Service to Business and Industry

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IN THE EARLY YEARS of this century business and industry's recognition of a need for information services led to the concept and establishment of company libraries. Such libraries continued to increase in number until there are now approximately 10,000 special libraries in the United States.[1] Many of them, particularly those in banks, insurance companies, and advertising agencies, formed good working collections, but from the beginning practically all relied upon larger libraries for supplementary material.

Public libraries in metropolitan centers responded to the information needs of business by the establishment of special departments, such as that for Business at the Newark (N.J.) Public library in 1904, and the Technology Department of the Carnegie Library of Pittsburgh in 1905. Libraries of academic institutions, too, cooperated by loaning to companies; but it was not until the 1920's that the volume became of enough significance to be mentioned by their librarians. In the 1925-26 Report of the Librarian of Massachusetts Institute of Technology it was noted that interlibrary loans were issued to 10 corporation libraries (about 17 per cent of all libraries loaned to). By 1928-29 the number of industrial libraries using interlibrary loan privileges had increased to 32 (47 per cent of all libraries loaned to), causing the librarian to comment, "In common with other college libraries the Institute has considered means of reducing the strain put upon it by outside borrowing, but it is necessary to go slowly in formulating restrictions because the reciprocal privilege of borrowing from other libraries is extremely valuable." The Institute's response to the demands of national defense and its participation in World War II accelerated industrial interlibrary loans, with the result that by 1944-45, 61 per cent of all libraries loaned to were company libraries.

During this period such interlibrary loan service, coupled with com-

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paratively free access to library resources by individuals, was considered part of the national war effort. In fact, an affirmative approach by academic libraries was recommended by Brown, then President of the American Library Association, "Obviously some research departments do not know of the material available in the nearby libraries, especially periodical files. They should be informed. Some of them have had unfortunate experiences in attempting to obtain material from libraries. The present opportunity is a most excellent one for bringing the libraries and the faculties of our universities into contact with the research departments of industries. The university library can well be the connecting link." [2]

The end of World War II brought no decrease in industry's requirements for library and information services. The age of science, with its information explosion, was ushered in. Grants from government agencies for research and development brought an expansion of existing companies, intensifying their research activities and turning them to new fields of experimentation. Many new firms were established, while universities, too, assumed increased responsibility for basic research programs. This new era of research and development was accompanied by the establishment in large industries of libraries with respectable research collections of their own. Many had developed Technical Information Centers, where their control of specialized information materials often outstripped that in a large public or academic library. However, as Henkle has noted, "Company libraries alone, even in the largest firms, cannot acquire all of the needed material. They must depend in part on the large research library. Smaller business and industrial concerns must depend on such libraries almost altogether." [3]

With the increasing emphasis upon basic research, the continued growth of scientific literature all over the world, and the application of new business and managerial methods, the dependence of business upon academic libraries is of such magnitude that it seems appropriate to take stock of the situation, consider some of the intricate problems involved, and indicate possible directions of solutions. Although this article considers primarily *urban* university libraries, the problems discussed exist in all academic libraries serving business and industry anywhere—they are simply intensified in the large metropolitan areas. Included are such libraries as those of Princeton and Stanford which, although not located in strictly urban areas, have large numbers of industrial and research laboratories in the community.

Business, research and industry require several kinds of service. Interlibrary loan is the traditional and most measurable form. In almost all urban universities this is a heavy load. Interlibrary loans to industry amounted, for example, in 1959-60 to 61 per cent of the total at Drexel, in 1960-61 to 44 per cent at the University of Pittsburgh, and to 93.8 per cent at California Institute of Technology. The University of Pittsburgh figure includes journals as well as books loaned, and the California Institute of Technology figure includes the number of photoduplicates of journal articles substituted for loan.

Industry is usually in a hurry for its material. In order to speed up delivery many companies have established their own messenger services to collect and return books. One sends a messenger daily to two libraries on round trips of some 25 miles each. Telephone requests for interlibrary loans are usually accepted, although they are more difficult for the lending library to handle efficiently than are requests mailed on interlibrary loan forms. Whatever the method, there can be delays. References, all too frequently incomplete, must be searched in the catalog. Campuses have many departmental libraries, and either the borrowing or lending library must discover which unit contains the item, and whether or not it is available for loan.

