Reference Service in Special Libraries

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The development of special libraries, essentially a product of the twentieth century, has been characterized by the rapid increase in their number, from 50 in 1907 to 3,473 in 1962, and by significant changes in their functions. The growth of services offered by special libraries has been directly related to the expansion of research and development programs, reflecting especially the impetus given to such programs by the two world wars and the major emphasis accorded research since World War II. "In its first 150 years as a nation, the United States—Government and industry combined—spent some $18 billion for R & D. That total was matched in the five-year period, 1950 to 1955, and almost matched again in the single fiscal year of 1962."1 This mushrooming of research has stimulated the development of new libraries as well as the expansion of existing ones.

Research organizations, businesses, governmental agencies, and similar enterprises established libraries in order to centralize materials housed in individual laboratories and offices and to unify information-like activities. Initially, therefore, the special library's role was restricted to that of a repository. Due in part to the librarian's effort to provide additional justification for the existence of the library, the idea of an information or reference function emerged. Leading to the establishment of reference services, the librarian gradually assumed responsibility for assisting the user to obtain the information he needed, first helping those who were unable to manage alone and then providing assistance in order to save the time of the research worker. Special librarians have slowly expanded the service role, and in some libraries service now includes active collaboration of the librarian in the conduct of specific projects or research activity.2

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Reference services differ considerably in special libraries, their nature being determined in major part by the purpose, dominant subject interests, size, and administrative structure of the parent organization as well as by the initiative of the library staff. In spite of the variations, reference activity in an individual special library normally corresponds to one of the levels of service identified above. It may be restricted exclusively to aiding those who lack facility in use of material, or it may encompass a complex array of services, including direct participation of the librarian in the research process. In discussing the work of the special librarian Adkinson said:

In partnership with the scientist and technologist, and armed with skills of modern library science, the special librarian tackles the arduous task of making readily available to them the knowledge and experience of others. He is skilled in the use of standard bibliographical tools, and he knows the locations of larger and more comprehensive collections than his own. He seeks to understand the habits of his readers and the processes by which they come to need and later use data. He is aware of the objectives of the investigators he assists and can therefore anticipate their information needs.

For descriptive purposes, reference services provided by special libraries may be grouped into four primary and six auxiliary categories. Primary service consists of those responsibilities essentially informational in character. The first two listed below are extended on request; the last two may be offered voluntarily.

1. Provision of information in response to specific request. Requests for information range from a question that can be answered by picking up a handbook and reading off a fact to one that requires use of numerous published and unpublished sources in assembling extensive data. An increase in the proportion of requests for a specific fact to other types of queries has been noted. Reporting that it has been “years” since she was asked for “everything you have on . . . ,” one special librarian has said that about 75 per cent of the questions she received were brief ones. Most of the queries were of either the (1) What’s in it? (2) Who makes it? or (3) Where does he work? variety. Listing “more demands for specific technical information” as a trend in special library reference work, Burton attributes the “noticeable growth in reference questions which demand specific answers” to the “exacting requirements of the space age.”

2. Carrying out literature searches. Through careful and exhaustive
checking of appropriate sources, the special librarian assembles either the relevant information or references to the sources wherein the data are found. In his study of scientists’ approach to information, Voigt concluded that the number of times the “exhaustive approach,” or a search of the literature, was used was “small in comparison to the number of times” other approaches were employed.6

3. Preparation of bibliographies. Usually the bibliographies are relatively brief lists carefully selected to correspond to a specific need. They may, on occasion, be prepared on the librarian’s initiative to suggest material on topics of current or of general interest to the library’s users.7

4. Scanning and referring current information and new material to appropriate individuals. As a matter of routine, serials, technical reports, books, and other materials are examined and sent directly to the attention of individuals who will be interested and who have a need to know about the developments reported. No more eloquent testimony to the importance of this service can be found than the list compiled by a member of a research staff of five types of information required by scientists. Four of the five items relate to the “keeping up process,” and the last of the desired services reads “To have called to their attention new and stimulating developments or facts in fields in which they are not presently interested but in which they might become interested if they knew of the new facts or developments!”8

Auxiliary services are those related to and supporting primary reference functions. They include: interlibrary loans, abstracting, publishing, translating, and photoduplication services.

