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Nineteen Fifty-Eight: The Year of the At and the In

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THIS YEAR, gentle reader, saw Cataloging at Source become Cataloging in Source. Why I shall never know, although I am sure there must be some learned reason.

For that matter, why "source"? Surely the "source" of a book is its author. And all the world knows authors are not often catalogers. Sometimes, alas, not even when they write about cataloging.

Perhaps we should have stuck with Ranganathan's "Pre-Natal Cataloguing." His phrase was pre- "Cataloging in [yea, even at] Source." "Pre-" by ten years, by golly. But here we run into the same problem. Where is a book born—or as we say in America "natalized"? In the author's head or in a publisher's office? For a book the publisher does only two things: he regularizes and he finalizes.

Of togetherness we had some more this year in ALA. The Cataloging and Classification Section became a not-squeaking (too much) wheel (one of four) of the Resources and Technical Services Division. We adopted By-Laws, we enlarged the Executive Committee, and we worked at a manual of procedures. There are still things to be done, but we are over the big bumps—we hope.

In code revision the most striking thing was the Stanford Institute last summer with almost 200 on hand to talk and (sometimes) listen. Before the Institute, Seymour Lubetzky had prepared a revised version of the Draft Code-to-Date, and this along with a weighty mimeographed tome of papers was in the hot little hands of the registrants when the meetings opened. Since then, Olivia Faulkner has worked long and hard at an excellent account of the discussion, published at year's end.

All this, of course, was peeking and tapping at the goldfish bowl in which Seymour Lubetzky and Wyllis Wright's Code Revision Committees labor so diligently. A year ago I damned such peeking and tapping, but this year in this issue Esther Piercy and I join the Peekers and Tappers and say what we think of the Draft Code, the papers, and the talk at Stanford. Man is born to be tempted and to sin.

The cataloger is also one-worldly. The IFLA Working Group on the Coordination of Cataloguing Principles has gone ahead, helped by funds from CLR, with preparations for a preliminary London meeting in July 1959. Wyllis Wright and Seymour Lubetzky will be our delegates. Plans will then be worked out for an International Cataloguing Conference to be held probably in 1961. Basic principles, rather than details, of cataloging are the chief concern.

While they are at it, how about international agreement on shorter names for international cataloging groups and on what to do with the "u" in "cataloging"? Or is that detail rather than basic principle?

A major event of the year was the publication of the 16th edition of Dewey. The 16th looks back to the detailed 14th rather than to the abbreviated 15th, and it includes a minimum number of relocations. Plans on the new abridged editions are moving ahead.

But it may prove to have been much more significant that on November 24 the editorial staff of DC merged with the Library of Congress staff responsible for assigning DC numbers to be printed on LC cards, and on December 8th the staff began assigning numbers from the 16th edition for the LC printed cards; these assigned numbers will be taken wholly from the 16th edition from now on with no effort to pick up those from earlier editions. The resulting Decimal Classification Office, directed by Ben Custer, will keep DC up to date as a routine day-to-day operation in the same way that the Library of Congress keeps its own classification scheme up to date. As the need arises, new numbers can be assigned, new interpretations can be given old numbers, and special revisions or expansions of specific parts of the schedule may be considered. A new publication, *DC Additions, Notes, and Decisions*, sent to all subscribers to LC cards and to all purchasers of the 16th edition who wish, will keep the 16th edition up to date. In effect, added to the 16th edition, the *Additions* will constitute the 17th.

This will bring DC, even more effectively than before, into line with the traditional American position that a classification scheme should be primarily a practical device for getting a batch of books onto the shelves in order as quickly as possible, rather than an elaborately theoretical attempt to organize all knowledge.

With Dewey, as with the Code, there is the international aspect. DC is, indeed, already an international document. So we shall have the pressure of users abroad combined with the pressure of numbers being actually applied to books in LC. Both are the pressures of living in an atomic age. How long can we hold out for "integrity of numbers"?

