 | - |

* Two librarians held first degrees in subjects other than librarianship

**Job Titles of Librarian posts:**

Head of Acquisitions
Acquisitions Librarian
Librarian-in-charge - Accessions Department
Deputy Head - Book Orders Section
Sub-librarian - Accessions
Assistant Librarian - Acquisitions
Assistant Librarian - Technical Services
Deputy Head of Cataloguing & Classification
Sub-Librarian - Cataloguing
Senior Librarian - Cataloguing Department
Assistant Cataloguer                    (2 posts)
Assistant Librarian
Senior Library Assistant - Cataloguing
Senior Library Assistant              (3 posts)
Sub-Librarian - Government Publications Section
Assistant Librarian - ...(subject designation)    (3 posts)

**Job Titles of Clerical Posts:**

Library Assistant - Accessions
Library Assistant - Acquisitions
Library Assistant - Book orders
Serials Assistant
Keyboard Supervisor
Typist - Acquisitions
Senior Library Assistant - Cataloguing
Library Assistant (Trainee Librarian)
Library Assistant              (7 posts)

**Brief job descriptions (using respondents' own words):**
    Head of Acquisitions
        Responsible for the acquisitions of monographs in the Main
        Library and departmental libraries (which have separate
        funding). Does not undertake selection.
    Acquisitions Librarian
        Responsible for ordering new acquisitions; controlling
        expenditure; and supervising staff.
    Librarian-in-charge - Accessions Department
        Handles book orders and deals with suppliers. Maintains records
        of payments. Supervises and trains other staff (9 full-time and
        3 part-time).
    Deputy Head - Book Orders Section
        Directs library assistants in Section; answers enquiries;
        assigns orders to suppliers; and is responsible for the
        'outreach' programme.
    Sub-librarian - Accessions
        Purchases and receipts books; deals with invoices and reports
        from booksellers; chases overdue orders. Supervises supply of
        cassettes and gramophone records.

**Brief job descriptions (continued):**

    Assistant Librarian - Acquisitions
        Purchases books and maintains financial records.

    Assistant Librarian - Technical Services
        Responsible for the processing of books from the time of order
        until they appear on the shelves (including catalogue entries);
        administration of the SCOLCAP system, book ordering and
        processing.

    Deputy Head of Cataloguing & Classification
        Responsible for day to day running of cataloguing section, with
        particular reference to automation and procedures affected by
        it. Represents section in internal library computerisation
        working party.

    Sub-Librarian - Cataloguing
        Undertakes cataloguing, classification and subject indexing
        (two-thirds of time); and, reference and general enquiries, and
        formal user instruction (one third of time).

    Senior Librarian - Cataloguing Department
        Second in command to Head of Cataloguing. Responsible for day to
        day running of department. Checks time sheets and undertakes
        routine paper work. Checks the output of five assistant
        librarians.

    Assistant Cataloguer            (2 posts)
   1. Catalogues and classifies, providing data for the computer
      microfiche catalogue.
   2. Catalogues and classifies non-fiction stock for Central and
      branch libraries.

    Assistant Librarian
        Catalogues and classifies books.

    Senior Library Assistant - Cataloguing
        Undertakes retrospective cataloguing.

    Senior Library Assistant         (3 posts)
   1. Cataloguing, classification and subject indexing. Some enquiry
      work. Counter duties on late night and on Saturdays. Supervises
      1 fte library assistant.
   2. Subject specialist (Film and Media studies), which includes
      liaison with the academic department. Catalogues and classifies
      all gifts and donations.
   3. Subject specialist (Politics, Environmental Science and German).
      Responsible for the map collection.

    Sub-Librarian - Government Publications Section
        Acquisition of material, cataloguing, and reference services
        covering parliamentary and non-parliamentary publications.

    Assistant Librarian - ... (subject designation)    (3 posts)
   1. (Natural Sciences). Catalogues and classifies in subject area.
      Teaches information retrieval as part of a Complimentary Studies
      Programme in the college. Attends School Board meetings and
      liaises with the department. Responsible for the library
      photocopying service.
   2. (Technology). Catalogues and classifies in subject area.
      Undertakes reference enquiries and online IR. In charge of
      Periodicals section.

**Brief job descriptions (continued):**

Assistant Librarian - ... (subject designation)
3. (Social and Economic Sciences). Catalogues and classifies in subject area. Liaises with department. Undertakes online IR for staff and postgraduates, and student enquiries. Responsible for the Government Publications Section and supervises the administration of the Reserve Collection.

Library Assistant - Accessions
Completes forms for withdrawals; checks new additions for duplicates in stock; and helps in the serials section.

Library Assistant - Acquisitions
Accessioning and receipt of books; checks orders; deals with invoices.

Library Assistant - Book orders
Deals with statements regarding overdue payments; peculiarities of the system; non-standard problems; processing; and the mail.

Serials Assistant
In charge of periodicals supply; deals with invoices for subscriptions and with local newsagents; marks off periodical parts and distributes them; deals with standing orders; and liaises with binders.

Keyboard Supervisor
Supervises input of data; trains others in use of VDUs.

Typist - Acquisitions
Types master cards for stock record file and bookplates.

Senior Library Assistant - Cataloguing
Backup to professionals; searches for bibliographic records; completes cataloguing forms, etc.

Library Assistant (Trainee Librarian)
Cataloguing and some classification; searches SCOLCAT (SCOLCAP's union file) to match records with books; checks book orders.

Library Assistant           (7 posts)
1. Checks-in periodical parts; chases/claims for missing parts; processes incoming mail; accessions monograph series; deals with closing (ceased) periodical titles.
2. Labels books for the circulation system; corrects computer entries.
3. Data preparation on Bibdes (data callection device); catalogues books; checks bibliographic details on order slips; does other checking in acquisitions; unpacks and receipts new books.
4. Deals with donations; standing orders; accessions register; and filing of invoices. Staffs the Reception Desk, dealing with reader enquiries and requests for material in the stacks and for photocopying.
5. Deals with invoices; orders for books; typing of orders; unpacking; checking of SCOLCAT; and filing.
6. Catalogues and classifies non-fiction for lending library; types catalogue cards; and processes books.
7. Catalogues fiction books for Central Library; and processes Central and some branch libraries non-fiction and fiction.

Appendix A. 9.    Effects of Automation in Libraries: Research Findings.
                  Detailed breakdown of responses to Questions 15-26, and
                  29.
                  (Four pages).

| | | Librarians | | Clerical Staff | | All | |
|---|---|---|---|---|---|---|---|
| | | No. | % | No. | % | No. | % |
| Qu. 15. How do you generally react to everyday problems at work? | | | | | | | |
| a) They do not bother me | a) | 8 | 38.1 | 3 | 20 | 11 | 30.6 |
| b) They bother me a little | b) | 12 | 57.1 | 6 | 40 | 18 | 50 |
| c) I worry about them | c) | 1 | 4.8 | 2 | 13.3 | 3 | 8.3 |
| d) I probably worry more about them than others do | d) | - | - | 4 | 26.7 | 4 | 11.1 |
| | | 21 | 100 | 15 | 100 | 36 | 100 |
| Qu. 16. How important is it to you in your work to have freedom to carry out your own ideas? | | | | | | | |
| a) It is of utmost importance | a) | 2 | 9.5 | 1 | 6.7 | 3 | 8.3 |
| b) It is of considerable importance | b) | 13 | 61.9 | 5 | 33.3 | 18 | 50 |
| c) It is of some importance | c) | 6 | 28.6 | 9 | 60 | 15 | 41.7 |
| d) It is of little importance | d) | - | - | - | - | - | - |
| e) It is of no importance | e) | - | - | - | - | - | - |
| | | 21 | 100 | 15 | 100 | 36 | 100 |
| Qu. 17. How important is it to you to have variety in the tasks you undertake? | | | | | | | |
| a) It is of utmost importance | a) | 3 | 14.3 | 2 | 13.3 | 5 | 13.9 |
| b) It is of considerable importance | b) | 14 | 66.7 | 10 | 66.7 | 24 | 66.7 |
| c) It is of some importance | c) | 4 | 19 | 2 | 13.3 | 6 | 16.7 |
| d) It is of little importance | d) | - | - | - | - | - | - |
| e) It is of no importance | e) | - | - | 1 | 6.7 | 1 | 2.8 |
| | | 21 | 100 | 15 | 100 | 36 | 100 |
| Qu. 18. To what extent is your present job a challenge to what you think you can do? | | | | | | | |
| a) It is a challenge to a very high degree | a) | 1 | 4.8 | - | - | 1 | 2.8 |
| b) It is a challenge to a fairly high degree | b) | 7 | 33.3 | 2 | 13.3 | 9 | 25 |
| c) It is a challenge to some degree | c) | 4 | 19 | 7 | 46.7 | 11 | 30.6 |
| d) It is not much of a challenge | d) | 8 | 38.1 | 4 | 26.7 | 12 | 33.3 |
| e) It is no challenge at all | e) | 1 | 4.8 | 2 | 13.3 | 3 | 8.3 |
| | | 21 | 100 | 15 | 100 | 36 | 100 |

| | Librarians | | Clerical Staff | | All | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| **Qu. 19. How much chance do you have in your job to learn things you are interested in?** | | | | | | |
| a) I have a very high chance    a) | 6 | 28.6 | 1 | 6.7 | 7 | 19.4 |
| b) I have a fairly high chance    b) | 4 | 19 | 3 | 20 | 7 | 19.4 |
| c) I have some chance    c) | 6 | 28.6 | 5 | 33.3 | 11 | 30.6 |
| d) I do not have much chance    d) | 5 | 23.8 | 5 | 33.3 | 10 | 27.8 |
| e) I have no chance at all    e) | – | – | 1 | 6.7 | 1 | 2.8 |
| | 21 | 100 | 15 | 100 | 36 | 100 |
| **Qu. 20. Are the things you are learning in your present job helping to train you for a better job in the organisation?** | | | | | | |
| a) They are helping me very much    a) | 1 | 4.8 | – | – | 1 | 2.8 |
| b) They are helping me a fair amount    b) | 5 | 23.8 | 3 | 20 | 8 | 22.2 |
| c) They are helping me to some degree    c) | 3 | 14.3 | 8 | 53.3 | 11 | 30.6 |
| d) They are not helping me much    d) | 7 | 33.3 | 4 | 26.7 | 11 | 30.6 |
| e) They are not helping me at all    e) | 5 | 23.8 | – | – | 5 | 13.9 |
| | 21 | 100 | 15 | 100 | 36 | 100 |
| **Qu. 21. Do you have much chance to try out your own ideas on your job?** | | | | | | |
| a) I have a very high chance    a) | 4 | 19 | 1 | 6.7 | 5 | 13.9 |
| b) I have a fairly high chance    b) | 8 | 38.1 | 2 | 13.3 | 10 | 27.8 |
| c) I have some chance    c) | 5 | 23.8 | 7 | 46.7 | 12 | 33.3 |
| d) I do not have much chance    d) | 2 | 9.5 | 2 | 13.3 | 4 | 11.1 |
| e) I have no chance at all    e) | 2 | 9.5 | 3 | 20 | 5 | 13.9 |
| | 21 | 100 | 15 | 100 | 36 | 100 |
| **Qu. 22. Does your job give you a chance to do the things you feel you are best at?** | | | | | | |
| a) It gives me a very high chance    a) | 2 | 9.5 | 1 | 6.7 | 3 | 8.3 |
| b) It gives me a fairly high chance    b) | 9 | 42.9 | 4 | 26.7 | 13 | 36.1 |
| c) It give me some chance    c) | 7 | 33.3 | 4 | 26.7 | 11 | 30.6 |
| d) It does not give me much chance    d) | 1 | 4.8 | 5 | 33.3 | 6 | 16.7 |
| e) It gives me no chance at all    e) | 2 | 9.5 | 1 | 6.7 | 3 | 8.3 |
| | 21 | 100 | 15 | 100 | 36 | 100 |

