Mobilization of Existing Library Resources

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WHAT BOOKS, PERIODICAL ARTICLES, films, maps, and related library materials are where now? And how and at what points can they be delivered for use? The answers to these questions are the basic concern of this chapter. They are simple questions but the answers no longer come as simply as they once did. This is so because the cataloging, indexing, and abstracting processes, which we have had to develop to know what is where have necessarily become increasingly elaborate, detailed, and complicated. This elaboration and this detail, and the resulting complexities, are part and parcel of the problems of mobilizing the total literature of the world and delivering it for use as efficiently and economically as may be. While the machinery by which we do this has grown and is growing cumbersome and unwieldy this does not arise from any inherent complexities in the bibliographical processes and procedures as such, but rather from the sheer mass of materials to be acquired, organized, and placed in readiness to be quickly and smartly marched front and center, on call, to whatever point from which the demand may come.

As applied to limited collections the cataloging, classifying and location processes, which we now have, are highly satisfactory. It is an easy and relatively simple matter to catalog a hundred books or to index and abstract a hundred periodical articles. It is easy too, but not quite so easy, to apply the same processes to a thousand items. It is not too complicated to catalog or index ten thousand items or even a hundred thousand and to establish the machinery for use. But as the numbers increase, as they so inexorably and rapidly have, into the multi-millioned volumes of our present civilization the right answers have become increasingly difficult, complex, and costly. All this is clearly demonstrated in our libraries, individually and collectively, and in the evolution, down through the ages, of the bibliographical processes.

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The first library catalog unquestionably could be, and was, a simple matter. It came into being only when the books had become numerous enough so that they could no longer be easily spanned and found by memory. Its compiler needed to devise only a simple listing and some scheme of organization, not even necessarily logical or efficient. No need in these first catalogs to worry about standardization, or uniformity, or classed versus author catalogs, or detailed classification schemes, or atrophied subject headings, or indexes and abstracts of literature published serially. But surely and inevitably, as books became more numerous and more varied in form, these problems and complications, insistent and less and less easily solved, presented themselves. To ignore them was only to compound the problems and increase the difficulties of some future day. These are obvious and elementary facts. They deserve emphasis, nevertheless in a consideration of the present-day complexities of mobilizing the writings of the world because it gives us perspective, and a better understanding if we realize that we deal with a problem grown and growing complicated chiefly by numbers.

These things are, in part at least, relative. No doubt the earliest keepers of books felt that they were faced with a pretty formidable task. Even the writer of Ecclesiastes, in a time when the situation, from our standpoint must have been very simple, was troubled by the making of many books and found the studying of them a weariness of the flesh. The librarians of the Ptolomies, who probably had a considerable cataloging and organizing problem and the medieval monks in charge of the book presses may also have felt, no less than we do now, that they presided over a rich store and that keeping it well ordered and safely preserved was a complicated and increasingly difficult task.

In the eighteenth century the product of the presses was a mere rivulet compared with the present flood-tide, but it was a pretty mighty river compared with what had gone before. So much so that Voltaire, sensing the intellectual if not the organizational aspects of the rapid increase of publication felt moved to complain, "The multitude of books is making us ignorant." As indeed it was in the sense that the time was fast disappearing when any one mind could encompass all the significant writings. Somewhat over a century later Washington Irving, another fecund contributor to the literary heritage, standing in awe of libraries of three and four thousand volumes, which to us seem modest indeed, expressed concern as follows:

> But the invention of paper and press have put an end to all . . . restraints. They have made every one a writer, and enabled every mind to pour itself into print, and diffuse itself over the whole intellectual world. The consequences are alarming. The stream of literature has swollen into a torrent—augmented into a river—expanded into a sea. . . . Unless some unforeseen mortality should break out among the progeny of the Muse, now that she has become so prolific, I tremble for posterity. . . . let criticism do what it may, writers will write, printers will print, and the world will inevitably be overstocked with good books. It will soon be the employment of a lifetime merely to learn their names. Many a man of passable information at the present day reads scarcely anything but reviews, and before long a man of erudition will be little better than a mere walking catalogue.[1]

No doubt the bibliographers and librarians of Irving's time read the above words with understanding and sympathy, quite as much as those of us in the present era can appreciate a grain of reality in Garrett Hardin's fantasy, "The Last Canute." This imaginative piece, appearing in the *Scientific Monthly* of September 1946, makes a news release in the fictitious *Martian Morning Revelation* go in part like this: "With the discovery of these plates [near Worldly New York] we have, for the first time, found evidence that at least a few of the Worldlings tried to fend off their doom. . . . What a strange quirk of Fate that these people, who titillated themselves with visions of destruction by atomic power—which to these primitive folk seemed a wondrous thing—should instead have perished peacefully, inexorably 'suffocated,' as one of their prophets put it, 'by their own intellectual excreta.' "[2]

It is not unthinkable that the librarians of future generations may find this fantasy too a bit quaint and a strange reaction to a situation which, from their viewpoint, should have been quite easily manageable.

