Libraries In The Federal Government

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Libraries in the federal government are as many and varied as the multi-faceted activities of the government itself which, in turn, reflects the wide-ranging interests of the American people. In size they range from office collections just beginning to require organization to the gargantuan Library of Congress or the world-wide public library service of the Army. There is no federal library system. It is doubtful that a single system can be organized or would be desirable. F. Mohrhardt, in 1953, described five library systems in the federal government, one of which served all elements in its agency, but he did not conclude that any of these systems included all libraries in its agency. Eight years later this writer still knows of no federal department which has all of its libraries in a single system.

For these and other reasons the definition of federal library becomes difficult. It involves such questions as: When does an office collection become a library? Is an information center a library? Is a film collection a library? If this paper were a comprehensive study, it would include libraries serving the research needs of federal officials, national libraries, presidential libraries, public and general purpose libraries within the federal establishment, and libraries in federal educational and correctional institutions and in federal hospitals. They have three common characteristics: financial support, control, and operation by the federal government. A more comprehensive study will be found in Library Trends for July 1953.

In order to bring this study within manageable bounds, it is necessary to limit it further to two types of federal library: national libraries and libraries serving the research needs of federal officials. This limitation is done with regret and with the knowledge that the majority of federal libraries are excluded. The regret is increased by a belief that in many ways the excluded libraries are working as effectively

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in their areas as the ones under consideration. However, we do believe that the establishments which most generally carry the connotation of "federal library" are the research libraries of the major executive agencies and the Library of Congress.

When one is considering these libraries, it is necessary to consider the structure of the federal government itself because the government looks upon its libraries as service organizations, and they follow the structure of the agencies they serve. The federal government is composed of three branches, the Legislative, the Executive and the Judicial. In many ways these are separate governments which may cooperate but are not coordinated. This situation is the reason for many of the deficiencies in federal library service today. In a similar way, the Executive Branch of the government is not a centralized, coordinated arm. The mission of each agency is prescribed by statute and regulation. The organization of each agency is guided by the needs of its mission, the evolving theories of administration, and the restraining hand of tradition. In this setting federal libraries have grown, not as a result of planned organized thinking, but in answer to specific needs of an individual office, a division, a bureau, or a department. As a result, there is no typical federal library or federal librarian. The type of pattern developed in the federal library service is like the patterns of nature rather than like the patterns of industrial designers.

In the Executive Branch there are more than 250 libraries of the kind we have under consideration. In addition, the military services operate the equivalent of public libraries and school libraries amounting to more library installations than any other public library system or school library system in the country. There are federal library collections in national parks, Indian schools, and veterans' hospitals, so that the totality of libraries in the Executive Branch is greater than 1,500, and the total expenditures exceed $60,000,000 annually. (This figure is an estimate derived by using Civil Service Commission figures on the number of librarians and library assistants in 1959, plus a figure for other employees derived from the unpublished Brookings Institution's Federal Library Survey.)

There are two national libraries in the Executive Branch and the Library of Congress in the Legislative Branch.

The nature of library collections in the federal government has been changing since World War II. The size has been increasing; the proportion of nonbook materials, such as technical reports and micro-
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forms, has grown. There is increasing concern over the scope of collections and the interrelation between them. Although there is yet no government-wide machinery established for coordinating collection policies, this seems imminent and will undoubtedly be stimulated by the report of the Federal Library Survey.3

Increasing attention has been paid in recent years to the establishment of higher personnel standards for federal librarians. A determined effort has been made by the federal librarians' group to keep the acute shortage of librarians from diluting their professional quality. New job standards have been developed by cooperative effort of professional library organizations and the Civil Service Commission. Efforts have been made to establish a positive educational requirement for entrance into the federal library service and, although this attempt has not been completely successful, entrance requirements have been strengthened and a program is now underway to develop a comprehensive entrance examination to be used in lieu of graduation from a recognized library school. At the same time there is an increasing demand for competence in the technologies with which the library is involved. This need has led to the employment of "technical librarians," subject specialists who attempt to learn library techniques on the job. Although this effort has not been very successful, it does point to a need and toward the sort of solution developed in some industrial firms, such as the Esso Engineering Company, where the summarizing, analysis, evaluation, interpretation, and application of technical literature are done by scientists and engineers, and the collection, organization, control, and retrieval are done by librarians.4 A third trend in library personnel is to increase the percentage of clerical and sub-professional personnel in relation to professionals. (Information from the Federal Library Survey indicates that the percentage of increase in the number of library assistants is approximately 45 per cent greater than for librarians.)

