Special libraries & information bureaux

by Roland Astall

Examination guide series

Clive Bingley

SPECIAL LIBRARIES AND INFORMATION BUREAUX

AN EXAMINATION GUIDEBOOK

BY ROLAND ASTALL ALA
CHIEF LIBRARIAN ENGLISH ELECTRIC CO LTD STAFFORD

CLIVE BINGLEY LONDON

To

MA and CB

FIRST PUBLISHED 1966 BY CLIVE BINGLEY LTD
16 PEMBRIDGE ROAD LONDON W 11
SET IN LINOTYPE 10 ON 12 POINT BASKERVILLE
AND PRINTED IN GREAT BRITAIN
BY THE CENTRAL PRESS (ABERDEEN) LTD

CONTENTS

INTRODUCTION

ALTHOUGH this *Examination guide* has been designed specifically for the eponymous paper of the Library Association final examination, it contains accounts of principle and practice which should be relevant to librarians working in special libraries.

Furthermore, like other books in the same series, this *guide* collates the important bibliographical references to further reading, especially in periodical literature, so that it can additionally be used as a source book of special libraries subject material.

Apart from the references in the text, the student is advised to consider the following texts which are basic to a study of special libraries:

General

W Ashworth (editor) *Handbook of special librarianship and information work* (ASLIB, second edition 1962).

J Burkett (editor) *Special library and information services in the United Kingdom* (Library Association, second edition 1965).

D J Foskett *Information service in libraries* (Crosby Lockwood, 1958).

S Sharp (editor) *Readings in special librarianship* (Scarecrow Press, 1964).

L J Strauss (and others) *Scientific and technical libraries: their organization and administration* (Interscience, 1964).

Does your firm need its own information service? (OECD, 1961).

Modern documentation and information practices (FID publication number 334, 1961).

Setting up your company's technical information service (OECD, 1965).

Materials and equipment

J Burkett & T S Morgan *Special materials in the library* (LA, revised edition 1964),

D E Davinson *Periodicals: a manual of practice for librarians* (Deutsch, second edition 1964).
P Millard *Modern library equipment* (Crosby Lockwood, 1966).

Bibliographies
H Zell & R Machesney *An international bibliography of non-periodical literature on documentation and information* (Robert Maxwell, 1965).
Librarianship and allied subjects (Ealing Public Libraries, third edition 1961—new edition in preparation).

I wish especially to thank David Bagley, chief librarian of the English Electric group central library, for reading the manuscript and for the helpful suggestions which he has made.

ROLAND ASTALL

CHAPTER ONE

HISTORY AND DEVELOPMENT

SPECIAL libraries serve a specialist clientele, located within a single establishment or group, and all engaged in working towards one common purpose.

They are not normally directly available to the general public. The staffs of these special libraries are also members of the groups or bodies which they serve.

The term 'special' embraces commercial, government, industrial, medical, scientific and technical libraries. It includes libraries and information services of research establishments, industrial firms, national libraries with specialist functions (*eg* the National Lending Library) and libraries of learned and professional societies and institutions.

Useful background articles to the history and development of special libraries and information services are to be found in the 1957 edition of *Encyclopedia Britannica*, the fourteenth edition of which also contains more detailed material relating to co-operation and special libraries. A shorter account is given in the 1950 edition of *Chambers's encyclopedia*. This mainly covers history in relation to national and public systems. A section on library history is included in *Encyclopedia of librarianship* edited by T Landau (Bowes & Bowes, second edition 1961).

Libraries have existed from earliest times. In ancient Egypt, Greece and Rome they consisted primarily of privately-established or semi-public collections. Many were obtained or built up from the spoils of war and most were attached to temples or legal houses. They could be described as special libraries insofar as they served a specialist or restricted clientele.

In more modern times, medieval libraries, mainly the property of religious orders and housed in the monasteries, flourished during the middle ages. Many of them were later absorbed into the universities.

Special libraries in the form they are known today, began to

develop at the beginning of the twentieth century in response to the increased pace of scientific and technical achievement.

SCIENTIFIC LIBRARIES

Chapter seven of *Scientific books, libraries and collectors* by J L Thornton and R I J Tully (LA, second edition 1962) gives an account of scientific academies in ancient Greece, many of which had extensive collections of material, and also of a comprehensive collection at Cordova in Spain during the same era; the latter was said to contain more than 400,000 volumes.

In Britain, scientific societies which accumulated libraries flourished from the sixteenth century onwards, and in particular many new societies were founded and grew up in and around London in the late eighteenth and early nineteenth centuries, when scientific enquiry reached one of its most fashionable stages. Some of these foundations were: Royal Institution(1799), Royal Astronomical Society (1825), Chemical Society (1841). In 1883 the Science Museum Library was formed by an amalgamation of Sir Henry de la Bede's collection with that of the Educational Library of the South Kensington Museum and the Museum of Practical Geology in London.

Chapter twelve of Thornton and Tully (*op cit*) covers the origins of the major scientific libraries in Great Britain and the USA, and the book contains a wealth of sources of background material to the history and development of scientific knowledge and communication. See also R Irwin and R Staveley *The libraries of London* (LA, second edition 1961) and H P Spratt *Libraries for scientific research in Europe and America* (Grafton, 1936).

ENGINEERING SOCIETIES

During the nineteenth century when applied technology was becoming recognised as a professional career, the engineering institutions were founded. The Institutions of Civil Engineers (1818) and of Mechanical Engineers (1847) provided collections of papers and other bibliographical material for members. The Institution of Electrical Engineers was established in 1871 as the Society of Telegraph Engineers. Full details of these societies, at home and abroad can be found in J E Holmstrom *Records and research in industrial and engineering science* (Chapman and Hall, third edition 1956).

DSIR AND THE RESEARCH ASSOCIATIONS

In 1920, the British Electrical and Allied Industries Research Association, one of the earliest of the government-sponsored industrial research associations, was set up. Details of the origination of these bodies can be found in Holmstrom (*op cit*) and also in J Burkett *Special library and information services in the United Kingdom* (LA, 1965).

The major development of scientific and other specialised information services came after the creation of the Department of Scientific and Industrial Research in 1916, which was to take over the administration of the National Physical Laboratory and other research stations. DSIR was to make available to as wide a section of industry as possible the results of research and development. Complementing the research associations were the trade development associations *eg* Electrical Development and Zinc Development Associations, set up to educate industry and the general public in the best use of their members' products.

GOVERNMENT DEPARTMENTS

In line with research associations, government departments also realised the need to keep abreast of new developments, particularly those which had military potential. The Ministry of Supply, created in 1939, operated a number of separate establishments, including various experimental bases such as the Chemical Defence Research Department and, later, the atomic energy stations. The latter were taken over by the Atomic Energy Authority in 1954.

Holmstrom (*op cit*) gives a step-by-step account of the chronological development of the British research associations. Burkett (*op cit*) gives a full account of government department library and information services.

TRADE ASSOCIATIONS

Developed in parallel with research associations, for protection and extension of their members' interests, including the evolution of information services. Random examples are British Gear Manufacturers Association, British Chemical Plant Manufacturers Association, Scientific Instrument Manufacturers Association. They have their co-equals in industrial countries throughout the world.

INDUSTRIAL FIRMS

The growth of libraries in industrial concerns gathered pace in the second half of the nineteenth century, side by side with technological advance and technological literature. One of the first to be established was that of Imperial Chemical Industries Dyestuffs Division in the eighteen seventies. D J Foskett *Information service in libraries* (Crosby Lockwood, 1958) pages 1-12 gives a brief outline of the origins of libraries in industrial concerns.

Initially these libraries were attached to research departments and served mainly the research and development staff. It is a comparatively modern development for manufacturing and sales management to utilise the current information services which special libraries can offer. An interesting account of a library intended to serve the needs of research staff is B G Churcher's description of the foundation of the intelligence section at Metropolitan-Vickers (now AEI) following the formation of a research department in 1917, Royal Society *Proceedings* A210 1951 151 and 165. See also Burkett (*op cit*) 216-265 for detailing of industrial libraries according to particular fields of interest.

NATIONAL LIBRARIES WITH SPECIAL FUNCTIONS

Science Library: This was established as one unit in 1883 to serve all departments of the Science Museum, and to act as a national reference institution for the public, together with the provision of scientific literature collections for the various colleges now comprising Imperial College of Science and Technology. J A Chaldecott in *Technical book review* (11) September 1964 8-9 gives a clear picture of the development and functions of the Science Library, up to the time when its lending functions and postal service, inaugurated in 1926, were largely absorbed into the new National Lending Library.

The position of the Science Library in 1955 (at the time of the formation of the NLL) is described by J M Brown in *British communications and electronics* 2 (12) December 1955 66-70.

National Lending Library for Science and Technology (NLL): Founded to provide adequate storage accommodation for the mass of scientific and technical literature produced in the technological revolution after 1945. The committee appointed by the Advisory Council on Scientific Policy, as watchdog over the distribution of scientific and technical information published, made two far-

reaching recommendations: 1 in 1951, that a national reference library of science and invention be created, based on the collections of the Patent Office Library; 2 in 1954, that a national lending library should be set up outside London, having access to postal services and to a high concentration of industry in the north and midlands.

In 1956, DSIR set up a lending library unit at Chester Terrace in London, to organize the planning and administration of the new library. By 1957 a lending service for Russian material had been established. In 1958 a permanent home was found at Boston Spa in Yorkshire, on the site of a Royal Ordnance filling factory. The library, planned for the accommodation of more than fifteen million volumes within one hundred years, was officially opened on November 5 1962.

The NLL is now recognised as one of the most important storage centres in the western hemisphere, particularly for Russian and east European literature. Handling facilities are organised on a continuous production line basis.

The student should be familiar with all aspects of the planning and development of this service. At the time of the official opening numerous articles appeared on the project. Most important of all is D J Urquhart 'The National Lending Library for Science & Technology' *Nature* 196 December 15 1962 1034-1036 and other articles by the same author in *Heating and ventilating engineer* 36 (11) November 1962 389-390 and *Metalworking production* 106 November 7 1962 11. Publications issued by DSIR also indicate the policies and chronological development of the NLL. The aim of the NLL is to acquire all the recent scientific and technological periodicals published anywhere in the world which are susceptible of being abstracted. Stock also includes Russian scientific books published since 1957 and English language volumes published since 1960.

Patent Office Library: The primary function at its inception as a public reference institution in 1855 was to support the workings of the Patent Act, and to function as a medium for the advancement of technology, after the separation of its educational functions, which were absorbed by the South Kensington Museum in 1883. A personal account of the background history of the Patent Office and its library is given by F W Gravell in 'Information—the father of invention' *Library Association record* 67 (7) July 1955

247-253. See also the same author in *The library world* 61 (720) June 1960 249-251.

After the first report of the committee in 1951, the scheme for a national reference library hung fire until September 1958, when the government announced plans to commence building a library in London within five years. The purpose of and policies of the library, which was due to be completed by the end of 1965, are outlined by R S Hutton in *Engineering* 191 May 19 1961 688. A Note in *Nature* 191 (4789) August 12 1961 649 gives a concise account of the functions and probable development of the library. The latest developments are presented in a recent article in *The times* August 10 1965 7.

An interesting possible development is suggested by L Corbett *Library Association record* 67 (5) May 1965 151-156; he would like to see the establishment of a national reference and information centre for science and technology similar to the National Referral Center in the USA.

SPECIAL LIBRARIES AND INFORMATION SERVICES OUTSIDE THE UNITED KINGDOM

Holmstrom (*op cit*) covers in some detail the development of sponsored research associations in commonwealth countries, Europe, Japan, USA and USSR (pages 222-260). The whole issue of *Special libraries* 56 (2) February 1965 was devoted to special libraries and information centres outside North America and includes articles on Europe and USSR. The semi-annual surveys of literature of special librarianship in *Assistant librarian* are also a fruitful source of information.

Europe and USSR: Apart from the sources mentioned, there are three articles on libraries in the USSR which cover historical background. Most comprehensive are 'Libraries in the USSR' *Library Association record* 61 (5) May 1959 111-115 by E Dudley and 'Research, special and technical libraries in the USSR' *Library Association record* 66 (7) July 1964 291-296 by M Poluboyarinov. The former consists mainly of a list of suggested readings and the latter includes statistical tables relating to the development of libraries and their collections. An article by E N Morozov on 'Organisation of a single system of scientific technical libraries in the USSR' *Library Association record* 64 (11) November 1962 415-416 outlines

a plan for the co-ordination of all scientific and technical libraries in the USSR.

Historical background on libraries in pre-war Germany can be found in 'The German library world and its system' *Library Association record* NS5 1927 101-121 by C Balcke.

USA: A T Kruzas *Business and industrial libraries in the United States 1820-1940* (Special Libraries Association, 1965) gives a full background to the development of special libraries in the USA.

One of the largest and most influential of American special libraries is the Engineering Societies Library, founded in 1907 and maintained by four member societies until 1961, when it was absorbed into the United Engineering Center, where it is now supported by twelve societies.

Historical aspects of special library development are covered briefly in 'One of a species: the special library, past, present and future' by P. Wasserman *Library journal* 89 (4) February 1964 797-802.

The National Library of Medicine in Bethseda Maryland is an example of a national library with a specialist function. This grew out of the US Surgeon-General's Library, and is now one of the largest medical libraries in the world. One of its latest developments is the introduction of a computerised information retrieval system, known as MEDLARS—medical literature analysis and retrieval system.