Whether progress in bibliographical controls in the future will be such that the problems we face here and now in mobilizing our massive literature will seem relatively simple to those who come after us only the future will tell. One thing, however, is certain and that is that the future will, in matters bibliographical, no less than in other areas, be determined by the present. And in the present within which we live keeping our literature organized, findable, and usable, is a problem which has, for the past century particularly, been quantitatively increasing exponentially and, to a lesser extent in complexity

and in cost. This has been so, we again emphasize, not because the control processes are cumbersome and poorly conceived, although no one would claim perfection, but rather because the materials to be controlled increase and spawn and cross fertilize and multiply at such a tremendous rate.

We are concerned here chiefly with organizational mastery of our literature, and this is problem enough. The intellectual aspects of mastering the literature and knowing and understanding what is in it, however, the danger that our writings, as Voltaire feared may make us ignorant, or that the learned man, as Washington Irving predicted, will be a mere walking catalog, or that we may come to the total suffocation of "The Last Canute," this is really the more serious part of the problem and it belongs not to the librarians alone but to all who think, study, read, write, and publish. It is a problem fundamental and basic to total civilization.

In our efforts to keep abreast of the rising flood and keep things manageable we of this later era have, consciously or unconsciously, followed the ancient principles deriving from the very nature of the problem. Librarians, if they are to be content and happy in their work must be people who instinctively are of intellectual bent and who like to help others. One of the first, at least in the period of the printed book, to systematically think of these things and write about them was Gabriel Naudé. In his book, *Avis Pour Dresser une Bibliotheque* first published in 1627, he set down a fourth principle, which, in part, goes like this: ". . . that by this means (a catalogue) one may sometimes serve and please a friend, when one cannot provide him the book he requires, by directing him to the place where he may find a copy, as may easily be done with the assistance of these catalogues."[3] On this principle all modern librarianship is based. Systematic organization through cataloging, friendly service, and directing the user to the book he may want, wherever it is, these all embodied in the Naudé principle, are the base root of our present day librarianship. They have determined the mobilization processes which we here discuss and reflect on.

Librarianship, on the present pattern, at least in America, began to evolve just about one hundred years ago. In 1847 the first list of indexed periodical articles, which was to grow into Poole's "great" cooperative index, was published.[4] By 1850 Charles Coffin Jewett's plan for a general printed catalog of American libraries was advanced.[5] Here was an idea which has been tenaciously pursued for years on

end, and which is still pursued, although not in the completeness originally envisioned by Jewett. In 1876, with the founding of the American Library Association, cataloging procedures began to standardize and crystallize along lines still largely adhered to. By 1901, when the Library of Congress took over the central printing of library catalog cards from Library Bureau, the pattern and machinery which now controls and determines our mobilization processes was pretty well set.

While there has been much latter day criticism of cataloging, as we practice it, and some administrators have thrown off airy criticisms about nineteenth century methods, it is doubtful, could we by a magic wand wave it all away, that we could come up with anything better. It is highly probable that we would come right back, in spite of the promises of the machine, to catalogs on cards. It is likely that these cards would be just about three by five inches in size and it is certain that there would be cards for each book under author, and under title and subjects, including all the machinery of cross references. This would be so because the whole card mechanism of control and mobilizing has worked, and worked rather well, even when applied to quantities of material which probably even the most prescient of the devisers ever foresaw.

The approximate twenty year span centering on the last century mark might well be called a golden age because in these years the leading librarians pretty well foresaw the shape of things to come and put forth the basic suggestions by which our mobilization still proceeds. Central cataloging, including printed cards, cooperative indexing of periodicals, union catalogs showing the location of books and journals, reservoir or deposit libraries, cooperative buying of books, including subject specialization, bibliographic centers, regional libraries, these were all foreseen, advocated, promoted, and discussed during these fruitful years.

In 1899 E. C. Richardson of Princeton and later of the Library of Congress, who will certainly continue to hold an important place in the history of American librarianship, declared in one of his earliest publications, that some method whereby the location of books in various libraries could be found was needed. He emphasized also the need of cooperation in buying in order that libraries would supplement, not duplicate each other, and in order too that as great a number of books as possible not already somewhere in this country

would be acquired.[6] Richardson gave a lifetime of effort and advocacy to this concept, so basic in the mobilizing of the literature. His idea, nurtured and promoted by those who came after him, slowly took firm root. One aspect of it is found in our various union catalogs and other locating devices and another in what we now know as the Farmington Plan.

In 1908 two ideas which are now basic components of our mobilization procedures were advanced. C. H. Gould, librarian of McGill University proposed, in that year, the establishment of regional libraries whose spheres of operation would embrace the entire continent, each to be the center of a great region, helping the libraries of its own district, but maintaining a definite cooperative relationship to all other regional libraries. He thought of these libraries as really international in scope and character.[7] Now, fifty years later we have at least a beginning of such libraries in the New England Depository Library and the Midwest Inter-Library Center.

W. C. Lane of Harvard, also in 1908, brought forward the plan, earlier conceived in part by President Eliot of Harvard, of not only cooperation among libraries for central storage but also the need for devising methods whereby it could be known where individual copies of books are located. He suggested setting up a College Library and Lending Bureau to gather bibliographies, catalogs, and other kinds of data on where books are located. He also suggested production of union lists on a variety of subjects and the building up, by the Bureau, of a collection of books of its own, chiefly working tools and expensive individual sets.[8] Agencies such as this we now have in our numerous bibliographic centers.