Library techniques, in common with techniques in other governmental operations, tend to become more routinized and simplified. More records and communications are committed to standard forms than in the past. Procedures are streamlined. Unessential details are omitted, and the continuous pressure of mounting costs is forcing reconsideration of almost every step in acquiring, organizing, and servicing library materials.

Another pressure which affects library operations is the urgency arising from an exploding technology, which has led to the growing
importance of technical reports and to a tremendous increase in technical journal publication. It is leading to experimentation with machine retrieval of information. There is deep concern over the scope and coverage of bibliographic tools, and the federal government is greatly involved in the development of machine translating systems.

The federal library appears to be at a critical point in its development. The tremendous outpouring of information through numerous media and in varied forms is forcing a revision of library programs and a reassessment of the library’s role in the research function of the federal government. The development of machine technology and the enthusiasm of some of its proponents are urging changes at a faster rate than either the libraries or the machines can accommodate.

A number of federal agencies are studying this problem ranging from early studies and experimentation in the Department of Defense and the Central Intelligence Agency to the recently announced project in the Library of Congress. A list of such projects involving the federal government would be surprisingly long.

A delineation of the status of federal libraries would be incomplete without consideration of their relation to each other and to nonfederal libraries. The Library of Congress, the National Library of Medicine, and the Library of the Department of Agriculture are recognized as great national libraries. In addition to providing great collections of research materials, they provide bibliographic services unmatched by those of any other libraries, they share the wealth of their collections with other libraries through loans, photoduplication, recordings, etc., and they provide leadership and assistance on professional problems. There are very few programs for the advancement of library work in which federal librarians do not participate.

To convey some idea of the extent of the collection sharing, the Library of Congress’ Public Relations Office reports the following statistics on its lending to other libraries:

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Lending to Other Libraries</th>
</tr>
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<tbody>
<tr>
<td>FY 1945</td>
<td>155,770</td>
</tr>
<tr>
<td>FY 1950</td>
<td>183,685</td>
</tr>
<tr>
<td>FY 1960</td>
<td>202,451</td>
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<tr>
<td>FY 1961</td>
<td>202,010</td>
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From observing the proportions of interlibrary borrowing between other federal libraries and between them and the Library of Congress, one might reasonably conclude that the total figure on federal interlibrary loan is slightly more than double this amount.
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The three libraries mentioned constitute only a part of those federal libraries which work with other libraries. Most federal agencies have libraries which provide service to other libraries and to scholars in appropriate fields. Some of these libraries are outstanding and give more than they receive; others are weak and receive more than they give. There seems to be no barrier between federal and nonfederal as far as libraries are concerned. There are many services which the federal government provides for libraries which are not provided by the federal libraries themselves. The publications shelved in depository libraries, the postal rates, the statistical programs of the Office of Education, and the Library Services Act come to mind as examples. The federal government is deeply involved with libraries and indications are that it will be more so in the future.

The federal government has been in the throes of almost revolutionary changes in its role in the life of the American people. Much of this change is related to and is a result of the surging pressures of an ever-growing population. The frontier is disappearing. The cream of the free land is gone. Our economy has changed from rural domination to metropolitan domination. We are now in the process of political change to accommodate ourselves to the new situation. The role of the federal government seems destined to be one of greater interest in the general welfare of the people, of great social programs and great scientific research. As our population increases, the proportionate volume of our natural resources decreases until the people as a whole, through their government, are forced to devise newer and better ways of exploiting these resources, of getting more and more value from them. We must renew the renewable resources, conserve the nonrenewable, and develop new materials and resources. We must obtain fresh water from the sea, new minerals from research, and develop unknown wealth through science.

Moreover, the pressures of an increasing population are not confined within the boundaries of the United States. The cry for lebenstrum did not die with Hitler. China moves in Asia with inexorable pressure. Over the world the demands of the starving increase the problems of our federal government. Our defense establishment grows greater and infinitely more complex. We grow more concerned with the mores and problems of strange people. Our prestige and survival depend upon our understanding and our research, upon our laboratories and libraries.

If these are true portents, a dominant function of the federal govern-
ment will be research on a long-term permanent basis.\textsuperscript{6} The pressure of research upon federal libraries is increasingly felt as is illustrated by the number of congressional reference inquiries handled by the Library of Congress, which rose from 64,849 in 1950 to 123,391 in 1960.\textsuperscript{7} All research programs require organized, controlled information, but they do not necessarily require information in the form that we have had in the past. It can be that here lies the federal library's great challenge and opportunity. That evolution of the library program in relation to the research program of the federal government will in the long run outweigh the changes arising from changing techniques whether manual, mechanical, or electronic.

If we assume that there is a historical basis for institutional development and growth, we must assume that out of the problems of today the libraries of tomorrow will be shaped.

