



### *Library Service to Industry in Great Britain and Continent*

out well-organized and competently staffed libraries, featuring comprehensive and well-selected collections, no service, whether active or passive, would be possible to industry. The use of such libraries by individuals employed by industry, and by students who are employees of industry, contributes indirectly but valuably to industrial efficiency.

The idea that public libraries should provide service to industry is by no means new. The individuals responsible for promoting the first Public Libraries Act for England and Wales in 1850 included among their number farsighted individuals who clearly envisaged these libraries collecting, as a matter of policy, published matter dealing with the industries of the locality. Admittedly, they only regarded it as one facet of the responsibilities of the general library, and they did not advocate special departments to deal with this material and its exploitation. Later, the complexity and the number of technical publications, coupled with the national needs and the industrial and individual needs, made it obvious that such special libraries were imperative. Edward Edwards, giving evidence on June 5, 1849, before the Select Committee on Public Libraries, strongly recommended establishing libraries specializing in material dealing with local industries and commercial pursuits. In support of his plea, he cited similar libraries existing on the Continent at such places as Hamburg, Germany, and Lyons, France, claiming that such libraries were responsible in part for an increased intelligence in their communities and for the excellence of French industrial design. This conclusion of Edwards was borne out elsewhere by a M. Guizot and a C. Meyer, the latter again citing Hamburg, where a Commercial Library was founded by the merchants of that city in 1735. In both cases the desirability of Manchester and Leeds, collecting works on the cotton industry and on the woollen industry, respectively, were given as prime examples of what the speakers had in mind.<sup>1</sup> Together they persuaded the Committee to report that such libraries would produce great advantages, not only in imparting general instruction, but in promoting the extension of commerce and manufacture of the town.<sup>2</sup>

After the passage of the 1850 Act, the first tangible official recognition of the responsibility of libraries towards their industrial communities came in 1856. The newly organized Patent Office, established under the 1852 Patent Law Amendment Act, presented complete sets of British Patent Specifications, abridgements and indexes, to eighty-two libraries of government offices, seats of learning, and the chief

municipalities. This was under a clause of the 1852 Act which made provision for these continuing gifts on condition that these depositories were open to daily public inspection without charge. At the time communications were such that a fairly large number of depositories were designated, often as a result of local pressure. This led to an uneven pattern of distribution, with such disparities as seven depositories in Yorkshire and only one in Scotland. As communications improved, the sheer bulk of the material collected often proved an embarrassment to the recipients; as the expense of these deposits to the Patent Office has increased, the numbers of deposit libraries have been gradually reduced. The latest reduction took place in 1959 when the number was cut from the remaining twenty to twelve.

The scientific and technical material acquired by the larger reference libraries continued to form part of the stock of the general reference library for more than fifty years into the present century. These general reference libraries played their part in the more or less haphazard dissemination of technical data which helped the industrial output of that time. Conditions were such that British industry had no difficulty in selling everything it produced; intensive foreign competition and the attendant balance of payments problem were not thought of in the Victorian era. The first suspicions that these conditions would not continue forever, and that Great Britain was lagging behind in fundamental scientific and technical research, were voiced as early as 1873 by an eminent research worker and Fellow of the Royal Society, George Gore. One result of his promptings, and those of such kindred spirits as Sir Norman Lockyer, Sir Philip Magnus, and the politicians Haldane and Balfour, was the establishment of the National Physical Laboratory in 1902.

It took the stimulus of World War I, with its revelations of how far Great Britain had slipped behind Germany in many industrial fields essential to the war effort, to provide the next advances in research and the bibliographical resources to support it. The formation in 1916 of the Department of Scientific and Industrial Research (DSIR), which led in 1918 to the beginnings of the research associations, brought about two things. First, it spotlighted the needs of the nation for basic research at all levels of science and technology, and second, it stimulated the demand for the availability of the relevant literature to be increased, not least the published results of this research as it was produced.

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### *Establishment of Separate Technical Libraries*

It was in this historical context that the first separate technical libraries were established in the larger cities in the immediate post-war period. Leeds and Coventry led the way in July 1918; Leeds, with a joint Commercial and Technical Library, and Coventry, with a separate Technical Library. Sheffield followed the pattern of Leeds with a joint library in 1920, while Manchester in 1922 and Birmingham in 1924 favored separate establishments. It is interesting to note the size of these early efforts. The Manchester Technical and Science Library, for example, opened in a hutmented annex to the Reference Library. Although probably larger than any similar library then open to the public in Great Britain, with the exception of the Patent Office Library in London, it was comparatively modest by present-day standards. It contained 35,000 volumes, 250 current journals, the Patents Depository, a clippings file, and seating for 48 readers. Almost 50,000 readers made use of the library in its first year.<sup>3</sup>

Many other libraries greatly increased their collections of technical books without creating separate libraries, and by 1924 it was reported that industrial collections existed in seventy libraries.<sup>4</sup> With the exception of Sheffield, these libraries all operated "passive" services; the only facets which could conceivably be termed extra-mural were the answering of inquiries by letter or telephone, and the issuing of special booklists on technical subjects. One of the pioneers of these special departments, Manchester, actually cut back its service in two stages. With the opening of the new Central Library building in 1934, the Technical Library was combined with the Commercial Library until 1937, when it was judged that a Central Lending Library was of greater priority. The Technical Library was abolished as a separate venture and incorporated once more into the general Reference Library from which it had sprung, the Commercial Library being moved to smaller premises more conveniently sited and arranged for the readers. Apart from the provision of a joint Technical and Commercial Department at Leicester in 1936, development was arrested at this stage until after the end of World War II.