This was the year in which at last was published the Jackson-Mostecky *Catalog Use Study*, reviewed by Pauline Seeley in the current *LRTS*. Perhaps the most ambitious in the long array of such studies, it (like those that have gone before) raises some intriguing questions but gives no final answers. Even if the answers were final they would be final only for a particular body of users, chiefly students, in a particular area and time. To know if the answers were valid for other people at another time—or even for the same people at another time—would require another study.

Studies of use to what purpose? To find out how the user approaches the catalog and then try to draw up entry rules, classification schemes, and subject headings to match these habits of use? But habits and attitudes change. This would mean endlessly stretched out series of studies and endlessly changed rules for entry, classification and subject headings

to match successive changes in habits and attitudes shown by the studies.

Or we could assume that the reader is intelligent enough to understand a logical system. Then we could set up our catalog on the basis of logic as Seymour Lubetzky is doing so well with rules for entry. Studies of the catalog and its use would then seek only to learn if these logical ends were actually being met. Grace Kelley's study of classification remains a classic in this area.

Perhaps the greatest question raised by the *Catalog Use Study* is a side issue: Finance. Cataloging, we have been solemnly warned again and again by this and that excited administrator, is a terribly expensive business—too expensive, in fact. And no doubt it *is* expensive. (Whether too expensive is yet to be proved.) Taken on a country-wide basis and over a period of years, cataloging no doubt costs several million dollars. But to examine this business and perhaps to find some points where it could be made more efficient and less costly, only \$2000 were raised from two foundations plus some contributions—not from libraries or administrators but—from catalogers themselves.

Do we really mean all our talk about the need for studies of the user? Do administrators really mean all their talk about economy?

An International Conference on Scientific Information met in Washington in November, with perhaps 1000 observers registered. Some 75 papers had been distributed in preprints and were discussed by panels of specialists. Such topics as the literature and reference needs of scientists, the effectiveness of abstracting and indexing services, and various aspects of the organization of information for storage and search were explored. The proceedings will be published. Also in Washington at the same time were meetings of the American Documentation Institute and the Fédération Internationale de Documentation. (Perhaps international cataloging organizations are not alone in their need of shorter names.)

Cataloging in Source with its prefabricated card, international cataloging, international classification, the search for the lowest common denominators in catalog use, the documentalist and his machines—we move inexorably toward standardization. No doubt we shall save some time and money—perhaps we shall save a lot of time and money.

But what of the ordinary catalogers—people like you and me—who accept these hand-me-downs? Shall we lose entirely the delight of creation, of meeting our own little problems in our own little ways? Shall we become the Organization Cataloger, the Cataloger in the Gray Flannel Suit?

Pay me no mind, dear reader! I am only an unreconstructed rebel.

Also 1958 was the year of the 6th edition of the LC list of subject headings. Each new list, no matter how skillfully prepared, shows only the effects of sheer cumulation. Subject headings, like Topsy, just grow; and special lists of headings multiply like rabbits. "Specificity," magic word, means all things to all men and little to most. Cutter's doctrine of the supremacy of readers' habits (as the cataloger understands or thinks he understands them) has led us down many a long and diverting bypath, as Marie Louise Prevost warned 12 years ago (*LQ* 16 (1946)140-51).

These and other problems were touched on at the San Francisco program on subject headings chaired by Marietta Daniels and summarized by Maurice Tauber in this issue of *LRTS*. What we need is not more lists so much as a statement of fundamental principles. Then we can begin work on a code. After that, perhaps the list will come logically and usefully.

At the end of the year came the cheering announcement that through a grant from the Council on Library Resources the Library of Congress will establish a national union catalog of manuscript collections. The goal is to publish on printed cards uniform descriptions of some 24,000 manuscript collections in about 75 cooperating libraries and archives. The dream of historians for almost a century seems about to come true.

We suffered great loss this year. We could ill afford to lose the gay wisdom of David Haykin and the stubborn courage of Maude Moseley.

I continue to be pleased with the Mann awards. Esther Piercy is a splendid editor; she is also a magnificent person. In addition to our own Margaret Mann Citation, a Cataloger (for the third time in its six-year life) received the Melvil Dewey Medal—this year Janet Dickson joined Wyllis Wright and Maurice Tauber in this exclusive group.

So much for the past. What of the future? Cataloging in *Source*, of course. Get yourself a camera and the backside of a title page, and you've got it made, man.