These problems are not peculiar to federal libraries. They are faced by research libraries everywhere, in industry and in universities. Most of them are not solely library problems, but are problems faced by scientists and scholars and by the learned world in general. They have to do with the organization of knowledge, with encompassing and controlling the great flood of literature which threatens to engulf us. They have to do with the application of pertinent portions of that literature to the solution of particular problems, with the development of programs and techniques for the mastery of information. They may be divided into four groups: problems of relationship, problems of library technology, problems of literature, and problems of administration.

The relations between federal libraries and federal research, between federal research and nonfederal research or federally-subsidized research form some of the basic problems facing the federal libraries. In general, libraries need to define their role in relation to the research programs in which the federal government participates. Policies need to be established to determine when library participation begins, to what extent the library acts independently, and where bibliographic service merges into analysis, evaluation, and synthesis of the literature. Until this range of participation is made clear, it will be impossible to distinguish between the functions of the librarian and the scientist. Until this distinction is made, there will be confusion, lost motion, conflict, instead of teamwork, and we will experience the frustrations which arise when able, well-intentioned specialists attempt to perform expertly outside their special fields. Until this clarification is accom-
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plished, it will be difficult to obtain the full understanding and support from management which will allow the library to do its job well. The problem is emphasized by current development in literary production, data processing, and the development of technical information programs.

A second group of problems involving relationship has to do with the cooperative relations between libraries. In the federal establishment a great deal of cooperation exists, but there are possibilities for so much greater cooperation that if they were realized, it would amount to a revolution in federal library management. The problems of interlibrary cooperation are so inextricably interwoven with other problems facing libraries that before we have finished considering cooperation we will have discussed the others also.

The Library of Congress, the National Library of Medicine, and the Department of Agriculture Library have been able to reach a sort of working agreement which assigns responsibility for building great national collections which are retrospective and comprehensive in the fields of medicine and agriculture. That such agreements have not been reached in other areas is due to a number of factors: few other agencies in the Executive Branch have defined their missions in such a way that they require the establishment and continuing maintenance in perpetuity of great research libraries which are so comprehensive in scope and depth that they can become in effect national libraries. In fact, few agencies in the Executive Branch have been specific in determining the limits of the library service which they need and desire. Without such definitions it becomes extremely difficult to decide upon the areas of cooperation between federal libraries. It becomes almost impossible to assume that the responsibility for collecting completely in any specific field is being fulfilled, other than in medicine or agriculture, and perhaps geology, except as the Library of Congress has assumed that obligation.

The need for defining library missions in terms of scope and coverage is emphasized if one considers the problem of establishing a federal interlibrary storage center or joint bibliographic projects.

It is surprising that with this lack of clear-cut mission the system of interlibrary loans works as well as it does. Other areas of cooperation, such as joint research projects, joint cataloging, and mechanical preparation of library materials, can be developed without this basic definition of the roles of the various libraries, but in many respects they will be hampered because of this lack.
Federal libraries, in common with other research libraries, are confronted with a flood of literature in innumerable forms and various languages. The problems of listing and analyzing this material and of informing the library's clientele of its existence and of making it available to them have not been solved. However, progress is being made. There are indications that libraries are accommodating their organizations to meet this need, but that there is a long way to go in the federal library system. The federal government is becoming increasingly concerned to see that bibliographic tools are adequate to meet the research needs not only of the government itself but also of the nation as a whole. It is concerned to see that gaps in coverage are filled and that unnecessary duplication is avoided, but that the interests of the various disciplines are adequately represented. It is concerned with prompt issuance of these tools and with the maintenance of effective standards of quality and usefulness. It is attempting to devise some program of joint action in this area.

An integral part of these problems is that posed by foreign literature. The purchase of foreign literature in translation wrecks library budgets. The percentage of foreign journals on federal library shelves is increasing at a rapid rate. In addition to the bibliographic problems posed by English language literature, the problem of translating this material is more complicated than substituting English equivalents for foreign words and phrases. Translators must be versed in the science as well as in the language. If machine translation is used, special vocabularies must be established for each scientific discipline, and these must be kept current. The editing of machine translations poses special problems.

Most federal libraries are faced with serious problems of space and equipment. That they are not the only federal institutions so confronted does not lessen the seriousness of their problems. Three characteristics are typical: inadequacy, obsolescence, and improper planning. Often the library bookstock has overflowed the reader space; the furniture and equipment are the residue from countless moves of other offices. The library is located obscurely in quarters planned for other purposes. The federal librarian in library quarters designed for library service is envied by his colleagues. Some library space problems could be solved by judicious weeding of the collections, but this is often difficult because of lack of staff.