Industrial libraries developed on a comprehensive scale immediately after the second world war, due to the government policy of supporting industrial research by direct grants and contracts. One recent development is the setting up of the President's Science Advisory Committee—the Weinberg committee—which in 1963 published a report entitled 'Science, government and informa tion'.

Commonwealth: In the more advanced commonweath countries —Canada, Australia—library and information services have developed along lines similar to those in the United Kingdom, where the main impetus was the organization of government scientific information services.

In *South Africa* some special libraries existed before 1939, but no development on a large scale occurred until 1945, when the Council for Scientific and Industrial Research was formed.

R Musiker writes on special libraries in South Africa in *Special*

libraries 55 (2) February 1964 92-95. A more detailed article is by R B Zaaiman in *The library world* 64 (755) May 1963 304-312.

Library associations: Associations have played an important part in the development of information services, and the student should be aware of their historical backgrounds. ASLIB, Special Libraries Association, IFLA, FID, and the reference, special and information section of the Library Association should all be particularly noted. Chapter thirteen of the ASLIB *Handbook of special librarianship* provides the necessary information.

The issue of *Special libraries* 55 (7) July-August 1964 was concerned with the fifty-fifth SLA anniversary, and includes much information on the Special Libraries Association and its numerous sections in the USA.

The development of IFLA is well covered in 'Turning point' *Library journal* 89 (20) November 15 1964, 4481-4482, and FID in an article by D J Foskett in the same issue, pages 4478-4480. The development and present status of FID is considered in a pamphlet published with ASLIB *Proceedings* 17 (4) April 1965, and entitled *International Federation for Documentation* (FID).

CHAPTER TWO
SPECIAL LIBRARIES IN THE UNITED KINGDOM

A GENERAL picture of the present position can be obtained from the ASLIB Directory (1957) and the current edition of ASLIB *Yearbook*. Burkett (*op cit*) chapters 1-9 gives information under particular categories. See also *Industrial Research in Britain* (Harrap, fifth edition 1964); Ministry of Defence *Guide to government departments and other library and information bureaux* (sixth edition 1964); *Scientific and learned societies of Great Britain* (Allen & Unwin, sixty first edition 1964); an article by B N Saraf 'Special libraries in the United Kingdom' *Herald of library science* 3 (4) October 1964 314-317.

D Mason writing in *Five years work in librarianship* (LA, 1963) outlines some recent developments and his article can be supplemented by reference to the semi-annual surveys of literature of special librarianship in *Assistant librarian* and to a series of articles on special librarianship currently (1965) appearing as a regular feature in the same journal.

Several regional co-operative organizations (NANTIS, for example) have produced directories of local resources. A similar work is *The libraries of greater Manchester* by H Smith (LA Reference Special & Information section, 1956—new edition in preparation). Also useful for the study of libraries in a particular area is R Irwin and R Staveley *The libraries of London* (LA, second edition 1961).

MINISTRY OF TECHNOLOGY AND GOVERNMENT RESEARCH STATIONS

The organization of the various research stations with their associated library and information services is described in *Technical services for industry* (DSIR, 1964) pages 9-24.

DSIR was officially dissolved in April 1965, although the functions and administration of research stations and government sponsored scientific and technical information services through the Ministry of Technology remain substantially the same. One

exception to this is the NLL, responsibility for which lies with the Department of Education and Science.

The newly created Office for Scientific and Technical Information (OSTI) is described by H T Hookway in *Nature* 207 (4994) July 17 1965 234-236.

The Ministry of Technology is responsible for the fifteen research stations, which cover a wide variety of research in the national interest. These should not be confused with co-operative research associations.

Government research stations are under the direct control of the Ministry, and their staffs are members of the scientific civil service. Three important stations in the general science and technology fields are:

National Engineering Laboratory: This carries out basic and applied research connected with all aspects of mechanical engineering. Results of the work are made known in freely distributed leaflets, articles by staff in the technical press and NEL reports. The laboratory also produces the annual *Heat bibliography* (HMSO).

National Chemical Laboratory: This laboratory is particularly concerned with research into chemical thermodynamics, metallic corrosion and the development and application of new materials and analytical techniques. Results of research are made known mainly in HMSO publications.

National Physical Laboratory: The largest research station of all. It carries out investigations into a wide range of physical phenomena and basic theories connected with all branches of science and engineering. A number of its publications are available through HMSO, and a quarterly list of all papers published, including miscellaneous divisional reports, is sent out free on request. Library services are outlined in a pamphlet published by the laboratory, entitled *NPL library services* (1965).

GOVERNMENT DEPARTMENTS

Most government departments have library or information services, varying in size according to the nature of the department and its comparative need for its own source of information. In addition to the Ministries, both the House of Commons and the House of Lords libraries have extensive legal and parliamentary collections. Principal department libraries are:

Board of Trade Library: One of the most important of minis-

terial libraries, having commercial and economic functions. It includes as a separate unit the Statistics and Market Intelligence Library, which collects all material, especially serials, relating to the statistics of overseas countries, as well as publications from international bodies concerned with statistical information. The Registrar of Companies is also under control of the Board of Trade,

Patent Office Library: Although an independently sited library, the Patent Office is also under control of the Board of Trade. The Library is to provide a nucleus for the projected National Reference Library for Science and Invention (see below). Stock covers all facets of science and applied technology, excluding medicine and natural history. The Library currently subscribes to some 8,000 periodicals, a list of which has recently been issued.

Ministries of Defence and Aviation Libraries: The Ministry of Aviation controls the MOA Central Library in London which acts as headquarters Library, having a stock of more than 40,000 books and pamphlets and more than 1,000 current periodicals, covering all information of interest to the various departments under the Ministry's wing. The Library is a branch of TIL, the Technical Information and Library Services Division, and is concerned only with published information. A large amount of unpublished material, much of it security classified, is handled by other sections of TIL. Access to this information is possible by firms engaged upon Ministry contracts, with their librarian or information officer acting as custodian or reports control officer for any material obtained.

Naval services are co-ordinated through the Naval Scientific and Technical Information Centre, under the Navy Department of the Ministry of Defence. NSTIC is responsible for the information services at many of the specialised research and development establishments of the Navy Department.

Other research establishments, such as the Royal Radar and Royal Aircraft Establishments, have their own library and information facilities. An account of the RAE Library and its services is given by R C Wright *Library Association record* 58 (12) December 1956 464-470.

UK ATOMIC ENERGY AUTHORITY

The UKAEA was born in 1954 out of the Ministry of Supply, to carry

out fundamental research into atomic energy and the applications of nuclear power. Today, the Ministry of Technology may authorise the AEA to carry out scientific research unconnected with nuclear science.

The AEA is a large network, based on five groups. Information services are mainly centred on three establishments: Risley (engineering, production and reactor), Harwell (AERE), Aldermaston (AWRE). A detailed account of the organization, policies and administration of library and information services is given in Burkett (*op cit*) pages 139-179. L J Anthony describes the Harwell library in *Library Association record* 63 (2) February 1961 42-44. A more complete picture is presented in the pamphlet entitled *Guide to the AERE libraries and information services* (AERE, second edition 1962). J R Smith gives an account of the library and information services of the groups centred on Risley in *Library Association record* 67 (9) September 1965 297-301.

The information contained in AEA libraries is not always accessible to other special libraries, because a large proportion of it is security classified or restricted to bona fide contractors.

NATIONALISED UNDERTAKINGS

These are the organizations responsible for coal, electricity, gas and broadcasting.

Central Electricity Generating Board: The Board is one of the largest government controllers of electricity supply systems in the world, and the library and information services are at a crucial stage of development, with a policy of individual dissemination of information now being evolved. The services are based on a central headquarters in London, serving the whole of the system with centralised abstracting and translating services. There are also the Central Electricity Research Laboratories on a site adjacent to the Electrical Research Association at Leatherhead in Surrey, the Berkeley Nuclear Laboratories and the Marchwood Engineering Laboratories. Small libraries and information units are located at regional headquarters and at some of the larger power stations.

The Board's services provide a valuable addition to the sources of information available to manufacturing concerns in the electrical power field.

British Broadcasting Corporation: BBC libraries, including the

libraries at the Television Centre in London are fully described in Burkett (*op cit*) pages 122-128. Students should consider the wide variety of services and facilities required by the BBC *eg* gramophone, general reference, engineering and film libraries.

Commercial television programme contractors have mostly established some form of internal library service. Granada and Associated Rediffusion both have substantial and comprehensive services, the latter including the Weaver-Smith picture collection.

National Coal Board and *Gas Council*: See Burkett (*op cit*) pages 136-138 for concise accounts of the services of both these bodies.

CO-OPERATIVE RESEARCH ASSOCIATIONS AND TRADE DEVELOPMENT ASSOCIATIONS

The CRA's are supported financially by the Ministry of Technology in conjunction with subscription-paying members—mainly industrial organizations for whom most CRA work is done. These library and information services are usually limited to members only, and they are described in *Technical services for industry* (DSIR, 1964).

Each of the associations is concerned with a single industry or manufacturing group, for example British Ceramic, British Iron & Steel, Coal Tar, and Electrical Research Associations. All these maintain information services for the use of members and the organisation of the British Ceramic Research Association, for example, is described in 'Information in ceramics' by A E Dodd ASLIB *Proceedings* 13 (11) November 1961 301-308.

Three of the largest co-operative research associations are the British Iron and Steel, Electrical, and Production Research Associations. Between them they cover some of the most important engineering and technological fields. All have translating services and publish various forms of bibliographical information for members *ie* reports, abstract bulletins, bibliographies etc.

Some are responsible for cover-to-cover translations of Russian periodicals *eg* British Cast Iron Research Association for *Russian castings production* and the Production Engineering Research Association for *Machines and tooling* and *Russian engineering journal.*

Facilities and services offered by the co-operative research associations are similar to each other. Emphasis is always on the provision of a service for members only. For a description of the

British Iron and Steel Industry Research Association's services see the article by J Negus in *Steel and coal* 186 (4931) January 18 1963 118-121.

In line with the co-operative research associations, but with one important difference, are the trade development associations *eg* Aluminium, Copper, Electrical, and Zinc Development Associations. They maintain information bureaux, which are, however, available to the general public. Their aim is to promote the further interest of the public in the various manufacturers whom they represent.

INDUSTRIAL FIRMS

It is difficult to trace any consistent pattern in the organization of library and information services attached to industrial firms. Variations cover both the size and type of firm, and the range of service and facilities.

Some of the most important and comprehensive library services are attached to firms in electronics and new materials applications fields where the industries and their products are constantly expanding and evolving.

Burkett (*op cit*) pages 216-265 describes the organization of industrial library services and groups them by industry or manufacture. He includes with industrial firms the CRA's and societies connected with each industry.

Many of the better and most comprehensive library and information services and facilities have grown up through the amalgamation of smaller firms into industrial groups, and it is because of the size and structure of the groups that the need has developed for full control of technical information, resulting very often in centralisation of group library services with branches regionalised by geographical area or manufacturing activity.

For accounts of some of the services of industrial firms see the following articles: H R Cox and J S Rippon ' Information as aid to productivity ' *Manager* 31 (11) November 1963 29-33 (Metal Box Co Ltd); R Hindson ' The dissemination of published information to the executives of a major steel group ' ASLIB *Proceedings* 17 (1) January 1965 8-20 (Colvilles); B C Burrows ' The information and library section of Association Engineering Ltd (Group research and development) ' *Library Association record* 66 (5) May 1964 209-211 (Associated Engineering Ltd); B M Dent and J S P Paton ' The

library and information service of The Metropolitan-Vickers Electrical Co Ltd ' *Manchester Review* 4 Autumn 1946 236-238 (Metropolitan-Vickers Electrical Co Ltd). There is an undated ICI publication entitled *The libraries of ICI dyestuffs division*; these libraries are also briefly described by R Brightman in *Manchester review* (*op cit*) 232-235 and R T Bottle *Use of the chemical literature* (Butterworth, 1962) is also helpful.

COMMERCIAL ORGANIZATIONS

Students should concern themselves with the libraries and information services attaching to commercial organizations insofar as they may differ from those of industrial firms owing to different commercial needs. This mainly applies to newspapers and specific services such as management consultancy.

Large newspaper organizations, especially the national press, have extensive library facilities, based on past reported matter and occurrences, but including a wide range of general reference material geared to provide current information needed to support news or feature stories. An important reference here is G Whatmore *News information* (Crosby Lockwood, 1964) which gives a full account of techniques, requirements and administration.

The growth of information services to meet general management consultancy demands in the fields of business management and operational research is well illustrated in the article by D A Hook about the library of Urwick, Orr and Partners *Library Association record* 60 (9) September 1958 278-280.

For an account of a translating and abstracting service, see J E Pemberton in *North western newsletter* 56 March 1959 1.

SOCIETIES AND INSTITUTIONS

A number of professional and scientific societies maintain library and information services for their members. They may also be willing to provide these facilities for non-members under certain conditions. Many of these societies elect not to provide any service for non-members, beyond answering telephone enquiries or requests for specific information. The Engineering Institution's Joint Council service, with thirteen member libraries, is available to members of any of the institutions comprising the Council. A large proportion of the income of these types of libraries comes from members' subscriptions; thus services differ accordingly with the wealth of the society or institution.