The authors of these proposals clearly realized that they were not spot solutions and that it would take many years to see them in effective operation. Thus Gould, who in 1908 made cooperation the theme of his presidency of the A.L.A. said, in his presidential address, "The twentieth century has the task of evolving method and order *among* rather than within libraries." [9] Similarly R. R. Bowker, speaking on coordination at the 1909 Conference said, "It is an enormous subject, this; it is really the subject of the century, . . ." [10]

It has indeed taken years to bring these proposals into being, and then only imperfectly. With the century half spent they are still only very spottily and haphazardly realized. Regional libraries, in the sense of gathering books together, in their physical presence, have been

achieved, in an important sense, only in the two centers noted above and of these only the Midwest Inter-Library Center is truly a regional library.

In the important area of achieving coordination among libraries and in the location of books much greater progress has been made. Now we have five major union catalogs and bibliographical centers in full-blown and successful operation. These centers, all effective mobilizing agencies, are the Union Library Catalogue of the Philadelphia Metropolitan Area, the Pacific Northwest Bibliographical Center in Seattle, the Union Catalog at Western Reserve University Library in Cleveland, the Bibliographical Center for Research of Denver and last and most important of all, the Union Catalog Division of the Library of Congress. In 1950 the relatively modest sum of $118,386 was being spent on operating all these Centers. They then contained about nineteen million cards, more than ten million of them in the Library of Congress National Union Catalogue.[11] Supplementing these centers are a whole host of lesser union catalogs, all important in regional mobilization. Among these are the Union Catalog of the Nashville Libraries, the North Carolina Union Catalog, the Atlanta-Athens Union Catalog, the Union Catalog of Southwestern Michigan, the Union Catalog of the Oregon State System of Higher Education and similar cooperative enterprises.

Into these union catalogs, major as well as minor, has gone a great deal of planning and hard work. Space allocations for them have been made in crowded host library buildings and substantial monies have been expended, a considerable part of them from Foundation grants. It is rather significant that while all these union catalogs are being maintained at considerable expense and are effective in their various areas that no important new union catalogs have been founded in recent years. All regions and communities which have these catalogs certainly profit by them but possibly the gains do not now seem significant enough to justify both the very considerable cost of creation plus the continuing annual cost of maintenance.

An outstanding event, possibly one of the important milestones of our century, in the development of the union catalogs, is the realization of the long sought goal of printing the great *National Union Catalog*. This has come about through the printing in offset form, along the lines pioneered by the Library of Congress author catalog, of all cards for all 1956 and later imprints. This is an enterprise of bright promise which may produce one of the greatest location and

mobilizing tools yet achieved. There are, as should certainly be expected, great problems in the making and printing of this catalog, one of which is the limitation on the number of locations which can be conveniently shown. Nevertheless even in its envisaged beginning form the Catalog, for which the first deliveries are expected shortly, will certainly aid greatly in disseminating information about the resources of the major libraries of America.

This Catalog, believes George Schwegmann, Jr., chief of the Library of Congress Union Catalog Division, may change some of the traditional patterns of American librarianship and make possible a more equitable national distribution of the inter-lending of books among the libraries of the country, with more books borrowed from libraries near at hand. The Catalog can also be an aid to national and regional planning and may reduce cataloging and acquisition costs.[12] To the extent that these predictions come true the need for further major or even minor regional union catalogs will certainly be reduced.

The progress of this *National Union Catalog* brings into emphasis the now familiar pattern of our twentieth century librarianship—ever increasing numbers to be struggled with. The annual cumulation of this catalog will contain 17,858 entries prepared by the Library of Congress and 7,775 by other libraries for 1956 imprints alone. For these titles the catalog will cite 71,198 locations in American and Canadian libraries. Together with imprints for previous years the catalog will fill 3,622 pages. This is a tremendous listing but the 1957 record may make it look pretty insignificant. The cumulation for only the first three months of 1957, which contains 1956 and 1957 imprints, records 11,743 Library of Congress entries and 2,848 from other libraries, totaling more than half as many as in all of the 1956 cumulation. The April 1957 issue alone contains 4,961 entries from other libraries which when added to the previous three months exceed the number of entries from other libraries for all of 1956.[13] Here we are indeed going to have a tool, massive, as it must be, but a great mobilizer of the book resources of this continent.

Among the most effective of all the literature mobilizing tools are the various union lists of serials. What was probably the first of such lists was published in Chicago in 1901. Other union lists followed at Philadelphia in 1908, University of Illinois in 1911, New York in 1915, Rochester, 1917 and Providence, 1921. These and similar lists set the stage for and pointed the way to the great national *Union List of Serials* of 1928. This epoch making list, which without doubt is the

most comprehensive and effective literature mobilizing tool produced to date by any nation, was conceived during World War I and promoted, in the ensuing years, by libraries, chiefly college and university, forty of which contributed $12,000 a year, for a three year period, for its support.[14] After years of work the list was, in 1928 an accomplished and bulky fact and, as a by-product, the serial files of the cooperating libraries were in better shape than they had ever before been. Much additional work and money was required to bring a second edition, bulkier, more comprehensive and better than the first, into service in 1943. This was followed by supplements through 1949. By then this way of cooperatively recording and locating serials had begun to tax the patience and budgets of libraries so the supplements ceased. Taking their place was the much less satisfactory *New Serial Titles, a Union List of Serials Commencing Publication after December 31, 1949* published by the Library of Congress. That this new union list has been something less than satisfactory is reflected in a recent grant of $6,000 from the Rockefeller Foundation to enable the Joint Committee on the Union List of Serials to develop a new union list program.[15] Should this new analysis of union list processes achieve success comparable to the great union list of 1928 mobilization progress will indeed have been made.