At the beginning of this article it was stated that the author knows of no federal department which has brought all of its libraries under
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a single system. This decentralization of library administration and operations generally follows the pattern of the departments themselves, especially when the functions of a number of bureaus are dissimilar or when there is widespread geographic dispersion. This administrative decentralization makes the application of standards difficult. It also makes the development of an adequate library program and service difficult. These deficiencies are offset by the closeness of the smaller libraries to their constituents. The problem will be to maintain the advantage of decentralization and at the same time to establish a high quality of service throughout the agency. 

Problems of procurement plague federal librarians in many ways. Federal procurement regulations are not designed to take full advantage of the operations of the book trade. The requirements which give undue advantage to price over service in the purchase of books, periodicals, and binding, and the procedural restrictions on such procurement are often handicaps in building adequate collections of materials. The lack of communication between libraries often means that full advantage is not taken of new developments in procurement.

Most federal libraries are open to the public for reference use, and many of them make their materials available to the public through interlibrary loan. However, because federal libraries are usually not planned for use by the general public, problems of budget and administration arise. The most seriously affected is the Library of Congress, which sorely needs the space in a third building now being planned. On the reverse side of the coin many federal agencies have stations on college and university campuses and use their libraries freely. Contracts for federally-sponsored research carry provisions for library support of the projects. As the Federal Research Program expands, the problem will undoubtedly be emphasized.

It has been indicated that the federal government spends a minimum of $60,000,000 per year on library service; yet many librarians and research workers feel that a greater proportion of federal funds spent on the provision, the analysis, and the evaluation of literature will redound to the government's benefit. In addition, there is an evident need for fuller comprehension of the optimum role of the library in a research program on the part of management and directors of research. These problems go to the heart of any program for library development.

The status of federal libraries, the trends in federal library operations, and the problems faced by federal libraries have been exam-
ined, together with some of the demographic forces playing upon the federal government itself. Now “fire burn, and cauldron bubble.” Will this conglomeration give some indication of what will occur in twenty years? Logic would indicate that it will, that change arises from causes, that the future is built upon the past, and that one may discount the possibility of an entirely new kind of library, unrelated to libraries of today, which will in twenty years spring unheralded from the Jovian brow of an unknown library genius. The odds are against such an event. If some genius should conceive a brilliant revolutionary program, entirely different from anything that has gone before, the chances are (human nature and entrenched interests being what they are) that it would be discarded and that the slow processes of evolution would continue. The library of 1980 will be what the forces of history, demography, politics, and science make it.

This is not to say that the federal library in 1980 will be the same as the federal library of today. The demands upon the government will require changed instruments of service. It is likely that the federal establishment will be much larger. When the population of the United States in 1880 was 50 million, federal employment was less than 140,000 (0.28 per cent), when it became 123 million in 1930 federal employment rose to 856,000 (0.7 per cent), and when it became 179 million in 1960 federal employment rose to 5.2 million (2.9 per cent).10

In 1980, with an estimated population of 246 million, federal employment is likely to reach more than 7,500,000 (3 per cent). To provide library service and other essential information services for a staff of this size will require at least 50 per cent increase in the size of the library service, if the factor of size is considered alone. The chances are that the increase will be greater.

However, size of federal employment is only one of a number of factors which are likely to affect the size of the federal library service. The nature of the problems with which the federal government will deal will be a more potent factor than the size of the library’s clientele. The development of scientific management within the federal establishment will be another potent factor. A third factor will be improvements in library technology and in the whole area of communications, which may change the nature of staff and services provided by libraries and information centers. Technical advances may have more influence upon the nature of library service in 1980 than any other cause.

In addition to its steady growth in size the federal government has
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experienced a change in the nature of services demanded by its citizens. The general welfare provision in the Constitution covers more and more activities. The increasing mobility of the population makes state boundaries less important and the federal government more important. Government services in public health, in economic assistance and development, in exploiting and conserving natural resources, in educational and social fields are growing apace. In 1961 the military is still the great consumer of government funds, and it is likely to be in the foreseeable future. However, the military grows more and more dependent upon research, as do the civilian agencies. Research seems destined to be the most important function of government as far as expenditures of time and money are concerned. It is likely that applied research will dominate but that pure research in the basic sciences will also increase as a governmental activity. The increased research activities will result in increased production of technical reports, documents, and journals. It will also make it incumbent upon the government to be even more active in the support and direction of documentation and bibliographic programs.