Sheffield, the exception already mentioned, took the lead as a pioneer in the fields of interlibrary cooperation and of lending in the technical field. J. P. Lamb, then City Librarian of Sheffield, was always an impassioned advocate of this aspect of public library service, both in his book<sup>5</sup> and elsewhere. He fired the first shot in 1932 at the ninth annual Aslib Conference; in a paper on "The Public Library

as an Aid to Industry and Research,"<sup>6</sup> he suggested the pooling of technical journals frequently required by many Sheffield firms. He pointed to the unnecessary step whereby requests from firms within the city for journals actually housed in the Sheffield Science and Technology Department were being routed through the National Central Library in London. The solution he proposed was for a co-operative interchange of technical periodicals within Sheffield, with the public library acting as the medium of exchange. A memorandum was circulated on January 30, 1933, to local industry setting out that the purpose of the scheme is to pool the resources of the whole city by forming a central index, and by interchanging specialist matter between the various organizations which join the scheme. Such an interchange would be based on the following principles:

1. Agreement between the organizations to lend their books to one another.
2. A list of all the available literature should be kept at a central point.
3. The natural place for this central catalogue should be the Science and Technology Department of the City Libraries, whose staff would compile it and keep it current and also provide an Information Service.<sup>6</sup>

The advantages were obvious and the Sheffield Interchange Organization (SINTO) was established. A union catalog of all books was found to be impractical, but a selective union catalog was kept of full details of periodical holdings. Current periodicals, directories, quick reference books, and material in constant use were specifically excluded from the types of items members were expected to lend. Exchanges were effected by a telephone call to the Science and Technology Department to locate the item, the actual loan then being arranged directly between the two parties. One of the conditions of loan, requiring borrowers to return material immediately on demand, rendered it possible for the Patent Office to waive the usual embargo on the lending of British Patent Specifications from the Sheffield deposit library to members of SINTO. The undertaking by the City Libraries to provide an information service to industry is also the first time this aim has been specifically mentioned. The scheme has gone from strength to strength. Their annual reports are published in the *Library Association Record*. An excellent survey of the first twenty-five years of the scheme appeared in 1958,<sup>7</sup> with supplementary subsequent details published in the following year.<sup>8</sup> As this

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scheme has become the prototype for many similar ventures during the last fifteen years, it seems only right that full details should be given of its beginnings. No subscriptions were charged at the outset, as later became the pattern with post-war schemes such as LADSIRLAC, and the organization was run democratically by a committee drawn from its member firms. The scheme was slightly modified in 1965 by the introduction of a nominal subscription for membership of two guineas (\$5.88).

World War II and its immediate aftermath, coupled with all the destruction, emphasized again the need to increase the efficiency and productivity of Great Britain's industry. The need to mount an intensive export drive in order to pay her way in the world had two main effects of interest in this context. It led to a vastly expanded program of scientific and technical education at all levels, a program which is still gaining momentum at the present day, and to a growing awareness that research of all types had to be applied to industrial processes in order to keep them viable. Both these factors automatically multiplied the demands on libraries for services to industry and services to the students from which industry was recruiting its personnel.

New technical libraries were opened, initially in the larger cities not yet so equipped, and existing libraries were reorganized in the first post-war decade. Manchester opened a new Technical Library in 1947, which at the outset functioned as a reference department only for books, periodicals, and patents. It soon became evident, for a number of reasons, that the traditional passive approach was quite out-of-tune with the needs of the times, and before long a photocopy service and service to industry had been inaugurated. Liverpool opened its Technical Library in 1952, organized as a joint reference and lending service from the start, and soon to be supplemented by service to industry. Leeds reorganized its Library of Commerce, Science and Technology as a combined lending and reference library in 1955.<sup>9</sup> Nottingham, Bradford, Stafford, Newcastle-upon-Tyne, Hull, and Burton-on-Trent are all English cities which inaugurated technical libraries in the first ten years after the war.

One of the few large cities which until then had failed to provide a technical library service was Belfast, a grave omission in an industrial center of such magnitude, with interests ranging from shipbuilding to textiles. This gap in the services of the largest public library service in Ireland was repaired in October 1958 with the establishment of a Business, Science and Technology Department in temporary

premises, moving to permanent quarters in 1962. During the short period of its existence, the Department has concentrated on collecting basic stock, coordinating existing resources, and planning for the future. The fact of the isolation of local industry from other technical library services has been fully recognized and the financial provision for the technical service has been relatively generous. Plans include lavish provision of periodicals, integration of the three technical college libraries with the Public Library Technical Service, the provision of a technical lending library, the formation of a cooperative scheme of service to industry, and the eventual division of the business and technical elements of the service. In the meantime the library is wisely refraining from any strident publicity campaign which might well elicit demands an embryonic service is quite unable to meet.