| | Librarians | | Clerical Staff | | All | |
|---|---|---|---|---|---|---|
| Qu. 23. To what extent do you get feedback on how well you are doing in your job? | No. | % | No. | % | No. | % |
| a) I get a lot of feedback a) | 1 | 4.8 | 1 | 6.7 | 2 | 5.6 |
| b) I get a fair amount of feedback b) | 6 | 28.6 | 4 | 26.7 | 10 | 27.8 |
| c) I get some feedback c) | 6 | 28.6 | 5 | 33.3 | 11 | 30.6 |
| d) I do not get much feedback d) | 8 | 38.1 | 5 | 33.3 | 13 | 36.1 |
| e) I do not get any feedback e) | – | – | – | – | – | – |
| | 21 | 100 | 15 | 100 | 36 | 100 |
| Qu. 24. How do you feel about your work: does it rate as an important job with you? | | | | | | |
| a) It is a very important job a) | 8 | 38.1 | 1 | 6.7 | 9 | 25 |
| b) It is a fairly important job b) | 4 | 19 | 6 | 40 | 10 | 27.8 |
| c) It is important to some extent c) | 8 | 38.1 | 6 | 40 | 14 | 38.9 |
| d) It does not rate as much of an important job d) | 1 | 4.8 | 2 | 13.3 | 3 | 8.3 |
| e) It is not an important job e) | – | – | – | – | – | – |
| | 21 | 100 | 15 | 100 | 36 | 100 |
| Qu. 25. How much variety is there in the tasks you undertake? | | | | | | |
| a) There is a lot of variety a) | 8 | 38.1 | 3 | 20 | 11 | 30.6 |
| b) There is a fair amount of variety b) | 8 | 38.1 | 3 | 20 | 11 | 30.6 |
| c) There is some variety c) | 2 | 9.5 | 8 | 53.3 | 10 | 27.8 |
| d) There is not much variety d) | 3 | 14.3 | 1 | 6.7 | 4 | 11.1 |
| e) There is no variety e) | – | – | – | – | – | – |
| | 21 | 100 | 15 | 100 | 36 | 100 |
| Qu. 26. How well do you like the sort of work you are doing? | | | | | | |
| a) I like it very much indeed a) | 4 | 19 | 5 | 33.3 | 9 | 25 |
| b) I like it a good deal b) | 11 | 52.4 | 2 | 13.3 | 13 | 36.1 |
| c) I like it fairly well c) | 3 | 14.3 | 7 | 46.7 | 10 | 27.8 |
| d) I am indifferent about it d) | 3 | 14.3 | 1 | 6.7 | 4 | 11.1 |
| e) I dislike it e) | – | – | – | – | – | – |
| | 21 | 100 | 15 | 100 | 36 | 100 |

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Questions 27 and 28 - see Chapter 8

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| | Librarians | | Clerical Staff | | All | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| **Qu. 29.** How much would you say the use of computers in libraries has affected your own job in your own area of the library service? | | | | | | |
| a) It has affected it a great deal   a) | 9 | 42.9 | 4 | 26.7 | 13 | 36.1 |
| b) It has affected it quite a bit   b) | 2 | 9.5 | 1 | 6.7 | 3 | 8.3 |
| c) It has affected it to some extent c) | 6 | 26.6 | 2 | 13.3 | 8 | 22.2 |
| d) It has not affected it very much  d) | 3 | 14.3 | 3 | 20 | 6 | 16.7 |
| e) It has not affected it at all    e) | 1 | 4.8 | 5 | 33.3 | 6 | 16.7 |
| | 21 | 100 | 15 | 100 | 36 | 100 |
| **Qu. 30.** When automation is or has been discussed what are the major reactions among your own work group? (N.B. Multiple choice question) | | | | | | |
| a) A certain amount of anxiety   a) | 15 | 31.9 | 10 | 29.4 | 25 | 30.9 |
| b) A certain amount of resistance  b) | 10 | 21.3 | 7 | 20.6 | 17 | 20.9 |
| c) A feeling that it cannot happen here    c) | 2 | 4.2 | – | – | 2 | 2.5 |
| d) A recognition that change is inevitable    d) | 10 | 21.3 | 11 | 32.3 | 21 | 25.9 |
| e) A sense of pleasure at new methods of work    e) | 6 | 12.8 | 5 | 14.7 | 11 | 13.6 |
| f) Other (Specify: _____    f) | 4 | 8.5 | 1 | 2.9 | 5 | 6.2 |
| _____ ) | 47 | 100 | 34 | 100 | 81 | 100 |
| **Qu. 31.** How do you view automation? (N.B. Multiple choice question) | | | | | | |
| a) With a certain amount of anxiety  a) | 7 | 20.6 | 7 | 25.9 | 14 | 22.9 |
| b) With a certain amount of resistance    b) | 3 | 8.8 | – | – | 3 | 4.9 |
| c) With a feeling that it cannot happen here    c) | – | – | – | – | – | – |
| d) With a recognition that change is inevitable    d) | 8 | 23.5 | 10 | 37.0 | 18 | 29.5 |
| e) With a sense of pleasure at new methods of work    e) | 12 | 35.3 | 8 | 29.6 | 20 | 32.8 |
| f) Other (Specify: _____  f) | 4 | 11.8 | 2 | 7.4 | 6 | 9.8 |
| _____ ) | 34 | 100 | 27 | 100 | 61 | 100 |

APPENDIX B. SUMMARIES OF THREE DESCRIPTIONS OF PROFESSIONAL AND NON-
PROFESSIONAL DUTIES IN LIBRARIES.


Appendix B.1. LIBRARY ASSOCIATION. Professional and non-professional duties
in libraries. 2nd. ed. L.A., 1974.

A summary of the full descriptive list of duties is as follows:

*Professional Duties*                          *Non-professional Duties*

GENERAL ADMINISTRATION
    Interpreting & clarifying                  Bookkeeping & accountancy work;
    objectives or basic aims.                  compiling statistics; receiving,
    Formulating policies - Long-               distributing, & despatching
    term planning; planning &                  mail; routine correspondence;
    initiating new activities, new             filing; minute taking; typing;
    services, budget; investigating            photocopying; purchasing
    admin problems; management                 supplies; taking inventories;
    tools; automation.                         maintenance of buildings,
    Execution of policy, including             equipment, A-V, vehicles;
    organisation & management -                switchboard operation;
    Organising; coordinating;                  reception duties; messenger
    supervising work programme;                services; driving library
    supervising service points;                vehicles.
    executing & controlling the
    budget; selecting supplies;
    giving professional information;
    preparing reports; framing
    rules & regulations.


PERSONNEL MANAGEMENT
    Determining personnel policy -             Recruitment & promotion - Admin
    Staff establishment; conditions            & clerical functions involved
    of service; joint consultation.            in recruitment, appointment,
    Recruitment - Job descriptions;            promotion & retirement; train-
    adverts, selection; interviewing;          ing junior clericals; staff
    Training & education - Policy;             reporting; advice & assistance
    induction; training to improve             to improve work performance.
    performance & for promotion;               Other duties - Preparing time-
    staff development.                         sheets; maintaining personnel
    Staff management - Personnel               records; minute taking.
    records; staff reports; career
    management; advice & assistance;
    determining standards; trade
    union & other negotiation; staff
    meetings; supervising work
    schedules; approving leave
    requests.
    Promoting staff welfare -
    Supervising application of
    welfare policies; advising &
    assisting staff on personal
    problems.


PUBLIC RELATIONS
    - publicising the library
    as a whole.

## SELECTION AND WITHDRAWAL OF MATERIAL

Formulation of policy - Needs
of users; selection policy;
inter-library lending policy;
allocating bookfunds.
Selection of current material -
publishing information; reviews;
on approvals; gifts; serials &
services; retention policies.
Stock editing.
Stock allocation - including
redistribution of stock.

Checking in catalogues; writing
order cards from marked lists,
catalogues, etc.

## ACQUISITION AND DISPOSAL OF MATERIAL

General - Controlling the
budget; preparing material for
selection process; negotiations
with publishers & suppliers;
decide on method of acquisition;
obtain authority for purchase,
where necessary.
Ordering & acquisition - Design
systems & supervise operations.
Disposal of unwanted material -
Decide on method.

General - Keep acquisition
budget records; handling
material for book selection;
routine correspondence with
suppliers; soliciting &
acknowledging gifts; work
relating to exchanges of
material.
Ordering & acquisition - Receipt
& accessioning of materials;
check-in of serial
publications.
Disposal of unwanted material -
Disposing of material including
offering it to other libraries.

## CATALOGUING, CLASSIFICATION AND INDEXING

- Establishing policies -
general & technical
Cataloguing - Descriptive
cataloguing; added entries;
analytical entries; special
materials; re-cataloguing.
Subject analysis - Classifying;
expanding/developing schemes;
re-classifying; assigning
subject headings; references;
expanding lists of subject
headings.
Indexing - Policy decisions;
index compilation; editing.
Physical form of catalogues.
Filing & catalogue maintenance
- Procedures; checking; super-
vising physical upkeep of the
catalogues; union catalogues.

Cataloguing & classification -
Ordering printed cards; simple
descriptive cataloguing;
allocating author marks.
Indexing - Writing entries;
assisting with proof-reading.
Physical production of
catalogues - Producing entries;
processing added copies; filing
cards & catalogue maintenance;
despatching cards to branches,
etc.; maintaining work cards &
statistics.

## PRODUCTION, PREPARATION, CONSERVATION, HOUSING AND HANDLING, OF MATERIAL AND ASSOCIATED EQUIPMENT

- Determining methods & routines
inspecting newly acquired items;
establishing policies for binding
& repairing / security of stock;
specifications for binding &
repairing; negotiating with
binders; decisions on binding;
checking; supervising upkeep
processes; designing records;
financial control; planning
shelving operations / notices
& guides / stocktaking.

- Applying ownership marks,
labels & security devices;
affixing covers & containers;
lettering & labelling;
reinforcing & simple binding;
mounting prints & cuttings;
maintaining loose-leaf works
& amending books; cleaning &
treatment for preservation;
minor repairs; preparing
material for binding; packing
& unpacking; inspecting
returned items; maintaining
binding records; shelving &
filing; fetching material from
shelves for prof.staff &
readers; shelf-checking/ file
checking; keeping shelves tidy;
preparing shelf guides;
relocating stock; cleaning
shelves & stock; stocktaking;
maintaining AV & other
equipment.