The Year's Work in Acquisitions and Resources

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FOR ACQUISITIONS and its end product, resources, 1958 was a year of promises. Two were made, several were advanced toward hoped-for goals, and one was kept.

The Council on Library Resources granted \$16,131 to the United States Book Exchange for a survey of its services and operations. Selection of Edwin Williams to make the survey promised a first-rate appraisal to be completed in May, 1959. Enactment of the Dingell Bill (part of Public Law 480) and LC's subsequent request for appropriations to take advantage of its provisions gave promise of funds for acquiring foreign publications for deposit in appropriate libraries in this country.¹

Progress was made by Frank Schick's Foreign Desiderata Committee to establish a TAAB-like operation among foreign book dealers in countries where o.p. materials are hard to locate and by William Kurth's

Cost of Library Materials Index Committee to get annual book and periodical cost indexes established.

Substantial progress made toward the realization of cataloging in source promised acquisition librarians a bright future in which dealers' quotations will be listed under LC entries, gifts of books will be taken quickly, easily, and correctly through library records by clerks, and blanket ordering will gain support through the further economy of checking ease.

Farmington Plan Survey

The promise kept—and well-kept—was the completion of the Farmington Plan Survey. The survey was financed by the Council on Library Resources and ably carried out by Robert Vosper and Robert Talmadge. Mr. Talmadge, the junior member of the team, gave a preview of their findings at the San Francisco Conference and in *College and Research Libraries*, Sept. 1958. His forecast of a final "Yes" rather than a "No" proved accurate when the three-pound, two-ounce *Final Report* was presented at Midwinter, 1959, to ARL. Strong affirmative evidence was given by a random sample of all FP receipts, which revealed that nearly forty per cent of the items were unique holdings as far as libraries in this country were concerned and that an additional fourteen and one-half per cent were held only by the FP recipient and LC.

Robert Vosper's summary and final word, which made up the last forty-four pages of the Survey, were designed to shake the Plan out of the relatively narrow procedures and coverage into which it has settled and to revitalize it as a broad, world-covering concept. In the area of administration, he recommended an ARL central committee continuously responsible both for initiating and evaluating activity,*and under this central control, working committees for coverage of the areas of East Europe, the Middle East, Western Europe, Latin America, the Far East, South & Southeast Asia, and Africa, these committees to be in close cooperation with interested scholarly groups. In the area of coverage, he not only pointed back to the original plan for securing one copy of all current publications of research value on a world-wide basis, but also urged greater duplication of materials. In the area of procedures, he suggested that cooperating libraries be given more freedom in carrying out their procurement and coverage commitments.

Last of all, Mr. Vosper set the challenge firmly before ARL to assume leadership toward the goal of building library research resources in this country.

ARL should continue to bring forcefully to the attention of appropriate governmental agencies, educational bodies, and foundations that the national pool of research books and journals is of high national importance, that an effectively coordinated national program for world-wide coverage is an expensive but urgent undertaking, and that adequate assistance through direct, long-term financing and through staff aid is in the national interest.²

Resources

Chairman Ralph Ellsworth reported:

The Committee on Resources has concentrated again this year pretty much on the same problem it worked on last year, namely, publishing the Subject Index Catalog [which] will expand the scope of the National Union Catalog. We intend to keep hammering away at this until we have completed the project.

Also, we have created a Sub-committee to deal with Micropublishing projects. We think this committee will have great potential possibilities. And that is probably what we will be doing next year.³

These efforts to control library resources were energetically complemented by various groups of librarians, government officials, and scholars who joined efforts to increase resources. Each group attacked the problem by selecting the geographical area of its own interest and setting up conferences, missions, and surveys to comprehend the extent of publication in the area and to plan for its acquisition. It is these discrete working groups which the Vosper-proposed central committee would bring into a unified program.