The Library of the Chemical Society is probably one of the finest chemical collections in the world. All of its facilities are available, on payment of an annual subscription, for the use of corporate organizations. This Library is described in *Chemistry in Britain* 1 (1) January 1965.

Medical libraries in the UK are covered in *Directory of medical libraries in the British Isles* (LA, second edition 1965) and in L T Morton *How to use a medical library* (Heinemann, fourth edition 1964). See also 'Medical libraries' by W J Bishop *Medical Libraries Association bulletin* 38 1950 296-311.

Examples of the working of other institutional libraries are described in: BSI *News* (1) January 1964 9 (British Standards Institution Library); R E Watson 'The library of the Royal Agricultural Society of England' *Library Association record* 59 (4) April 1957 134-135 (Royal Agricultural Society); M I Webb 'The library of the Chartered Institute of Secretaries' *Library Association record* 58 (6) June 1956 224-227 (Chartered Institute of Secretaries).

NATIONAL LIBRARIES WITH SPECIAL FUNCTIONS

These are libraries which were set up as national institutions, but with particular emphasis on one specialised function.

National Lending Library for Science and Technology: Development of the NLL (out of the Science Museum collection) is described in Burkett (*op cit*) chapter one, together with details of the collection policy.

The basis of policy is that the NLL acts as a 'mail order' house for scientific and technical literature, rather than as a library in the accepted sense. The NLL at present subscribes to 20,000 periodicals and stock includes Russian scientific texts published since 1957 and English language titles published since 1960. US government reports and translations of Russian material are provided.

There is some controversy over whether the NLL should conduct bibliographical searches, rather than supply only material requested.

Photocopying services are available and a large number of organizations may borrow direct. The service is for organizations, not individuals, although the public has access to the collection through public libraries, which act as agents for the NLL.

References are: *National lending library* (DSIR, 1962); 'The

National Lending Library of Science and Technology: an editorial comment' *Library Association record* 64 (12) December 1962 452-454; D J Urquhart 'Plain man's guide to the National Lending Library for Science and Technology *Library Association record* 64 (9) September 1962 319-322.

Science Library: This Library supports the services of the NLL and is still one of the principal scientific reference libraries in London. Full details of its services are given in 'The Science Library' by J A Chaldecott *Technical book review* (11) September 1964 8-9.

National Reference Library for Science and Invention: The Library is intended to complement the services of the NLL, and to provide a national reference centre in London, based on the collections of the Patent Office Library. The project was intended for commencement in 1963 and completion in 1965, but has still not been put into effect at the time of writing. An article in *The times* August 10 1965 7 discusses postponements and delays over the project. User research for the library is described by Sir Frank Francis in *Nature* 194 April 14 1962 126, and the urgent need to complete the project is pointed by R S Hutton in *Engineering* 191 May 19 1961 688.

National Central Library: Students should take particular cognisance of proposals for a national lending service for the humanities, as described by D J Richnell in *Journal of documentation* 17 (4) December 1961 197-214.

CHAPTER THREE: SPECIAL LIBRARIES OUTSIDE THE UNITED KINGDOM

STUDENTS are required to concentrate especially on Europe and the USA.

Many countries now publish national directories to sources of scientific and technical information, although not always to humanities or social sciences material. *National technical information services: a world-wide directory* (FID publication number 359, 1964) lists one major source in each country whereby technical information may be located by an enquirer not familiar with that country's technical facilities. See also *World guide to science information and documentation services* (UNESCO, 1965) which is to be followed, in 1966, by *World guide to technical information and documentation services. Guide to European sources of technical information* (OECD, revised edition 1965) provides a more comprehensive list of European sources.

Library science abstracts is also a fruitful second-hand source of information on special libraries overseas.

Medical libraries overseas were covered in a series of seven articles which appeared in *Libri* 3 1954, dealing with Argentine, India, Japan, Mexico, New Zealand, Nigeria and Norway.

USSR

A comparison between the organization of scientific information in Russia and the USA appears in an article by T Kridler and G Simpson in *International science and technology* (30) June 1964 100-104. The article includes parallel charts of the Soviet and American scientific information networks, and concludes that although organization in the two countries differs in numbers of departments and terms used, it nevertheless runs on similar lines.

National co-ordination of all scientific and technical information, documentation and library services in the USSR is conducted on a national basis under government control and supported by government subsidies. The introduction of a nationally organized

system is described by E N Morozovz in *Library Association record* 64 (11) November 1962 415-416.

Libraries are valued as essential stepping stones in the progress of scientific achievement, and also as useful propaganda tools. Their work is fairly well documented. Essential reading is *Scientific and technical information in the Soviet Union: report of the DSIR-ASLIB delegation to Moscow and Leningrad June 7-24 1963* (DSIR, 1964). A personal report on the same visit is given by W R Francis in ASLIB *Proceedings* 15 (12) December 1963 364-373.

National libraries and public institutes, each covering a selected field, abound in the USSR. G Matveya 'Special research libraries of the USSR' *Special libraries* 56 (2) February 1965 107-108 gives a condensed version of a paper presented to IFLA in Rome in 1964, containing numerous facts and figures concerning libraries in the USSR.

As far as Russian publications are concerned, each national special library (*eg* the Central Research Agricultural Library, the Institute of Information of Patents and Inventions) contains an exhaustive collection of material in its own chosen field, with one copy of every publication being deposited therein. In the appendices to *Scientific and technical information in the Soviet Union* (*op cit*) the organization and functions of some of these specialist collections and centres are outlined, *eg* the Central Bureau of Scientific and Technical Information of the Moscow Regional Economic Council, and the Institute of Information of Patents and Inventions.

Industrial libraries play a great part in the technical life of the USSR. The industrial system is based on large 'economic units'. All units are obliged to provide library facilities for their personnel. Unit libraries are closely linked with regional central libraries for industry, such as the Central Scientific and Technical Library of the Economic Council of Leningrad. Regional central libraries not only provide services comparable with the technical departments of large public libraries in the United Kingdom, but may also act as training and advisory centres for librarians of industrial units within the region, and purchase all of the periodicals and foreign publications required for use in industrial units. *Scientific and technical information in the Soviet Union* includes details of libraries of the First State Ball Bearing Plant in Moscow,

the Synthetic and Artificial Fibres Combine in Klim and the Neviskii Engineering Plant in Leningrad.

Additional references which may be helpful are: M J Ruggles and R C Swank *Soviet libraries and librarianship* (ALA, 1962); O S Cubar'Jan 'Technical libraries in the USSR' UNESCO *Bulletin for libraries* 18 September-October 1964 224-229 & 242; E Dudley 'Libraries in the USSR' *Library Association record* 61 (5) May 1959 111-115; P L Horecky *Libraries and bibliographical centres in the Soviet Union* (Indiana University Press, 1959); F L Khmara 'Medical libraries in the Ukrainian SSR' UNESCO *Bulletin for libraries* 19 January-February 1965 39-43; M Polubcyannov 'Research special and technical libraries in the USSR' *Library Association record* 66 (7) July 1964 291-296; A Thompson 'Report on special library work in the USSR' ASLIB *Proceedings* 12 (6) June 1960 219-228; T J Whitby 'Libraries and bibliographical projects in the Communist bloc' *Library quarterly* 28 (4) October 1958 277-294.

It is difficult to glean much information about other east European countries which is not in the original language of the country concerned. A personal 'off-beat' account of libraries in Yugoslavia is 'American in a fez: technical information in Yugoslavia' by E Bromberg *Special libraries* 56 (7) July-August 1965 375-378. For 'Some impressions of Hungarian libraries' see F R Taylor *Library Association record* 67 (10) October 1965 350-358.

EUROPE

In ASLIB *Proceedings* 14 (1) January 1962 5-10, W Ashworth gives personal opinions of the European Productivity Information Mission, which visited twenty three firms and institutes in the UK, Denmark, Netherlands, Germany and France over a period of ten days in November 1960.

The whole issue of *Special libraries* 56 (2) February 1965 is mainly devoted to special libraries and information centres outside the USA, and it includes an account of two scientific information centres which are devoted entirely to material not comprehensively covered elsewhere. The European Translation Centre at Delft is concerned with east European scientific and technical literature in translation. It acts as a central agency for the sixteen existing national translation centres. This Centre is

also described by G A Hamel in UNESCO *Bulletin for libraries* 18 (2) March-April 1964 73-83.

The International Document Centre in Sweden is responsible for microfilming books and periodicals, both out of print and currently available, to order, and for any foreseeable demand.

A simple light-duty reader has been produced by the Centre which sells at just under £50.

In the issue of *Special libraries* cited above, J Bogardus describes the Paris library of OECD under the title 'A library for economic development', and B V Tell describes the library of AB Atomenergie, the Swedish counterpart of the UKAEA.

The organization and functions of two large library and documentation services in Germany are covered by two recent articles. W Michalski describes the work of the Hamburg Institute for International Economics in ASLIB *Proceedings* 17 (3) March 1965 83-87. An article in *The times* July 8 1965 entitled 'Hanover's laboratory of knowledge' discusses the recently established technical information library with its emphasis on material from Russia and other east European countries.

USA

A perusal of *Directory of special libraries* (Special Libraries Association, 1953) shows the variety and number of organizations in the USA which maintain library and information services.

There are at present more than 5,000 company libraries. *Special libraries,* the official organ of the Special Libraries Association, is the most fruitful source of reference on the organization and functions of individual libraries within the USA, and on libraries and services appertaining to one particular field of knowledge, or covering one kind of business or industrial community. For information on scientific and technical fields, an 'umbrella' term, embracing aerospace, chemistry, engineering, nuclear science, paper and textiles, petroleum, pharmaceutical and public utilities, there is *Sci-tech News,* the official bulletin of the Special Libraries Association, Science-Technology Division.

H S Sharp *Readings in special librarianship* (Scarecrow Press, 1963) gives accounts of various special library and information services in the USA, mainly business libraries. He also describes the Engineering Societies Library in New York and the Franklin Institute Library. The former, now one of the largest in its field, has

a present stock of 180,000 volumes and 3,400 periodicals currently being received. Sharp also considers (pages 574-637) the future of library science and the shape of libraries to come.

Special libraries 55 (5) May-June 1964 is devoted to libraries and librarianship in advertising, marketing and communications media.

G L Annan covers 'Medical librarianship in the United States: resources and trends' *Medical Libraries Association bulletin* 50 1962 149-158. The National Library of Medicine has issued its own descriptive publication *Facts about the National Library of Medicine* (1965), which discusses aims, history, collections and MEDLARS. The latter is also described in an article in *Data processing* 7 (1) January-February 1965 58-60.

One of the most far-reaching events in documentation in the USA is the creation of the National Referral Center for Science and Technology at the Library of Congress.

The purpose of the Center is to act as a clearinghouse and to provide access to national resources of scientific and technical information. A comprehensive account of the Center's structure and organization is given by M W McFarland in ASLIB *Proceedings* 16 (8) August 1964 258-268, and the chief of the Center, J F Stearns, presents an account of the first year's work in *Special libraries* 55 (1) January 1964 20-23.

Development towards a fully co-ordinated national bibliographical and documentation service, in the fields of science and technology, is being considered by the President's Committee on Scientific and Technical Information. The President's special assistant has called for the creation of a National Library of Science System, revolving around a computer-based pool of all scientific literature and a comprehensive distribution network. Further details of the proposals are given in *Special libraries* 55 (7) September 1964 518.

The student should also be aware of the Clearinghouse for Federal Scientific and Technical Information at Springfield, Virginia, which has taken over the duties of the Office of Technical Services and expanded the service, to provide for the dissemination of scientific and technical information on a national basis.

COMMONWEALTH

Periodicals which provide direct source references of information

on special libraries in commonwealth countries are: *Australian library journal, Canadian library, Herald of library science* (India), *New Zealand libraries, South African libraries* (South Africa is not a member of the Commonwealth), UNESCO *Bulletin for libraries.*

S R Simpson describes some Australian special libraries in ' Medical libraries in New South Wales ' *Australian library journal* 13 (4) December 1964 199-208. Yet others are described in the same issue under the title ' New libraries for a new age '.

P Kruse in ' Tea brings books to Ceylon ' *Special libraries* 56 (2) February 1965 112-116 gives an overall picture of special library development in Ceylon, covering libraries of research institutions, government departments and other specialist organizations.

The Indian Institute of Science Library is described by G Habell in *Assistant librarian* 58 (8) August 1965 150-152.

Information services provided through the various departments of the South African Council for Scientific and Industrial Research are described in the Council's publication *Information for industry: a study in communications* by J. Grant (1964). R Musiker gives a general account of the development and organization of special libraries in South Africa, built up from numerous cited sources, in *Special libraries* 55 (2) February 1964 92-95.

CHAPTER FOUR: GOVERNMENT AND ADMINISTRATION

THERE are a number of general readings under this heading which are of particular value for background information: R L Collison *Information services: their organization and administration* (Clarke, 1950); D J Foskett *Information service in libraries* (Crosby Lockwood, 1958); L J Strauss (and others) *Scientific and technical libraries: their organization and administration* (Wiley, 1964).

H S Sharp *Readings in special librarianship* (Scarecrow Press, 1963) has already been cited as an anthology of some of the best American and Canadian writings, and it is particularly comprehensive on policy, planning and administration. ASLIB *Handbook* concentrates on technique and practical aspects of special librarianship. Burkett (*op cit*) should be read.