A clear reflection of evolving publication rates and trends and the rapidly increasing serialization of our twentieth century literature is that the 1955 cumulation of *New Serial Titles,* which includes only journals which have come into existence in the 1949-55 period, requires 667 pages, recording approximately 40,000 titles. Probably not the most knowing of the students of the bibliographical birth rate would have predicted, in 1948, that each of the next six years would bring, on an average, six thousand new journals into being, to be housed and mobilized and to demand annual financial sustenance. This tremendous increase in current publication points up the observation, made by several commentators on the current bibliothecal scene, that it is not the literature of the ages that has brought acute organizational problems to our libraries but rather the present and increasing spawning among the presses.

Here are some thought-stirring facts of the increase problem as applied to a single field—physiology. In 1810 there was only one journal being published in this field. By 1950 there were 151. It is not so much this increase in itself which gives the scientist and the librarian pause as the rate, reflected in *New Serials Titles* and also in the following

figures, at which it has come about. In 1850 there were only three physiological journals and by 1900 twenty-two. This number had increased to fifty-one by 1920 and here the growth begins in earnest with more than thirty new physiological journals appearing in each of the three following decades and all this while journals already in the field were generously proliferating and increasing their page content. Pity the poor physiologist who would familiarize himself with all his literature. Even in 1900 it would have taken him, reading at the rate of two minutes per page for eight hours per day, ninety-one days to scan the journals. By 1940 such a scanning of the year's journals would have required two years and seventy days.[16] And if the physiologist has more than enough to read, what about the doctor of medicine? He has only 12,000 journals, clinical and pre-clinical, to read, any one of which might contain information of vital import to him.

It is obviously not necessary, for every physiologist, every doctor, every engineer to read everything. Rapid and significant progress has come without such total reading. The present ideals and philosophy of librarianship, however, and of current scholarship too, require that every scientist should know and have easy access to that portion of the literature, wherever it may be, which touches his immediate interests and speciality. Our mobilization machinery for serial literature has, at its best, never achieved these ideals. Our indexing machinery for journals, while laboring heavily, is falling steadily behind in organizing the rapidly increasing serial literature. Against the rising flood there stands two types of indexes, the general indexes, first made and produced by librarians and now typified by the whole family of Wilson indexes and others, and the specialized subject indexes, such as *Biological Abstracts*, *Chemical Abstracts*, *Engineering Index*, and a host of more highly specialized abstracts and indexes originated and produced by scholars of the field.

The valiant struggles for control by these subject indexes emphasizes the losing nature, currently, of the battle. *Biological Abstracts,* for example, covers less than forty-five per cent of the literature of its field. It is estimated that it would require seven abstracting journals the size of the present *Biological Abstracts* to adequately cover all the biological journals publishing substantive research articles. A plan for, if not complete biological world coverage, then a more comprehensive coverage, would assign exclusive nuclei of journals, on a coordinated basis, to *Excerpta Medica, Biological Abstracts,* and

Berichte über die gesamte Biologie. Other abstracts that now have some biological coverage, such as *Chemical Abstracts* and the *Geological Indexes* would agree to cover completely smaller quotas of partly biological journals. The specialized abstracting journals would also be fitted into the general program. All this of course would require a collaboration and coordination between all the indexing services now not even remotely approached.[17]

The same problems of providing chart and compass for their literature which the biologists are struggling with are present, in varying degree, in every other technical and scientific field. Solution of them, if it comes, will require cooperation on a colossal scale. Coordination and elimination of present duplication would do much but there will also need to be a wide extension of coverage to the myriad new titles, and sharp central control mechanisms, if the scholar or librarian is to be enabled to learn what is where in any real comprehensive sense. Here indeed is a stubborn and rocky field awaiting the fertilization and stimulation of Foundation dollars.

Progress, in control, if it is made, will likely come through further specialization and breaking down and segmenting of the major fields into subject areas more and more specialized. This is a trend which has developed slowly but inevitably since the first attempts of the late nineteenth and early twentieth centuries at subject mastery such as the *Catalogue of Scientific Papers* and the *International Catalogue of Scientific Literature* of the Royal Society of London and *Concilium Bibilographicum,* H. H. Field's almost singlehanded effort to internationally organize the literature of zoology. From the beginning these ambitious enterprises were doomed to be finally overwhelmed, partly because of organizational problems but finally and completely by the sheer mass of the materials they were required to mobilize.

Important in the organizational mastery of literature has been the preparation of individual bibliographies of varying scope and ambition, from relative brief listings to exhaustive subject, regional, period, or national lists, and from author listings only to elaborate annotated bibliographies that have sometimes been the work of a lifetime. Illustrative of the careful and detailed work that has gone into bibliographies as well as improving quality and value, through systematic cooperation, is the Hain-Copinger-Reichling series of bibliographies dealing with incunabula, to be followed by the ambitious *Gesamtkatlog der Wiegendrucke.* This later epitome of bibliographical detail answering exactly what is where for its field, like so much exacting bibliogra-

phical and location work, moved very slowly. Only eight volumes, covering less than one-fourth of the alphabet, could be produced in the 1925-40 period, before it was brought to an abrupt halt by World War II. Bibliographies are legion of course and to list even the most important would be to produce still another bibliography. In the present quick analysis of literature mobilization only a bow can be made in the direction of the printed catalogs of the great libraries such as the Library of Congress, the British Museum, and the Bibliothèque Nationale. These are basic bibliographical tools in daily use in the scholarly work of the world.