Some progress was made in most of the areas listed in the FP Survey. For Latin America, as an outgrowth of the three Seminars on the Acquisition of Latin American Library Materials (the Third was held in Berkeley just before the San Francisco Conference), a cooperative mission to explore the acquisition problems in seven Latin American countries was financed by LC and eleven other libraries and undertaken by William Kurth, who spent September through December traveling in the relevant countries. For South Asia, the National Committee of the Conference on American Library Resources on Southern Asia met in September to consider further the proposals made at the Conference held in November, 1957; and LC sent Cecil Hobbs, Head of its South Asia Section, on a 7-month field trip through Southeast Asia. For the Far East, as an outgrowth of the Tokyo Seminar on the International Exchange of Publications in the Indo-Pacific area, held in November, 1957, Japan's National Diet Library announced that it intends to publish in English a quarterly newsletter on all aspects of exchange work in the area; ARL established a committee to work with the Association for Asian Studies' Committee on American Library Resources for the Far East in preparing a proposal for foundation aid to strengthen resources in this area. For the Middle East, the ARL approved in principle the David Wilder report prepared for the Social Science Research Council, which recommended setting up a Bibliographic Center at LC to acquire and control materials from the Near and Middle East. For East Europe, Douglas Bryant, Chairman of the ARL Committee on Slavic and East European Studies, reported progress on the survey of resources for Slavic studies in the United States, a project directed by Melville J. Ruggles and sponsored by ARL and the Joint Committee on Slavic Studies of the American Council of Learned Societies and the Social Science Research Council.

Business Was Good

The Library of Congress Order Division reported increases in volume of work handled during the fiscal year ending in 1958, a 62 per cent increase in total selections handled, 88 per cent in regular orders recommended, 24 per cent in titles searched, and 19 per cent in titles ordered. The LC Exchange & Gift Division showed a similar increase with receipts of more than 4,000,000 pieces of all kinds of library materials. If this is a valid index for acquisitions all over the country, business was good.⁴

G. E. Harris, writing on the occasion of the British Antiquarian Book Fair in the September *Stechert-Hafner Book News*, reported three trends in the British booktrade: the tendency of book shops to move to the country, the rise of the amateur or spare-time book dealer, the willingness and the good prospects of the individual starting into business on his own. Some of us, both in the trade and on the buying end of transactions, thought we detected a slackening interest in Americana. If History of Science is not replacing Americana as an active area in book buying, it is at least rivaling it. Alert American publishers were recognizing the trend by announcing a number of series of reprints in the History of Science field. Rare book prices continued to rise as booksellers' stocks dwindled and more libraries got into the act. In December, at Sotheby's Dyson Perrins sale, records of high total prices paid during any one day, for average price per lot in a single day's sale, and for prices paid at a public sale for a manuscript all fell before an international audience of bookdealers.⁵ And in numbers of library offices across the United States, bookish travelers returning from Europe told with glee of seeing books they had bought in 1948 for two pounds now priced at forty pounds. In the rare book business, the problem continued to be obtaining stock, not selling it.

University Microfilms caught the attention of the out-of-print book world by announcing that its new Xerox Copyflo makes out-of-printedness obsolete, that its new Xerographic Department would produce one full size copy at a time of any out-of-print book. According to Mr. Melcher, 12,000 books go out of print every year in this country alone. In making them available for reserve use and for use in the many circumstances in which microfilm readers are unavailable, University Microfilms has done a great service to librarians.

Robert Vosper, Chairman of the ARL Customs Committee, campaigned successfully to add sound recordings to the list of materials which libraries may import free of duty. The new tariff act had been tested by court action, and phonograph records had been specifically prohibited from free entry under it. An amendment changing the situation was added to Public Law 85-458 and solved the problem for libraries.

Libraries fared well under the new August 1st postal rates. The old library book rate was kept and was extended to include manuscript and audio-visual material. The storm of protest which greeted the announced increase in international book rates caused a postponement and resulted

in a reduced scale which finally became effective on January 1, 1959. In making the adjustment the U. S. Post Office Department recognized its responsibility to place no new barriers in the way of making U. S. Books and periodicals available abroad.