The criterion for special library service is whether an organization can do without it—not whether it can be afforded. Industrial management is sometimes difficult to convince that the library is essential to operations and not a luxury which benefits only a few people. Although themselves non-productive in the trading sense, the library and information service today are vital parts of a firm's equipment for profitable operation. Their job is to feed, and even anticipate, the needs and the knowledge of research and technical staff and to ensure that the sales department also is kept up to date about potential contracts, customers and competitors. Many industrial libraries tend to neglect their sales departments, because it is not always easy to deploy valuable staff time or to stretch limited finance and facilities over or beyond an entire organization.

But the library is the central information point in the organization. It acts as a filter for the flood of information coming in. It reduces duplication of research effort and it directs specific material to staff who need or can use it. The library is an active and dynamic part of the firm.

A qualified librarian or information officer is essential, and

K G B Bakewell 'Creating a company library' *Manager* 31 (7) July 1963 27-29 shows how both can work together in complementary fashion.

In the past, industrial libraries in the UK have often tended to appoint qualified staff only after the 'library' has been operating (haphazardly) for some time. Under pressure from ASLIB and the Library Association, the need for a qualified librarian at the initial stages of special library planning is now coming to be more widely recognised.

For the library to be recognised as an integral and functional part of the organization, it is essential that the librarian and/or information officer be given adequate status in line with other heads of departments and that he be directly responsible to the chief engineer, or research or administration manager, depending upon the main functions of the service and areas of personnel served. The head of the service should be able to talk to the hierarchy at their level. Where circumstances and conditions permit, the library service should be available to all personnel from the chairman to trainees.

The service should not have to function directly through a committee. An advisory or steering committee, with members representative of all groups of users, can give useful advice on future planning and policy, with direct knowledge of the future needs and development of the organization. By having regular meetings with such a committee, the librarian maintains personal contact with a representative cross-section of users. Public relations is still one of the most important aspects of a special librarian's work. The service must be 'sold' to readers and the head of the section should make time to find out about readers' interests and information needs.

Foskett (*op cit*) chapter two considers the role of the information officer. Strauss (*op cit*) pages 4-21 describes the main functions, organizational status and planning for the establishment of a scientific-technical library and gives ten variations on designations for the word 'library' within the scientific and technical field.

A M Rees, in a paper given at the annual meeting of the American Documentation Institute in October 1963, defined an information centre as 'the incarnation of the invisible college, in that it attempts to formalize the informal exchange of information among a closed set of users'. R R Shaw, writing in *Research*

management 7 (6) November 1962 485-492 describes a special library as a collection of ' canned experts '. J E Wright in chapter one of ASLIB *Handbook of special librarianship* (second edition 1962) gives a very brief outline of the functions of a special library and information service, and in chapter two B R F Kyle discusses various aspects of administration. S Mohlenbrock UNESCO *Bulletin for libraries* 16 (1) January-February 1962 29-34 discusses efficient library administration. The position of the library and information service in industrial organizations and the importance of the librarian or information officer is pointed out by R Sewell in ' The place of the library and information service within an organization: what management should expect to get from the service ', a paper given to the joint BIM/ASLIB conference in 1961 and published as *New technical libraries in industrial organizations* (BIM, 1961).

Essential reading on the value of an information service and the policy problems involved are the two OECD pamphlets *Does your firm need its own information service?* (1961) and *Setting up your company's technical information service* (1965). The former resulted from a study carried out by C W Hanson and M Slater of ASLIB and contains appendices showing case histories to illustrate positive benefits deriving from an information service and the negative effects of lack of information.

The second pamphlet is a follow-up to the earlier publication which presumes that managers have evaluated and analysed the evidence in favour of an information service and now want to know how to set about creating one. This also contains case studies, which give an overall picture of how various organizations operate their information services. Both pamphlets contain useful bibliographies.

The role of the librarian as manager is dealt with in ' Creative organization: the librarian as manager ', a report of two joint sessions held at SLA's fifty fifth convention in 1964, *Special libraries* 55 (10) October 1964 548-558. R R Shaw in ' Face its norm ' *American documentation* 16 (2) April 1965 77-80 discusses the importance of and tasks facing information centres, and attempts to differentiate between librarians and information scientists. D A Redmond provides a ' Brief guide to the organization and operation of small technical libraries ' UNESCO *Bulletin for libraries* 18 (2) March-April 1964 49-79. Although intended for newly

developing countries and based on American college library practice, the paper is succinct and has a comprehensive bibliography.

During the British National Productivity Year (1962-3), much effort was devoted to showing how library and information services in industrial organizations aided productivity through awareness of new developments and techniques. H R Cox and J S Rippon 'Information—an aid to productivity' *Manager* 31 (11) November 1963 29-33 outlined some of the problems to be tackled in the communication of information. 'Library services as an aid to productivity' was the theme of an ASLIB northern branch conference in November 1962 and a midlands branch conference held in December 1962. Summaries of papers given at both conferences appear in ASLIB *Proceedings* 15 (3) March 1963 75-83.

The most important factors to be considered when programming the organization and development of the library and information services are users' needs. Too many services are set up with insufficient research into these. *Technical libraries, users and their demands* (ASLIB, 1964) is a classified analysis of the results of a questionnaire sent to many types of technical libraries, including academic libraries. From the survey has come much information about the part played by library and librarian in the chain of communication stretching from required information to user. The survey throws light on the relative importance of the library to its parent organization, and should be read in conjunction with C W Hanson 'Research on users' needs: where is it getting us?' ASLIB *Proceedings* 16 (2) February 1964 64-68 and D J Campbell *Survey of information/library units in industrial and commercial organizations* (ASLIB, 1960).

Consider also the problems of users' needs within specialist groups of scientific and technical fields of enquiry. A recent discussion held at the Institution of Mechanical Engineers on 'Keeping the engineer up to date and finding information', reported in *Chartered mechanical engineer* 12 (4) April 1965 211-214, illustrates the type or form of material which the engineer is likely to need.

Problems of users' needs in electronics are analysed in N Calder's description of a survey carried out for DSIR *What they read and why* (HMSO, 1959).

D A Kronick writes in *Medical Libraries Association bulletin*

52 (4) October 1964 652-669 about information requests in a medical library.

A paper which should be noted is D J Foskett ' Readers' needs in industrial libraries ' *Library Association record* 59 (11) November 1957 353-358 but reprinted in the same author's *Science, humanism and libraries* (Crosby Lockwood, 1964). Also to be noted is I H Hogg and J R Smith ' Information and literature use in a research and development organization ' *Proceedings of the international conference on scientific and technical information Washington 1958* volume one page 131.

POLICY

Once the idea of a library and/or information service has been firmly established and agreed upon, the next step is to decide a definite policy for the organization and administration of the system. What is to be the prime concern of the service, in view of the groups of personnel employed? Information can be obtained from surveys and analysis of readers' needs.

Is the service to be part of a larger group communication and information network? Many large establishments in industry are part of much larger groups. Individual libraries may only act as branches, with a central library situated at group headquarters. Even within an individual establishment there may be branch libraries. This very often happens in large government establishments *eg* United Kingdom Atomic Energy Authority, and may occur in industrial organizations such as English Electric, where at one of the large factories within the group there are a number of product divisions, each with its own library and information service.

There is justification for segmentation under certain circumstances, *eg* difficulty of access to the main library; specialist staff grouped in one composition department; for collections of material within sections, such as the chemical laboratories etc.

Segmentation creates a need for duplication of certain sections of the stock. The overall policy for the organization of the service must be decided according to local circumstances. A certain amount of flexibility, within the lines laid down, is necessary in order to provide for any additional requirements, and, particularly in industrial libraries, for reorganization and changes in company policy. D V Arnold 'An industrial information service:

the effects of growth on its organization and administration' ASLIB *Proceedings* 16 (8) August 1964 234-245 considers some of the problems, according to the type and nature of the personnel the service is designed to serve. J R Stocks presents some theoretical aspects of organizational relationships between central and sectional units in ASLIB *Proceedings* 14 (12) December 1962 454-463, and A H Holloway on pages 464-472 of the same issue gives some practical examples of centralization in large organizations.

TYPES OF MATERIAL

What services are to be provided, what forms of material are required?

Information may come in many shapes and sizes, ranging over books, periodicals, pamphlets, reports, translations, correspondence, standards, patents, papers, trade catalogues, news cuttings, maps, films, photographs, slides, microforms, and even gramophone records and tape recordings.

I G Ross considers material from several groups which needs to be collated for a particular purpose or for specialist staff—in this case the provision of economic information for management—in ASLIB *Proceedings* 17 (7) July 1965 217-227.

Collections invariably begin with books and periodicals, but the development of any information service involves the creation of special services handled by specialist staff for such things as abstracting, literature searching and translating. Photocopying is a vital service, and one which raises questions of copyright. In this context see the recent joint publication by the Society of Authors and the Publishers Association *Photocopying and the law* (1965). Two other discussions of this problem are 'Photographic reproduction and copyright' UNESCO *Bulletin for libraries* 17 (4) July-August 1963 224-241, and 'The photographic reproduction of protected works by or on behalf of libraries, documentation centres and scientific missions' UNESCO *Copyright bulletin* 17 1964 31-68.

The OECD pamphlet *Setting up your company's technical information service* lists (page 31) thirteen basic information materials.

The general conditions under which the library operates should be laid down *eg* hours of opening, conditions of loan,

conditions of readership etc. As actual working hours in industry grow less, librarians may be faced with the problem of whether to open the libraries outside these hours. In some industries, for example, Friday afternoon working for staff ceases officially at 4 pm.

Conditions of operation of the service should be written down and made available to all library staff. These conditions should have flexibility. The librarian may be faced with a problem of the chief engineer requiring a ' reference only ' book for use outside the confines of the library. This sort of problem has to be decided on its merits, as and when it occurs. Certain additional conditions, providing for the security of classified documents, may also be necessary in a library which handles such material.

FINANCE AND BUDGETING

Government department and government sponsored establishment libraries operate on annual budgets.

Libraries attached to scientific societies and institutions generally have a fixed budget.

Industrial libraries may have an annual budget, or in many cases may not have a ' known ' budget at all.

Where libraries are attached to research departments, their costs in relation to the total costs of research and development programmes may be too small to allocate separately.

Comparative costs are difficult to establish with accuracy. Properly controlled budgeting is obviously necessary and ASLIB *Handbook of special librarianship* (*op cit*) pages 22-25 shows the factors to be taken into account before establishing a budget. Sharp (*op cit*) gives some useful advice on budgeting, although the figures quoted are generally higher than are available to librarians in the UK. Strauss (*op cit*) devotes the whole of chapter three to budgeting and operation costs, giving useful budget comparisons, especially for staff.

D J Campbell (*op cit*) includes a tabulation of costs and expenditure in his survey, and appendix three of the 1961 OECD pamphlet already cited presents useful data under the heading 'Average annual expenditure on documents per member of the technical staff ', compiled from three surveys published in UK and USA. Appendix one of the other (1965) OECD pamphlet cited contains case studies with details of costs and expenditure.

Accepted levels of budgeting for special libraries in the USA are also detailed in 'Objectives and standards for special libraries' *Special libraries* 55 (10) December 1964 672-680. *New technical libraries in industrial organizations* (*op cit*) includes a paper by D V Arnold entitled 'Siting, planning and costing of industrial libraries'. Mr Arnold estimates that a modest technical library serving a professional staff of 150 can be established at a cost of just over £5,000. The estimate was, of course, given in 1961. The cost of maintaining the service is difficult to assess, even roughly, for, as Arnold shows, costs can vary enormously between companies. They are particularly subject to increase during the early years because of snowballing demands on the new service and consequent extensions of scope. D A Redmond 'Small technical libraries' UNESCO *Bulletin for libraries* 18 (2) March-April 1964 49-79 estimates that if prices of technical books average £5, then in a company or research organization the library should cost between two and five percent of the total research budget. J Binns 'Guide to equipping and staffing of industrial libraries' ASLIB *Proceedings* 9 (1) January 1957 12-28 also provides information on costing, some of which is still relevant to present day values.

ADMINISTRATIVE ROUTINES

Administrative routines should be assessed and programmed. Each special library has its own problems peculiar to that organization, and all administrative systems must be tailored to its needs. Many routines may be suitably adapted from those used in public library systems. There are no standard routines as such in special libraries; each system differs according to the nature and needs of the organization.

A staff manual, containing details of all routine procedures should be produced and made available to all new staff. This method of setting out procedures is preferable to that of 'sitting by Nellie'. It might be better to delay any 'write-ups' for at least twelve months. This will enable any needed changes, due to handicaps or inherent disadvantages of certain systems, to be made *eg* in book ordering, charging, circulation etc.

Staff responsible for carrying out and developing routines could write-up their own procedures, once they have established their own best methods. These can then be vetted and adjusted by the chief where necessary. Manuals of routine procedures are very

often neglected in special libraries, although in public libraries they are generally the rule, rather than the exception. A properly organized staff manual would obviate the need for extensive retraining of new junior and semi-professional staff. This can be a continuing problem because of the rapid turnover of female staff. Pages 18-19 of ASLIB *Handbook of special librarianship* state the need for and advantages of a staff manual.