Across the water from Belfast lies Barrow-in-Furness, a town similarly concerned with shipbuilding and heavy engineering, with a few minor industries, albeit with a much smaller population. In September 1958, a Technical Library was established in the Central Public Library building, administered as a department of the library, but serving not only the public but the Central College of Further Education and local industry. This novel arrangement arose out of the Local Education Authority's consideration in 1957 of the Ministry of Education's Circular 322 on Libraries in Technical Colleges, with reference to the then partially opened Central College of Further Education. The Borough Librarian and Chief Education Officer were asked to advise on library provision, and their joint memorandum resulted in the present arrangement. The education and library authorities share all expenditure equally, and there is a Technical Library Advisory Subcommittee consisting of two representatives each from the education and library committees, and four from local industries. Apart from these new libraries opened in the large cities, many medium-sized towns also found that demands justified the opening of separate technical libraries. These include, and the number is not claimed as a complete list, Scunthorpe, Oldham, Rochdale, Huddersfield, Burnley, Luton, and Coventry.

The foregoing services have been in exclusively urban settings, but an important post-war development has been the arrival on the technical library scene of the county library service. Quite apart from the contemporary national climate of opinion, the Government White Paper on "Technical Education" in 1956 exhorted Education Committees to cooperate in this field in the following terms.

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There should also be as much cooperation as possible between college, public and other libraries at local, regional and national levels. This will make easier the interchange of technical material and information, which is particularly desirable in view of the high cost of many technical books.<sup>10</sup>

The close administrative connection between the County Library services in England and the Education Committees are well known, and this exhortation was yet another powerful catalyst in bringing about the activities in this field undertaken by many county libraries.

Lancashire, as early as 1951, set the pace and provided a technical service.<sup>11</sup> The scheme, as it then existed, was little more than a combination of centralized book purchasing in the technical field, coupled with machinery for dealing with technical requests from the branches and an interlending service. A series of technical booklists were also published from time to time. Extensions of this service on an ambitious scale were envisaged, and the Technical Librarian now acts in an advisory capacity to the libraries in technical colleges in the administrative county. A scheme of coordination with these technical college libraries and with industrial organizations is also planned when the requisite accommodation and staff are made available. Although subsequent frustrations have resulted in Lancashire's scheme being partially eclipsed by other counties, it was a pioneer in this field.

The possibilities of basing public technical library services on technical college libraries was first canvassed by D. J. Urquhart in 1955 and 1956, in the days before he became fully occupied with the National Lending Library.<sup>12</sup> The obvious areas in which to try out this theory were the counties, where technical colleges were in existence or being planned with libraries of their own, and where no public technical library services existed. In the towns, both library services already existed in a number of cases, and the set patterns and vested interests involved made such provision much more difficult, although the problem has been tackled as we have seen. The first county actively to take up this idea was Hertfordshire in 1953, when the stock of the newly opened Hatfield Technical College Library was integrated with the County Library stock from the outset, being paid for by the college but supplied through the County Library. Prior to this, a very active Hertfordshire Special Libraries Group was in existence, linking a couple of dozen special libraries in the county by maintaining a union catalog of books and a union list of periodicals, and by conducting interlibrary loans via County Library headquarters.

In 1956 this principle of integration of stock was extended to two further technical colleges, and a County Technical Librarian appointed to tackle the wider problems of providing a technical information service for industry.

A preliminary meeting to discuss this was held in 1958. The scheme now operates under the Education Act with the aid of two advisory committees on the scheme as a whole and on documentary reproduction, always a vital matter in any plan of this kind. Catalog cards are printed for each college library, eight in number by 1960, and a union author catalog of all the college holdings is maintained at each library, at the National Central Library, and at the Science Museum Library. A monthly classified bulletin produced by Xerox is distributed to member firms, and batches of cards recording accessions are distributed weekly on a subject interest basis. Not only are firms encouraged to borrow from the scheme, they are also encouraged to send members of their staffs to browse in the nearest college library. The widest use of microtexts and photocopying has been made, and several excellent symposia on these topics have been sponsored, which have attracted both national and international attention. The subsequent publication of the proceedings has made useful additions to the literature of these subjects. Another feature of the service has been the establishment of private studies (christened "thinking boxes" at Hertfordshire, but better known generally as carrels) in the college libraries, which can be hired by the hour or day, by interested firms, for prolonged research projects. A scheme of such ambitious and imaginative proportions has, naturally, not gone undocumented, and excellent descriptions by G. H. Wright,<sup>13</sup> S. T. Broad,<sup>14</sup> and L. V. Paulin<sup>15</sup> have appeared in print.

The Hertfordshire scheme has been described in some detail as it is the first county scheme to operate effectively on anything like this scale. In considering other new county schemes, only the points in which they differ from this basic prototype will be mentioned. The Northamptonshire County Technical Library Service was started in June 1957,<sup>16</sup> administrative control being vested in the County Library Committee but the cost met from Further Education Committee expenditure. The headquarters of the service is the Corby Technical College Library which also acts as the County Technical Library, providing a service for the staff and students of the three Technical Colleges, for the Institute of Agriculture and for commerce and industry in the county. Publications include a *Weekly Bulletin of Tech-*

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*nical Articles*, covering 250 periodicals, of which 160 copies are issued, monthly lists of *Recent Additions*, special "Subject Booklists", and "An Introduction to the Resources of the County Technical Library." The college libraries are staffed by teacher-librarians, supervised by the County Technical Librarian, who also undertakes liaison visits to firms. The County Technical Library is completely self-contained, with shelving for 12,000 books, seating for fifty, and photocopying and microfilm reading apparatus.