The new pattern evolving is one of a gradual decrease in interlibrary loans, caused primarily by restrictions upon journal loans and made possible by the greater availability of photocopying facilities. Since the fiscal year 1959-60, Drexel has offered photocopies of material, and its percentage of interlibrary loan to industry has decreased from 63 per cent in 1958-59 to 49 per cent (ten months) in 1960-61. This is a healthy trend; it enables industry to have a copy which it may keep, and at the same time leaves the material in the library for consultation.

When good copying services are available, industry will purchase heavily; 61 per cent of the M.I.T. Microreproduction Laboratory orders came from industry in 1960-61. The bulk of such orders came by mail, although many were received by telephone or brought to the desk. Some type of microfilm and photocopying service is available on most university campuses today, and there are several campuses with fine laboratories in their own library buildings. For special research jobs, or in libraries where copying facilities are not available, companies occasionally bring in their own equipment. Over and over again industrial librarians stress that speed, not low cost, is what they require, and libraries will do well to remember this in setting up

their services. One company librarian has defined rapid service as receiving an item within forty-eight hours from the time an order is placed by phone. With the adoption of the Freehafer report on copyright, which recommends that "it be library policy to fill an order for a single photocopy of any published work or any part thereof,"[4] full use of the various copying methods available, at suitable prices, should enable most libraries to provide industry with this vital service, at little extra burden to themselves.

The necessity for rapid service has been met also by personal library use, by librarians, and by individual company employees. This service is performed either on a free, or fee basis, depending upon library policy. Direct use by individuals, for borrowing, consultation and browsing, is of some consequence in heavily research-oriented areas, but actual figures are not readily available. In a 1959 survey made of four of M.I.T.'s libraries during 47 per cent of the hours they were open in one week, 24.3 per cent of the outside users represented industry and government. Sixty-three individual companies and ten government agencies were represented in this brief sampling.[5] In 1960-61 the M.I.T. libraries issued 861 Library Privilege Cards and 323 one-day room use cards to individuals from companies and government agencies. Many others use the reading rooms without applying for cards.

The dependence of some firms upon a nearby academic library warrants their librarian's spending as much as day a week at the university; some engage a graduate student to work for them on a part-time basis. Such arrangements save a considerable amount of library staff time, once initial instructions in the use of library materials have been given.

It is in the area of reference and bibliographic assistance that definitions of policy are most difficult. It is even difficult to ascertain just how much of this type of service is given to industry. Telephone, and even desk inquiries, are not always easily identifiable, and they come to many departments of a university library system. Inconclusive as they are, it may give an indication of trends to note the results of statistics kept in the M.I.T. libraries from July 1960 through June 1961 on M.I.T. vs. non-M.I.T. reference and information activities, at the desk, by telephone, and by mail. In all, 36,220 questions from M.I.T. users and 15,282 from non-M.I.T. users were recorded, making a total of 51,502. If one applies the percentages of a 1959 two-week study of the Reference Department's questions from

industry, government, and educational institutions, he can assume that 3,586 (13.2 per cent) of the total desk inquiries, 8,262 (34.9 per cent) of the telephone calls, and 443 (66.6 per cent) of the letters were from industry.

Reference librarians are finding it more and more difficult to give complete service when asked for information. Increasing numbers of requests from their own university clientele, who have priority, must be handled along with those from the outside. The latter come all too often in an incomplete and unreferenced form. Geraldine Anderson says, after speaking of the interlibrary loan form and code, "As far as I know, there is no written code for other types of library cooperation. This is one area of library work in which many of us err. In requesting assistance with reference questions from another library, there should be a similar code. To ask another librarian to do work which we should do disregards this unwritten code of ours. I feel I can speak impartially in pleading that special librarians be more considerate of larger libraries when asking for assistance." [6]

This statement can be interpreted also as a plea for more trained, competent librarians; these librarians would not be guilty of making unwarranted requests of other libraries. But there are just not enough of them to go around. Recruitment and better training programs are urgently needed to provide the personnel who can distinguish with imagination and intelligence the proper roles of industrial and educational libraries in their mutual information problems. In the meantime, various stop-gap methods are being used to help the untrained librarians help themselves. Several librarians report that they seize every opportunity to instruct those in charge of company libraries in the use of large library facilities, particularly the mechanics of interlibrary loan. Frequently the occasion is a meeting of the local chapter of the Special Libraries Association. The Science-Technology Group of one chapter recently gave a short course for "beginning or untrained librarians." Though not completely acceptable to all members of the profession, it met a real need and, as a by-product, interlibrary loan and reference librarians of the local research libraries now receive more knowledgeable requests from the participants.[7] One library, which has a membership plan for industry, invited all participating members to spend an entire day at the university, where staff members explained the function, use, and services of various departments. The guests also toured the library and met personally the librarians with whom they deal in their day-to-day requests. The

result has been better cooperation between the library staff and its outside users.