## INFORMATION WORK AND ASSISTANCE TO READERS

- Establishing policies;
organisation of local coop-
erative shemes; explaining
general arrangement & resources;
assisting readers to locate &
select material; answering
enquiries; keeping in touch with
interests of users; current
awareness; reading guidance;
course development; indexing
of special materials; abstracting;
compilation of reading lists,
bibliographies, etc; information
on books; planning displays,
exhibitions, etc.

- Recording statistics & main-
taining records of use; locat-
ing simple bibliographic
information.

# THE LENDING FUNCTION OF LIBRARIES

- Rules & regulations for lending interpreting rules; records & forms; supervising ILL; planning collection & analysis of statistical data; handling complaints.

- Explaining lending rules; maintaining registration records.

Loans - setting up service point; issuing, renewing, reserving & discharging; inspecting returned material; circulating periodicals; reserving books; receiving & recording money; identifying overdue material & issuing overdue notices; requesting & returning ILLs; maintaining ILL records; maintaining records of postage; collecting & recording statistics, & compiling data for reports.

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Appendix B. 2.   SERGEAN, R, J. R. McKAY and Cynthia M. CORKILL.   The Sheffield
                 Manpower Project: a survey of staffing requirements for
                 librarianship and information work. University of
                 Sheffield, 1976. pA51-A58.

Detailed classification of work activities as determined by the
Sheffield Manpower Project.

I   Activities associated with the provision of Technical Services.
        Selection of material.
            Includes the evaluation, selection, and rejection of fresh
            material of any kind, and the evaluation, replacement and
            withdrawal of existing material, irrespective of what this
            material is. i. e. Evaluation and selection of material;
            stock editing; stock control; stock revision; stocktaking;
            stock allocation and redistribution; exchanges; budgetary
            decisions and actions.
        Acquisition and disposal of material.
            Includes all activities involved in the ordering and
            receiving of fresh material and in the disposal of existing
            material. i. e. Ordering of stock; order chasing; disposal of
            material.
        Processing of material.
            All activities involved in the incorporation of fresh
            material into the system, and the re-arrangement of existing
            material. i. e. Cataloguing; classification; indexing;
            revision, recataloguing, and reclassification; copy
            cataloguing; routine cataloguing; ...
        Physical upkeep of material.
            All activities involved in the physical maintenance and
            upkeep of stock. i. e. Shelving; shelf tidying; binding;
            repair work.

II  Activities associated with the provision of User Services.
        Lending work.
            All activities involved in making material available to the
            client for his temporary use, whether internally or
            externally. i. e. Issue, renew, receive, discharge;
            reservations and requests; interlibrary loans.
        User advisory work.
            Straightforward assistance (e. g. holdings; verification &
            simple bibliographic checking; providing correct citations;
            assistance in choosing material; assistance in locating
            material; explaining general resources and arrangement of
            material. )
            More difficult assistance (e. g. trying to find out what the
            client wants; obscure references; limited information. )
        Answer services.
            Enquiries (general, technical, subject) that can be dealt
            with on the spot or by quick reference to readily accessible
            material; enquiries calling for more extended search.

III **Adjunct or accompanying activities.**

Related to general exploitation of stock and services offered, and to known interests/requirements of particular users or user groups. These activities are in part the means by which certain user services are carried out, but they include activities which are adjunct to technical services work.

Publicity; extension activities; cultural activities; promoting library services. Personal development. Information work instruction/library work instruction. Preparation of guides; information bulletins; current awareness guides; simple bibliographies; publications; booklists. Technical/specialist writing; reports; reviews; exhaustive bibliographies. Creative writing. Book reviewing. Abstracts. Translating. Editing. Proof reading. Displays; exhibitions. Features.

IV **Organising and running the system.**

General and more specific planning (in broad sense, to include policy planning, the determination of action necessary to meet objectives, and control activities). Research; projects; feasibility studies. Liaison work, with outside bodies and individuals; outside committee work. Supervisory work. Coordination of service activities. Meetings and informal discussions within the system. Formal committee meetings. Working parties. Written reports. Correspondence. Administrative paperwork. Personnel work. Recruitment and selection. Induction and training. Staff meetings.

V **Servicing the system.**

Accounts and purchasing. Petty cash. Wages. Office activities. Maintenance – of vehicles, buildings, equipment. Security. Secretarial/typing. Manual. Portering/packing, etc.

VI **Composite "technical activity" categories.**

Used where exact nature of the activity cannot be distinguished. e.g. Filing; photocopying; relief work; library routine...

VII **Categories created to take account of responses not in technical activity terms.**

Responses in terms of particular type of material; or users; or subject; or equipment. Physical conditions of work. Relations with others. Non-library/information work performed by library workers (e.g. teaching, invigilation. Secretarial).

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Appendix B.3. RICKING, Myrl and Robert E. BOOTH. Personnel utilization in libraries: a systems approach. American Library Association, 1974.

A sample summary of the task list prepared for the Illinois Library Task Analysis Project:

| *Professional* | *Non-professional (includes technical and clerical)* |
|---|---|

**COLLECTION DEVELOPMENT SUBSYSTEM**

| | |
|---|---|
| Analyses user needs | Checks bibliographic information |
| Selection | Prepares orders |
| Withdrawals | Correspondence concerned with |
| Procures material | orders |
| Controls acquisition process | Receipts materials |
| | Checks & processes invoices |
| | Chases overdue orders |
| | Tests A-V equipment |
| | Bookeeping |

**COLLECTION ORGANISATION SUBSYSTEM**

| | |
|---|---|
| Develops classification | Performs descriptive cataloguing |
| systems | Performs simple classification |
| Directs maintenance of | Types catalogue cards or inputs |
| cataloguing records | data |
| Determines recataloguing & | Processes added copies & new |
| reclassification policy | editions |
| Assigns classification | Edits card catalogue entries |
| Assigns subject headings | Files catalogue cards |
| Checks work of non- | Undertakes routine file mainten- |
| professionals | ance |
| Designs filing systems | |

**COLLECTION PREPARATION AND MAINTENANCE SUBSYSTEM**

| | |
|---|---|
| Determines methods and | Processes new materials |
| techniques | Maintains bindery control file |
| Negotiates with binding agents | Checks and processes newly |
| Determines binding policy | bound material |
| Arranges disposition of | Processes newspaper cuttings |
| withdrawn material | Reviews shelves for damaged |
| | materials |
| | Repairs damaged materials |
| | Applies protective covers on |
| | materials |

**COLLECTION STORAGE AND RETRIEVAL SUBSYSTEM**

| | |
|---|---|
| Plans shelving arrangements | Shelves returned materials |
| Plans inventory operations | Makes routine & spot inspections |
| Coordinates schedules for | of shelves and files |
| moving materials within the | Locates materials on the shelves |
| library | for users |
| | Searches shelves for overdue |
| | items |
| | Undertakes shelf tidying |

## CIRCULATION SYSTEM

Establishes circulation system
for all types of material
Handles complaints
Administers ILL policy
Supervises reserve collections
of materials

Registration of users
Circulates material
- charges, renews, & discharges
Processes reservations
Computes & collects fines
Handles overdues
Charges for lost/damaged
materials
Handles ILLs
Maintains appropriate files
for above processes

## COLLECTION INTERPRETATION AND USE SUBSYSTEM

Provides assistance and
guidance in the use of the
collection
Provides reference service
Provides guidance in users'
selection
Interprets use of the library's
resources
Provides user instruction

Photocopies materials requested
by users
Provides directional information
Performs simple bibliographic
work under supervision
Assists users in the operation
of AV equipment

## MANAGEMENT SUBSYSTEM

Planning:
Formulates goals & objectives
Fomulates & recommends policies
Interprets goals, objectives &
policies
Formulates & develops new
services
Determines priorities
Recommends allocation of
resources
Organises services & staffing
Conducts studies of library
systems & procedures
Evaluates policies & programmes
Fiscal
Formulates programme needs of
library
Presents & interprets budget
Administers budget
Analyses sources of revenue
Personnel
Plans & conducts recruitment
Evaluates qualifications of
applicants
Provides training & staff
development
Administers library's position
classification plan

General management:
Serves as administrative
secretary
Assembles data on library
operations, collection, &
services
Supervises clerical units
Data processing:
Codes data
Various programming tasks
Mail:
Collects & distributes incoming
mail
Prepares outgoing mail
Typing:
Various typing tasks
Operates various machines
Filing:
Various operations
Reception:
Receives & directs callers as
appropriate
Secretarial:
Schedules appointments
Other duties
Telephone switchboard:
Operates switchboard

. . .

(Continued)

MANAGEMENT SUBSYSTEM (Cont.)

Conducts continuous programme
of staff evaluation
Controls personnel records
Represents library in
negotiations with employee
unions
...

Public relations:
Various promotional activities
...

Fiscal:
Maintains accounting system
Controls expense & cash funds
Compiles expenditure totals
Personnel:
Assists with administering
applicants for jobs
Conducts typing tests
Maintains personnel records
...
Public relations:
Various activities
...


STAFF DEVELOPMENT
(Responsibility for the development of the skills, knowledge, and
understanding of individual staff is shared by the library and the
individual. The activities listed here are undertaken on the initiative
of the individual, and are multi-level. Thus they may be performed by
either professional or non-professional staff (technical and in some
cases clerical).)