Nottinghamshire County Library Technical Library Services began operation in 1959, based on the three technical colleges at Mansfield, Worksop, and Beeston, together with the other colleges at Newark, Brackenhurst, and Hucknall. The service, controlled by an Organizer of Technical Library Services with the assistance of District Technical Librarians and clerical assistants, has resulted in the coordination of book and periodical provision, minimizing expensive duplication, and ensuring fuller exploitation of the college library stocks on a cooperative basis. About three-quarters of the expenditure involved is met from Further Education Funds.<sup>17</sup> Descriptions of somewhat similar arrangements in Derbyshire, also organized on a regional basis, appeared in 1960<sup>18</sup> and 1961,<sup>19</sup> while the whole field was summarized at a symposium held at Derby College of Art on November 11, 1959.<sup>20</sup> Essex, Gloucestershire, West Sussex, and Wiltshire are among the other counties which have started services.

The foregoing is but the briefest historical survey of the technical library provision by public libraries, together with a mention of the pioneer work of Sheffield in the field of cooperative service to industry. A number of excellent accounts of SINTO have been published<sup>21</sup> in addition to the regular appearance of its annual reports in the *Library Association Record*. Its example, and the success of its efforts, has inspired many other cooperative schemes either directly or indirectly. Not all of them are organized on identical lines to SINTO; different localities have different needs which are catered for individually. The multiplicity of such schemes, and the confusion often caused by their identifying sets of initials necessitate a detailed exposition of their number.

An early example of a scheme without any formal governing committee is the Manchester Technical Information Service (MANTIS) which commenced operations in 1948. It was decided not to set up a formal organization, with a specially compiled union catalog of holdings to be housed in one place. Instead, the librarians of the Technical

Library and the Manchester College of Science and Technology cooperated in the compilation of a union list of periodical holdings of the public and special libraries in the whole of the Northwest, through the agency of which interlending could be speedily effected. This they persuaded the Library Association to publish, thus making the information widely available. This list has acted as a model which other regions of the country have since copied, to the benefit of interlending generally. Manchester also provides one of the earliest examples of cooperation with existing local organizations and the Regional Technical Information Officers of the DSIR, in this instance the Manchester Joint Research Council and its Executive Officer (later the Technical Information Officer of the Bureau of Industrial Liaison). A survey undertaken by the Council showed a lack of awareness of the sources of information available; this was remedied by publishing lists of resources at all levels and by conducting liaison visits by their Executive Officer. The Technical Library staff made parallel efforts, and the service has progressed, first steadily and then rapidly. In a typical year, over 2,000 items are lent via this scheme; over 14,000 inquiries by telephone, 1,000 by Telex (a 24-hour public teleprinter switching system), and several hundred by letter are answered. In addition, hundreds of items are borrowed on behalf of firms from other libraries, special bibliographies are prepared on request, and over 14,000 photocopy orders executed annually. This last service has grown so quickly that it has necessitated a full-time department with its own staff. Descriptions of this Manchester service appeared in 1952 and 1960.<sup>22</sup> The scheme is fostered by links with Aslib at national, regional, and group levels, and the parallel organizations of the Reference, Special and Information Section of the Library Association.

Chronologically, the next scheme on the Sheffield pattern was that formed in London in 1951, based on Acton Public Libraries, Co-operative Industrial Commercial Reference and Information Service (CICRIS), also known as the Commercial and Technical Library Service, West London. The operations of this venture were described in a paper given at a weekend conference of the London and Home Counties Branch of the Library Association in 1959.<sup>23</sup> It was found by 1956 that over-centralization on Acton was causing some difficulties, and extra staff, coupled with measures of decentralization in 1957 and 1958, overcame these. Membership here, as elsewhere, indicates that the larger firms with libraries of their own make the most use of the scheme, the operation of which has been helped by the

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preparation and publication of four union lists of holdings of periodicals, abstracts and indexes, directories, and dictionaries, both technical and translating.

Hull Technical Interloan Scheme (HULTIS) was inaugurated in April 1953 with an initial membership of twenty-three firms and institutions. This has since increased greatly and in 1958 the monthly accessions list of Hull was expanded into the *Hull Commercial and Technical Bulletin*, drawing attention not only to additions but to news of services provided. A *Checklist of Current Periodicals* held by members of HULTIS is also published.

Birmingham runs two schemes concurrently. The first, for the interloan of scientific and technical periodicals in the district, was started in 1953. The union list of titles by which the interchange is accomplished contains over 2,000 titles. The Works Libraries Loan Scheme began in 1957 and has over fifty members lending in the region of 1,000 items per year. The Luton and District Technical Information Service was formed in 1953, and its publications include *Technical Periodicals Available in the Luton Area* and an excellent monthly *Technical Bulletin*.