Worth reading

The periodical literature of 1958 dealing with acquisitions made worthwhile reading. Out of the total I want to mention eight articles. "Acquisition and Technical Processing," by Miles O. Price appeared in the April, 1958, issue of *Library Trends*, an issue devoted to the legal aspects of library administration. Mr. Price deals with the legal background against which acquisition and catalog work are done in all types of libraries and with the problems arising therefrom. "The History of Science: Library Resources and Academic Programs of Teaching and Research in the Middle West," by Joseph Rubinstein (*LRTS*, Winter, 1958) presents in pleasantly-readable fashion a short but excellent history of collecting in this field, surveys the resources of eighteen university libraries and the Linda Hall and John Crerar libraries, and summarizes the teaching programs of the universities.

In the area of exchanges, H. L. White covers "Australian Experience in International Exchange of Publications" in the April *Australian Library Journal*. Mr. White gives an excellent coverage of the history of exchanges in Australia and the pattern of today's operations. Another authoritative history and survey of present day practices is given by Marietta Daniels in "The Contribution of the Organization of American States to the Exchange of Publications in the Americas," which appeared in the January *Library Quarterly*. In "The Russian Exchange Program at Columbia University," Karol Maichel gives the terms and conditions under which the successful Columbia Slavic Library operates exchanges with Russian libraries. (*LRTS*, Fall, 1958).

In the area of procurement, Emerson Jacob and Bege Salisbury make a good case for the "Automatic Purchase of University Press Books" by the large research library (*Library Journal*, March 1, 1958). William Kurth's "Acquisitions From Mexico" (*LRTS*, Spring, 1958) was based on his working paper prepared for the Second Seminar on the Acquisition of Latin American Library Materials. Besides exploring the subject of U. S. library acquisitions from Mexico, the article includes in two appendices a list of the book dealers used by U. S. libraries for Mexican books and a list of exchange sources in Mexico—227 of them! Sister Helen's "Book Purchasing for the Small College Library" (*Catholic Library World*, December, 1957) gives a good, practical coverage of its subject.

Agitation in MSS

Manuscripts made news in two unusual ways during 1958. On January 23, the St. Louis Circuit Appeals Court upheld an earlier decision that the United States did not have a right to claim the sixty-seven pages of notes made by Captain William Clark in 1804 as co-leader of the Lewis & Clark

Expedition.⁶ The papers are now in the possession of the Minnesota Historical Society, and the National Archives based its claim to them upon declaring them official records. So far, no new appeal has been made, and collectors, dealers, and librarians who have manuscripts which might fall into the same classification as the Clark papers can relax.

Poet Karl Shapiro set off a brisk discussion with an open letter in the August issue of *Poetry*. Mr. Shapiro attacked the practice of librarians who request authors to donate their manuscripts for—as the cemetery caretaker would say—perpetual care by the library. “American libraries are among the richest institutions in the country,” said Mr. Shapiro, and he urged American poets to refuse to donate their manuscripts without adequate payment. He wound up his letter, “American Library Association, please copy.” ALA did in the September *ALA Bulletin* and added a reply by David Mearns. Messrs. Shapiro and Mearns were followed into print by Philip Larkin, Librarian of the University College of Hull, England, in the *Times Literary Supplement* of October 10, 1958. Mr. Larkin urged British librarians to plunge into collecting by free solicitation since this was an area in which they would have an equal chance with American librarians. I dare say the last word has not yet been said, even by Dave Randall, who pointed out in the January, 1959, *ALA Bulletin* that American libraries have been paying tidy sums for authors’ archives.

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The Year's Work in Serials, 1958

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NO LIBRARY activity stands alone without relationship to other functions of the library. This truism is dramatized in the field of serials handling in technical services. Purchase is closely related to acquisitions policy and procurement, and recording is an extension of descriptive cataloging. The year's work in serials is represented in this issue in the articles on acquisitions, cataloging and classification, and copying methods. The events of the year which are of particular importance to serials librarians are described in this article, as well as developments in the fields of binding and preservation, government documents, and exchanges.

Serials

During 1958 the Joint Committee on the Union List of Serials incorporated itself and began an active search for funds to support the program announced the previous year, which would establish a union list of serials at LC as a counterpart of the National Union Catalog and which would be used to produce lists of various kinds of serials. Because of difficulties encountered in securing the large amount of money needed, \$3,300,000, the Joint Committee is considering alternatives to its original plans. Although these are not definite yet, it is probable that they will include a reprinting of the second edition of the *Union List of Serials* for which there is great demand from both librarians and dealers in serials.