Routine procedures are outlined by A J Walford in ASLIB *Handbook of special librarianship* (*op cit*) chapter eight, and chapter nine of Strauss (*op cit*) deals more briefly with them under the title 'Administration of readers' services'. G D Anderson, writing in *Special libraries* 15 (7) July-August 1954 245-249 is concerned with short cuts and simplified procedures. R Narain in *Indian librarian* 17 (1) June 1962 33-43 deals at length with the circulation of periodicals.

The pros and cons of circulation are the subject of a paper given at an ASLIB symposium on practical aspects of special library work by H Thornton in Sheffield in 1958, and summarized in ASLIB *Proceedings* 11 (4) April 1959 106-107.

PUBLIC RELATIONS

Personal communication between library staff and users is one of the most important considerations in the establishment of a successful service. It is the librarian's job to go out and meet his users, to estimate and determine their needs, and by anticipating them to secure their confidence in the value of the library service. Public relations should be carried out continuously.

The subject is dealt with briefly in chapter two of the ASLIB *Handbook* (*op cit*) and in much more detail in chapter twelve of Strauss (*op cit*). There public relations is defined and its exploitation considered. Strauss also gives a 'checklist of media and techniques for public relations activities in special libraries'.

'Selling library services to commerce and industry' was the main theme of the Reference, Special and Information section of the Library Association conference held in 1965, the proceedings of which are due for publication shortly by the Library Association. See especially, when they appear, the papers by J W Marshall and B J Sants.

Education of the user has been overlooked in most special libraries, although in a number of technical colleges it now forms

part of the curriculum. Theoretically, the organization of an educational course for users of special libraries does not present any great problems. Practical reasons make it difficult to carry out. There is no large influx of personnel at any one time, except possibly in industry, where graduates and other trainees are brought into the organization en bloc.

At least one industrial library includes a lecture on the library and information service as part of their initiation course. At recent RSIS conferences, a number of delegates have expressed the desire to see more education courses for users. A course carried out at Hatfield College of Technology, and which could provide the basis for a similar course within large organizations maintaining special libraries and information services, is described by R J P Carey in *Library Association record* 66 (1) January 1964 14-20. D J Foskett in chapter eight of *Information service in libraries* (*op cit*) deals with user education, and cites two articles of his own on this subject.

SYSTEMS ANALYSIS

Due to the ever increasing need to streamline procedure, in order to keep costs at a minimum and to provide the best possible service with the least number of staff, it is necessary to carry out organization and methods type studies on various aspects of the service, especially routine procedures. Systems analysis provides information for any future redevelopment of the service or techniques. Reports and statistics should be kept to a minimum, and only provided if they serve a useful purpose.

Consider spot checks for loan statistics etc, rather than having to record the information continuously over a twelve-month period. Surveys of external borrowings, for example, may provide the requisite information to enable reorganization of the periodicals holding to be carried out successfully. Published references to O and M, systems analysis etc are available. The student should make an effort to see those listed below.

General references are: F N Hogg (and others) *A report on a survey made of book charging systems at present in use in England* (LA, 1961); E H E Jones 'O & M in the special library' ASLIB *Proceedings* 16 (9) September 1964 279-282; M Morelock and F F Leimkuhler 'Library operations research and systems engineering studies' *College and research libraries* 26 (6) November 1964 501-

503; L Pratt 'Analysis of library systems: a bibliography' *Special libraries* 55 (10) December 1964 688-695. This comprises references which have appeared in *Special libraries* between 1960 and September 1964; G E Randall 'Special library standards, statistics and performance evaluation' *Special libraries* 56 (6) July-August 1965 379-386.

References on mechanization are: C P Bourne *Methods of information handling* (Wiley, 1963); H Fast and J Murtyn 'Current developments in the dissemination of information' *Institute of Physics bulletin* 16 (7) July 1965 272-277; D R Swanson 'The education of a catalyst' *Special libraries* 55 (8) October 1964 543-547—aimed at persuading the librarian to analyse advanced automatic and semi-automatic systems at present under development in relation to special library methods; R C M Barnes *The present state of information retrieval by computer* (UKAEA Research Group Harwell, 1964); S P White and J Walsh 'A computer library's approach to information retrieval' *Special libraries* 54 (6) July-August 1963 343-345, a feasibility study to decide which operations could be mechanized; from the results, two usual applications, preparation of a book catalogue and a permuted title index to periodicals, were modified. A book stock of 9,000 volumes and current stock of 400 periodical titles were considered too small to warrant mechanization.

One reference on the use of stock is: P M Strain 'The circulation pattern of one technical library' *Special libraries* 56 (5) May-June 1965 312-317. Circulation in this case refers to any library materials out on loan *ie* any non-reference use of material.

CHAPTER FIVE: BUILDINGS, SITING AND EQUIPMENT

ONCE the overall policy of the service and its organization have been decided upon, a suitable home and location are now required. Information from surveys and assessment of users' needs should help towards the functional planning of a home for the library and providing a suitable site. The main points to bear in mind are the primary needs and requirements of users and the fact that service and stock will expand fairly rapidly during the first five years and tend to level off after ten years.

Siting of the library is a very important factor to be considered. It should be directly accessible to the highest concentration of users. A central situation, in relation to the whole of the site to be served, should be found for the library if possible. The library should be located on the ground floor, if it is part of a large administration block, and near to the main entrance. It should not be tucked away in the far corner of a large department, or be working directly for any one department, for it is difficult in that case to give fair service to everybody.

In an industrial organization, the highest concentration of users may be the research staff, and the library may need to be located within the research department. Users outside this sphere may feel that the service is not for them.

Very few special librarians are in the fortunate position of being able to plan their buildings from scratch or even to choose the location, except sometimes in libraries attached to societies, to forward-looking government departments or information-conscious industrial organizations. The building is very often thrust upon them and has to be adapted for use as a library. Some time generally elapses before a permanent site is found. This may only happen after justification for having an extensive library and information service has been proved.

Provision may then be made for a new library building or centre to be incorporated in any projected new development within the organization. Temporary accommodation is sometimes

a wooden hut, or a prefabricated or unit-type building. The latter can prove very suitable for even an extended stay. The method of construction, on a unit or modular principle, aids planning. This type of building can easily be extended or segmented, according to the service requirements and future developments.

It is generally possible to obtain planning permission for a temporary structure where, in the case of a permanent building, permission would not be granted. The special librarian usually has to be content with the minimum requirements of accommodation and facilities for a basic service. One of the main obstacles in industrial organizations to suitable library accommodation is often that everybody requires more accommodation and facilities at the same time. The library, classed as a non-productive unit, must take last place in the priority stakes. J B Reed in chapter seven of the ASLIB *Handbook* (*op cit*) extensively covers the layout and planning of special libraries, including a space survey carried out in his own organization. He applies this to six other libraries. Information, is given on routes of movement in respect of users, library staff and materials. The problem of estimating expansion is also considered. Strauss (*op cit*) chapter four surveys space requirements and allocations, and includes plans of libraries representing a variety of US organizations. These plans provide information about variations in planning, accommodation and facilities in each library, according to the organization concerned, the personnel served and the scope of the service. They also show the relative amount of space required for service areas, storage, work rooms and staff offices. Even fuller coverage of planning is given in C M Lewis *Special libraries: how to plan and equip them* (Special Libraries Association, 1963). 'Objectives and standards for special libraries' *Special libraries* 55 (10) December 1964 672-680 discusses general space and location requirements.

An interesting proposal for a suitable location is offered by G E Randall 'Special library standards, statistics and performance evaluation' *Special libraries* 56 (6) July-August 1965 379-386. He suggests that as some organizations provide a central cafeteria for use by personnel during breaks, an ideal place for the library would be adjacent to this. He also maintains that where the organization actively encourages use of the library by employees as part of their work, it might equally be used as an alternative

office to which staff could repair to escape telephones and other interruptions.

Two important American publications in this context are: H L Roth (editor) *Planning library buildings for service* (ALA, 1964) and W A Katz and R G Swartz (editors) *Problems in planning library facilities: consultant, architects, plans and critiques* (ALA, 1964).

D V Arnold in the paper cited in the last chapter which he presented to the 1961 BIM/ASLIB conference discusses accommodation requirements and gives statistics such as 200 square feet per thousand volumes of books and periodicals (including a working area in front of storage space), 100 square feet per staff member for service, indexes and furniture and 25 square feet per reader in the reading room.

D A Redmond in an admirable article 'Small technical libraries' UNESCO *Bulletin for libraries* 18 (2) March-April 1964 49-79 gives minimum needs of 600 square feet to house up to 2,000 volumes and provide reading space for eight readers. The article includes a reproduction of a minimum floor plan for a company library out of an article 'Engineering library costs' by H S Sharp in *Machine design* 32 (22) October 27 1960 108-111. *Setting up your company's information service* (OECD, 1965) gives on page 79 a minimum area for a library housing an information officer plus accommodation for two users as 250 to 400 square feet, on the basis of fifty square feet of floor space excluding shelving for each reader, and twice this amount for each staff member.

As a general guide to construction on the modular or unit principle, load-bearing columns of the building should range between 18 ft 6 ins and 22 ft 6 ins (maximum). Requirements laid down by the University Grants Committee, and useful for comparison, are: 25 square feet per reader, 60 square feet per 1,000 books (seven-shelf tiers), and 40 percent balance area.

A book which was primarily intended as a guide to the planning of new university libraries, but which nevertheless contains information relevant to special libraries, is K A Lodewycks *Essentials of library planning* (University of Melbourne Library, 1961). The report of the ASLIB meeting on 'Planning and equipment of special libraries' held in 1946 and reported in *Journal of documentation* 3 (2) June 1947 should be noted, as also should be J Binns 'Equipping and staffing of industrial libraries' ASLIB *Proceedings* 9 (1) January 1957 12-28.

Individual libraries are usefully described in the following references: *Guide to the AERE library and information service* (AERE, second edition 1962); B C Burrows 'The information and library section of Associated Engineering Ltd' *Library Association record* 66 (5) May 1964 209-211; L J B Mote describes, with floor plans, the technical information division's building at Shell Thornton Research Centre, Cheshire in ASLIB *Proceedings* 14 (1) January 1962 11-18.

Each year the *Library Association record* publishes a special issue devoted to new library buildings. The planning of individual library services in the USA is dealt with in a series of articles under the heading 'Planning the new library' in *Special libraries* 55 (1) (2) (8) (9) January, February, October, November 1964 and 56 (1) January 1965.

FURNITURE AND FITTINGS

This includes structural and service requirements of buildings such as flooring materials, lighting, heating ventilation and so on—all to be considered when any new buildings are planned. These problems may be partly solved for us. The library may be located in a new administrative or central services block which already includes the necessary heating, lighting etc. All office buildings and accommodation now have to comply with the 1963 Offices Act.

There are the special requirements of the library to be considered, bearing in mind the form of materials which it is to house, departments, services offered and the staff facilities required. The library should be provided with adequate heating, in line with that already provided for other sections of the establishment. The heating system should be capable of maintaining a minimum constant temperature of 65°F. Good natural lighting is essential supplemented by adequate artificial lighting. Fluorescent lighting is generally considered to give least eye strain. Lighting in the service and storage areas should be correctly positioned. The decoration should provide suitable reflection for the lighting. Adequate ventilation is also important for staff and storage areas. In any libraries which are established in tropical countries, the buildings need to be well lighted artificially and air-conditioned, with the book stock out of range of direct sunlight.

The library should be located away from the highest noise-rating areas *eg* manufacturing, foundry, testing. A certain amount of external noise can be eliminated through sensible architectural and structural planning. The correct choice of flooring and internal fittings will help to absorb a certain amount of unwanted noise.

Furniture comprises soft-furnishings, desks, tables, chairs and the necessary storage items—shelving, files etc. (Storage of special forms of material is discussed in chapter seven.)

In planning the total space requirements, the librarian must take into account the amount of space to be occupied by shelving and files. Emphasis should always be on functional rather than aesthetic furniture. Too many special libraries have acquired furniture which looked right within the general scheme of decor, rather than because it served the purpose for which it was intended most effectively and economically. Before settling on final layout, it is wise to make block models of tables and shelving to the same scale as the plan, and to manoeuvre them until the most suitable position is obtained. This method is useful for comparing space requirements for various items, particularly in odd-shaped rooms or buildings which have to be adapted for library use. The use of models is fully covered in ASLIB *Handbook* (*op cit,* pages 252-253). Firms such as Libraco, Remploy and Serota specialize in the supply of library furniture and provide a wide range of designs, many of which are suitable for special library use. Tables and chairs will be constructed to a standard height, but may vary in other dimensions according to the preferences of the planner, intended use and space available for their installation.

The Library Technology Project (LTP) was established in the USA in 1959 to explore ways and means whereby modern technology and principles of scientific management could be used to solve some of the administrative problems in libraries. LTP is financed by grants from the Council on Library Resources Inc and a major part of its work is concerned with the testing and evaluating of supplies and systems. Results are made known on a world-wide basis by means of a technical information service, which is available to subscribers. Full details of LTP are to be found in 'Library Technology Project—today and tomorrow' by G T Piez *Libri* 14 (4) 1964 330-336.

The only British book which specifically covers library furni-

ture and equipment is one of the same title by T Landau (Crosby Lockwood, 1963). It takes the form of an illustrated catalogue of manufacturers' designs, and was subject to some criticism when it first appeared. It is to be replaced by a new book entitled *Modern library equipment* by P Millard, to be published by Crosby Lockwood in 1966.