Interlibrary loans. The self-defining subject limitations of special libraries have helped stimulate their use of interlibrary loans. Because subject specialists on occasion want access to material outside their fields and because these needs frequently cannot be anticipated, special librarians are often unable to supply from their own collections the desired material. For this reason special libraries are well-known borrowers, so well-known in fact, that Sass, basing his statement on his survey of a selected group of special libraries and bibliographical centers, characterized the “...relationship between special libraries and their larger college and public counterparts...” as being “...largely of the host-parasite variety...”. Supporting her reply with isolated illustrations, Ferguson insists that the “Special Librarians Need Not Be Parasites.”10 Adding emphasis to Sass’ findings, however,
although writing from another viewpoint, Nicholson points out that loans to industry dominate the interlibrary lending of urban universities. In 1960-61, for example, 93.8 per cent of the interlibrary loans made by the California Institute of Technology Library were to industrial concerns. The volume of loans has become so great that some institutions (MIT, Stanford) have established an associates program whereby businesses pay a membership fee which entitles them to use and borrow library materials.

Abstracting services. Abstracts may be provided in connection with dissemination of current information, in reporting the results of literature searches, and in the process of answering specific questions. Although commercial abstracts are of major importance, they also possess certain limitations. A publication may be a part of the special library's collection for months before it appears in a commercial abstracting service. A locally prepared abstract, however, can be circulated shortly after the publication is added to the collection. In addition, the special librarian can select for abstracting only those new materials possessing significance for that organization, thus saving time of research personnel who can avoid use of the more complete commercial services except for specific problems.

Publishing services. Services related to publishing possess two facets: (a) activities related to material prepared and distributed by the special librarian, and (b) editorial activities related to publications produced by users of the library. The special library staff may prepare newsletters which describe library services and new materials or present selected bibliographies on topics of current interest. It is generally agreed that information services should operate as a "... filter not a funnel ..."; through a bulletin the librarian "... eliminates what is unnecessary, coordinates the material and disseminates it." While some of the bulletins may be essentially public relations vehicles, they offer a means for publicizing information as well as the reference services offered by the library. Editorial assistance to users is no more than answering requests for specific information relating to the formal presentation of information. Editorial activities may also cover consultations regarding the indexing of company publications as well as questions pertaining to their final form.

Preparation of special indexes and files. The proliferation of unconventional material (clippings, charts, supply catalogs, specifications, for example) used in special libraries has helped to increase the number of separate files librarians maintain. The unusual formats
of the items in the collection mean that ordinary tools such as a card catalog and commercial indexes offer inadequate aid. Consequently, indexes to trademarks, to corporations possessing certain qualifications, and to other relevant subjects are prepared.

Translation services. When the need to read foreign languages arises, the American worker is frequently unable to continue the search for information. In order, therefore, to supply desired information, the librarian, usually equally unconversant with foreign languages, must be able to provide translations. Out of the need to obtain satisfactory translations and the concern over duplication of efforts has evolved one of the more successful special library cooperative programs—the SLA Translation Center at John Crerar. Whenever it is possible to do so, libraries file with the Center copies of translations they have prepared. These translations then become available to others. Special librarians are also involved in some of the pioneering work in machine translation.

Photoduplication services. Where several staff members need or are interested in the same information, copies are frequently supplied. Copies of library materials are also provided for project files. The nature and extent of photoduplication services are naturally affected by the kind of equipment available.

No studies of the relative importance of the different types of reference service have been undertaken; the few comparative statements quoted above refer to their rankings in certain situations. Statistical data regarding the frequency with which the services are offered are also lacking, and generalizations have to be based on whatever appropriate comments can be located in the literature.