A list of domestic periodicals available on long-term subscription was prepared by the Committee on Long Term Periodical Subscriptions, a joint committee of the Acquisitions and Serials Sections of RTSD. The listing of about 800 titles and the period for which the publisher will accept a subscription serves as a checklist for the use of serials librarians in their efforts to reduce costs of renewal as well as costs of subscriptions.

Union Lists

Reports of current literature relating to union lists of serials and cooperative indexing as well as other developments in interlibrary cooperation are now conveniently offered to librarians in a feature appearing in the *ALA Bulletin* called "Progress in Interlibrary Cooperation." Two of these reports were published there in 1958, compiled by the Committee on Interlibrary Cooperation of RTSD.

Work was completed on the Southeastern Supplement to the *Union List of Serials*, and the published supplement should appear early in 1959. The supplement will be a volume of approximately 550 pages listing about 32,500 entries, four-fifths of which appeared in the *ULS*. They are listed with additional locations for Southeastern Libraries.

The continued growth of *New Serial Titles* is reflected in its statistics reported at the San Francisco Conference. The 1955 cumulated volume contained approximately 36,000 titles and 64,000 locations, while the 1957 annual cumulation listed 38,435 titles and 145,895 locations. The number of contributing libraries grew to 308 in 1958.

Preservation

Under date of January, 1958, the Library Binding Institute issued pamphlets on standards for library binding and for pre-library bound new books, intended to succeed "Minimum Specifications for Class A Library Binding" and "Standards for Reinforced (Pre-Library Bound) New Volumes," respectively. The new LBI standards were proposed for adoption by the American Standards Association as American Standards; however, they contain certain restrictive definitions and extraneous matter, ALA has withheld its approval until the standards are modified in

accordance with previous agreement and has instructed the RTSD representative to ASA's Committee Z39 to vote "No" on their proposed adoption.

The study of the preservation of manuscripts by lamination which was begun by the Paper Section of the National Bureau of Standards on July 1, 1954, under the sponsorship of the National Archives, the Army Map Service, LC and the Virginia State Library has been completed and will be incorporated in various articles to be published by the Bureau.

Government Documents

A bill to revise the depository library law had final hearings in Washington on June 19 with a group of librarians testifying in support of it. The revised bill (HR 13140) passed the House of Representatives on July 21 and was referred to the Senate Rules and Administration Committee where hearings were to be held. There was not sufficient time to hold these hearings before Congress adjourned, but it is expected that a similar bill will be introduced in the new Congress.

The bill provides changes from the present law by requiring all units of the federal government to provide lists of its publications to the Superintendent of Documents with the exception of certain restricted materials. These publications would be listed by the Superintendent of Documents and distributed to such depository libraries as select them. The bill also provides the mechanics for designation of additional depository libraries and for the establishment of as many as two regional depository libraries within each state, territory, and commonwealth which would agree to retain at least one copy of each government publication, permitting other depository libraries to dispose of government publications after five years. Under the new bill, mailing charges would be borne by the Government Printing Office.

Exchanges

The United States Book Exchange received a grant from the Council on Library Resources for a survey of its services and operations. Edwin E. Williams, Harvard College Library, is directing the survey, and it is expected that a final report will be made available in 1959. Mr. Williams will visit libraries and communicate with as many librarians as possible to appraise the services of USBE to American libraries, relate them to the services of other organizations, and make suggestions for improvements.

An Intergovernmental Committee of Technicians and Experts was convened by UNESCO at Brussels in the Spring of 1958 to make preparations for conventions concerning the international exchange of publications. The committee decided two conventions would be necessary: one relating to exchanges of official publications between governments and the other relating to exchanges in general, which may be between governmental or non-governmental organizations. Each convention will be concerned with the scope and method of exchanges, the role of the ex-

change services, the responsibilities of exchange partners, provision for review of the working of the conventions and similar matters, and the legal and other formal necessities for giving effect to the conventions, as well as means for supplementing and amending them as well as relating them to earlier obligations.