One of the largest single schemes started during this period was the Liverpool and District Scientific and Industrial Research Libraries' Advisory Council (LADSIRLAC). This was launched following a one-day Technical Information Conference held on October 27, 1955, the very full proceedings of which make excellent reading for anyone interested in launching a similar venture.<sup>24</sup> The pilot services which the Liverpool Technical Library had been running experimentally for some time before the formal inauguration of LADSIRLAC were described in *Aslib Proceedings* earlier that year.<sup>25</sup> The ambitious services provided by this organization are of interest as a prototype of such schemes. The first difference between this and other schemes is the fact that subscriptions are charged to member firms, the payment of which entitles them to services which include postal loans, production inquiries, literature searches, industrial information, and copies of the monthly *Documents Bulletin* of recent additions and index entries to British and foreign journals. The library itself is organized on a subject division basis embracing both reference and lending functions. Ancillary operations have included exhibitions, the arranging of lectures by eminent figures in science and technology, and conferences on special topics. Many of these lectures and proceedings have been published by the Library. Some idea of the expansion of LADSIRLAC

will be seen in the figures of more than 200 member organizations, with the equivalent of over 1,000 subscriptions, mentioned in its annual report. For a fuller account of its work, the annual reports should be read,<sup>26</sup> as should the pamphlet published in 1960 on the occasion of the opening of the "Liverpool and Industry" exhibition by Sir Alexander Fleck,<sup>27</sup> and any example of the *Documents Bulletin*.

In view of the successes, and the resultant publicity, of such schemes as already mentioned, it is hardly surprising that others were started, or given renewed life. The Tyneside Association of Libraries for Industry and Commerce (TALIC) was formed on September 18, 1958, much of the preliminary organization having been undertaken by the local Regional Technical Information Officer, who was also the Information Liaison Officer of the North East Industrial and Development Association. The cost of an introductory brochure was met by DSIR, and the scheme has its headquarters in the Newcastle Central Library. The first years have seen steady progress with both the resources and the membership of the organization increasing year by year. Reports of the work to date can be found in the relevant annual reports of both the sponsoring organizations.<sup>28</sup> The Huddersfield and District Information Scheme (HADIS) was founded after a preliminary meeting on "Technical and Commercial Information for Industry" held at the Huddersfield Central Library on April 8, 1959, under the auspices of the Northern Branch of Aslib.<sup>29</sup> A number of public libraries, technical colleges, and industrial concerns now compose the HADIS membership. The annual subscription is 10s; all three interests are equally represented on the governing committee. Lists have been published of local translators, periodical holdings, and subject dictionaries; help and material are exchanged on a mutually beneficial basis without the intermediary of a paid staff. Another courageous effort by a smaller public library was the attempt in 1959 by Burnley to launch North East Lancashire Technical Advisory Service (NELTAS). This was to be based on the cooperation of the local technical library and that of the technical college, administered by five part-time technical information officers; however, full implementation of this scheme has been hampered by financial difficulties.

Leeds Public Libraries have started a scheme to circulate patent journals to firms, as well as a cooperative venture to provide adequate coverage of textile periodicals between themselves, the University, and the Wool Industries Research Association. Cooperation between

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industry and individual libraries in book selection was described in January 1958.<sup>30</sup>

Other cooperative schemes which have begun to become known by their initials are as follows. The Hertfordshire Technical Information Service (HERTIS) was already described in the section on County Libraries. The Bradford Scientific, Technical and Commercial Services (BRASTACS) was formed in 1961 and based on cooperation between Public Library, Institute of Technology, and seventeen other libraries of firms, research associations, and the like. The Coventry and District Information Group (CADIG) was formed by the public libraries of Coventry, Nuneaton, Rugby, and Leamington Spa, the University of Warwick, and other local educational and industrial libraries, with an annual subscription similar to the LADSIRLAC scheme. The Nottingham and Nottinghamshire Technical Information Service (NANTIS) depends on subscriptions, this time differentiating between members within and without the city, and is based on cooperation between the city and county libraries and local industry. There is also the Wiltshire Association of Libraries of Industry and Commerce (WALIC), and the Hampshire Technical Research Industrial and Commercial Service (HATRIS) based on Southampton Commercial Library.

#### *Cooperation on a National Basis*

The growth and proliferation of such schemes has inevitably led to the demand for cooperation between them on a national basis. This was begun in 1964 with the first meeting in Nottingham of the Standing Conference of Cooperative Commercial and Technical Library Services. This followed an informal meeting between the schemes in Sheffield the previous year. The aims of the Standing Conference are to exchange experiences to mutual advantage, to coordinate their efforts with existing and proposed Government Technical Advisory Services, and to solicit financial support from the Government to aid and expand the services provided to industry. Cooperation to a greater or lesser degree on the personal level already exists between the local schemes and the appropriate Regional Technical Information Officer concerned, as mentioned in the case of Manchester, for example. Liverpool has improved on this by actually having this officer operate from the LADSIRLAC premises, with all the obvious advantages of this arrangement.