It would be interesting if the type and amount of service given by all urban university libraries to business and industry could be neatly tabulated, but there is not enough information available. However, the writer has information on the practices of thirty libraries, almost all urban, and all serving business and industry. The following statements, based upon an analysis of these thirty, probably give a fair picture of the situation. For the most part the statements apply to business and industry specifically, but sometimes the policy cannot be separated from that applied to all outsiders, whether from government, industry, or the academic world.

Interlibrary Loan

Twenty-four lend to company libraries on interlibrary loan without charge.

Two charge for interlibrary loan, both of these as part of the formal plans for industry.

Three do not provide interlibrary loans to companies in the area. One lends to individuals only.

Photocopying

Twenty-nine have some kind of photocopying service available, either in the library or on the campus. In many instances the charges are for materials and service only.

Use of Library by Individuals

Twenty-eight allow room use without charge.

One charges after one month's use.

One charges after one day, or slightly longer, depending upon the individual case.

Loans

Thirteen lend without charge.

Nine charge for loans, the fee ranging from $5 per year to $50 per semester.

One waives the fee for alumni.

One has a lower fee for alumni.

One does not lend.

One does not lend except to alumni, who are charged a very nominal fee.

Six statements are not clear on this point.

Reference Service

All give information and reference service over the desk and by telephone without charge.

Three indicate that it is limited reference only.

Nominal fees or contributions occasionally given voluntarily by a company enable a library, like Alice, only to stand still while running as fast as it can. There are very few plans for industry's use of university libraries which allow for the expansion of facilities to meet the service involved, while the library carries on, at the same time, its primary obligation to students and faculty. Meeting that primary obligation is a strain in itself with the increased enrollments and burgeoning research programs on university campuses.

Readers may be interested in the details of two plans which show a recognition of the real expenses involved, one on the West Coast, one on the East Coast. In 1958, the Stanford University Libraries estimated that they were supplying scientific and technical journals and other library services to about 3,000 research and development people on the Peninsula and that this number was rapidly increasing. To better serve the long-term interests of both industry and the University, a Technical Information Service department was established within the libraries.[8] It is supported by subscribing industries, known as the Stanford Industrial Library Associates. All requests from industry for technical information are channelled to the staff of this department. Services include library privilege cards for the professional staff of companies, loan of books and journals, or alternatively, photocopies at no extra charge, and extensive translating, abstracting or literature searching, the latter services to be extra charges, billed at cost.

Annual membership fees are scaled according to the extent of the Associate's use of the service at an approximate ratio of $250 for each 50 loans (or photocopies). This fee is calculated to reflect both the direct cost of operating the Technical Information Service and a reasonable contribution toward the infinitely larger stand-by cost of selecting, acquiring, cataloging, binding, and housing the University Libraries as an organized research facility.

The East Coast plan is that at M.I.T. which established a library Membership Plan for Industry in January 1960. The reasons were similar to Stanford's; the library desired to continue the Institute's traditional policy of fostering scientific research in the community and the nation and to make its facilities available to serious researchers from outside M.I.T. Members were invited to contribute to the support of the collections and services, since the rapid growth of scientific research and literature continues to accelerate the cost of maintaining a first-class library in terms of books, journals, space, and staff.[9]

Services to members of the plan include room use of all materials in the libraries, interlibrary loan, library privilege cards for designated company members, and complimentary copies to each member company of *Current Serials and Journals in the M.I.T. Libraries* and of the M.I.T. annual list of *Publications from the Institute and Theses for Advanced Degrees.* Journals may not be borrowed, but complete reproduction facilities are available at cost. Literature searches cannot be performed for the companies, but the library attempts to locate qualified personnel.

The annual fee of $250 entitles the member company to ten Library Privilege Cards issued in the name of individuals authorized by the person designated by the company as contact officer, usually the Librarian. A Library Privilege Card entitles the holder to use the reading rooms for one year and to borrow not more than fifty books, excluding journals, in accordance with the usual regulations.