Developments in Copying Methods—1958

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IT IS a procrustean task to survey the developments in a rapidly-changing field and arbitrarily limit the survey to a calendar year. Some processes and techniques are announced ahead of time; others are started and developed quietly and do not get publicized until much later. Any yearly review should be read with an eye on previous studies (in this case there has been only one prior study), and a mind open to the possible developments in the year to come.¹ Perhaps if this study were called a review of the literature on copying methods in 1958, it would be a more accurate title.

The introduction to last year's survey presented the problem of where "copying" ends and where "duplicating" takes over. The Bylaws of the ALA—RTSD Copying Methods Section state that their object is: "To promote the usefulness of photocopying and other duplicating processes. . . ."² This dichotomy of purpose is confusing, but it is based on practical needs. A library sometimes needs to make one copy of something for one reader (copying), or a number of copies of something else for a group of readers (duplicating). Equipment is usually designed either for copying or duplicating; however, it is possible to make an almost endless number of combinations between such equipment. A recent article takes Xerography, the electronic scanner, and reflex photocopy, and shows by graphic means how they can be combined with offset, stencil, and spirit duplicators.³ This increases the versatility of the equipment and narrows the gap between copying and duplicating. In what follows it would be well to remember that though the emphasis is on copying methods, there is always the possibility of expanding the edition into the duplicating field.

The projection photocopy has been available for so long that it tends to be taken for granted. New applications for old Photostat machines and accounts of new models doing old jobs do appear regularly in the literature. The New York Public Library was one of the first to make use of the Photostat. The Photostat Junior Continuous was noted in last year's survey as a new model. The New York Public Library reports that its Preparations Division is using this machine to copy 3 × 5 cards onto special card stock in 7½ minutes at a cost of about 7¢ a card.⁴ They also use it for a number of procedural applications similar to those suggested by

other libraries for the Photoclerk and Bibliofax cameras, and they use the Expedito model in their Photographic Service Division to give rush service to readers who can bring the book to the camera. This library finds this machine more satisfactory than the so-called "quick copiers."

The General Electric Company has developed an unorthodox use for this same Expedito by using it to take the place of printing and enlarging photographic negatives in the darkroom.⁵ As it is mounted on wheels, it can be moved from office to office. Negatives pulled from a file are placed on a light-box under the lens of the Expedito, and in ten minutes or less the dried prints, either the same size or enlarged, are automatically coming off the drier at the other end of the machine. For quantity orders, 250 prints an hour can be produced with this application.

A piece of equipment that resembles a combination of a projection photocopy camera with a printer's process camera is the Statmaster. It consists of the usual lens, prism, and tube lights in a unit that can be built into the wall of an existing darkroom. There are also models that feature compact darkrooms as an integral part of the equipment. The manufacturers suggest that it may be used to make stats, copy prints, copy negatives, screened veloxes, and halftone prints from color transparencies. The Metropolitan Life Insurance Company finds it even more versatile, using it also for slides, enlargements, and stripped-in prints for photo-offset copy.⁶

The reflex photocopy had a big year in 1958, and all indications seem to point to even greater applications in the next few years. It has been estimated that 150,000 offices in the United States have some version of this type of equipment, and one proponent goes so far as to state that: "In a few years, the photocopy machine will become as common in the average business office as the typewriter is today."⁷ At Eastman Kodak (where, no doubt, they do not find it difficult to afford such equipment) they report one Verifax machine to every 100 employees, and one machine to every ten typewriters. For the average business office, it is estimated that 40% of all typing is some form of copying.⁸ At a guess, this ratio would be higher in libraries.

All of this tends to support the importance of the July 15th meeting of the Copying Methods Section at the San Francisco conference. Papers were presented at this meeting on the subject of *Library Uses of Rapid Copiers*.⁹ Peter Scott covered Thermofax, John Gantt was responsible for the Soft Gelatine Transfer Process (Verifax), and William Hawken had the job of introducing the subject, of covering the Diffusion Transfer Process, and of summarizing the symposium. Any library that is considering a reflex photocopy machine should not fail to look at the report of this meeting, especially its introduction and conclusion.