On the larger question of central government support, either direct

or indirect, an early manifestation of this was the Patent Specification Depositories. This form of hidden subsidy on a tiny scale has been carried on by similar arrangements made to deposit the non-secret publications of the Atomic Energy Authorities of this country and the Western Alliance, the deposit of collections of the reports of war-time developments in enemy industries such as the BIOS, CIOS, and FIAT reports, and the concession of the 50 per cent discount on publications of government-financed research associations. Apart from these, the whole of the large costs entailed in running these large technical libraries and information schemes falls quite unfairly on the individual local authority within whose boundaries they are situated. This is most inequitable, as these services are obviously widely used beyond the boundaries of the authority, and since the services taken together form an important and expanding part of the national library service. The Roberts Committee was taken to task in *Nature* on May 9, 1959, for ignoring this in its report, as follows:

It might have been expected, therefore, that the Committee would have given some attention to these broader issues, particularly in view of the place which some of the commercial and technical libraries at, for example, Manchester, Sheffield, Liverpool, Leeds and elsewhere have already taken as regional centres. . . . The real problems in establishing an adequate national library service which will meet scientific and technical needs, among others, have not been faced; and the extent to which it is a factor in industrial and scientific efficiency and not merely in education is not understood. The contribution which the commercial or technical library of a large local authority could make in developing an economic [national] service is ignored, as are the financial implications which arise when such a body is asked to meet national needs from local resources. If the nation's growing needs for scientific and technical information, educationally or in research, in industry and in commerce, are to be met at any reasonable and practicable cost, full and effective account must be taken of all existing resources, and the means provided for efficient co-operation without making demands liable to impair the efficient discharge of any institution's primary responsibilities.<sup>31</sup>

The largest single action of the national government which has greatly increased the potential of all the local cooperative schemes and the libraries themselves has been the formation of the National Lending Library for Science and Technology. This, together with its network of Local Agents, has vastly improved the coverage and

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speeded up the supply of material from this central repository over the Science Museum Loan Service which it superseded. To qualify as a Local Agent, with direct access to, and borrowing powers from, the National Lending Library for Science and Technology, a library service must fulfill certain conditions as to the number of periodicals, abstracting and bibliographical aids taken. The aim is to have these Local Agents acting as the professional sieve through which all bibliographical requests are sifted, in order that the actual requests received at the library shall be correct, with all that implies in ensuring a speedy service.<sup>32</sup> Libraries of firms and other organizations have the right of direct access to the library if they meet the stated requirements.

Other aids to cooperation on a national basis between services to industry include contacts through the agencies of the Library Association and Aslib. The Reference, Special and Information Section of the Library Association at both national and regional level ensures through its committees, meetings, and publications that librarians from industry work in the closest harmony with those from other spheres. Aslib, although primarily an organization for industrial and research concerns, also has within its membership a large and growing percentage of libraries providing the services already discussed. In addition to work on a geographical basis, both national and regional, similar to the Library Association organization, a number of special groups organized on an industry basis do much of this work within Aslib. In this way they are somewhat parallel in operation to the various research associations. Publications which are invaluable for cooperation in special fields are issued by both of these professional associations. Directories of the libraries in a particular area are issued by all the regional groups of the Reference, Special and Information Section of the Library Association, while the industry groups of Aslib, such as the Textile Group, have produced lists of holdings of periodicals within the constituent libraries of the groups. The parent body Aslib has, of course, published the *Aslib Directory*<sup>33</sup> giving details of all the libraries regardless of location or industry.

The Library Association's concern about the lack of national planning for efficient access to the literature was mirrored in 1965 by the formation of a committee to survey the present situation and make proposals for action. The following proposals were formulated in April 1965 in its first report, "Access to Information."<sup>34</sup>

I. The planning function should be carried out by a national bib-

liographical advisory council of a representative character, whose tasks would be: (1) To determine priorities in developing national bibliographical information services; (2) To promote and extend such services; (3) To stimulate research; (4) To coordinate library and information service activity; (5) To improve coordination of bibliographical services (including abstracting and indexing services); (6) To encourage better provision of reference and bibliographical facilities in libraries; and (7) To act as a link with international bodies concerned with the planning of bibliographical and information services.

II. The executive functions should be carried out by a national bibliographical center with an adequate and professionally qualified staff, whose principal tasks would be to establish a clearing house for information on resources, to establish and control a full national bibliography, both current and retrospective, to establish a full union catalog of both lendable and non-lendable material, to carry out research, and to serve as a clearing house of information about research in progress and completed, and to act as the Secretariat to the national bibliographical advisory council. Operations of the clearing house would be: (1) Passing on requests from libraries and institutions to suitable sources of information; (2) Accepting and answering inquiries itself in appropriate cases (It would thus need to be based on a large reference collection.); (3) Compiling and publishing detailed guides to sources of information; (4) Publishing bibliographical guides of all kinds as well as stimulating and coordinating their publication by other agencies; (5) Sponsoring and organizing regional centers of information which would both feed the national center and lighten the demands made on it; and (6) Dealing with international bibliographical inquiries.

These proposals were circulated to all cooperative schemes for their consideration, and a meeting to consider their views on them is to be held in an effort to make more effective the coordination of information resources.