Keeps informed of developments in professional
or technical field
Contributes to the development of professional
or technical field
Increases own knowledge of professional or
technical field

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BIBLIOGRAPHY OF SOURCES CONSULTED

ABELL, Millicent D. (1979) The changing role of the academic librarian:
     drift and mastery. *College and Research Libraries*, 40, March 1979,
     p154-164.
ADAMS, Marie. (1985) *Professionalism: a continuing process.* Association
     of Assistant Librarians, 1985.
ALDERFER, Clayton P. (1967) An organizational syndrome. *Administrative
     Science Quarterly*, 12, 1967, p440-460.
ALLISON, Anne Marie and Ann ALLAN (Eds). (1979) *OCLC: a national library
     network.* Enslow Publishers, 1979.
AMERICAN LIBRARY ASSOCIATION. (1948) *Descriptive list of professional
     and nonprofessional duties in libraries: preliminary draft.* A.L.A.,
     1948.
ASHEIM, Lester. (1979) Librarians as professionals. *Library Trends*,
     27(3), Winter 1979, p225-257.
ASSOCIATION OF GRADUATE CAREERS ADVISORY SERVICES. (1986) *Library,
     information and archive work.* Central Services Unit, GCAS, 1986.
AUSTER, Ethel. (1982) Organizational behavior and information seeking:
     lessons for librarians. *Special Libraries*, 73(3), July 1982, p173-
     182.
BAILEY, John. (1983) *Job design and work organization: matching people
     and technology for productivity and employee involvement.* Prentice-
     Hall, 1983.
BAUER, Charles K. (1982) Automation and its lessons. *Special Libraries*,
     63, Feb 1972, p47-52.
BAUM, Bernard and Elmer BURACK. (1969) Information technology, manpower
     development and organizational performance. *Academy of Management
     Journal*, 12(3), Sep 1969, p279-291.
BAUSSER, Jaye. (1984) *Online catalogs: issues and concerns.* ERIC
     Clearinghouse on Information Resources, Syracuse University, 1984.
     (ED253 251).
BEAUMONT, Richard A. and Ray B. HELFGOTT. (1964) *Management, automation
     and people.* Industrial Relations Counsellors, 1964.
BIGMEAD, Margaret (Ed). (1976) *Use of computers in libraries and
     information centres.* Aslib, 1976.
BISHOP, Olga B. (1973) *The use of professional staff in libraries: a
     review, 1923-1971.* Canadian Library Association, 1973.
BJØRN-ANDERSEN, Niels (Ed). (1980) *The human side of information
     processing. Proceedings of the Copenhagen Conference on Computer
     Impact - 78, Oct 25-27 1978.* North-Holland, 1980.
BLAU, Peter M. and W. Richard SCOTT. (1963) *Formal organisations: a
     comparative approach.* Routledge and Kegan Paul, 1963 [1982 reprint].
BLUNDEN-ELLIS, John. (1987) A market study of library automation systems
     in the U.K. *Program*, 21(4),Oct 1987, p317-332.
BODDY, David and David A. BUCHANAN. (1981) *Information technology and
     the experience of work.* University of Glasgow, Department of
     Management Studies, 1981. [Unpublished paper]
BOOZ, ALLEN and HAMILTON INC. (1972) *Organization and staffing of the
     libraries of Columbia University.* Washington, D.C., Association of
     Research Libraries, 1972.
BOSS, Richard W. (1984) *The library manager's guide to automation.*
     2nd ed. Knowledge Industry Publications, 1984.
BROUDE, Jeffrey. (1984) Impact of automation on acquisitions functions.
     *Technical Services Quarterly,* 1(4), 1984, p55-60.
BRYAN, Harrison. (1979) Trends in staff organization in large academic
     libraries. IN *Studies in library management*, Volume 5. Edited by
     Anthony Vaughan. Bingley, 1979. p42-65.

BUCHANAN, David. (1983) Technological imperatives and strategic choice. IN WINCH, G. (Ed) *Information technology in manufacturing processes: case studies in technical change.* Rossendale, 1983. p72-80.

BUCHANAN, D.A. (1979) *The development of job design theories and techniques.* Saxon House, 1979.

BUCHANAN, David A. and David BODDY. (1983) *Organizations in the computer age: technological imperatives and strategic choice.* Gower, 1983.

BUCHANAN, David A. and A.A.HUCZYNSKI. (1985) *Organizational behaviour; an introductory text.* Prentice-Hall, 1985.

BUCKLE, David. (1983) Library automation: an inexpensive benefit? IN HELAL, Ahmed H. and Joachim W.WEISS (Eds). *Increasing productivity through library automation. Essen Symposium 11-14 Oct 1982.* Essen University Library, 1983. pp113-133.

BULAONG, Grace. (1982) Man and machine: staff adaptation to library automation. *Ontario Library Review,* 66(2), June 1982, p35-42.

BUNDY, Mary Lee and Paul WASSERMAN. (1968) Professionalism reconsidered. *College and Research Libraries,* 29(1), Jan 1968, p5-26.

BUSCH, B.J. (1985a) Technical services practices. *RTSD Newsletter,* 10(3), 1985, p25-26.

BUSCH, Joe (Ed). (1985b) Coming out of the back room: management issues for technical services in the Eighties. *Technical Services Quarterly,* 2(3/4), Spring/Summer 1985, p115-141.

CENTRE FOR LIBRARY AND INFORMATION MANAGEMENT. (1981) *The management of technical innovation in libraries.* CLAIM, 1981.

CENTRE FOR LIBRARY AND INFORMATION MANAGEMENT. (1982) *The impact of new technology on the management of libraries: papers presented at a course organised by the Library Association and CLAIM.* CLAIM, 1982.

CHENEY, P.H. and G.W.DICKSON. (1982) Organizational characteristics and information systems: an exploratory investigation. *Academy of Management Journal,* 25, 1982, p170-184.

CHILD, John. (1973) Organisational structure, environment and performance: the role of strategic choice. IN SALAMAN, Graeme and Kenneth THOMPSON. (Eds) *People and organisation.* Longman, 1973. p91-107.

CHILD, John. (1977) *Organisation: a guide to problems and practice.* Harper & Row, 1977.

CHWE, Steven Seokho. (1978) A comparative study of job satisfaction: catalogers and reference librarians in university libraries. *Journal of Academic Librarianship,* 4(3), July 1978, p139-143.

CLARK, Peter A. (1972) *Organisational design: theory and practice.* Tavistock, 1972.

CLINIC ON LIBRARY APPLICATIONS OF DATA PROCESSING, Apr 30-May 3, 1972. *Applications of on-line computers to library problems.* Edited by F. Wilfrid Lancaster. Clive Bingley, 1972.

CLINIC ON LIBRARY APPLICATIONS OF DATA PROCESSING, Apr 23-26, 1978. *Problems and failures in library automation.* Edited by F. Wilfrid Lancaster. University of Illinois, 1978.

COCHRANE, Pauline A. (1983) The changing roles and relationships of staff in technical and reference/readers' services in the era of online public access catalogs. *The Reference Librarian,* No.9, Fall/Winter 1983, p45-54.

COLEMAN, M.D. (1982) Technology and librarians. *New Zealand Libraries,* 43(10), June 1982, p171-173.

COOK, John D. et al. (1981) *The experience of work: a compendium and review of 249 measures and their use.* Academic Press, 1981.

CROSS, Rosemary and David BAWDEN. (1987) Information technology: human and organizational factors. *Journal of Information Science,* 13(5), 1987, p277-284.

CUADRA, Carlos A. (1969) Libraries and technological forces affecting them. *ALA Bulletin*, 63, June 1969, p759-768.

DAVINSON, Donald E. (1982) Non-professional library staff education: a state of the art report and proposals for the future. In *Studies in Library Management*, Volume 7. Edited by Anthony Vaughan. Clive Bingley, 1982.

DAVIS, L. E. (1962) The effects of automation on job design. *Industrial Relations*, 2(1), 1962, p53-71.

DAVIS, L. E. (1966) The design of jobs. *Industrial Relations*, 6(1), Oct 1966, p21-45.

DAVIS, Louis E. and Albert B. CHERNS and Associates (Eds). (1975) *The quality of working life, Volume 1: problems, prospects and the state of the art*. Free Press, 1975.

DAVIS, Louis E. and James C. TAYLOR. (1975a) Technology effects on job, work and organizational structure: a contingency view. IN DAVIS, Louis E. and Albert B. CHERNS (Eds). *The quality of working life, Volume 1*. Free Press, 1975. p220-241.

DAVIS, L. E. and J. C. TAYLOR. (1975b) *Technology, organisation and job structure*. University of California, Los Angeles, Graduate School of Management, 1975. (Mimeo).

DAY, Mark Tyler. (1969) *The library as an organisation: a critical overview of concepts and approaches*. M. A. thesis. University of Chicago, 1969.

DE GENNARO, Richard. (1968) The development and administration of automated systems in academic libraries. *Journal of Library Automation*, 1(1), March 1968, p75-91.

DE GENNARO, Richard. (1981) Libraries and networks in transition: problems and prospects for the 1980s. *Library Journal*, 106(10), May 15th 1981, p1045-1049.

DE GENNARO, Richard. (1982) Libraries, technology, and the information marketplace. *Library Journal*, 107(11), June 1st 1982, p1045-1054.

DE GENNARO, Richard. (1983a) Library automation and networking perspectives on three decades. *Library Journal*, 108(7), April 1st 1983, p629-635.

DE GENNARO, Richard. (1983b) Perspectives on three decades of library automation and networking in the U. S. IN HELAL, Ahmed H. and Joachim W. WEISS (Eds). *Increasing productivity through library automation. Essen Symposium, 11-14th October 1982*. Essen University, 1983. p73-100.

D'ELIA, George P. (1979) The determinants of job satisfaction among beginning librarians. *Library Quarterly*, 49(3), July 1979, p283-302.

DEPARTMENT OF EMPLOYMENT. WORK RESEARCH UNIT. (1980a) *New technology: effects in general*. W. R. U., 1980. (Work Research Unit Bibliography, No. 18).

DEPARTMENT OF EMPLOYMENT. WORK RESEARCH UNIT. (1980b) *New technology: employee attitudes*. W. R. U., 1980. (Work Research Unit Bibliography, No. 22).

DEPARTMENT OF EMPLOYMENT. WORK RESEARCH UNIT. (1980c) *New technology: job content effect*. W. R. U., 1980. (Work Research Unit Bibliography, No. 20).

DEPARTMENT OF EMPLOYMENT. WORK RESEARCH UNIT. (1980d) *New technology: work organisation effects*. W. R. U., 1980. (Work Research Unit Bibliography, No. 21).

*Developing library effectiveness for the next decade: proceedings of the 7th meeting of IATUL. Louvain, May 16-21, 1977*. Edited by Nancy Fjällbrant and Kerstin McCarthy. IATUL, 1978.

DOWLIN, Kenneth E. (1985) The "integrated library system". *Electronic Library*, 3(5), Dec 1985, p340-345.

DRAGON. Andrea C. (1984) Measuring professional performance: a critical examination. IN *Advances in Library Administration and Organization*, Volume 3, 1984. Jai Press, 1984. p25-46.

DRAKE, Miriam A. (1979) Managing innovation in academic libraries. *College and Research Libraries*, 40(6), Nov 1979, p503-510.

DU MONT, Paul F. and Rosemary Ruhig DU MONT. (1981) A goal typology and systems model of library effectiveness. *Journal of Library Administration*, 2(1), Spring 1981, p13-23.

DUNLAP, Connie R. (1976) Organisational patterns in academic libraries, 1876-1976. *College and Research Libraries*, 37(5), Sept 1976, p395-407.

EASON, K.D. (1980) Computer information systems and managerial tasks. IN BJØRN-ANDERSEN, N. (Ed). *The human side of information processing. Proceedings of the Copenhagen Conference on Computer Impact - 78, Oct 25-27 1978*. North-Holland, 1980. p133-149.

EDWARDS, Ralph M. (1975) The management of libraries and the professional functions of librarians. *Library Quarterly*, 45(2), April 1975, p150-160.

EMERY, Fred and Einar THORSRUD. (1976) *Democracy at work: the report of the Norwegian industrial democracy program*. Martinus Nijhoff, 1976.

EMERY, F.E. and Einar THORSRUD. (1969) *Form and content in industrial democracy: some experiences from Norway and other European countries*. Tavistock, 1969.

ENNIS, Philip H. (1962) Technological change and the professions: neither Luddite nor technocrat. *Library Quarterly*, 32(3), July 1962, p189-198.