In some instances the special librarian’s responsibility encompasses all of the primary and auxiliary reference functions identified above; in other cases the library handles only requests for specific information. Bibliographies may be compiled and literature searches conducted by an “information center” or “documentation division.” Considerable disagreement exists regarding the distinction between information centers and libraries. Even more differences of opinion arise in discussions regarding the responsibility, as well as the ability, of the librarian where literature searches and similar services are concerned. Certainly, each of the services discussed above is offered by some special libraries, even though it may not be a part of every library program. Each of the services may, moreover, appropriately be considered a reference or reference-related service.
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A study of the literature reveals no general pattern distinguishing the services of a library from those of an information center. In the absence of objective studies, it seems advisable to recognize that differences of opinion and practice exist and to accept Gray's generalization "... that in any laboratory the name applied to the major organizational unit in which information programs fall is likely to be a function either of chance or of the history of the agency." 15 Jackson predicts "... that by 1980 it will be impossible to distinguish between a special library and a documentation service." 16 The significant factors are, of course, that those informational services needed to support an organization's program be available and that they be provided by qualified personnel. It is obvious, however, that a new professional worker has emerged who will assume responsibility for some of the primary and auxiliary functions. The new worker is identified directly with literature and with the theory and handling of information.

The size of the parent organization and related factors determine the organizational framework through which the above primary and auxiliary services are extended. In some cases all library activities are handled by one professional librarian who may or may not have clerical assistants. At the other extreme the library staff may include several professional librarians and subject specialists plus technical and clerical assistants. In addition, in large corporations possessing numerous branch operations, libraries may function in each plant. These "branch libraries" may be unified administratively and may have access to TWX services in order to expedite the exchange or flow of information.

Although they do not help to define or clarify reference service in special libraries, numerous guides to the organization of information services exist. (See appended list of additional references). The handbooks for specific types of special libraries all include sections on reference service. Programs for the services grouped here as primary and auxiliary services are generally outlined in the guides, although they may be treated separately. In addition to the treatment accorded them in the handbooks, the services have been analyzed in varying detail in journal articles.

Subjective statements of research workers and studies of the use of special libraries add to an understanding of reference service. Library users have spoken frankly concerning the type of service they need and the frustrations they experience in seeking information.
Some of them display an accurate interpretation of some of the problems involved in providing the service they wish to receive. A few recognize they themselves can, by following some simple practices, get more from the library.\textsuperscript{17}

Numerous studies of the use of, or approach to, information exist. These studies have commonly employed either citation counting, interviews, or the diary method to collect data regarding the material used by scientists and other workers. In addition to discussing the merits of different types of studies of the use of information, Egan and Henkle give a sixty-three item bibliography of such studies.\textsuperscript{18} Voigt analyzes some of the more significant writings concerning use of information\textsuperscript{19} and introduces his own detailed study of scientists' approaches to information. Although his study "... covered only certain areas of science, ..." he feels "there is no reason to believe that similar conclusions would not be reached in other fields of science or in other areas of research, such as the social sciences."\textsuperscript{20} In the study which is one of the most revealing of those available, Voigt classifies the approaches into three groups: current, every day, and exhaustive. He then considers in detail the methods and sources most important to each approach.

A third source of information, studies of the use of individual libraries, sometimes includes findings that have application beyond the walls of the library studied. Results of Jacobs' recent examination of reference queries at John Crerar, for example, "... suggest that even in a highly specialized technical library more use could be made than is now being made of non-professional personnel in handling of reference questions."\textsuperscript{21}

**Distinctive Features of Reference Work in Special Libraries**

Reference service has been identified by some as the distinctive characteristic of special libraries; others have said that the way in which service is provided marks the special library; still others indicate that reference service is reference service and no real difference exists from one kind of library to another.\textsuperscript{22} Evidence from the literature of information service supports those who speak in terms of distinguishing features of reference work in special libraries. In comparison, the difference between reference services in special and other libraries is essentially a matter of degree or depth of service and of importance or frequency of demand for specific services. Reference service in special libraries is characterized by the following features.

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1. Lack of emphasis on the teaching function. The special librarian finds the information rather than teaching the user how to find it for himself. Only in the case of special collections serving instructional programs is the teaching function recognized. More specifically, a librarian serving a medical school may stress the instructional aspects of reference work,23 but the librarian serving a medical society will emphasize performance of work for the users.24

2. Greater participation of the special librarian in the search for information. The special librarian may be involved in the initial planning and discussion of a project or experiment, adding his knowledge of information sources to the contributions of the various subject specialists. In this widely accepted group or operations research approach, the special librarian has the opportunity to work closely with organizational personnel as a recognized member of the team.25