Present indications are that advanced systems of bibliographic service will have been developed by 1980. Judging by present demands and problems, it is likely that such systems will provide faster reporting, more detailed indexing, and more comprehensive coverage. It is also likely that such bibliographic services will not be able to cope fully with the insistent demands of scientific research, because the areas of research expand outward like cancer cells, each cell furnishing sustenance for innumerable new cells. The only limits upon research are the limits to man's unbounded imagination. In spite of improved machines, improved techniques and standardization of the product, bibliographic tools are likely to be extremely expensive. Such increased expense is likely to be caused by refinements in the product for which the improved techniques, standardization, and mass production will not wholly compensate. It must then be assumed that in 1980 federal libraries will merely be upon the threshold of newer and greater developments in bibliographic service.

It is likely that by 1980 machines will be available to assist in every library operation. By that time the problems of circulation controls should have been worked out. This should include not only the problem of charging and discharging books but also the problems of automatic circulation of new materials. A daily summary of library receipts, which would be divided into segments and delivered to the desks of
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appropriate research workers as part of the library service to readers, should be technically feasible, and in high priority research it should be economically possible by then. Use of machines as tools to assist in such operations would require only the refinement and mass production of machines already in existence or in the development stage in 1961.

This possibility suggests that the development of machines for library use will go through a period of experimentation and adaptation, then standardization and mass production. It is likely that because of cost, libraries will be forced to adjust some of their procedures to take advantage of machine time available in central processing units of the agencies.

In the field of communications current developments promise to lead to increased usefulness for libraries. Instantaneous facsimile transmission of library materials is close to reality. Current equipment is capable of transmitting a limited amount at a still prohibitive price, but the possibility of speeding up the scanning devices and reducing the cost is great. There is doubt that the dream of a laboratory worker dialing a code from his desk and receiving a facsimile of the latest research in his field can be realized by 1980, but communication between library centers by this method may be reached.

Automatic translating machines are emerging from the laboratory stage. Automatic indexing is a possibility although there is still doubt that it can be effective without the application of human judgment. The storage and retrieval of technical data and information on machines are realities today, and millions of dollars are being spent by the government on this kind of program, both for experiment and application. By 1980 the use of machine-stored information in special fields should be almost commonplace in the major government libraries or information centers.

By 1980 technologists should have perfected reading devices which will have overcome many of the handicaps to using microforms. It will then be possible to do adequate research in isolated places, to store great libraries in a few rooms.

There is no doubt that duplication methods will have been improved to such an extent that copying library materials will in many cases be preferred to lending. It will be cheaper to present the reader with facsimiles of source materials than to lend him the volumes.

At present there seems to be no indication of the development of a federal library system, although it is likely that much coordination
of federal library services and cooperation among libraries will be achieved. Communication between federal libraries will be more formally and efficiently established. Acting together, they will have established standards of service and a reporting service. Research on library techniques and problems will be operated on a planned program, either in the Library of Congress or in a new joint agency established for this purpose. The number of national libraries will have been increased, with pure science and engineering being the most likely prospects for coverage. There will be jointly operated acquisition programs probably with a limited form of cooperative cataloging which, nevertheless, will go beyond that now provided by the Library of Congress. A federal library storage center will be a necessity and will have been organized but will be experiencing problems of communication and policy.

It is evident that there will be a change in the role of the library. There will be an information service staffed by librarians, subject specialists, and technologists. Literature will be collected, organized, analyzed and evaluated according to the needs of the federal agency served.

The individual library will be able to provide pertinent literature upon every topic of value to its clientele and will do so as the literature appears, as well as upon demand. Machine retrieval of literature upon specific topics from individual points of interest will be available as will summaries and evaluations of the literature for specific purposes. Libraries will be equipped with numerous reading machines which may be loaned with the microforms. They will also be able to provide instant cheap copies of library materials or facsimile copies of materials from selected libraries.

Machine coding will be done at great depth while the general library catalog will have fewer analytics but more annotation. Probably a greater portion will be ready-made and purchased from outside sources. With machine searching of literature it will be possible and will be necessary to use a greater portion of the library staff for organizing the literature.

Of necessity the programming of library operations will be included with the programming of research and development. The cost of libraries will force greater attention from management, and use of the library will have become essential in every research program. Library service within an individual federal agency should be more universally available even in remote locations. Although it is not likely
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that field libraries can be discontinued, it is likely that more service can be directly available to field personnel from the headquarters library, and the improved communications will have great influence in making a more cohesive group.

This review of possible development of the federal library service in the next twenty years indicates that the group of federal librarians should become more cohesive and that they will develop a program of organized research into their own problems. Because federal library problems are in the core area of library problems, federal librarians will have the opportunity of exercising more and more leadership in library work. The federal library program can become more than ever the focal point for development of research library work in the United States.

References