ETZIONI, Amitai (Ed). (1969) *The semi-professions and their organisation*. Free Press, 1969.

EVANS, G. Edward. (1976) *Management techniques for librarians*. Academic Press, 1976.

EYRE, J.J. (1979) Impact of automation on libraries: a review. *Journal of Library and Information Science*, 5, April 1979, p1-15.

FASANA, Paul J. (1980) 1981 and beyond: visions and decisions. *Journal of Library Automation*, 13(2), June 1980, p96-107.

FAUNCE, N.A. (1965) Automation and the division of labour. *Social Problems*, 13, Fall 1965, p149-160.

FINE, Sara. (1979) *Resistance to technological innovation in libraries: research report, Part II: Data analysis and statistical report. Final report*. Pittsburgh University, P.A., Graduate School of Library and Information Sciences, 1979.

FINE, Sara F. (1986) Technological innovation, diffusion and resistance: an historical perspective. *Journal of Library Administration*, 7(1), Spring 1986, p83-108.

FLAHERTY, Kevin C. (1981) Library networks: cooperative uses of technology. *Catholic Library World*, 53(3), Oct 1981, p116-119.

FORD, R.N. (1969) *Motivation through the work itself*. American Management Association, 1969.

FORD, Robert N. (1973) Job enrichment lessons from AT & T. *Harvard Business Review*, 51, Jan/Feb 1973, p97-106.

FREEDMAN, Maurice J. (1984) Automation and the future of technical services. *Library Journal*, 109(11), June 15th 1984, p1197-1203.

GAPEN, D. Kaye. (1979) Cataloging: workflow and productivity. IN ALLISON, Ann Marie and Ann ALLAN (Eds). *OCLC: a national library network*. Enslow, 1979. p101-119.

GAPEN, D. Kaye and Ichiko T. MORITA. (1978) OCLC at OSU: the effect of the adoption of OCLC on the management of technical services at a large academic library. *Library Resources and Technical Services*, 22(1), 1978, p5-21.

GILCHRIST, A. (1968) Further comments on the terminology of the analysis
of library systems. *Aslib Proceedings*, 20(10), 1968, p408-412.
GOODE, William. (1957) Community within a community: the professions.
*American Sociological Review*, 22, April 1957, p194-200.
GOODE, William. (1961) The librarian: from occupation to profession.
*Library Quarterly*, 31(4), Oct 1961, p306-318.
GOODELL, John. (1971) *A case study of cataloguers in three university
libraries using work sampling*. Ph.D. dissertation. Florida State
University, 1971.
GORE, Daniel. (1975) View from the Tower of Babel. *Library Journal*, 100,
Sept 15th 1975, p1599-1604.
GORE, Daniel, Joseph KIMBROUGH and Peter SPYERS-DURAN (Eds). (1979)
*Requiem for the card catalog: management issues in automated
cataloging*. Aldwych Press, 1979.
GORMAN, Michael. (1979a) On doing away with technical services
departments. *American Libraries*, 10, July/Aug 1979, p435-437.
GORMAN, Michael. (1979b) Technical services in an automated library. IN
CLINIC ON LIBRARY APPLICATIONS OF DATA PROCESSING, 1979. *The role of
the library in an electronic society*. Edited be F. Wilfred
Lancaster. University of Illinois, 1979. p48-59.
GORMAN, Michael. (1983a) The ecumenical library. *The Reference
Librarian*, No.9, Fall/Winter 1983, p55-64.
GORMAN, Michael. (1983b) Reorganization at the University of Illinois -
Urbana/Champaign Library: a case study. IN MARTELL, Charles. (Ed)
QWL strategies: reorganization. *Journal of Academic Librarianship*,
9(4), Sept 1983, p223-225.
GORMAN, Michael. (1985) *The impact of technology on the organisation of
libraries*. CLSI, 1985. (CLSI Annual lectures on library automation,
No.1).
GREAT BRITAIN, Department of Education and Science. (1982) *Census of
staff in librarianship and information work in the United Kingdom,
1981*. Office of Arts and Libraries, 1982.
GREENBERG, Esther. (1974) *Innovative designs for acquisitions and
cataloguing departments as a result of library automation*.
Cleveland, Ohio; Case Western Reserve University, School of Library
Science, 1974.
GREENBERG, Esther. (1976) Automated cataloging: the state of the art.
*Bulletin - Medical Libraries Association*, 64(1), Jan 1976, p5-11.
GREENBERG, Esther. (1977) OCLC - seven years of library change.
*California Librarian*, 38, 1977, p27-34.
GREENWOOD, Ernest. (1957) Attributes of a profession. *Social Work*, 2(6),
July 1957, p44-55.
GULICK, Luther and L.URWICK (Eds). (1937) *Papers on the science of
administration*. Institute of Public Administration, 1937.
HACKMAN, J.R. et al. (1975) A new strategy for job enrichment.
*California Management Review*, 17(4), Summer 1975, p57-71.
HACKMAN, J.Richard. (1969) Nature of the task as a determiner of job
behavior. *Personnel Psychology*, 22, 1969, p435-444.
HACKMAN, J.Richard. (1977) Work design. IN HACKMAN, J.Richard and
J.Lloyd SUTTLE. (Eds) Improving life at work: behavioral science
approaches to organizational change. Goodyear, 1977. p96- .
HACKMAN, J.Richard and Edward E.LAWLER III. (1971) Employee reactions to
job characteristics. *Journal of Applied Psychology (Monograph)*,
55(3), June 1971, p259-286.
HACKMAN, J.Richard and Greg R.OLDHAM. (1975) Development of the Job
Diagnostic Survey. *Journal of Applied Psychology*, 60(2), 1975, p159-
170.
HACKMAN, J.Richard and Greg R.OLDHAM. (1976) Motivation through the

design of work: test of a theory. *Organisational Behavior and Human Performance*, 16, 1976, p250-279.

HACKMAN, J. Richard and Greg R. OLDHAM. (1980) *Work redesign.* Addison-Wesley, 1980.

HACKMAN, J. Richard and J. Lloyd SUTTLE. (Eds) (1977) *Improving life at work: behavioral science approaches to organizational change.* Goodyear, 1977.

HALL, Richard. (1971) *The formal organization.* Basic Books, 1971.

HALL, Richard H. (1973) Professionalisation and bureaucratisation. IN SALAMAN, Graeme and Kenneth THOMPSON. (Eds) People and organisations. Longman, 1973. p120-133.

HAMMER, Donald P. (1969) Casting for automation: new roles for administrator, librarian, systems analyst, programmer. *Library Journal*, 94, Dec 15th 1969, p4492-4495.

HAMMER, Donald P. (Ed) (1976) *The information age: its development, its impact.* Scarecrow Press, 1976.

HANKS, Gardner and C. James SCHMIDT. (1975) An alternative model for a profession for librarians. *College and Research Libraries*, 36, May 1975, p175-187.

HARRINGTON, Sue Anne. (1986) The changing environment in technical services. *Technical Services Quarterly*, 4(2), Winter 1986, p7-20.

HARVEY, E. (1968) Technology and the structure of organizations. *American Sociological Review*, 33, April 1968, p247-259.

HAUG, Marie R. and Jacques DOFNY. (Eds) (1977) *Work and technology.* Sage Publications, 1977.

HEALEY, James S. (1982) Developing human resources: an administrative view. IN McCLURE, Charles R. and Alan R. SAMUELS. *Strategies for library administration: concepts and approaches.* Libraries Unlimited Inc., 1982. p277-288.

HELAL, Ahmed H. and Joachim W. WEISS. (1983) *Increasing productivity through library automation. Essen Symposium, 11-14th October 1982.* Essen University, 1983.

HELAL, Ahmed H. and Joachim W. WEISS. (Eds) (1988) *International library cooperation. 10th Anniversary Essen Symposium, 19-22nd Oct 1987.* Essen University Library, 1988.

HERZBERG, Frederick. (1968) One more time: how do you motivate employees. *Harvard Business Review*, 46, Jan/Feb 1968, p53-62.

HERZBERG, Frederick, Bernard MAUSNER and Barbara B. SNYDERMAN. (1959) *The motivation to work.* 2nd ed. John Wiley, 1959.

HEWITT, J. A. (1976a) The impact of OCLC. *American Libraries*, 7(5), May 1976, p268-275.

HEWITT, Joe Anderson. (1976b) *The impact of on-line cataloging on the operation of academic libraries: a study of the charter members of the Ohio College Library Center.* Ph. D. thesis. Department of Education, University of Colorado, 1976.

HICKEY, Doralyn J. (1975) Public and technical library services: a revised relationship. IN STEVENS, Norman D. (Ed). *Essays for Ralph Shaw.* Scarecrow Press, 1975, p179-189.

HILDRETH, Charles R. (1988) Automated library networking in North America: new realities, major trends. IN HELAL, Ahmed H. and Joachim W. WEISS. (Eds) *International library cooperation. 10th Anniversary Essen Symposium, 19-22nd Oct 1987.* Essen University Library, 1988. p221-241.

HILL, Paul. (1971) *Towards a new philosophy of management.* Gower Press, 1971.

HILL, Virginia S. and Tom G. WATSON. (1984) Job analysis: process and benefits. IN *Advances in Library Administration and Organisation*, Volume 3, 1984. Jai Press, 1984. p209-219.

HINKS, John. (1977) Leicestershire libraries: a team-based organisation structure. IN *Studies in Library Management*, Voliume 4. Bingley, 1977. p67-84.

HOLLEY, Robert P. (1981) The future of catalogers and cataloging. *Journal of Academic Librarianship*, 7(2), 1981, p90-93.

HORNY, Karen. (1974) Automation of technical services: Northwestern's experience. *College and Research Libraries*, 35(5), Sept 1974, p364-369.

HORNY, Karen L. (1985a) Managing change: technology and the profession. *Library Journal*, 110(16), Oct 1st 1985, p56-58.

HORNY, Karen L. (1985b) Quality work, quality control in technical services. *Journal of Academic Librarianship*, 11(4), Sep 1985, p206-210.

HOWARD, Helen. (1984) Organization theory and its application to research in librarianship. *Library Trends*, 32(4), Spring 1984, p477-493.

HOWARD, Helen A. (1981) Organizational structure and innovation in academic libraries. *College and Research Libraries*, 42(5), Sept 1981, p425-434.

HOWARD, Helen Arlene. (1977) *The relationship between certain organisational variables and the rate of innovation in selected university libraries*. Ph.D. thesis. Rutgers University, 1977.

HUNTER, Eric J. (1985) *Computerized cataloguing*. Clive Bingley, 1985.

The impact of OCLC on departments cataloging - a study. *Network: International Communications in Library Automation*, 2(1), Jan 1975, p11-16.

*Independent v co-operative cataloguing systems: proceedings of a seminar held at the School of Librarianship and Information Studies, Newcastle upon Tyne Polytechnic on September 22nd 1982*. LA, UC & R Section, Northern Group, 1982.