A useful group of articles on furniture and equipment appeared in *Library trends* 13 (4) April 1965 and the issue of *The library world* 65 (761) November 1963 was entirely devoted to equipment.

Shelving for open access areas and for stacks depend on space available. Standard specifications for stacks are given in 'Objectives and standards for special libraries' *Special libraries* 55 (10) December 1964 672-680. They include a figure of 150 pounds per square foot for loading of shelves and also shelf dimensions, stack areas, and an average number of volumes of different types of book per foot-run of shelf. ASLIB *Handbook of special librarianship (op cit)* pages 244-246 gives some figures for shelf capacity, and J Binns in ASLIB *Proceedings* 9 (1) January 1957 12-28 also offers some useful data. The ASLIB *Handbook* also describes (pages 253-255) various methods of concentrated storage, and an interesting mathematical exposition of compact storage is presented by F F Leimkuhler and J G Cox in *Operations research* 12 (3) May-June 1964 419-427. The April 1965 issue of *Library trends* cited above contains two articles which deal respectively with the economics of compact storage and selection and evaluation of book stacks.

Periodical display in libraries presents a furniture problem and D E Davinson *Periodicals: a manual of practice for librarians* (Deutsch, second edition, 1964) appraises methods and equipment (pages 65-76). An effective display rack of advanced design is illustrated in *Library Association record* 55 (12) December 1953 397. For an unusual guide to the selection of soft furnishings see R and S Marrus in *Special libraries* 55 (5) May-June 1964 280-282.

SPECIAL EQUIPMENT

Under this heading are included such items as may be required for special functions and/or for a special department of the library.

Some type of reproduction or reprographic equipment is an essential item for any active service concerned with the immediate dissemination of information. Some services may even require a fully equipped reprographic section. Most large organizations now have some form of copying equipment, such as xerox (which is only available on hire) accessible on a central basis to all departments, and they may possibly also have branch printrooms or facilities set up in individual departments.

It is essential for the library either to have equipment installed on the premises or, if economics do not justify this, to have direct priority of access to the central facility. The library will also require various office machines—typewriters, duplicators etc. Strauss (*op cit*) chapter four includes a review of microfilm and microtext reading machines and their suppliers, together with similar information on duplicating equipment and other useful gadgets. Chapter twelve of ASLIB *Handbook* includes a brief section on micro reproduction and photocopying in library work, with an extensive bibliography. G Beer *Machines for office workers* (Macdonald, 1965) is a good recent publication on equipment suitable for special libraries and gives extensive coverage of typewriters and reproduction methods and equipment. The book is well illustrated.

An FID publication *Manuel pratique de reproduction documentaire et de selection* (1964) is concerned with techniques and apparatus for multiple copying and includes illustrations of equipment surveyed. The Library of Congress publication *Libraries and automation* (1964) presents in section four a survey of all types of equipment and reproduction media, plus an extensive bibliography. A yet more comprehensive bibliography is L J Kiersky's in *Special libraries* 55 (3) 56 (4) March 1964 and April 1965, American references are important in this field, because much of the available equipment is of American origin.

G H Wright and S B Page review document reproduction processes annually in *Assistant librarian,* and the same authors present a comprehensive review in 'ICP compendium of document reproduction', a supplement to *Industrial and commercial photographer* 3 (4) August 1963.

Students should also be aware of *Microdoc,* the journal of the Council for Microrecording and Document Reproduction, as a useful source of information. Two other general surveys worth

noting are 'The new age of copiers' by A R Gardner *Product engineering* 36 (3) February 1 1965 55-61 and P Burton's review in *Engineering materials and design* 5 (7) July 1962 491-494. which includes an alphabetical tabulation of all equipment available in the UK with details of cost and speed per copy, dimensions, price and special features.

H R Verry *Document copying and reproduction processes* (Fountain Press, 1958) is still relevant on basic techniques, and other references which students might consider are: L L Ardern and L Howe 'The Dagmar microcard adapter' *Library Association record* 61 (10) October 1959 260; L L Ardern 'Microfiche' *Library Association record* 60 (5) May 1958 150-152; W H Rupp 'Document reproduction from microfilm . . .' *Automation and scientific communication* proceedings of the twenty sixth annual meeting of the American Documentation Institute held in Chicago October 6-11 1963 (ADI, 1963) 151-152; L G Vaglanos 'Xerography in the library' *Special libraries* 54 (9) November 1963 572-574; H W Ballou *Guide to micro reproduction equipment* (National Microfilm Association, second edition 1962); G H Davison *1962 Review of equipment for microtext* (LA, 1963); W R Hawken *Enlarged prints from library microforms*—LTP publication number six (ALA, 1963); G Whatmore *News information* (Crosby Lockwood, 1964).

CHAPTER SIX: STAFF

REFERENCE has been made in chapter four to the importance of appointing a professional librarian or information officer as head of the service and to the necessity for his being equal in status with other departmental heads. Controversy has raged in the past about whether or not to appoint a librarian or an information officer. The choice is even more difficult now that there are in addition information scientists and literature scientists. The final selection depends not only upon whether an enlightened management or directorate is responsible for the decision, but also upon the nature of the organization and its subject interests.

An information service in a small, closely-knit chemical firm, could be safely left in the hands of a chemist with a thorough grasp of his subject and extensive experience in the industry. On the other hand, a similar service in a rapidly expanding electronics company, that has fingers in many pies, involves access to a wide range of sources of information and may be run more efficiently by a trained librarian who has comprehensive bibliographical knowledge and background experience in the electronics field.

The ideal arrangement is sometimes considered to be to appoint both a librarian and an information officer, the one to exploit the material and the other to interpret technical queries. This situation exists in a number of large industrial organizations. A further extension of it can be found in co-operative industrial research associations, where an enquirer may have recourse to a team of information specialists, all conversant with the technology of the industry or scientific field concerned. ASLIB *Handbook of special librarianship* (*op cit*) lays down in chapter two the status and qualifications required of the department head. Strauss (*op cit*) chapter two considers very briefly the appointment of the head of the service, as well as qualifications and duties of the other library staff. D J Foskett in chapter two

of *Information service in libraries* (*op cit*) describes the role of the information officer, and three articles in *Library journal* 89 (19) November 1 1964 4280-4294 under the title 'The special librarian' deal with necessary characteristics and education of special librarians.

Does your firm need its own information service? (OECD, 1961) assesses the pros and cons of appointing different people from the 'secretary-librarian' to the 'Boss's nephew'! The conclusion is that for a small firm setting up a new service a newly qualified graduate or a professional librarian may be equally suitable, though the former is more likely to develop the system into an information service and the latter develop a library. W Ashworth in a paper given to the joint BIM/ASLIB conference in 1961 entitled 'Staffing a library' deprecated the widespread unwillingness to bring in a trained librarian or information officer who might (mistakenly) be thought to know nothing of the needs and interests of a firm, when the need for subject specialists in other fields of industrial endeavour was nowhere disputed.

D J Campbell's survey for ASLIB cited in chapter four indicates the balance in 1961 between librarians and information officers. L R Rathburn 'The company professional librarian, or, what's the difference?' *Special libraries* 54 (3) April 1963 210-213 discusses the advantages of having a trained librarian in charge of the service. This theme is reiterated in J F H Wright and J Tighe 'Special libraries: information officer versus librarian' *Australian library journal* 3 (2) April 1954 63-67. At the time of this article there were no designated scientists in the information field.

But the Institute of Information Scientists now considers scientific and technical information work to be a distinct profession and maintains that 'appropriate and adequate subject knowledge is essential for information work', and that the purveyor of information should still remain primarily a scientist. R R Shaw in 'Face its norm' *American documentation* 16 (2) April 1965 77-80 attempts to differentiate between librarians and information scientists, and the latter are considered by P E Colinese in *Scientific business* 2 (5) May 1964 30-38.

In 'The library as a partner in scientific creativity' *Library Association record* 67 (3) March 1965 84-85 J L Gardner mentions librarians who, because of specialized training, are able 'to

provide an interpretive service to the researcher' and are more frequently known as literature scientists.

An attempt to realise the best of both worlds and to bridge the gap between librarian and information scientist is being made in the Florida (USA) library school with a course intended to train librarians with scientific backgrounds in information science. The course is described by G Jahoda in *Florida libraries* 14 (4) December 1963 7-10.

Salaries of librarians and information officers may vary as much as between £850 and £3,000 per annum, according to each post, and D J Campbell's survey (*op cit*) indicates some of the salaries being paid in 1961 in specific posts. There is of course no set scale, nor any independent machinery for negotiating increases.

SELECTION AND RECRUITING

It is necessary to determine and select the ideal minimum staff needed to run an efficient service. This should be done in conjunction with the original policy and planning of the administration. Before an information service can be fully developed, and specialist abstractors, bibliographers, translators, technical information staff appointed, the library will probably have to prove itself.

A schedule of duties likely to be entailed, from the commencement of the service, and the calibre of staff required to carry them out, should be decided upon. It is difficult to differentiate between 'professional' and 'non-professional' duties in special libraries. The library may have to operate on a basis of one librarian, plus clerical assistant and/or typist. The librarian or information officer may have to carry out routine professional duties and to cope with the general clerical work as circumstances demand. Both the ASLIB *Handbook* and L J Strauss (*op cit*) pay attention to staff requirements and the qualifications needed for special duties. Strauss considers in detail the assistant librarian, library assistants, abstractors, translators, cataloguers and typist-clerks, and other members of the staff.

The proportion of trained to untrained staff, or 'professional' to 'non-' or 'semi-professional', may only present a problem in a large organization with an extensive library and information service, where a considerable amount of routine and clerical

duties is involved. The Library Association publication *Professional and non-professional duties in libraries* is a very useful descriptive list of duties and routines, based on library practice in the UK. It is a modified version of the American Library Association's *Descriptive list*. Each category of duty or routine is broken down into professional and non-professional. The best guide to categories for special libraries is G H Davison 'Desirable ratio of professional and non-professional library staff' ASLIB *Proceedings* 14 (11) November 1962 361-379. This paper summarizes previous surveys and articles of British and American origin and includes a comparative table compiled from answers to a questionnaire. See also J Binns' article in ASLIB *Proceedings* 9 (1) January 1957 12-28 and, for a portend of the future, E Heiliger 'Staffing the computer-based library' *Library journal* 89 (13) July 1964 2738-2739.

Recruiting applicants for junior and semi-professional posts in special libraries seldom presents any problems. Selecting the right type of personnel, however, is less easy. Many applicants are totally unaware of the nature and work of special librarianship, and current Library Association education policy and ASLIB education course (discussed more fully below) do not always help to solve the difficulties.

In some organizations, new entrants for administrative work are brought in en bloc and given introductory training together. Aptitudes may be determined at this stage and likely candidates for, say, the library passed on to library duties after they have acquired general knowledge of the organization.

Few textbooks in this field devote space to the practical problems of staff recruitment for special libraries. The ASLIB booklet *Information work as a career* is intended for young people and also gives some indication of approximate salary levels.

Some of the problems connected with staffing and training were discussed at the ASLIB 1965 annual conference. Interviewing of staff is treated by O J Whitley in ASLIB *Proceedings* 15 (8) August 1963 234-242.

EDUCATION AND TRAINING

Special libraries are at present indifferently catered for by professional training, because of the Library Association policy of

full-time education. The old entrance examination, now discontinued, gave special library staff the opportunity to see beyond special library practice into general librarianship. An 'assistant's certificate' currently being canvassed would enable staff engaged upon 'semi' or 'non-professional' duties to obtain tangible evidence of competence in their work, and would be especially useful for staff wishing to continue in library work.

A course for 'non-professional' staff of libraries is being experimented at the North-Western Polytechnic in London, during the 1965-66 session, and a course for staff and newcomers to special library and information work is in progress at the Manchester College of Commerce. ASLIB run special courses on various aspects of library and information work, and advanced courses on specific techniques such as co-ordinate indexing, patents etc. These courses are usually held at ASLIB in London, and are expensive to attend. The fee for the course does not include the cost of meals or accommodation.

In theory, the sandwich course is ideal since the student divides his time between academic studies and practical work, but few special libraries can afford to release staff for the necessary length of time or fit them back into the organization when their studies are completed. D H V Wyatt discusses the sandwich course in *Technologist* 1 Autumn 1964 83-84, and considers that for three careers in pure science it is ideal—scientific librarian, technical training officer and technical college lecturer.

The Institute of Information Scientists holds a full-time postgraduate diploma course of one academic year, and a two-year part-time course of two evenings per week at the Northampton College of Advanced Technology in London, and holds external examinations for Certificate of the Institute. Details of the aims and purpose of the Institute, together with grades of membership, are given in a leaflet obtainable from the Hon Secretary.

J Bird, who is education officer at ASLIB, looks at new thinking on special library education in relation to Library Association policy and the Robbins report in ASLIB *Proceedings* 16 (7) July 1964 216-222. L G Patrick in the same journal 15 (1) January 1963 18-30 examines in detail the 1964 Library Association syllabus as far as special librarianship is concerned under the title 'Some implications of the new LA syllabus from the special library viewpoint'. Concern is shown that it is almost impossible

to qualify by part-time or correspondence courses. A critical appraisal of the present system of full-time preparation for librarianship by an Australian with first-hand experience is 'Education for librarianship in the United Kingdom' by J Hagger *Australian library journal* 13 (3) September 1964 123-128.