As in all information work, published guides to the resources and services form an essential part of any scheme. This might be an appropriate place to mention some published by the schemes already discussed. Of the local cooperative schemes Liverpool, Sheffield, Hull, Nottingham, Luton, and Hertfordshire, to name only a few, issue regular annotated bulletins of material added to their resources. These vary from the full scale *Documents Bulletin* of LADSIRLAC to mere

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accessions lists issued by less ambitious schemes. Many libraries issue detailed handbooks to the resources and services offered, or to specialized facets of them. Examples of these are the publications of Manchester descriptive of the contents of its Technical Library,<sup>35</sup> Patents Library,<sup>36</sup> technical translating dictionaries collection,<sup>37</sup> and holdings of current abstract and indexing services.<sup>38</sup> All these have had a wide sale, not only within the British Isles, but all over the world. Most of the larger technical library services in cities are now organized on a subject departmental basis, with all the innate advantages of such arrangements to both reference, lending, and industrial users. A corollary of this is often a separate Patents Library and such extra provisions as translation services, photocopying, standards and dictionary collections, and the like. A telephone answering service for industrial inquiries has long been the rule, and this is increasingly supplemented today by a Telex inquiry service, most of the larger urban libraries now being on this British teleprinter network since Manchester pioneered this medium of communication in the library field in 1958.<sup>39</sup>

Thus far only the organizations, their resources in books and allied materials, and the network via which they cooperate have been considered. The last leg of the tripod of buildings, stock, and staff, namely staff, is considered by many to be the most important of the three. The biggest single factor inhibiting the realization of the full potential of technical library services provided by public libraries continues to be the constant drain on qualified and experienced staff. The loss to the public library service generally of trained staff is serious, but the loss of qualified staff from the technical libraries of this service is very serious. Four main avenues are open to staff trained in public library technical services, namely libraries of educational institutions, libraries and information services of the United Kingdom Atomic Energy Authority, libraries in industrial firms and research associations, and libraries of government departments and institutions whose staff come under the civil service. All these categories have been expanding at a rapid rate, and all of them are able to offer more attractive salaries, working hours and conditions, and better prospects for promotion than can public libraries. The wonder is not that staff leave; it is rather that there are any left.

The general problem of public library staffing was brought to the attention of the House of Commons in an adjournment debate on March 1, 1961, which was subsequently reported in the *Library Asso-*

*ciation Record*.<sup>40</sup> The discrepancy in material reward between libraries in local government and in the national, industrial, and research organizations, although present at all levels, is greater in the higher posts until, at the head of department level, the salaries differ by almost 100 per cent in some cases. J. P. Lamb consistently advocated, both in his book and elsewhere, the payment of salaries adequate to encourage staff to specialize in technical or commercial work, and attractive enough to retain them there when fully trained. As long ago as 1927 the Kenyon Committee recommended that "the trained librarian should be paid not less than the trained teacher and the one profession should not be less attractive than the other."<sup>41</sup> The Roberts Committee reiterated this in 1959 and expressed the desire to see more specialist posts of this type, noting at the same time the loss to public libraries of trained staff as already described. Everyone, it seems, from Governmental committees down to individual librarians, is aware of the position except the people who can correct the situation, the Local Authorities themselves.

Proverbially it is an ill wind that blows nobody any good. It is thus a fact that, paradoxically, this drain on the staffs of public technical services has actually benefited the industrial library services of the country as a whole. Without the experience and training recruited from the public libraries by industrial libraries, research associations and the like, it is extremely doubtful whether these information services would have developed so speedily along the efficient lines which they have followed. If industry had nothing else to thank the public libraries for, it would still be in their debt for training so many of the more successful of their information staffs. Even where smaller firms do not recruit directly, they are often helped in an advisory capacity to establish small information services and libraries either by visits from the local technical librarian, or by the member of the firm's staff responsible for the service for training. Many of the larger libraries also arrange exchanges of senior staff between themselves and local industrial libraries. Manchester, for example, has exchanged staff with a local chemical company and a research association for periods of a month at a time, to the mutual benefit of both services and their liaison. They have extended this scheme overseas by the exchange of staff for similar periods with one of the leading continental technical universities at Delft in Holland, with which they also enjoy the closest cooperation via Telex for the interchange of material, information, and translations.

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This brief outline sketch of the post-war development of British technical library services to industry can be followed in greater detail by the reading of the relevant sections of the *Five Years' Work in Librarianship*.<sup>42</sup> A shorter summary was published by UNESCO in 1961.<sup>43</sup>

Whereas it is obvious from the foregoing that a closely knit network of cooperative schemes for services to industry, based on public library centers, now covers much of Britain, this is by no means the case in continental Europe. What appears to be a peculiarly British form of cooperative service has not been transplanted successfully elsewhere with certain embryonic exceptions. On the continent, on both sides of the Iron Curtain, the bibliographical and library services tend to rely on research institutes, universities, and learned libraries rather than on public libraries. Those touring industrial libraries in France, Denmark, Holland, and Germany under the sponsorship of the European Productivity Association mission in 1961 reported that librarians were on the whole reluctant to form cooperative schemes of this type, and that industry tended to lean heavily on research associations even for elementary items of information.<sup>44</sup> Those touring technical libraries of Western Europe in 1956 reported a very similar picture; of 100 technical libraries visited in France, Germany, Holland, and Scandinavia, no public libraries were mentioned as part of the information services outside Britain.<sup>45</sup> The passive facet of service to industry may fairly be said to be the predominant one in continental public libraries. In a further survey of technical information services in Germany, Luxembourg, Belgium, and Holland in 1959,<sup>46</sup> the German and Dutch were considered to be the best developed, and it would seem appropriate to take these countries as examples from Western Europe.