3. Emphasis on information. The special librarian deals in information not in bibliographical units; he is expected to supply the answer to a question rather than provide the sources wherein the answer is contained. This leads to a depth of reference work that other types of libraries cannot normally support. Years ago Margaret Mann wrote, "many organizations do not need a library so much as they need a searcher, someone well versed in literature, who can visit libraries and do the searching for the busy man."26 Working "for the busy man," all of the staff members of the special library may concentrate their time for several days, or as long as need be, on one question. In fact, according to Henkle, the special librarian may well be the heaviest user of the library's collections.27

4. Presence of time pressures. Free from the pressures produced by several classes writing on the same subject and from the demands of rush hour patrons, the special library is more inclined to pressures arising from deadlines, from emergency situations.28 Something happens in the laboratory; there is a client on a long distance line; a conference is suddenly called for this afternoon—each of these can create an urgent need for a fact or facts. Although these crises are routine, they are always handled as emergencies because the needed information could have a vital influence on the work of the organization.

5. Differences in the relationship between the special librarian and library users. Users of a special library are likely to possess a greater degree of homogeneity in that most of them have academic training plus subject specialization and experience. Most of them normally have some acquaintance with the use of information if not with the
use of libraries. The special librarian sees these people more frequently and over a longer period of time than is customarily the case where users of other kinds of libraries are concerned. From these contacts the special librarian develops an intimate knowledge of individual interests and work habits and is consequently able to operate more effectively as a liaison between the user and sources of information. The closeness of the relationship contributes to the successful collaboration of the research worker and the special librarian in obtaining and using information.

6. Utilization of subject specialists. In those libraries or information units where reference service is highly developed, the staff customarily includes individuals with academic backgrounds in subjects corresponding to the dominant interest of the organization. These individuals may be called literature searchers, information officers, literature analysts, or technical librarians. Whatever their titles, they are normally engaged in activities related to compilation of bibliographies, literature searches, and to preparation of state of the art reports, abstracts, and reviews. In discussing the use of subject analysts in the Legislative Reference Division of the Library of Congress, Goodrum wrote: "... as long as the service was asked to provide factual answers to specific questions, the librarian was most efficient. But when the inquiries began demanding either broad analyses of past situations or anticipated results of some theoretical future move, we had to have more highly specialized personnel." The librarian, he said, was able to get the answer to such questions, but the specialist would produce it faster and more fully.

The emphasis given to these six characteristics should in no sense be interpreted to mean that they exist only in special library reference work. Certainly, reference work of great depth is performed elsewhere; of course, close ties exist between some librarians and some patrons in public and academic libraries. Restating the introductory generalizations to this section, the distinctive character of reference service in special libraries is found in the repetition of certain of its features, the regularity with which the features appear. Again, reiterating an earlier statement, differences in reference activity exist but they are primarily a matter of degree.

These distinguishing features contribute to the magnification of certain problems directly involved in reference service in special libraries. These problems, outlined in the following paragraphs, are by
no means restricted to special libraries but are usually more acute there.

Subject specialization of personnel. As the special librarian becomes more actively involved in research, in the daily work of the organization's personnel, his need for subject competence increases. The number of librarians with academic backgrounds in the sciences and, to some extent, the social sciences, is small. The continued expansion of special libraries and the lack of librarians with appropriate subject backgrounds have directed attention to the kinds of training needed to support the various reference and informational activities. Although no general agreement has been reached, widespread recognition exists of the need for training of a kind not presently found in library schools. Acceptance of the subject specialists, under a variety of titles, as a member of the reference staff is unquestioned. Considerable uncertainty exists, however, as to who should be charged with the ultimate responsibility for some of the services outlined above.

Whether the librarian and the information specialist will work together in the development and improvement of all the services or whether there will be an ultimate division of activity with the librarian working almost exclusively with specific categories of service and the technical information officer handling other types has not been determined. The formation of the American Documentation Institute in 1937 shows that librarians in their organizations and their thinking have not satisfactorily accommodated all of the approaches to information problems. This fragmentation of organized effort suggests that while the librarian and the information specialist will collaborate, there will always be the two separate and distinct professional approaches.