*Institute on automation in large libraries: implications for the administrator and the manager. 9-11 May 1968*. Edited by Paul J. Fasana. University de Montreal, 1968.

JACOB, M.E. (1972) Library in-service training: systems analysts and programmers. IN *Proceedings of the 16th Biennial Conference of the Library Association of Australia, August 1971*. L.A.A. Conference Committee, 1972. p720-723.

JACOB, Mary Ellen L. (1974) Management problems consequent on the automation of library processes, III. IN *Proceedings of the 17th Biennial Conference of the Library Association of Australia, August 1973*. L.A.A., 1974. p529-532.

JESSUP, G. (1978) *Role of modern technology and new forms of work organisation: technology as if people mattered*. London, Work Research Unit, 1978. (Work Research Unit Occasional Paper, No. 12).

JOHNSON, D.I. and Ruth C. CARTER. (1973) Library automation - not so painful after all. *Illinois Libraries*, 55, April 1973, p242-245.

JONES, Ken. (1984) *Conflict and change in library organisations: people, power and service*. Clive Bingley, 1984.

JONES, Noragh and Peter JORDAN. (1975) One year later: a survey of students who completed their B.A. (Librarianship) course at Leeds Polytechnic in 1972. *Research in Librarianship*, No. 28 (Vol. 5), Jan 1975, p113-123.

JONES, Noragh and Peter JORDAN. (1982) *Staff management in library and information work*. Gower, 1982.

JUDSON, Arnold S. (1966) *A manager's guide to making changes*. Wiley, 1966.

KALLENBACH, Susan and Susan JACOBSON. (1980) Staff response to changing systems: from manual to OCLC to RLIN. *Journal of Academic*

*Librarianship*, 6(5), Nov 1980, p264-267.

KAPLAN, L. (1979) Professionalism, decision-sharing and bureaucracy. IN *Studies in Library Management*, Volume 5. Clive Bingley, 1979. p19-39.

KAST, Fremont E. and James E. ROSENZWEIG. (1970) *Organization and management: a systems approach.* McGraw-Hill, 1970.

KATZ, Daniel and Robert L. KAHN. (1978) *The social psychology of organizations.* International 2nd rev. ed. John Wiley, 1978.

KELLER, Robert T. (1972) A look at the sociotechnical system. *California Management Review*, 15(1), Fall 1972, p86-91.

KELLY, John E. (1982) *Scientific management, job redesign and work performance.* Academic Press, 1982.

KENCHINGTON, Carol E. (1974) Management problems consequent on the automation of library processes, I. IN *Proceedings of the 17th Biennial Conference of the Library Association of Australia, August 1973.* L. A. A. , 1974. p518-522.

KENT STATE UNIVERSITY. Cataloguers Group. The impact of OCLC on cataloging departments - a study. *Network*, 2(1), Jan 1975, p11-16, 25.

KERLINGER, Fred N. (1964) *Foundations of behavioral research.* Holt, Rinehart and Winston, 1964.

KESNER, Richard M. (1982) The computer and the library environment: the case for microcomputers. *Journal of Library Administration*, 3(2), 1982, p33-50.

KETS DE VRIES, Manfred F. R. (1979) Organizational stress: a call for management action. *Sloan Management Review*, 1, Fall 1979, p3-14.

KILGOUR, Frederick G. (1969) Effects of computerisation on acquisitions. *Program*, 3(3/4), Nov 1969, p95-103.

KOENIG, Michael E. D. (1987) A stage hypothesis for information systems development. *ITs News*, No. 11, Jan 1987, p3-13.

KOLODNEY, H. and T. STJERNBERG. (1986) The change process of innovative work designs: new design and redesign in Sweden, Canada, and the U. S. . *Journal of Applied Behavioral Science*, 22(3), 1986, p287-301.

KORTENDICK, James J. and Elizabeth W. STONE. (1971) *Job dimensions and educational needs in librarianship.* American Library Association, 1971.

KRAFT, Margit. (1966) What would you do with brighter people? *Journal of Education for Librarianship*, 7, Summer 1966, p21-28.

LAMSAC. (1976) *The staffing of public libraries: a report of the research undertaken by the Local Authorities Management Services and Computer Committee for the Department of Education and Science.* HMSO, 1976. 3 vols.

LANCASTER, F. W. (1981) The future of the library in the Age of Telecommunications. IN *Telecommunications and libraries: a primer for librarians and information managers.* Knowledge Industry Publications Inc, 1981. p137-156.

LANCASTER, F. W. (1983) Future librarianship: preparing for an unconventional career. *Wilson Library Bulletin*, 57(9), May 1983, p747-753.

LANCASTER, F. W. , Laura S. DRASGOW and Ellen B. MARKS. (1979) The changing face of the library: a look at libraries and librarians in the year 2001. *Collection Management*, 3(1), Spring 1979, p55-77.

LAWRENCE, Paul R. (1967) Technical inputs. IN SEILER, John A. *Systems analysis in organizational behavior.* Richard D. Irwin/Dorsey Press, 1967. p133-143.

LAWRENCE, P. R. and J. W. LORSCH. (1967) *Organization and environment: managing differentiation and integration.* Harvard University, 1967.

LAY, R. W. (1986) The relationships between job design, health and

technological change. *Journal of Occupational Health and Safety -
Australia and New Zealand,* 2(1), 1986, p9-13.
LEAVITT, Harold J., William R. DILL and Henry B. EYRING. (1973) *The
organizational world.* Harcourt Brace Jovanovich, 1973.
LENTINI, Allan A. (1985) Paraprofessional position and classification
review by librarians at Cornell University Libraries. *Journal of
Academic Librarianship,* 11(3), July 1985, p154-158. ·
LIBRARY ASSOCIATION. (1974) *Professional and non-professional duties in
libraries: a descriptive list...* 2nd ed. L.A., 1974.
LIBRARY ASSOCIATION. (1985) *Evidence submitted to the UGC/NAB
Transbinary Group on Librarianship and Information Studies.* Library
Association, 1985.
LIBRARY ASSOCIATION WORKING PARTY 1981-2. *The impact of new technology
on libraries and information centres.* Library Association, 1982.
LIPETZ, Ben-Ami and Peter J. PAULSON. (1984) *A study of impact of
technological change in library service facilities: changes in use
of the public catalog at the New York State Library associated with
the introduction of online subject searching capability in the
public catalog. Summary report.* New York State Library, 1984.
LOCKE, Edwin A., David SIROTA and Alan D. WOLFSON. (1976) An experimental
case study of the successes and failures of job enrichment in a
government agency. *Journal of Applied Psychology,* 61(6), 1976, p701-
711.
LUQUIRE, Wilson. (1976) *Selected factors affecting library staff
perceptions of an innovative system: a study of ARL libraries in
OCLC.* Ph.D. dissertation. Indiana University, 1976.
LUQUIRE, Wilson. (1983) Attitudes toward automation/innovation in
academic libraries. *Journal of Academic Librarianship,* 8(6), 1983,
p344-351.
LYNCH, B. (1972a) *Library technology: a comparison of the work of
functional departments in academic libraries.* Ph.D. dissertation.
University of Wisconsin, 1972.
LYNCH, Beverly. (1972b) Participative management in relationship to
library effectiveness. *College and Research Libraries,* 33, Sept
1972, p382-390.
LYNCH, Beverly P. (1974a) The academic library and its environment.
*College and Research Libraries,* 35(2), March 1974, p126-132
LYNCH, Beverly P. (1974b) A framework for the comparative analysis of
library work. *College and Research Libraries,* 35, Nov. 1974, p432-
443.
LYNCH, Beverly P. (1979) Libraries as bureaucracies. *Library Trends,*
27(3), Winter 1979, p259-267.
McCLURE, Charles R. and Alan R. SAMUELS. (1982) *Strategies for library
administration: concepts and approaches.* Libraries Unlimited Inc.,
1982.
McCORMICK, Ernest J. and Daniel R. ILGEN. (1980) *Industrial psychology.*
7th ed. Prentice Hall, 1980.
McGREGOR, Douglas M. (1967) *The professional manager.* McGraw-Hill, 1967.
MacKENZIE, A. Graham. (1981) Why automate anything? IN GRAHAM, Margaret
E. (Ed) *Automation and serials: proceedings of the U.K. Serials
Group Conference... 31 Mar-3 Apr 1980.* UKSG, 1981. p1-16.
McKINLAY, John B. (Ed) (1975) *Processing people: cases in
organizational behaviour.* Holt, Rinehart and Winston, 1975.
McKINLEY, Margaret. (1984) Victims, villains or victors: the impact of
serials automation on a library organisation. *Serials Review,* 10(2),
Summer 1984, p43-48.
McLEAN, Neil. (1981) Computerisation and library organisation. IN CENTRE
FOR LIBRARY AND INFORMATION MANAGEMENT. *The management of technical*

*innovation in libraries: proceedings of a conference.* CLAIM, 1981.
p7-12.

McLEAN, Neil. (1982) New technology in academic libraries. IN *Studies in
Library Management*, Volume 7. Edited by Anthony Vaughan. Bingley,
1982. p144-166.

McNALLY, A.M. and R.B.DOWNS. (1973) The changing role of directors of
university libraries. *College and Research Libraries*, 34(2), Mar
1973, p103-125.

MALINCONICO, S.Michael. (1983a) Hearing the resistance. *Library Journal*,
108(2), Jan 15th 1983, p111-113.

MALINCONICO, S.Michael. (1983b) Listening to the resistance. *Library
Journal*, 108(4), Feb 15th 1983, p353-355.

MANPOWER SERVICES COMMISSION. (1985) *The impact of new technology on
skills in manufacturing and services.* MSC, 1985.

MARCHANT, Maurice P. (1982) Managing motivation and job satisfaction. IN
McCLURE, Charles R. and Alan R.SAMUELS. *Strategies for library
administration: concepts and approaches.* Libraries Unlimited Inc.,
1982. p261-273.

MARKUSON, Barbara Evans. (1972) Progress and problems in library
automation. IN *Proceedings of the 16th Biennial Conference of the
Library Association of Australia, August 1971.* LAA Conference
Committee, 1972. p39-49.

MARKUSON, Barbara Evans. (1976) The Ohio College Library Center System:
a study of factors affecting the adaptation of libraries to on-line
networks. *Library Technology Reports*, 12(1), 1976, p11-129.

MARKUSON, Barbara Evans. (1979) Cooperation and library network
development. *College and Research Libraries*, 40(2), March 1979,
p125-135.

MARSTERSON, William. (1986) *Information technology and the role of the
librarian.* Croom Helm, 1986.

MARTELL, Charles. (1979a) Erasing the past: organizational renewal and
technical shift. IN STUEART, Robert D. and Richard D.JOHNSON (Eds).
*New horizons for academic libraries.* K.G.Saur, 1979.

MARTELL, Charles. (1981) Improving the effectiveness of libraries
through improvements in the Quality of Working Life. *College and
Research Libraries*, 42(5), Sept 1981, p435-446.

MARTELL, Charles. (Ed) (1983a) QWL strategies: investing in people.
*Journal of Academic Librarianship*, 9(1), March 1983, p33-35.