The post-war difficulties in Germany and the other countries were immense. In Germany, for example, the scientific libraries lost over ten million volumes. As early as 1951, less than six years after this, an impressive scheme of cooperation between twenty-three of the largest of these scientific libraries started. Seven regional union catalogs revealed their joint holdings, and cooperation on an interlending and bibliographical basis was instituted.<sup>47</sup> A further scheme of interlending of scientific literature in North Rhine Westphalia exists between eighty-five scientific libraries of the region. Essentially it is based on the university libraries, but public libraries are included.<sup>48</sup> The city libraries themselves of this same area banded together in

1956 in a cooperative scheme for the purchase of German scientific literature. Each library undertook to spend 5 per cent of its book fund on scientific subjects allocated to it. This scheme was the result of the city libraries finding they were deficient in this class of literature and that the university and special libraries were often unable to lend expensive works in this category because they were in similar demand by their own patrons. Cooperation between the cities of this highly industrialized area was the obvious solution, and one which has worked well.<sup>49</sup> An individual city, Duisburg, began an attempt at a service to industry from its own resources in 1960, albeit at an elementary level with a mere twenty-five periodicals.<sup>50</sup> That the Germans themselves are not wholly satisfied with this position is evident in many of their professional journals. Too many industries still ignore libraries which might solve their technical problems, and too many new libraries are being built without technical departments as separate services.<sup>51</sup>

In the Low Countries, the Section for Special Libraries of the Dutch Library Association formulated recommendations on how public and special libraries could help each other. These were put into operation towards the end of the last decade at Deventer, Zwolle, Amsterdam, and Enschede with promising results.<sup>52</sup> These experiments were reported in Germany as examples to be copied with profit. Just as we find libraries linked by Telex in Britain, so the large public libraries of Holland have been so joined since 1957, with a correspondingly increased service to the commerce and industry of that country.<sup>53</sup> The nearby city of Antwerp in Belgium has also been supplying technical literature since 1956, a fact which was again held to be exemplary in Germany.<sup>54</sup>

Behind the Iron Curtain, the services to industry provided by libraries are all centralized rigidly on the approved socialist pattern. All libraries, of whatever type, are under a unitary control, which makes it relatively easy to arrange for cooperation to whatever degree is required, either for propaganda or information. Here again, however, as in Western Europe, service to industry is provided directly by the research institutes and technical universities, rather than in cooperation with public libraries. To take Hungary as an example of this unitary control, the libraries were grouped into thirteen networks by types of library, by laws enacted in 1952 and 1956. The National Technical Library and Documentation Center presides over a network of 917 technical libraries in industry in addition to its own

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large resources. The total bookstock in this network is approaching three million units, including volumes of periodicals, with the best collections housed in large factories and the research institutes.<sup>55</sup> Some 10 per cent of these libraries carry out local documentation, otherwise it is all done at the Documentation Center with its monthly publication in thirteen subject groups. A translation service is also provided, together with central registration and deposit of translations, and a collection of foreign patent specifications numbering over 6½ million. As is the case all over eastern Europe, the language barrier is one of the largest that librarians have to overcome in serving industry. The emphasis thus tends to be on abstracting and documentation of foreign periodical literature, with a wide circulation of the resulting abstracting journals.<sup>56</sup> Special subject documentations or literature searches are also undertaken on request and sold to industrial enterprises at cost price. The various technical universities also carry out this type of consultant service to industry, again on a fee-paying basis. This is carried out at Miskolc and Veszprém in their specialized fields of technology of metallurgy, mining, and chemical engineering, respectively. The "passive" aspect of circulating large quantities of books and periodicals via the public libraries to industrial workers is carried out on an impressive scale, and cooperation has existed between them and the trade union libraries since 1959.<sup>57</sup>

The main problem in Hungary, and all the members of the eastern European bloc, is to press on with industrialization, and the library networks are only just another means to this end. Technical information services to firms in all the Soviet satellites follow a similarly centrally inspired or imposed pattern, and a survey of such services in the U.S.S.R., Czechoslovakia, Poland, East Germany, and Rumania was issued in 1961 as a guide for Hungarian librarians to the way in which these countries were linked in the information field through COMECON, the East European "Common Market."<sup>58</sup> The position in Czechoslovakia itself was summarized in English in the *Unesco Bulletin for Libraries*.<sup>59</sup> Scientific and technical information systems in all the European satellites are, of course, modelled on the Soviet system. This is so well documented that no attempt will be made here to describe it. Its claims to be included as a purely European system are in any case dubious, the vast majority of the Soviet Union being in Asia. Probably the most concise and easily read summary of this system as applied to the industrial side is to be found in the report of the DSIR Aslib delegation to Moscow and Leningrad in June 1963.

This summarizes the structure from the huge All Union Institute for Scientific and Technical Information (VINITI) organization downwards.<sup>60</sup> The main thing to remember is that everything is run and controlled by the state and that there is therefore no need for voluntary cooperation on the SINTO pattern, all being coordinated centrally and the necessary cooperation imposed from above. Whether this bureaucratic approach is desirable is a matter of opinion, and this is no place to discuss ideological considerations.

This chapter is a little unbalanced in content between Britain and the continent. In the first place the author has been a part of the British developments for a number of years and knows them well, whereas he has first-hand knowledge of the libraries of only one country on the continent, namely Hungary. This disparity, however, is a reasonable reflection of the scale of the services to industry in Britain and Europe outside the research associations and universities. This is the important difference, and only time will tell which is the better system. Industry appears to be benefiting in some measure from both, if the industrial outputs of Britain, the Common Market, and Eastern Europe are anything by which to judge.

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