Use of non-book material. Due to the emphasis on certain subjects and the necessity for up-to-date information, the special librarian relies heavily on non-book material and unconventional formats. Egan identified a revolution in the communication of specialized information "... brought about through increasing specialization in all fields, through changing methods and agencies in research, and as a result of shifts in the organization and relationships of scientific, industrial, and governmental activities under the impact of war." A multilithed market survey, specifications, a supply catalog, a technical report—these represent the kinds of material found in quantity in special libraries. The bibliographical problems involved in acquiring, filing, and using these various types of material are numerous and time-con-
assuming. The deluge of technical reports in the last two decades has affected considerably, for example, the kinds of material used in research. In addition to the difficulties in identifying and obtaining specific items in the various less conventional formats, some of which are unpublished reports, the special librarian frequently encounters classified material—both security and proprietary classifications—and additional complications in his search for information.

Need for more detailed indexes and other aids. Emphasis on information, reliance on non-book material, the necessity for up-to-date information, and the pressures of time have caused the special librarian to develop "home made" reference tools: indexes, data files, and abstracting services. Maintained over the years, these tools have in many cases proved to be inadequate in terms of the great increase in volume of publication and changes in the way information is disseminated. The information explosion has created acute problems for libraries, and special libraries have felt the impact acutely. Special librarians have concerned themselves, therefore, with the general problem of bibliographic control; they have led in the utilization of machines in information retrieval.

Users of special libraries are vitally concerned with these problems—particularly where their specialized knowledge can be utilized in the search for a solution. Non-librarians have taken leading roles in the study and research on information retrieval, the application of machines to reference work, and the general subject of information, its nature, dissemination, and use. They have assumed major responsibility for conferences, both international and local, at which these problems were discussed.

Characteristics of the literature and the research methodology identified with dominant subject interests. Some problems associated with reference service arise because of the dominant subject interests served by the library. Either the subject content or the methods of research commonly utilized in the subject affects the informational needs of the workers in the respective area or produces difficulties peculiar to that field. Obviously the reference tools change from field to field, but specialists feel there are fundamental differences in the use of information produced by, in oversimplified terms, such factors as the social scientist's concern with trends and his use of the case study and survey, and the scientist's need for specifications and his emphasis on experimental methods.

Outside requests for service. The distinctive nature of the resources
of the special library frequently attracts outsiders who request reference assistance as well as access to the collection. Although special libraries are virtually private libraries serving distinct groups, their administrators have not found that this characteristic constituted provocation for "... denying service to those outside the spheres, who have legitimate need of it, ..." particularly when the "outsider" has been sent from another library. In those special libraries serving the professions of medicine and law, grave reservations exist about extension of service to laymen, and more restriction on outside use occur in these subject areas. In the case of some of the technical and commercial libraries, service to outsiders is encouraged as part of the public relations program. Some special libraries offer extensive services on a fee basis, the best known examples being John Crerar’s Research Information Service and the services offered by the Engineering Societies Library.

The distinction between information services and reference is more exactly drawn in European countries. Evidence suggests that reference service, the service associated with the provision of answers to requests for specific information, is less well developed abroad. On the other hand the services provided by the "information officer”—abstracting, indexing, and literature searches—are quite advanced. Programs for the training of the information officer or literature analyst are well established, and a voluminous literature relating to special libraries and information services has been developed. No studies of the impact of foreign developments on American programs or vice versa are reported in the literature.

Only an incomplete picture of reference service in special libraries can be drawn from the literature which is primarily subjective and interpretive in nature. There is, for example, little objective information on such items as: size and composition of reference and/or information staffs; availability of specific services; and distribution of staff time among various reference functions. The literature reveals, however, expansion, both in number of units and in kinds of service offered. The emergence of a technical information specialist, a non-librarian, who handles those informational services dependent on subject knowledge stands out clearly in special library development—whether a rigid distinction will be established between his activities and those of the reference librarian has not yet become apparent.

Without question, much is happening in special libraries today, particularly in those in science and technology. They are serving as
the laboratories wherein experiments in the use of machines in information retrieval and in translation are being conducted. These experiments, produced by the combined efforts of librarians and representatives of industry and government, should enhance the role of the librarian as a collaborator of the researcher and the technician. Work currently underway in special libraries may well exert significant influence on reference service in other types of libraries.

References

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20. Ibid., p. 81.


22. Rothstein, op. cit., pp. 53-54.


ADDITIONAL REFERENCES


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