This plan has been integrated with the Institute's much larger cooperative program called the Industrial Liaison Program. Companies belonging to the latter make substantial annual contributions to the general support of M.I.T. and are automatically members of the Library plan. The I.L.P. companies constitute the heaviest library users, accounting, for example, for two-thirds of the interlibrary loans to industry; the M.P.I. members account for the other one-third. There have been no interlibrary loans to other companies since a charge of $5 per loan was announced two years ago.

Provision has also been made for individuals to purchase Library Privilege Cards, for which the fee was increased from $25 to $50 a year ago.

Although it does not have a formal industry plan or service, Columbia modifies its usual individual charge for those not associated with the University in the case of groups of research workers—institutional,

governmental, or industrial. The annual charge is $100 for each of the first three individuals, and $50 for each additional individual in the group.

Other universities are contemplating arrangements for financial contributions from industrial corporations. Princeton University, located in a growing center of electronics and space research, is planning to establish a contributory plan for the many corporations now using their libraries on a guest basis. The library director of a large state university recently stated, "Service to local industrial concerns, which was of relatively minor consequence a few years ago, is now a significant additional load on several units of the library system. . . . if the load becomes much heavier, the present policy of providing this service without charge, may have to be reviewed. Presently the problem of loans to this group of users is not as great as the reference service involved in telephone inquiries, which, at busy times, is difficult to handle except at the expense of good service to campus patrons." [10]

The phrase "at the expense of good service to campus patrons" is significant. Faculty and students should not have to wait at a reference desk while the librarian aids an engineer from a nearby aviation company, nor should their access to a book be delayed because the material is charged out to a local electronics library. Yet as the load of industrial use increases, such incidents will become more and more frequent.

Obviously, fees which pay for both the direct service costs and the maintenance of great research collections imply reasonable service in return. Letters received by the author from some of the most competent librarians in industry emphasize this. While expanding their own collections they recognize their ultimate dependency upon the research libraries for certain classes of materials. They are sympathetic to the present-day problems of university libraries, but complain that in some instances the university library is reluctant to give the full service for which industry is willing to pay.

In contrast to the financial arrangements of the universities mentioned above is the position of some city or state-supported institutions. It is their belief that as long as they are supported by government they should provide free service to tax-paying citizens. Some maintain that support of the university by local industries obligates its library to give free service to all business and industrial firms in the area. The University of Pennsylvania, for example, undertakes

an extensive free service to all Pennsylvania citizens and to any employee of industry in the area.

More and more frequently, one of the considerations in site location of new plants is proximity to universities. Several libraries recently received an inquiry from a firm of location consultants concerning their library policy toward industry. The latter explained that one special aspect of the selection of a site for an industry is the availability of library facilities. The advantages of such proximity are obvious. Generally speaking, private companies do not have the space for large retrospective collections in their own subject interests, much less for material in peripheral fields. Reader access to the neighboring university library gives company staff members the advantage of browsing in a larger collection where they may discover pertinent material, or where they may, for example, scan an article in the original Russian before asking the company to spend money having it translated. Even further, they may discover through the wider reference sources available that it has already been translated.

The bibliographies and lists of new books issued by departments and divisions of large libraries are often useful selection tools for special libraries. Indeed, the card catalog itself has enabled many small company librarians to classify and catalog their own books by copying out the classification number and subject headings.

The university library staff members, too, contribute to the success of a company library when the officials in charge of research consult them on the informational and library needs of their firms. It would be beneficial in establishing working relationships if more such consultations could be held, especially in the case of a new or fast-growing company where management is not always giving full support to its own library.

The advantages to university libraries of cooperation with industrial libraries are many, though perhaps not as obvious as in the reverse situation.

The indirect benefits which academic and research libraries have derived from the professional contributions of special librarians are among the most important. Their initiative, imagination, and leadership have produced many tools of incalculable value. One of the first was the four-volume *Special Libraries Resources*, published between 1941-1947. As Henkle says, "A project of this magnitude would have been impossible without the cooperation of the libraries of the United States and Canada—not only special libraries but also public, college

and university libraries containing special subject collections of research value." [11] Publication of such bibliographic aids has continued —the *Guide to Metallurgical Literature,* or *Sources of Commodity Prices,* for example. Material at the Translations Center in the John Crerar Library, largely provided by donations from industry, is of equal use to university and special libraries.