The disrupting intrusion of war into the affairs of bibliography and scholarship may be further noted in the fate of the very ambitious *Deutsches Gesamtkatalog* which has been described as "an indispensable work for catalogers, reference workers, and bibliographical investigation generally in the matter of German publications." This great work too, after achieving fourteen volumes in the 1931-39 period and covering only the letters A-B came to a grinding halt under the bombs and madness of the God Mars, who is little concerned with bibliographies and the affairs of scholars unless, perchance they should be making listings, as many of them have, dealing with the arts of making war. This *Gesamtkatalog* indicates locations in more than a hundred libraries. It is but one of many highly perfected mobilization tools. It is doubtful however that the scholarly world can, under the increasing weight of numbers, longer afford such luxuries of detail and perfection.

While bibliography, whether of serials or monographic writings, is the bedrock of librarianship even the sheer mass of books about books begins to weigh heavily. Thus we find two French bibliographers, as quoted by Julien Cain, complaining as follows: "Like literature itself bibliography today has become as boundless as the sea. It would be well to practise Malthusianism in this respect and to discourage certain bibliographers who, from the mechanical recordings of the works of others, derive an intellectual satisfaction which they are incapable of achieving through research of their own." [18] This is the first complaint of this kind which this writer recalls encountering. It has a rather curious "me and thee" connotation similar to that of the Quaker who thought everyone queer but himself and his wife. It could also be interpreted as pointing at practically all of us as librarians, since we have, as a class, made helping others to be creative our chief mission in life rather than being creative ourselves. The two

functions, of course, are not mutually exclusive, but if librarians and bibliographers throw up their hands in despair over too many bibliographies or other informational devices about books then the battle surely begins to be lost.

It is the part of the librarian's and the bibliographer's dilemma that the better he does his work, the more helpful he is, the more work there is to do. From this viewpoint, certainly, the work of librarians and libraries with all the attendant mobilization problems, has been tremendously effective. Bibliographies, of course, in and of themselves are not the books crowding our libraries. This can be said in spite of the three fat volumes which constitute the tremendous second edition of Theodore Besterman's *World Bibliography of Bibliographies.*

An extremely important factor in the mobilization of the world's literature is the great and often highly specialized libraries, or collections within individual libraries, brought together by individual citizens. These men, more often than not, have not been great scholars in their collecting fields. They have, however, been activated by a passion for collecting and, for the most part, possessed of the extensive dollars required to pursue the publications of their chosen fields. It is to men of this kind that we owe such magnificent collections as the Hoover Library of War and Peace, the Folger Shakespeare Library, William Andrews Clark Memorial Library of the University of California, the Arents Tobacco Collection of the New York Public Library and numerous other libraries and collections of private origin. These private collecting activities and, in many instances, their continuing handsome endowments, have been valuable mobilization factors creating subject collections which attract the scholars of the world.

The systematic analyses of regional and national libraries and resources such as R. B. Downs' three volumes, *American Library Resources; Resources of New York City Libraries;* and *Resources of Southern Libraries;* and John Van Male's *Resources of Pacific Northwest Libraries* are among the useful tools outlining the nature and location of the library wealth of the country. Additional guides to subject holdings and the location of special strength are the *Directory of Special Libraries* and the *American Library Directory.* These and similar less extensive analyses and guides in the periodical literature are among the latter day aids which help to delineate the national fabric of our library resources and to bring them into relief.

Other significant approaches to mobilization of library strength more from the acquisitional rather than the use standpoint are a vari-

ety of specialization conferences and agreements. These have developed chiefly in the second quarter of our century. They include the extensive but informal national Library Specialization Conference of May 13-14, 1941, and, regionally, the Pacific Northwest Library Association Conference on Library Specialization of 1943 at which general specialization agreements were reached by the libraries of the Northwest. On a national scale the Farmington Plan is, of course, also a form, of varying effectiveness, of mobilizing and distributing library strength throughout our country.

Many efforts toward specialization among college and university libraries have lacked validity and strength because a corollary to extensive specialization among libraries of this kind must be a corresponding specialization of curricula and research interests and activities. To date no really important higher educational agreements of this kind, which would be reflected in library holdings, have been reached but such relatively recent regional cooperative agencies as the Southern Regional Education Board and the Western Interstate Commission for Higher Education, both of which maintain permanent headquarters, have taken a notable part in reducing duplication of higher educational facilities. What they have done and are doing has already to a limited extent and will increasingly affect what library resources are where.

Supplementing national and regional agreements on development and use of resources are numerous local agreements between libraries such as the long established and effective agreement between the John Crerar, Newberry, and Public Library in Chicago, the University of North Carolina-Duke agreements, agreements in Nashville and Atlanta areas, in the Bay area of California, among the New York City libraries and in numerous other localities. These cooperative arrangements for limited areas, much more easily consummated than more extensive agreements, possibly number in the hundreds. Without question they have been of tremendous importance in the rapidly evolving and constantly changing fabric of library resources.