MARTELL, Charles. (Ed) (1983b) QWL strategies: trust, subtlety and
intimacy. *Journal of Academic Librarianship*, 9(3), July 1983, p164-
165.

MARTELL, Charles. (Ed) (1983c) QWL strategies: reorganization. *Journal
of Academic Librarianship*, 9(4), Sept 1983, p223-225.

MARTELL, Charles. (1984a) QWL strategies: consideration. *Journal of
Academic Librarianship*, 9(6), Jan 1984, p350-351,382.

MARTELL, Charles. (Ed) (1984b) QWL strategies: managing participation.
*Journal of Academic Librarianship*, 10(1), March 1984, p29-32.

MARTELL, Charles. (1984c) QWL strategies. *Journal of Academic
Librarianship*, 10(5), Nov 1984, p286-289.

MARTELL, Charles. (1985) QWL strategies: people are the castle, people
are the walls, people are the moat. *Journal of Academic
Librarianship*, 10(6), Jan 1985, p350-354.

MARTELL, Charles and Richard M. DOUGHERTY. (1978) Role of continuing
education and human resource development: an administrator's
viewpoint. *Journal of Academic Librarianship*, 4, July 1978, p151-
155.

MARTELL, Charles and Joan D.KUNSELMAN. (1984) QWL strategies:
involvement = commitment. *Journal of Academic Librarianship*, 10(3),

July 1984, p158-160.

MARTELL, Charles and John TYSON. (1983) QWL strategies: quality circles. *Journal of Academic Librarianship*, 9(5), Nov 1983, p285-287.

MARTELL, Charles and Mercedes UNTAWALE. (1983) Work enrichment for academic libraries. *Journal of Academic Librarianship*, 8(6), 1983, p339-343.

MARTELL, Charles Rennie. (1979b) *An experimental design for restructuring and redesigning the functions of academic research libraries.* D.L.S. dissertation. University of California, Berkeley, 1979.

MARTIN, Lowell A. (1984) *Organizational structure of libraries.* Scarecrow Press, 1984.

MARTIN, Susan K. (1984) The new technologies and library networks. *Library Journal*, 109, June 15th 1984, p1194-1196.

MARTIN, Susan K. and Brett BUTLER. (Eds) (1975) *Library automation: the state of the art II.* American Library Association, 1975.

MEALIEA, Laird W. (1978) Learned behavior: the key to understanding and preventing employee resistance to change. *Group and Organization Studies*, 3(2), June 1978, p211-223.

MEIER, Richard L. (1961) Efficiency criteria for the operation of large libraries. *Library Quarterly*, 31, July 1961, p215-234.

MEIER, Richard L. (1963) Communications overload: proposals from the study of a university library. *Administrative Science Quarterly*, 7, 1963, p521-544.

MEYER, Marshall W. (1972) *Bureaucratic structure and authority.* Harper and Row, 1972.

MINTZBERG, Henry. (1981) Organization design: fashion or fit? *Harvard Business Review*, 59, Jan/Feb 1981, p103-116.

MITCHELL, Terence R., Charles M. SMYSER and Stan E. WEED. (1975) Locus of control: supervision and work satisfaction. *Academy of Management Journal*, 18(3), 1975, p623-630.

MONTAGUE, Eleanor. (1978) Automation and the library administrator. *Journal of Library Automation*, 11(4), Dec 1978, p313-323.

MOSER, Claus A. and Graham KALTON. (1971) *Survey methods in social investigation.* 2nd ed. Heinemann Educational Boojs, 1971.

MOUZELIS, Nicos P. (1975) *Organisation and bureaucracy: an analysis of modern theories.* Routledge and Kegan Paul, 1975.

MUGNIER, Charlotte. (1980) *The paraprofessional and the professional job structure.* American Library Association, 1980.

MUSMANN, Klaus. (1978a) Socio-technical theory and job design in libraries. *College and Research Libraries*, 39, Jan 1978, p20-28.

MUSMANN, Klaus. (1978b) Will there be a role for librarians and libraries in the post-industrial society? *Libri*, 28(3), 1978, p228-234.

MUSMANN, Klaus. (1982) The diffusion of innovations in libraries: a review of the literature on organization theory and diffusion research. *Libri*, 32(4), 1982, p257-277.

MUSMANN, Victoria K. (1981) The potential of public library bureaucracy. *Journal of Library Administration*, 2(1), Spring 1981, p63-70.

NASH, John C. and Mary M. NASH. (1981) Libraries and small computers - a perspective for decision-making. *Canadian Library Journal*, 38(4), Aug 1981, p207-211.

NAYLOR, Bernard. (1987) Library automation in the United Kingdom. IN *European conference on library automation, 11-12 Sep 1986: proceedings...organised and sponsored jointly by the Library Association and CLSI.* LA Publishing, 1987. p5-19.

*New technology and libraries:* a report of the Conference of (London) Polytechnic Libraries, held at the Polytechnic of the South Bank,

16th July 1980. (Unpublished paper).

New York conference reports: Acquisitions for the Eighties
Preconference. *RTSD Newsletter*, 5, Sept/Oct 1980, p49-51.

NEWMAN, Derek. (1973) *Organization design: an analytical approach to the
structuring of organizations.* Edward Arnold, 1973.

NICHOLSON, Deborah and Rashid TAYYEB. (1981) Automation from the library
manager's perspective. *APLA Bulletin*, 45(1), July 1981, p10, 12.

NIELSEN, Brian. (1980) Online bibliographic searching and the
deprofessionalization of librarianship. *Online Review*, Sept 1980,
4(3), p215-224.

NIELSEN, Brian. (1982a) Teacher or intermediary: alternative
professional models in the information age. *College and Research
Libraries*, 43(3), May 1982, p183-191.

NIELSON, Brian. (1982b) Technological change and professional identity.
IN CLINIC ON LIBRARY APPLICATIONS OF DATA PROCESSING, 1981. *New
information technologies - new opportunities.* Edited by Linda
C. Smith. University of Illinois, 1982. p101-113.

NORTH, John. (1977) Librarianship: a profession? *Canadian Library
Journal*, 34(3), August 1977, p253-257.

OH, Tai Keun. (1966) New dimensions of management theory. *College and
Research Libraries*, 27, Nov 1966, p431-438.

OLDHAM, Greg R., J. Richard HACKMAN and Jone L. PIERCE. (1976) Conditions
under which employees respond positively to enriched work. *Journal
of Applied Psychology*, 61(4), 1976, p395-403.

OLSGAARD, John N. (1985) Automation as a socio-organizational agent of
change: an evaluative literature review. *Information Technology and
Libraries*, 4(1), March 1985, p19-28.

OPPENHEIM, A. N. (1966) *Questionnaire design and attitude measurement.*
Heinemann, 1966.

OWEN, Jeanne C. (1974) Management problems consequent on the automation
of library processes, II. IN *Proceedings of the 17th Biennial
Conference of the Library Association of Australia, August 1973.*
L. A. A., 1974. p522-528.

PALMER, Richard Phillips. (1973) *Case studies in library computer
systems.* Bowker, 1973.

PARKER, S. R., R. K. BROWN, J. CHILD and M. A. SMITH. (1972) *The sociology of
industry.* 2nd edition. Allen and Unwin, 1972.

PATRINOSTRO, F. S. (1973) *A survey of commonplace problems in library
automation.* LARC Association Inc., 1973.

PAVALKO, Ronald M. (1971) *Sociology of occupations and professions.*
F. E. Peacock, 1971.

PEACOCK, Brian. Job redesign in the bindery: a case study. IN SELL, R. G.
and Patricia SHIPLEY. (Eds) *Satisfactions in work design: ergonomics
and other approaches.* Taylor and Francis, 1979. p155-160.

PERROW, C. (1967) A framework for the comparative analysis of
organizations. *American Sociological Review*, 32, April 1967, p194-
208.

PERROW, Charles. (1970) *Organizational analysis: a sociological view.*
Tavistock Pubs, 1970.

PFEFFER, Jeffrey and Huseyin LEBLEBICI. (1977) Information technology
and organizational structure. *Pacific Sociological Review*, 20, 1977,
p241-261.

PFLUG, Günter. (1975) The effects of automation on library
administration. *IFLA Journal*, 1(4), 1975, p267-275.

PIERCE, Jon L. and Andre L DELBECQ. (1977) Organization structure,
individual attitudes and innovation. *Academy of Management Review*,
2, Jan 1977, p27-37.

PLATE, Kenneth H. and Elizabeth W. STONE. (1974) Factors affecting

librarians' job satisfaction: a report of two studies. *Library Quarterly*, 44(2), April 1974, p97-110.

POTTER, William Gray. (1986) Online catalogues in North America: an overview. *Program*, 20(2), Apr 1986, p120-130.

PRESLEY, Roger L. and Carolyn L. ROBISON. (1986) Changing roles of support staff in an online environment. *Technical Services Quarterly*, 4(1), Fall 1986, p25-39.

PRESTHUS, Robert Vance. (1970) *Technological change and occupational response: a study of librarians. Final report*. Washington D.C., Office of Education, 1970.

PRITCHARD, Alan. (1973) *The library as an industrial firm: an approach to library management*. City of London Polytechnic, 1973.

RAITT, David. (1984) Based on experience: tips for vendors, operators and users of automated systems. IN HELAL, Ahmed H. and Joachim W. WEISS. (Eds) *Local library systems. Essen Symposium 24-27 Sep 1984*. Essen University Library, 1984. p5-27.

RAYWARD, W. Boyd. (1969) Libraries as organizations. *College and Research Libraries*, 30(4), July 1969, p312-326.

REEVES, William Joseph. (1976) *Librarians as professionals: the occupation's impact on library work arrangements*. Lexington Books, 1980.

REPP, Joan M. (1986) The response of the cataloger and the catalog to automation in the academic library setting. IN *Advances in Library Administration and Organization*, Volume 5. Jai Press, 1986. p67-89.

RICHARDSON, W.D. (1976) What's the point: or how many goals did you score today Daddy? *Lasie*, 7, Sept 76, p26-34.

RICE, A.K. (1958) *Productivity and social organisation: the Amedabad Experiment: technical innovation, work organisation, and management*. Tavistock Pubs, 1958.

RICKING, Myrl and Robert E. BOOTH. (1974) *Personnel utilisation in libraries: a systems approach*. American Library Association, 1974.

RITCHIE, Sheila. (1982) Women in library management. IN *Studies in Library Management*, Volume 7. Edited by Anthony Vaughan. Bingley, 1982. p13-36.

ROBBINS, Stephen P. (1983) Organization theory: the structure and design of organizations. Prentice-Hall, 1983.

ROBBINS, Stephen P. (1984) *Management: concepts and practices*. Prentice-Hall, 1984.

ROBERTS, N. (Ed) (1978) *Personnel in libraries and information units: a seminar for library managers*. B.L., 1978.

ROBERTS, Norman. (1973) Graduates in academic libraries: a survey of past students of the Postgraduate School of Librarianship and Information Studies, Sheffield University, 1964/65-1970/71. *Journal of Librarianship*, 5(2), April 1973, p97-115.