Special librarians are usually willing to give reference help and often will lend from their highly specialized collections. One such librarian writes, "the amount of information produced today is too great to expect any library, even a large and well-run university one, to handle completely. One answer . . . is greater use of industrial libraries to supplement university collections." [12]

The technical librarians of industry have been, by and large, the leaders in furthering research, experiment and action on machine methods of coping with the scientific literature problem. University libraries, where the problems are compounded by size, are beginning to cooperate in the research and experimentation necessary for progress in this field and will undoubtedly be more active in the future. If expectations materialize for retrieving information by machine from bibliographic centers and for terminal reading equipment at remote locations, some of the problems of interlibrary use being discussed here will be solved.

The libraries of business and industry are represented sparingly in the national union lists or in card catalog files of regional bibliographic centers. Possibly this practice is wise. Sass quotes Eleanor Campion, Director of the Philadelphia Bibliographic Center: "Quite frequently a new industrial library ceases operations after ten or fifteen years; or moves out of the area; or changes its management or its importance in the company structure; or has a constant turnover in its staff and sometimes non-professional management. All these situations are difficult for the Catalog because the quality of the cataloging varies from excellent to poor." [13] Nevertheless, exclusion of industrial libraries from such union catalogs makes it much more difficult for small libraries to tap each other's resources, or for the larger libraries to utilize the specialized resources of the smaller. The urgent need of a company's research contract will sometimes enable purchase of materials that an academic budget could not permit—for example, complete files of English translations of Russian journals. The university library is more likely to feel that its role demands collecting the original, which it can do more easily than the company library.

With mechanized methods of compiling and updating lists becoming more sophisticated every day, thought should be given to more regional union lists, at least of periodical holdings, in order to distribute and equalize borrowing and purchasing loads.

Elizabeth Ferguson has summed up the need for cooperation: "The time is long past when any one library can hope to have under its own roof all the materials it may need to give satisfactory service to its patrons. It's obvious that professional practices must be observed, that expenses must be reckoned with, and that more and better tools and organized exchange units must be developed."[14]

The service to business and industry of large public libraries, mentioned in the beginning of this paper, may well expand to help meet this growing need. In cities where the public library has built up excellent departments in business, science, and technology, extensive reference and loan services to local industry already exist, and thus lessen the burden on university libraries in those areas. Rose Vainstein[15] mentions as notable examples the services provided by the Enoch Pratt Free Library to the Martin Company in Baltimore, and the Seattle Public Library to the Boeing Airplane Company. Often industrial librarians mention that they try to use the public library first, the university library second. More may be able to do this in the future. Hamill,[16] in his survey of the problems of the public library in a metropolitan area, examines methods of breaking down the barriers which now prevent full service to all, and mentions particularly a hopeful trend toward state support of public libraries which will make it possible for them to truly serve as reference and research centers for their areas. Already legislative bills enabling this support have been passed in some states—Pennsylvania and Massachusetts, for example.

A far-reaching proposal, affecting all research libraries in New York, is that outlined in a report of the New York State Commissioner of Education's Committee on Reference and Research Library Resources. The needs of the industrialist and researcher are included, indeed emphasized, in the proposals for a regional network of reference and research libraries. To give adequate library service to the professional and research community of the state it is recommended that "the State assist the development of a cooperative program of library service for the professional and research community by providing annually a minimum of $5 for each professional person in the State."[17]

There are, in addition, private libraries especially equipped to serve business and industry. The best known is probably the John Crerar Library in Chicago, which established its Research and Information Service in 1947. Kansas City has the excellent collections and services of the privately endowed Linda Hall Library of Science and Technology. The Library of the Franklin Institute in Philadelphia is expanding its resources and services. Professional society libraries such as those of the Engineering Societies and of the Chemists' Club in New York serve their own members.

E. B. Jackson predicts that the alliance between industry and university libraries will become even closer in the future:

> In 1980 there will be university-managed and industry-sponsored special libraries that are arising and will arise in the vicinity of the principal universities. Their advanced use of new methods of bibliographic control, information retrieval, and data exchange will make their operations indistinguishable from those of special libraries of outstanding profit-making organizations in the same subject fields. . . . Significant assessments will be made on the participating organization in research parks not only for the financing of day-to-day operations of facilities, especially set up for their benefit, but also for the total enrichment of the university library resources.[18]

There is no question that, in addition to the increasing public and private library resources, business and industry will continue to require services which only a university library can provide. With a recognition of the necessity for equitable fees in return for services, the volume of the latter can be controlled and this mutually valuable cooperation between education, business, industry, and research will continue.