One library mobilization factor which was of little or no significance at the beginning of this century but which has been developing steadily and with increasing rapidity, particularly in the post World War II years, is the creation of special libraries by industry and business. The phenomenal development of these libraries, and of highly specialized collections within libraries, in recent years, is indicated by the fact that the *Special Libraries Directory* of 1935 includes only

1,154 libraries and specialized collections as compared with 2,489 listed in the 1953 directory. These increasing and highly specialized libraries, tailored to the needs of their companies, add appreciable strength and richness and an additional element of mobilization to the library resources of the nation. A case in point, and hundreds of outstanding examples could be listed, is the library of the Corning Glass Works, which contains the great majority of the writings extant on glass.

One factor in the production of the literature our libraries must acquire and organize which the pioneers did not have to struggle with, and which they probably never even foresaw, is the unpublished report which has, since World War II assumed increasing importance in the research processes. These evolving and difficult to control publications are in the very forefront of research. While they are now chiefly produced in highly specialized projects, and to the extent that they are acquired by libraries, are chiefly found in the specialized libraries, it seems certain that there will be more and more of them, not less. They will become undoubtedly an increasingly important part of the holdings and work of the generality of research libraries, bringing with them problems both of internal controls and perhaps, to a limited extent, national mobilization.

To this point this chapter has considered chiefly the problems and mechanisms of control of our literature, the means by which we tell what we have and where it is. We come now to the prime reason for all our acquisition, organization, and housing processes, to the delivering of our books, journals or other materials for use. It is a characteristic of the true librarian that he is never so happy as when his books are being used, for only this makes his library a living thing with vitality, significance, and purpose. The desire to have books used, emphasized by Naudé and many others has, in spite of some gruesome examples to the contrary, very likely dominated librarians from the time writings were first assembled in quantity.

In medieval times the extant writings, in the earlier period chiefly unique copies, were extremely rare and of great value. Even under these conditions it was recognized that they should be shared, as is indicated by the following sentence from Gertrude B. Rawling's *The Story of Books*: "It was considered a sacred duty thus to share the benefits of books with others; but sometimes the custodians of the precious volumes, aware of the failures of memory to which book-borrowers have ever been peculiarly liable, were so averse from run-

ning the risk of lending that the libraries were placed under anathema and could not be lent under pain of excommunication."[19]

In spite of sharp and necessary restrictions and even the chaining of books there was a considerable interchange of writings among the medieval monastic libraries. That books were not thought of as being completely and irrevocably cloistered in these earlier times is shown by the efforts, in the early sixteenth century, of one Nicolas Claude Fabri de Peiresc to establish interlibrary loans between the Royal Library in Paris and the Vatican and Barberini libraries in Rome.[20] The recognition of the tremendous value to scholarship in a reasonably free exchange of materials in these efforts and the condemnation of those who jealously guard materials has a completely modern sound. The same sentiments can be found expressed in our literature right up to the present moment.[21]

The idea of positive extension of loans outside libraries and among libraries did not blossom, under the scarcity of books, but it persisted and took firm root in our country and elsewhere as soon as the times were propitious. In 1849 in response to a questionnaire from Jewett fourteen libraries reported loans to "persons at a distance." By 1876 S. S. Green, director of the Worcester Free Public Library called upon reference libraries "to lend books to each other." A proposal that libraries enter into agreements to furnish books to each other was advanced in 1892 by Samuel Bunford of the Ridgway Library in Philadelphia. The editors of the *Library Journal,* commenting on this proposal, remarked that such interlibrary lending was not "unexampled" and cited frequent lendings of this kind between Harvard College and the Boston Athenaeum.[22] By 1915 interlendings had increased to the point where the A.L.A. found it necessary to issue the first of its codes of regulations.

Now, of course, interlibrary lending has become an accepted and unquestioned part of the research process in the libraries of practically the entire world. The tacit acceptance of a liberal interlending of books by and among the libraries of our country, has in effect made the resources of our libraries a national cultural and research asset. This has been a tremendous contribution to both the rapid technological advances we have made and our great forward strides in research and scholarship. Aiding, as it has, in the publication of more and better books, this free interchange of books is but another of the many evidences of the fruit the work of librarians brings. Once

again, because librarians do their work well and with vision, as in the free interlending of books, they help significantly in creating more books to be acquired, organized, housed, and delivered for use as needed.

A distinct contribution to carrying out lendings among libraries economically and well has been the General Interlibrary Loan Code 1952 adopted by the Association of College and Reference Libraries. This code, to which a committee of the Association devoted two years of work, in addition to revising and improving lending regulations, establishes standard forms, based on those first devised for the libraries of the greater University of California. These are now helpfully in use on a nation-wide basis. Through them and the control and location mechanisms discussed above and through the general and prevailing philosophy that books exist to be used it is now possible for the scholar and researcher to have delivered to his desk, wherever he may be, almost whatever unit or units of the world's literature for which he may have a need. The results of this liberality and wide range of access, while now taken for granted has, when we stop to analyze it, been spectacularly successful. Of this our burgeoning libraries and the growing complexities and troubles of their management is clear proof.