There have, however, been some useful regional link-ups between special libraries and local library schools to provide trainee courses and sometimes courses in special subject fields. E S Fox 'Special library and information training in the midlands' ASLIB *Proceedings* 13 (11) November 1961 316-321 describes one such course. During October 1965 the North-Western Polytechnic school of librarianship in London held a five day medical libraries course in conjunction with the medical section of the Library Association. The question of medical librarianship training is discussed by L G G Manwaring 'Medical librarianship: a plan for future training' *Library Association record* 67 (8) August 1965 264-269.

A contribution towards the training of special librarians and information officers is being made by Sheffield University post-graduate library school, where emphasis is on scientific and industrial librarianship. Knowledge of at least two foreign languages (preferably German, Russian or Japanese) was a prior condition for the first batch of students. The aims and policy of this school are described in ASLIB *Proceedings* 16 (3) March 1964 105-115 by W L Saunders. Similar courses are now being offered at Queen's University Belfast.

Training in the USA is described in Strauss (*op cit*) pages 30-42 and students should also read the article by J H Shera in *Journal of education for librarianship* 1 Winter 1961 121-128.

In-service training is now an important part of a special librarian's education. It is difficult to accomplish. There are few special libraries with a sufficiency of professional staff, or whose chief librarian or information officer can spare the necessary time to supervise training. On-the-job training is usually all that is possible. A method of training carried out in the Ferranti Group Library System could possibly be adopted by other similar organizations. A series of courses, at least one per year, are held at one centre and last two or three days. In the Ferranti Group Library System, there are a number of individual library units located within various geographical regions. The holding of the

course at one centre ensures personal contact between staff within the group, and during the course the opportunity is taken to visit other libraries in the vicinity.

One suggestion which might help towards solving the problem of in-service training in libraries with an insufficient number of professional staff to carry this out adequately, would be for the librarians in a particular locality or region to pool their efforts to promote training programmes. Any course which resulted would be more in the nature of practical than academic, and would be held in alternate libraries, with the host library providing the tutor or course supervisor. Even in a closely confined geographical area, there are usually various types of library, such as local authority, industrial or academic, from which a pool of staff and resources for a training programme could be provided. There are already in existence a number of official and unofficial local co-operative information schemes. These could provide the basis through their members, many of whom are libraries with a small number of staff.

The ASLIB *Handbook* examines ways and means of in-service training (pages 17-19). This was also the subject of the 1964 Library Association Reference, Special and Information section annual conference held at Nottingham University, the proceedings of which have been published by the LA. In one of the papers presented R G Griffiths discussed the problem of in-service training in small special libraries. Further reference to this topic can be found in appendix D of 'In-service training' an LA sub-committee report published in *Library Association record* 64 (5) May 1962 171-175. The ALA has recently published *In-service training: a bibliographical essay* by J K Sollenberger (1965), which covers training in special libraries.

CHAPTER SEVEN: STOCK

THIS chapter covers only the administrative aspects of stock, its acquisition, handling and storage. Many of the stock considerations relevant to special librarianship are already covered in another *Examination guide* in this series, *Dissemination of information* by T D Wilson and J Stephenson (Bingley, 1966).

The heaviest influx of stock will be during the early years of a special library's existence, and acquisition, some of it speculative, will parallel the level of activity in the library and the nature of its parent organization. Stock will embrace a wider range of materials than that of, say, a public library, and will incorporate a substantial proportion of 'unpublished' material Books, periodicals pamphlets, reports, translations, trade literature and standards are only some of the materials which most special libraries have to handle. ASLIB *Handbook of special librarianship* (*op cit*) chapters three and six and the appendix to chapter six, covers acquisition, recording, filing and storing, with emphasis on the administrative techniques involved. Strauss (*op cit*) chapters five, six and eight gives more detail, the whole of chapter six being devoted to selection, acquisition and recording of periodicals. The techniques described are based upon common US special library practice, but give much general information on policy. D J Foskett *Information service in libraries* (*op cit*) chapters three and four deals briefly with selection, acquisition, arrangement and indexing of stock.

Students should also note P Spyers-Duran *Moving library materials* (Library Associates of the University of Wisconsin, 1964), which is the only extensive treatise available on moving stock. It discusses theory and practice of moving 1,000 or more volumes, based on information drawn from literature sources and from the analysis of a questionnaire.

SELECTION

Selection of stock may be the sole prerogative of the librarian or information officer. Usually, suggestions from members of the

staff of the organization with at least head-of-department-status are considered. In some special libraries, departments have their own budgets for books, or share directly in the running costs of the library. Purchases for departmental use may create a difficult situation if they are not co-ordinated by the librarian or information officer. One of the main duties of the head of the library is the selection of stock which is of interest to the organization, particularly in anticipation of requirements. Book selection takes up a considerable amount of time. Preliminary screening of publishers' lists, bibliographies, booksellers' leaflets or cards announcing new books, could be delegated to the deputy or senior assistant librarian in a large organization. They usually have more direct contact with readers, know what subjects are being requested and are aware of any deficiencies in the stock.

Technical and specialist periodicals carry reviews of books in their fields and should be scanned. If the librarian or information officer has the task of compiling an information bulletin containing abstracts selected from the periodicals received, then book reviews could be noted at the time of selecting the items to be included in the bulletin. Publishers usually send 'blurbs', or more often a sample copy of new periodicals. Other specialist materials, apart from pamphlets and standards, will generally be received either from sources within the organization, or from contacts or exchanges with various scientific and technical organizations. Most large industrial companies maintain overseas offices. Publications emanating from Europe or the United States can be easily and speedily obtained. A company with headquarters in London may make arrangements to obtain government publications direct from HMSO in London, and thus ensure the earliest possible receipt. G Crowther 'Stockbuilding for the information needs of research scientists' *Assistant librarian* 58 (8) August 1965 155-159 considers the needs of a library serving research personnel.

ORDERING

All orders should be recorded. Preprinted cards of standard size can carry the information and the same card could be used for the accessions record. One bookseller may be used by the whole of the organization. This causes a problem when all the libraries are not confined to one geographical area and there is the diffi-

culty of no direct contact with the bookseller. The use of a local bookseller will ensure personal contact, and the bookseller may possibly come to know more about the needs of the library in book material. On the other hand, it might be difficult to find a local bookseller with adequate stock.

Periodical subscriptions are usually handled by one agent for the majority of items. Separate agents may be used for British and foreign material. The agent will notify the library when any renewals of subscriptions become due. Periodical acquisition is covered in D E Davinson *Periodicals* (*op cit*). In chapter four of J Burkett & T S Morgan (editors) *Special materials in the library* (LA, 1963), A H Holloway deals with the procurement of foreign literature including periodicals.

RECEIPT

On receipt, the books are checked off against the record of order and processed ready for shelving. Processing consists of: accessioning—serial number given to each item—useful for statistics and identification of individual copies; cataloguing, classifying or indexing, in accordance with standard or modified procedure, and the required number of entries duplicated; labelling, lettering and stamping—stamping of the date label, when the book is borrowed, enables a check to be kept on the use made of the book.

After lettering with the classification number or code, the book is ready for shelving. On the shelves a separate sequence may be used for quick-reference works. Other reference stock may be shelved separately, or placed on the shelves with the loan stock on the same subject. This positioning enables the reader to check at one place on the shelves all the books on his subject.

Periodicals are one of the most important forms of material in any library concerned with science and technology. The number of titles received will vary according to the size of the organization and its interests. It is necessary to ensure that each issue is recorded and that any non-arrivals are written for immediately. Some form of visible index is now in general use in most special libraries. The ASLIB *Handbook* pages 57-61 describes the various periodicals recording systems available and the necessary information which should be recorded. A detailed analysis of recording systems is given in Davinson (*op cit*) pages 52-64, where a typical

visible indexing installation is described. If a periodical is to be circulated, its record card could contain the details of circulation.

Several copies of certain titles may be required in order to maintain one copy for reference purposes. This could also be the 'binding-file' copy, readily available for photocopying. No more than six to eight readers should be on the circulation list for each copy. It might be necessary to provide certain departments with individual copies of periodicals which are of direct interest.

Periodicals may be delayed during processing; record on the day of receipt if possible. Extra copies of periodicals required for circulation and for 'reference only' use will help to minimize any delays. Periodicals may be displayed before filing, or before circulation. Davinson appraises several methods of display on pages 65-75, and describes methods and types of equipment suitable for filing periodicals on the shelves.

Whether or not to bind periodicals is a question which requires careful thought. Binding should not be considered unless the periodical is to be retained for at least fifteen years. Binding creates the problem of the material being away at the binders for, possibly, up to three months. This is not so important as the fact that unbound volumes are easily handled and much greater use can be made of them as individual parts. Bound volumes are unwieldy, and may be difficult to copy. They will incur a fairly high postal rate when sent on loan. D Kaye in the appendix to chapter six of ASLIB *Handbook* examines all aspects of binding, including 'permanent' and 'semi-permanent', together with various self-binding techniques.

Periodicals are one of the easiest forms of material to obtain from external sources. Numerous holdings lists are available. The National Lending Library has recently issued a list of 20,000 titles currently being received. The student should read the article by D J Urquhart and R M Bunn in *Journal of documentation* 15 (1) March 1959 21-37 relating to national loan policy for scientific serials, in which it was stated that for half the current serials in the Science Museum Library usage is less than ten times per decade, and that therefore a single copy (perhaps located at the NLL) could provide an adequate loan service. D J Urquhart examines the use of scientific periodicals in a paper presented at the Washington International Conference on Scien-

tific and Technical Information 1958, and published in the conference *Proceedings* volume one 287-350.

D Grenfell *Periodicals and serials: their treatment in special libraries* (ASLIB, 1953) contains information which is still relevant on periodicals handling. Davinson (*op cit*) considers micro techniques to save storage space (pages 129-137). V W Clapp and R T Jordan 'Re-evaluation of microfilm as a method of book storage' *College and research libraries* 24 (1) January 1963 5-15 is an important report, based on two earlier investigations by Forbes and Waite for the Council of Library Resources Inc and by A B Pritsker and J W Sadler for a master's thesis at Columbia University (USA).

NON BOOK MATERIALS

General readings under this head are: J Burkett and T S Morgan (*op cit*); R L Collison *The treatment of special material in libraries* (ASLIB, 1957); J E Holmstrom *Facts, files and action in business and public affairs: part two—filing, indexing and circulation* (Chapman and Hall, 1953); D Mason *A primer of non-book materials* (AAL, 1958).

Pamphlets: General pamphlets, *ie* non-government publications, are treated as books in the initial stages of processing. Ephemeral material is not fully catalogued or indexed, and is filed in a separate sequence, in order to ensure continuous 'weeding'. Ephemeral material should be filed in pamphlet boxes, or vertical or lateral filing cabinets. Non-ephemeral, general pamphlets may be filed in boxes in a separate sequence, or may be placed on the shelves with the books. Various methods of filing pamphlets, and suitable storage equipment, are described in ASLIB *Handbook* pages 196-208. This section of the *Handbook* also includes 'Special kinds of pamphlet material', 'which in a small library, would probably be filed in the pamphlet sequence', *ie* reports, specifications, newspaper and press cuttings, and trade catalogues.

Government publications do not merit any special treatment in their handling and storage, except that it may be found more convenient in some larger organizations to file them under the issuing department rather than by subject. Burkett and Morgan cover thoroughly the selection, acquisition, filing and storing of government publications in chapter one (*op cit*).

Preprints, conference papers etc: Preprints are particularly important, for not only do they contain the first publication of a scientific and technical paper, but they might be the only form in which that article appears. This material usually consists of single copies of conference papers which have been sponsored by professional and scientific societies. Filing of this material should be primarily by society or by title of the conference, and then by paper number.

Reports: Reports are very important as original sources of scientific and technical information. For information covering a very narrow subject field they may be the only source of up-to-date information.

1 Unclassified reports are usually purchased through government publishers, or obtained through contacts. The majority of them can be treated as pamphlets.

2 Internal reports are generated by the establishment which the library serves and from other sections of the organization. If the library is attached to a research department or serves a government establishment, there will be a prolific amount of internal reports to be handled. The library should maintain a central record of all reports produced internally. Internal reports will usually be 'classified' and restricted to use within the company or organization. They may be restricted to use only by the originating department. Other departments may have to obtain the permission of the author before they can use such material. Many company reports are classified as confidential. There is no comprehensive system established in the United Kingdom of notifying reports to a central agency, as in the United States. The only central record in the UK is kept by the Ministry of Aviation TIL section, of all reports produced in connection with government defence contracts.

3 Research associations' reports will be received by virtue of membership of a research association *eg* British Iron and Steel Research Association, British Electrical Research Association. Any reports produced by associations are usually confidential and available only to members. Some of them may be available later in published form to non-members.