References

1. Smith, D. C: Librarians Endeavor to Shed Drab Image, Win Recruits to Field. *Wall Street Journal,* July 31, 1961, p. 1.

2. Brown, C. H.: Scientific Libraries in the Emergency. *College and Research Libraries,* 1:328-329, Summer 1940.

3. Henkle, H. H.: Libraries Can Give Industry Research Aid. *Library Journal,* 73:1630, Nov. 15, 1948.

4. Joint Libraries Committee on Fair Use in Photocopying. *Report on Single Copies.* March 17, 1961.

5. Nicholson, N. N., and Bartlett, E. L.: Who Uses University Libraries? Accepted for publication by *College and Research Libraries.*

6. Anderson, Geraldine D.: Interlibrary Loans and Cooperation. *Special Libraries,* 48:31, Jan. 1957.

7. See letters for and against in *Special Libraries,* 52:300-307, July-Aug. 1961 and 52:474-476, Oct. 1961.

8. Stanford University Libraries: *A Plan for a Technical Information Service.* Sept. 24, 1958.

9. Massachusetts Institute of Technology Libraries: *Membership Plan for Industry.* Cambridge, Massachusetts, Jan. 1960.

10. University of Minnesota. Libraries: *Annual Report, 1959-1960.* Minneapolis, [1960], pp. 19-20.

11. Henkle, H. H.: Cooperation Among Special Libraries. *Library Trends,* 6:345, Jan. 1958.

12. Spence, Barbara: Letter dated July 31, 1961.

13. Sass, S.: Must Special Libraries Be Parasites? *Special Libraries,* 50:153, April 1959.

14. Ferguson, Elizabeth: Special Librarians Need Not Be Parasites. *Library Journal,* 84:3374-3375, Nov. 1, 1959.

15. Vanstein, Rose: Science and Technology: Their Impact on Public Library Resources and Services. *Library Journal,* 86:2417-2424, July 1961.

16. Hamill, H. L.: The Metropolitan Area and the Library. *Library Quarterly,* 31:13-24, Jan. 1961.

17. New York (State) University. Commissioner's Committee on Reference and Research Library Resources: *A Cooperative Program for the Development of Reference and Research Library Resources in New York State; An Interim Report to James E. Allen, Commissioner of Education.* [Albany], 1960.

18. Jackson, E. B.: Special Libraries. *Library Trends,* 10:219, Oct. 1961.

ADDITIONAL REFERENCES

Ardern, L. L.: Manchester College of Technology Library and Its Assistance to Industry. *ASLIB Proceedings,* 7:136-142, Aug. 1955.

Bonn, G. S.: Role of the College and University Library in the Fields of Science and Technology. *In* Texas. University. Graduate School of Library Science: *Role of the Library in Collecting Information and Giving Service to the Serious Student and Research Worker—the College and University Library; Conference May 1 and 2, 1953.* Austin, The School, 1954, pp. 88-95.

Budington, W. S.: Impact of the Military Research Program on College and University Scientific Libraries. *In* Special Libraries Association: *Conference, 41st, 1950, Atlantic City; Proceedings,* pp. 99-103.

Grazier, R. T.: Cooperation Among Libraries of Different Types. *Library Trends,* 6:331-342, Jan. 1958.

Henkle, H. H.: Crerar's Research Information Service Explained. *Library Journal,* 74:93-96, Jan. 15, 1949.

Morgan, M. B.: Relationship of a University Library to an Industrial Library. *Illinois Libraries,* 36:157-158, April 1954.

Nicholson, Natalie N.: More on Library Service to Industry. Letter to the Editor. *Library Journal,* 85:696, Feb. 15, 1960.

Nicholson, Natalie N.: Technical Libraries in the Boston Area. *IRE Transactions on Engineering Writing and Speech*, EWS-2:52-55, June 1959.

The Relation of Industrial Growth to Library Services: A Panel Discussion. Special Libraries Association, Georgia Chapter, *Bulletin*, 3:A3-A13, Dec. 1957.

Schlundt, Esther M.: Services Available from Large Libraries; a Review. *Special Libraries*, 45:375-383, Nov. 1954.

Sewell, W.: Cooperative Control of Library Resources: Implications for the Industrial Library. *Medical Library Association Bulletin*, 47:383-386, Oct. 1959.