While it is true that literature from almost anywhere in the world can be delivered on the desk of the scholar locally, either in original or facsimile, this does not, beyond national borders, proceed too smoothly at this time. There are still formidable barriers of inadequacy and variations of the mobilizing processes, barriers of language, postal regulations, and academic mores and customs. In a world which is rapidly shrinking physically while at the same time growing even more rapidly intellectually, good progress in facilitating and simplifying library use is being made. As it must, this is coming about through ever increasing international collaboration. The need for thus working closely across boundary lines and language barriers has been clearly recognized throughout the entire modern period of librarianship.

Long before the League of Nations librarians and bibliographers, not in any great numbers it must be admitted, were collaborating and working together with their confreres in other countries. Through the League, and through the internationally minded thinking it promoted, further international collaboration took place and additional agencies for promoting such work were either founded or infused with addi-

tional vitality. World War II, of course, brought all this to a halt but even the War was not an unmixed evil, bibliographically, because it brought the demise of the only partially accepted League of Nations and the creation of the stronger United Nations and its great educational and scientific arm, Unesco.

Under Unesco international progress in all cultural and educational matters has slowly but surely quickened. This has been particularly true in all library matters. Much of the progress in this area, pointing the way to the future, is set forth in the first and second annual reports of bibliographical services throughout the world, 1951–52 and 1952–53, prepared by L. N. Malcles and published in Unesco Handbook Number 4. These two reports, requiring 111 and 196 pages respectively, reflect increasing activity and indicate that the third and fourth reports will record even more organizations and greater achievements. Much more than just reporting of activities will, of course, be required. With more and more of the record of achievement by countries available progress in the international coordination of them will be sure to come.

Within our country, already well developed bibliographically and culturally, the work of Unesco is little apparent. On the international scene, however, results have been achieved which are fraught with significance and promise for the whole cultural development of the world and particularly for all who work at acquiring and organizing the record. Each year, reports Unesco, twenty-five million more people are learning to read and there are now about 1,300 million literate persons in the world. The number of titles published in sixty countries now exceeds 250,000 each year and the world book output has increased by twenty-five per cent during the 1945–55 decade.[23] No promise of surcease for librarian or scholar in these facts and figures. Rather is there additional cause to wonder if the control and mobilization methods of the present are equal to gargantuan bibliographical prospects of this progress.

The international organizational apparatus for cooperation in meeting and conquering the problems which this great increase has already brought, and will continue to bring, in sustained and increasing abundance, include the following: International Federation of Library Associations, International Organization for Standardization, International Council on Archives, International Association of Agricultural Librarians and Documentalists, International Association of Theological Librarians and the International Association of Medical Li-

brarians and Documentalists. These and other organizations, some quite certainly yet to be born, face a task formidable now and which, some twenty-five million new readers annually and rapidly increasing literacy throughout the world, will rapidly become more so.

Organizations like the above are concerned chiefly with physical mastery of the world's writings. Over and above this, and far more important is the matter of intellectual mastery. While the future is not within the province of this chapter speculation is a temptation. Suffice it to predict that under the weight of numbers, librarians and the cultural world generally will eventually, sharply and necessarily, break precedent with the past. Even now there is some faint questioning of the perfectionism which has dominated our bibliographical processes and increasing talk of weeding and new and more stringent standards of value to be met by the materials which are admitted to our libraries to qualify for retention there.

One of the most outspoken statements of this kind has come from E. C. Colwell, president of the University of Chicago. He says very bluntly, "If fifty per cent of what college and university libraries contain was spread on the fields, it would enrich education as well as the soil." He decrys, and rightly, the institutional competition, pride, jealousy, and worship of numbers which is reflected in our great libraries, and some not so great, and, it may be added, in at least one library association. Colwell feels that a research library of about a million volumes, drawn chiefly from the current decade of operation ought to suffice and he sees no need of keeping the vestigial remains of bygone days. He advocates, as do many others, regional libraries to house little used items and national and international correlation of their work.[24]

With all of this, except the fertilizer value of old paper, this writer agrees. The sixty-four million dollar question, however, remains to be answered. Which fifty per cent of the resources libraries now own, or are acquiring currently, is fit only to enrich the fields? If we set out to answer this question in earnest, carefully and accurately, as must be done if we are to do justice to our great cultural heritage, the present problems of library acquisition and of mobilization for use will, in comparison, pale into insignificance. In some degree, nevertheless, some time, some way, somehow, this question will have to be faced up to in the interests of keeping our resources manageable. To declare, in any comprehensive sense, what parts of the product of the human mind are 4-F and what parts are strong and vital and

deserving of retention in the service of mankind, is a task which will require judgment and wisdom which is not now among us.

It is a characteristic of modern man that he has, with all his hardest work and many of his most difficult problems, turned to the machine, bending it to his will with remarkable, sometimes fantastic success. With the problems of mobilizing our knowledge too, and delivering it for use, we have turned and are turning hopefully to the machine. The literature of this search for machine solution of our bibliographical problems, still in its infancy, seems to have passed through two phases. First was the period of bright hope for spectacular success. This has been followed by a more restrained enthusiasm and we seem now to be entering into a period of facing the sober realities.