4 Other external reports may be received through contact with other organizations and direct from ministry departments. Ministry reports are generally divided into the following security cate-

gories: 'top secret', 'secret', 'confidential', and 'restricted'. The last two categories apply to the majority of reports received from ministry departments. Strict security precautions are necessary for any classified documents received from external sources, and these security precautions are necessary throughout all the handling stages. Similar precautions are required for reports received from research associations or through internal sources. Signatures should be received for all documents issued, and in certain cases kept on permanent record. The librarian or information officer acts as reports control officer for ministry documents and is responsible for their security and handling. Some special libraries have a separate reports section or reports library. D A Redmond 'Small technical libraries: a brief guide to their organization and operation' UNESCO *Bulletin for libraries* 18 (2) March-April 1964 49-79 outlines the procurement of reports. R C Wright in chapter five of J Burkett and T S Morgan (*op cit*) details the arrangement, storage and exploitation of report literature. One of the most comprehensive treatments of this type of material is *Library organization and management of technical reports literature* by B M Frey (Catholic University of America, 1953).

Translations: Are received from external sources, sometimes on an exchange basis, and they may also be produced internally by the translation section. File under the organization and reference number of the translation. Translations should be stored as for pamphlet material and indexed primarily by author. None of the text-books give much thought to the filing, indexing and storing of translations, although this form of material now plays an important part in a special library's information resources.

Patents and standards: Many industrial companies and other large organizations maintain their own patent sections, staffed by qualified patent agents. The library is not required to handle them. D A Redmond (*op cit*) outlines the procurement, handling and filing of patents. Index and file patents by country and patent number.

Standard specifications: These might also be handled by a separate section. It is useful to have a set of British Standards of interest to the organization, available for reference in the library. Index and file standards by country, followed by the originating organization, and then by standard number or code. The library may acquire foreign and international standards

organizations' publications, also ministry standard specifications. ASLIB *Handbook* outlines briefly methods of filing and storing patents and standards on pages 203-207.

Trade literature: This form of material is issued by manufacturers or distributors about products which they market. File under the name of the company, maintaining a detailed subject index of other products by the same manufacturer; it is useful also to index under trade and brand names. A trade literature collection requires continuous revision and amendment as new sheets are issued by maufacturers. B A Evans deals thoroughly with the subject in chapter six of J Burkett and T S Morgan (*op cit*). Another useful reference is B L Lee ' How to file and index manufacturers' literature ' *Heating, piping and air conditioning* 35 (2) February 1963 103-105.

Trade catalogues are a major source of information for drawing offices which often have their own large collection, as do purchasing departments. If this is the case the library may consider providing only manufacturers' addresses.

Other material: ASLIB *Handbook* pages 226-227 lists references to the filing and storing of maps, plans, drawings, illustrations, photographs, film materials and gramophone records. Sound recordings are also covered in D Mason (*op cit*). D T Richnell in chapter fourteen of J Burkett and T S Morgan (*op cit*) discusses microtexts and gives an extensive list of references. G Whatmore *News information* (Crosby Lockwood, 1964) provides a guide to the handling and storage of newspaper cuttings and related material.

A special library may have to act as repository for a firm's correspondence and business records. Guidance on the handling and filing of such material is given in 'ASLIB third conference on business records ' ASLIB *Proceedings* 13 (8) August 1961, and in an article by H H Goom in *Engineering* 192 (4972) August 11 1961 172.

CHAPTER EIGHT: CO-OPERATION

No special library or information service would expect to supply all its information requirements from its own resources.

Co-operation minimizes duplication and creates access to a range of material and sources of information which no individual organization could economically provide. It enables greater use to be made of both individual and corporate resources.

Full scale co-operation can only be carried out effectively if a list of resources, including details of periodicals holdings, is produced for a particular locality or region and made available to all participants. Various sections and groups of the Library Association have produced periodicals holdings lists and directories of resources for certain regions *eg* 'greater Manchester' and 'west midlands'.

Co-operation may either take the form of subject specialization, or else it may be the form of the material that is considered more important *eg* abstracts, translations etc. Most libraries now have access to reasonably cheap copying facilities. Material normally only available for consultation on the premises may be provided in this form for external borrowers. The ASLIB *Handbook of special librarianship (op cit)* discusses the co-operative acquisition of material on pages 61-65.

INTERLENDING SCHEMES

There are at present in existence in the United Kingdom at least twenty three co-operative schemes, mainly based upon public libraries, apart from regional library bureaux and other national schemes. One of the earliest of the local schemes is SINTO, the Sheffield Interchange Organization, established in 1933; one of the latest is MISLIC, Mid-Staffordshire Libraries in Co-operation, officially established in 1965.

The development of co-operative information services for industry is outlined in 'Library service for industry' by K J Rider *Engineer* 195 (5064) February 13 1953 252-254.

Due to the proliferation of official co-operative schemes, a large organization may be participating in a number of schemes and find it difficult to decide to which one it should be most loyal outside its own confines. In the case of English Electric at Stafford, the library and information service is part of the English Electric Group library system. Close co-operation in all aspects of information is carried out between individual works. The Stafford library is also a member of the west midlands Regional Library Bureau, of MISLIC and of LINOSCO, the Libraries of North Staffordshire in Co-operation. This participation has certain advantages in making available a much greater quantity and variety of information to English Electric. At the same time, the library has to be prepared to reciprocate towards any members of these schemes. Special libraries obviously have to put the requirements of their own readers first, and in the case of membership of regional library bureaux and some local schemes may sometimes find that they are having to lend a great deal more than they borrow.

Students should read the article 'The incorporation of special libraries in the national interlending system' in *Library Association record* 57 (12) December 1955 477-480 and the Ministry of Education report *Inter-library co-operation in England and Wales* (HMSO, 1962), both of which describe the organization of regional library bureaux and the role of special libraries in the system. A survey of regional library bureaux by B M Elsmore was recently published in *Library Association record* 66 (7) July 1964 307-309. Pages 299-306 of ASLIB *Handbook* briefly describe the national interlending system, including the National Central Library, regional bureaux, Science Museum Library and SINTO.

LOCAL SCHEMES

CICRIS (1951): West London Commercial Library Service. Based on ten public libraries, each responsible for industrial firms within its own area. Headquarters are at the Central Library, Acton. Services include union catalogue of periodicals, interlending, and union file of trade literature published by member organizations. The system has produced numerous publications, including union lists of periodicals, abstracts and indexes and technical translating dictionaries.

HADIS: Huddersfield and District Information Service. No headquarters. Communication is direct between members. Publica-

tions include union lists of periodicals, subject dictionaries and list of translators in the area.

HERTIS: Hertfordshire County Council Technical Information Service. Headquarters at Regional College of Technology Hatfield Herts. Provides one of the most extensive co-operative information services to industry. Services and facilities include union catalogue of periodicals holdings, interlending, weekly information service on cards (subjects nominated by individual members), industrial liaison officer, holding of short courses on reprography and information techniques. The College is one of the major centres in the United Kingdom providing reprographic training in documentation. Publications include list of periodical holdings and specific subject bibliographies.

LADSIRLAC: Liverpool and District, Scientific, Industrial and Research Library Advisory Council. This scheme is centred on the Brown Library at Liverpool Public Libraries. Financed partly by the Ministry of Technology and partly by subscriptions from Industry, there is no geographical limitation on membership. Services include a technical information centre and industrial liaison services. Primary publication, is a monthly technical information bulletin.

SINTO: Sheffield Interchange Organization. Based on the Libraries of Commerce, Science and Technology at the Central Library Sheffield. Services include interlending, union catalogue, union list of translations, index of steel specifications. Primary publication is a union list of periodicals.

NATIONAL SCHEMES

The National Central Library is a vital constituent of the national interlending scheme. Page 303 of ASLIB *Handbook* indicates how much direct borrowing is done through the NCL and how much between special libraries direct. The NCL is envisaged for the future as the nucleus of a national lending service for the humanities in an article by D T Richnell in *Journal of documentation* 17 (4) December 1961 197-214.

At present, the NCL, governed by the Department of Education and Science, is the centre of the regional system. Its principal functions are: 1 To act as a national centre for interloan of books in the humanities fields within the UK and as a centre for international loans via national clearinghouses in each country; 2 To

act as clearinghouse and reallocation centre for surplus books and periodicals between the UK and libraries overseas. This second function is described by A Allardyce in *Library Association record* 63 (9) September 1961 305-306.

Through its British Union Catalogue of Periodicals (BUCOP) section the NCL is responsible for compiling the *World list*—now replaced by BUCOP and supplements thereto.

The NCL also deals with loan requests for Slavonic books and maintains a Russian Union Catalogue. S P L Filon 'New book buying policy of the NCL' *Library Association record* 62 (8) August 1960 254-255 should be noted. The NCL also publishes a descriptive leaflet about itself which may be had on application.

Science Library: Although the national lending functions of the Science Library have now been largely taken over by the NLL, its assistance is still required for certain loans, and help may still be called for from its 'outlier' libraries.

CO-OPERATION ABROAD

One of the most famous schemes overseas is the Farmington Plan in the USA, which is described in *Library Association record* 51 (10) October 1949 306-310. References to the plan and to proposals for a similar system in the UK are given on page 69 of ASLIB *Handbook*.

American opinions on interlending are presented in *Special libraries* 55 (4) April 1964 207-226.

Regional plans for documentation in Canada and reports on co-operation in Scandinavia are contained in *Revue international de la documentation* 31 (1) February 1964 6-8. G A Hamel in UNESCO *Bulletin for libraries* 18 (2) March-April 1964 73-83 describes the European Translations Centre at Delft and includes a list of all the national translation centres for which ETC acts as central agency.

UNOFFICIAL CO-OPERATION

This includes disposal of surplus material, exchange, interchange, informal arrangements between libraries and co-operative storage.

Exchange is fully dealt with by *Handbook on the international exchange of publications* (UNESCO, third edition 1964).

Interchange of documents is considered by L A Hamrick *Automation and scientific communication* (American Documentation Institute, 1963) 219-220 in an article on the role of the US Office

of Technical Services—since superseded by the Clearinghouse for Federal Scientific and Technical Information.

Setting up your company's technical information service (OECD, 1965) describes some of the forms which inter-firm lending may, take, and co-operation between three US companies is described by W T Knox ' Inter-firm co-operation in technical information ' *Research management* 7 (5) September 1964 337-348.

Central co-operative storage began in the USA with the establishment of the New England Depository Library at Cambridge Massachusetts in 1942. This was followed by the Mid-West Inter-Library Center (MILC)—now known as Center for Research Libraries—in Chicago in 1951, and the Hampshire Inter-Library Center (HILC) in the same year. MILC is described by R T Esterquest in *Library Association record* 56 (9) September 1954 336-342.

The first similar scheme to be established in the UK, that of the University of London Library Depository in 1961, is described by J P Mansbridge in *Library Association record* 66 (7) July 1964 302-305.

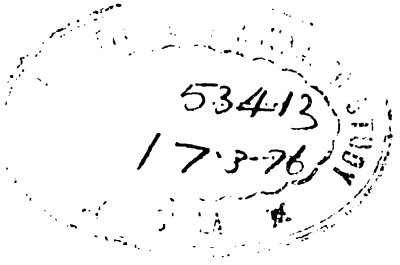
General problems of co-operative storage are discussed by J Bebbington in *Proceedings* of the 1964 public libraries conference (LA) pages 43-50. See also a Library Association pamphlet (number 24 1965) entitled *Central library storage of books* by P W Plumb.

Co-operative provision of information on translations is now facilitated by the ASLIB *Commonwealth index* described in ASLIB *Handbook* pages 442-443.

Students should not forget the value of special library associations in furthering co-operation, and in this context world-wide details of the major organizations are given by L Wilson in chapter thirteen of ASLIB *Handbook.*

Finally, a forthcoming book which will doubtless repay close study is *Library co-operation* by George Jefferson (Deutsch) due to be published during 1966.

INDEX



Books from Clive Bingley

EXAMINATION GUIDE BOOKS

series editor Donald Davinson FLA

Academic and legal deposit libraries *by Donald Davinson FLA, Principal Lecturer, Leeds School of Librarianship* (13*s* 6*d*)

Public library administration *by George Jefferson FLA, Senior Lecturer, Leeds School of Librarianship* (13*s* 6*d*)

Theory of classification *by Keith Davison FLA, Senior Lecturer, Birmingham School of Librarianship* (13*s* 6*d*)

Practical cataloguing *by W Dent FLA, Senior Lecturer, Leeds School of Librarianship* (15*s*)

Special libraries and information bureaux *by H R Astall ALA, Librarian at English Electric Co Ltd* (15*s*)

Dissemination of information *by T D Wilson FLA and J Stephenson FLA, Lecturers at Newcastle upon Tyne School of Librarianship* (15*s*)

Library work with young people *by Stella Pinches FLA, Children's Librarian, Birkenhead Public Library*

Theory of cataloguing *by P J Quigg FLA, Belfast City Library*

TWO NEW BOOKS OF SPECIAL IMPORTANCE TO STUDENTS

Systematic bibliography *by A M Lewin Robinson BA PhD FLA, librarian of the South African Public Library in Cape Town illustrated* (16*s*)

This admirable exposition of the main principles involved in the practical work of compiling bibliographies is a revised edition of a text first published by the University of Cape Town school of librarianship. It has already gained a substantial reputation as student textbook and practical handbook, and its value in modern librarianship studies is undisputed.

Organising music in libraries *by Brian Redfern FLA, lecturer at the North-Western Polytechnic school of librarianship* (15*s*)

This book is the fruit of several years of lecturing to library students and is of particular relevance to students preparing for the list C paper on music in the Library Association final examination syllabus, as well as a valuable handbook for music librarians.

Clive Bingley Limited
16 Pembridge Road London W11