ROBINSON, Arthur L. (1977) Impact of electronics on employment: productivity and displacement effects. *Science*, 195, March 18th 1977, p1179-1184.

ROGERS, W.A. (1972) In-service training for library automation. IN *Proceedings of the 16th Biennial Conference of the Library Association of Australia, August 1971*. L.A.A. Conference Committee, 1972. p729-728.

ROSENTHAL, Joseph A. (1978) Planning for the catalogs: a managerial perspective. *Journal of Library Automation*, 11, Sept 1978, p192-205.

RUSSELL, Norman J. (1985) Professional and non-professional in libraries: the need for a new relationship. *Journal of Librarianship*, 17(4), October 1985, p293-310.

SALAMAN, Graeme. (1979) *Work organizations: resistance and control*. Longman, 1979.

SALAMAN, Graeme and Kenneth THOMPSON. (Eds) (1973) *People and organisations*. Longman, 1973.

SALMON, Stephen R. (1975) *Library automation systems*. Marcel Dekker, 1975.

SAMUELS, Alan R. and Charles R. McClure. (1982) Towards a theory of library administraion. IN McCLURE, Charles R. and Alan R. SAMUELS. *Strategies for library administration: concepts and approaches*. Libraries Unlimited Inc, 1982. p12-28.

SAUNDERS, John. (1986) The people problem: matching skills, workloads and responsibility. *Assistant Librarian*, 79(2), Feb 1986, p19-23.

SAYLES, LEONARD R. (1958) *Behavior of industrial work groups*. Wiley, 1958.

SCHANCK, Peter C. (1986) Designing enriched jobs in law libraries. *Law Library Journal*, 78, Summer 1986, p375-404.

SCHEIN, Edgar H. (1980) *Organizational psychology*. 3rd Edition. Prentice-Hall, 1980.

SCHERBA, Beverly. (1974) "Terminal illness" for the professional cataloguer? *OLA Bulletin*, 44, July 1974, p30-31.

SCHRAML, Mary L. (1981) The psychological impact of automation on library and office workers. *Special Libraries*, 72(2), April 1981, p149-156.

SEASHORE, Stanley E. (1975) Defining and measuring the quality of working life. IN DAVIS, Louis E., Albert B. CHERNS and Associates. *The quality of working life, Volume 1*. Free Press, 1975. p105-118.

SEILER, John A. (Ed) (1967) *Systems analysis in organizational behavior*. Irwin-Dorsey, 1967.

SELL, R.G. and Patricia SHIPLEY. (Eds) (1979) *Satisfactions in work design: ergonomics and other approaches*. Taylor and Francis, 1979.

SERGEAN, R. (1977) *Librarianship and information work: job characteristics and staffing needs*. B.L., 1977.

SERGEAN, R. and J.R. McKAY. (1974) The description and classification of jobs in librarianship and information work. *Library Association Record*, 76(6), June 1974, p112-115.

SERGEAN, R., J.R. McKAY and Cynthia M. CORKILL. (1976) *The Sheffield Manpower Project: a survey of staffing requirements for librarianship and information work. Final Report*. University of Sheffield Postgraduate School of Librarianship and Information Science, 1976.

SHAUGHNESSY, Thomas W. (1977) Technology and job design in libraries: a sociotechnical systems approach. *Journal of Academic Librarianship*, 3(5), Nov 1977, p269-272.

SHAUGHNESSY, Thomas W. (1978) Redesigning library jobs. *Journal of the American Society for Information Science*, 29(4), July 1978, p187-190.

SHAUGHNESSY, Thomas W. (1982) Technology and the structure of libraries. *Libri*, 32(2), June 1982, p149-155.

SILVERMAN, David. (1970) *The theory of organisations: a sociological framework*. Heinemann, 1970.

SIMON, Herbert A. (1973) Applying information technology to organization design. *Public Administration Review*, 34, May 1973, p268-278.

SIMPSON, Richard L. and Ida Harper SIMPSON. (1969) Women and bureaucracy in the semi-professions. IN ETZIONI, Amitai. (Ed) *The semi-professions and their organization*. Free press, 1969. p196-265.

SLATER, Margaret. (1979) *Career patterns and the occupational image: a study of the library/information field*. Aslib, 1979. (Aslib Occasional Publication, No 23).

SMITH, E. (1971) Service and housekeeping: changing professional and non-professional responsibilities in the academic research library.

IN *Papers delivered at the Indiana University Library Dedication, Oct 9-10, 1970*. Indiana University Library, 1971.

SMITH, G. C. K. and J. L. SCHOFIELD. (1973) A general survey of senior and intermediate staff deployment in university libraries. *Journal of Librarianship*, 5(2), April 1973, p79-96.

SØRENSEN, Børge. (1983) Library automation - its impact on library service, working conditions and employment. *Scandinavian Public Library Quarterly*, 16(1), 1983, p8-13.

SOUDEK, Miluse. (1983) Organizational climate and professional behavior of academic librarians. *Journal of Academic Librarianship*, 8(6), 1983, p334-338.

SPECIAL LIBRARY ASSOCIATION. (1967) *Practical problems of library automation: papers presented at the 1966-1967 meetings*. S. L. A., 1967.

SPYERS-DURAN, Peter. (1979) The effects of automation on organizational change, staffing and human relations in catalog departments. IN GORE, D. et al (Eds). *Requiem for the card catalog*. Aldwych Press, 1979.

STEVENS, Norman D. (1985) Contemporary library management. *Catholic Library World*, 56(8), Mar 1985, p332-334.

STEVENSON, Gordon. (1983) The nature of the problem, if it is a problem. *Reference Librarian*, No. 9, Fall/Winter 1983, p3-7.

STEWART, Linda. (1982) *What do UK librarians dislike about their jobs?* CLAIM, 1982. (CLAIM Report No. 18).

STOUT, Eric Matt. (1981) The human factor in productivity...the next frontier in the office. *Journal of Micrographics*, 14(4), April 1981, p25-31, 34.

THOMAS, P. A. (1971) *Task analysis of library operations*. Aslib, 1971. (Aslib Occasional Publication, No. 8).

THOMAS, P. A. and Valerie A. WARD. (1974) *An analysis of managerial activities in libraries*. Aslib, 1974. (Aslib Occasional Publication, No. 14).

THOMPSON, James. (1982) *The end of libraries*. Bingley, 1982.

THOMPSON, James. (1983) The end of libraries. *Electronic Library*, 1(4), Oct 1983, p245-255.

THOMPSON, Victor A. (1961) *Modern organization*. Alfred A. Knopf, 1961.

TIMPERLEY, Stuart and Dan ONDRACK. (1982) *The humanisation of work*. Armstrong, 1982.

TOMESKI, Edward A. (1974) Job enrichment and the computer: a neglected subject. *Computers and people*, 23(11), 1974, p7-11.

TOOHILL, Barbara G. (1980) *Guide to library automation*. Mitre Corp., 1980.

TREVOR, W. J. (1970) Cataloguers, machines and management. IN *Proceedings of the 17th Biennial Conference of the Library Association of Australia, August 1973*. L. A. A., 1974. p669-676.

UMSTOT, Denis D., Cecil H. BELL Jr. and Terence R. MITCHELL. (1976) Effects of job enrichment and task goals on satisfaction and productivity: implications for job design. *Journal of Applied Psychology*, 61(4), 1976, p379-394.

VAGIANOS, L. (1972) The problem of "noise". *Library Journal*, 97(18), 15th Oct 1972, p3289-3291.

VAUGHN, W. J. and J. D. DUNN. (1974) A study of job satisfaction in six university libraries. *College and Research Libraries*, 35(3), May 1974, p163-177.

VEANER, A. B. (1981) Management and technology. *IFLA Journal*, 7(1), 1981, p32-37.

VEANER, Allen B. (1974) Institutional political and fiscal factors in the development of library automation, 1967-71. *Journal of Library*

*Automation*, 7(1), Mar 1974, p5-25.

VORWERK, R.J. (1970) *The environmental demands and organizational states of two academic libraries.* Ph.D. dissertation. Indiana University, 1970.

VROOM, Victor H. (1964) *Work and motivation.* John Wiley, 1964.

WAHBA, S.P. (1975) Job satisfaction: a comparison between men and women. *College and Research Libraries*, 36(1), Jan 1975, p45-51.

WALKER, Elaine. (1976) OCLC in a university library. *Canadian Library Journal*, 33(2), April 1976, p163-165.

WALTON, Richard E. (1975) Criteria for quality of working life. IN DAVIS, Louis E., Albert B. CHERNS and Associates. *The quality of working life, Volume 1.* Free Press, 1975. p91-104.

WARHEIT, I.A. (1971) When some library systems fail. *Wilson Library Bulletin*, 46(1), Sept 1971, p52-58.

WARWICK, Dennis. (1974) *Bureaucracy.* Longman, 1974.

WATSON, Peter G. (1984) The effect of computers on the future of the librarian. *Technical Services Quarterly*, 1(4), 1984, p61-72.

WEBB, Sylvia P. (1986) *Personal development in information work.* Aslib, 1986.

WEBER, D.C. (1971) Personnel aspects of library automation. *Journal of Library Automation*, 4, March 1971, p27-37.

WEBER, Max. (1948) Bureaucracy. IN *From Max Weber: essays in sociology.* Translated, edited by H.H. Gerth and C. Wright Mills. Routledge & Kegan Paul, 1948 (1970 reprint). p196-244.

WHITE, D.A. and T.D. WILSON. (1984) The relevance of theory and a new approach to library structure. *Libri*, 34(3), Sept 1984, p175-185.

WHITE, Geoff. (1984) *Employee involvement in work redesign.* Work Research Unit, 1984. (WRU Occasional Paper, No. 29).

WHITE, G.C. (1977) *Job design and individual differences.* Work Research Unit, 1977. (WRU Occasional Paper, No. 9).

WILD, R. (1975) Job restructuring, work re-organisation and the engineer. *SSRC Newsletter*, 27th April 1975, p15-16.

WILLS, G and C. OLDMAN. (1977) *The beneficial library: a methodological investigation to identify ways of measuring the benefits provided by libraries.* Cranfield School of Management, 1977. (BLR&D Report, No. 5389).

WILSON, T.D. (1977) Organisation development in library management. IN *Studies in Library Management*, Volume 4. Edited by G. Holroyd. Clive Bingley, 1977. p45-60.

WITTEN, Kathleen R. (1976) *Changes in library staffing patterns and organization in college and university libraries using on-line shared cataloging systems. Report of a project... 1975.* SUNY College at Purchase Library, 1976.

WOODS, R.G. (1982) *Library automation.* B.L.R. & D., 1982.

WOODS, Rollo G. (1986) Library automation in British universities. *Program*, 20(4), Oct 1986, p359-381.

WOODWARD, Joan. (1965) *Industrial organization: theory and practice.* Oxford University Press, 1965.

WYATT, Joe B. (1979) Technology and the library. *College and Research Libraries*, 40(2), March 1979, p120-124.