It seems certain that in one area, the quick delivery of books by libraries to distant points, either by electronic facsimile reproduction or photo image, success, in a practical sense, will come rather quickly. Such transmissions have already been made but at rather high expense. Should all our research libraries be willing to devote to the electronic transmission of writing only one-half of the hundreds of thousands of dollars they now spend for acquisitions, a network of regional super-libraries, for the quick facsimile transmission of literature, would, even at the present early state of development, be possible.

When we move into the area of answering what is where, the machine, at the moment, offers little hope in the sense of practical application to the millions upon millions of volumes now mobilized through the traditional apparatus of catalog cards, alphabetical indexes, and abstracts. This does not mean that a solution will not come for a determined attack on the problem is being made by able and intelligent men. At the Center for Documentation and Communication Research of Western Reserve University two large conferences, with particular emphasis on the machine processes, one but recently adjourned, have been held to consider the problems of storing and finding information. It is significant and encouraging that both of these conclaves attracted large numbers of people, the last one over 800, of which probably more than one-half were scientists, engineers, mathematicians, lawyers, and representatives of manufacturing and selling firms. This extensive participation of non-librarians in the problems of mastering the literature and making it quickly and economically findable is something new.

With such a sustained attack solution in some significant degree may come. All of us should, according to our talents, do what we

can to help, and devoutly hope for success. The machine has done the bidding of man in so many ways, and in so doing has often been so phenomenally spectacular, and has so often made criticism and adhering to the old methods ridiculous, that it is a brash man indeed, nowadays, who dares express doubts. Nevertheless this observer, much as he hopes for machine success, does not believe that it will come in the sense of a complete and comprehensive control of the total world literature. The millions of books and other publications, now here and present on hundreds of miles of shelves, and the millions and millions of writings still to come, whether on endless miles of shelves, or in micro reduction, will defeat the machine, just as they encumber our present card and alphabetical controls and make them increasingly unsatisfactory.

These words, whether of wisdom or the lack of it, are here set down with the clear realization, but not the expectation, that they may, at some early conference on electronic miracles and marvels, have to be eaten. If so this will be cheerfully done in a final and complete bow and capitulation to the machine. Such final capitulation will perhaps not be possible after all for one whose memory goes back to the primitive days of an earth bound man, the horse and buggy, and the coal oil lamp. From the primitive viewpoint, some faint surprise may still be allowable if, as E. C. Berkeley confidently predicts in his *Giant Brains, or Machines that Think*,[25] machines will one day think intuitively, make brilliant guesses and leap to conclusions. Such soul and thought endowed machines, if they are in fact achieved should be able to solve all the bibliographical problems and complexities. If they do let not the shade of Emily Dickenson be disturbed by this paraphrasing of some of her lines:

> "A little madness in Spring
> Is wholesome even for a King
> But God be with the Machine
> Which ponders this tremendous scene—
> This whole experiment of green
> As if it were its own!"

Machine controls or not, librarianship, as a profession, would be the stronger and our mobilization problems would be simpler if we could somehow be immune to the creation of the unnecessary jargon and obfuscatory terminology which, in this twentieth century, afflicts practically every field and subject in which men write and publish.

Librarians seem to be particularly subject to the wordy malaise of our times. Whatever our other gifts the gift to be simple, when we talk and write about ourselves and our work, is not one of them. We cite only a few examples.

If we have young professional workers in a training capacity, we inaccurately call them "internes" perhaps unconsciously hoping that we will thereby somehow dignify their status and ours and that some of the prestige of the medical profession, to which this term honestly and solely belongs, will somehow rub off on us. Similarly the ancient and honorable title of librarian no longer quite suffices so we increasingly call ourselves documentalists, information officers, and it has even been suggested that we be "data engineers." We also "retrieve" (a fashionable word much in our current prints, but not up to now admitted to this chapter) information, eschewing the perfectly good, simple and semantically more exact four letter word "find." Fancy words, alas, do not make us anything we are not. Rather than simplifying our problems, which should be our continuing and unremitting effort, they complicate them.

An epitome of some kind in wordy complexity is reached in the following definition from a just published book: "Communication. The discriminatory response of an organism to a stimulus. Communication occurs when some environmental disturbance (stimulus) impinges on an organism and the organism does something about it (makes a discriminatory response). If stimulus is ignored by the organism, there has been no communication." [26]

To this writer there is more than a little semantic static in this definition and in many of the others of the "Documentation Terminology" of which it is a part. It is the fascination for wordy complexity such as this, and the tendency not to use a half dozen simple and adequate words when a dozen complicated ones can be found or invented that swells the miles of books on our shelves and adds complexities both to the scholarly process and to the organization and management of knowledge. Such use of the language makes us wonder, is it possible that "The Last Canute" may not be a fantasy after all?

One thing is certain. The further our civilization progresses along present lines and trends the more people will be required to acquire and mobilize its literature. This could go on and on until, as this writer has predicted elsewhere, the literature will be so massive that everyone will be busy taking care of it and no one will have time to produce it. If, as has often been averred, librarians are meek, the

prospects are good that they will indeed inherit the earth. Definitely they are now a fundamental and absolutely essential part of the scholarly and research processes. Without their acquisition and mobilization of the factual and wordy profusion streaming from our presses our present civilization could not long endure. This makes it appropriate to end this consideration of and reflection on the mobilization of the world's literature with these perceptive lines from Alexander Pope: "Index learning turns no student pale; Yet holds the world of science by the tail."

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