At this ALA gathering copiers were considered whether they were designed for loose-sheet originals or could be used with bound volumes. Libraries need both types. A report which was presented in 1957, but published in 1958, goes one step further, giving descriptions and evaluations for book-copying machines.¹⁰ It is on the subject of copying

from a bound book that the librarian should be most skeptical. (If a salesman states that his machine will copy from books, get him to show you how it is done. Even better, try doing it yourself. If you can do it easily, it may be that the person assigned to the machine can do it too.)

Among the equipment announced in 1958, there is the Nord Wizard.¹¹ This model uses the overhead light—similar to a desk lamp—rather than the light-box which is found on most models. Another new model is the General Photo Products Company's Challenger.¹² This copier utilizes the wrap-around exposing surface to be found in an early Apeco model and in the recent Verifax Bantam.

The Contoura was among the first to feature its ability to copy from bound volumes. There now is the Contoura-Matic, which is designed strictly for loose-sheet originals.¹³ It has one novel feature in its plastic cartridge (actually a plastic bag) which is filled with processing fluid. This is clipped onto the machine and serves as a reservoir for the processing element.

Most of these office copiers use paper that is insensitive enough to permit the sheets being handled, with caution, in the average-lighted room. However, fluorescent illumination is to be found in many offices—and in some libraries. Some of this lighting gives off enough ultra-violet illumination (as does daylight) to increase the danger of fogging the emulsion. Peerless Photo Products has brought out its Bright-Light No. 1 paper which has a yellow dye in the emulsion which tends to minimize this danger.¹⁴

The project in microphotography that made the greatest impact on the literature has been the University Microfilms' program of keeping out-of-print books in print by Xerography.¹⁵ At last reporting there were 43 publishers cooperating in this project and a list of some 120 titles were available.¹⁶ The *New York Times* was so taken by the idea that it coined a term—"Microxerobook"—to describe the results of the process.¹⁷ Going from out-of-print publications to original publication is merely a step in planning; it does not require any difference in physical details. This has been done and may well be the "shape of things to come."¹⁸

Going by our experience at Columbia, the word about Xerox Copyflo must have travelled through the scholarly world like a brush fire. A number of libraries which can't afford the high rental fees for Copyflo equipment avail themselves of the service offered by commercial agencies in their cities.¹⁹ There are also many un-advertised sources of Copyflo service. There is a certain analogy between renting or owning this equipment and riding the proverbial tiger. Once you have it, you must keep it busy or else you find that you are working for the Haloid-Xerox Company rather than your own institution. There have been a few cases where agencies that do not have a Copyflo have made arrangements with those that do and obtained this service at very little over base costs. It is something that others might find worth looking into.

As could be expected, two libraries that are using Copyflo in their own labs are the National Library of Medicine and the Library of

Congress. The latter installed the Copyflo at the beginning of the year and by the middle of the year reported more work being done with Xerox than the drop reported in Photostat and silver-halide enlargements from microfilm. They go even further by pointing out that there are "... indications that many customers are ordering paper reproductions in lieu of the less expensive microfilm."²⁰ This is a reversal of a trend that most of us in library photoduplication laboratories would report over the past ten years or so.

We have become accustomed (if not hardened) to the Motorama, Futurama and their ilk. Now we have a Copyrama, which is a travelling show presented by Haloid-Xerox with the assistance of Recordak, Film-sort, and others. Though emphasizing microfilm of engineering drawings inserted in tab cards and then enlarged by Copyflo, the show does have much of interest to the general librarian. In 1958 it appeared in five cities, mostly in the East and Midwest. In 1959 it is scheduled to appear in six more cities in the West and Midwest.²¹

At the National Microfilm Association's New Orleans meeting the Haloid-Xerox representative reported work being done on a less expensive model which it was hoped would be available in 1958.²² This is the Copyflo 1824 Printer which will sell for about \$10,000 and rent for \$200 a month, about one-fifth the cost of the Copyflo Model 1. At present writing it is reported that it will not be released until the Fall of 1959. This machine will work only with film in cards. The Charles Bruning Company exhibited their Copytron at the New York Business Show in October. This machine enlarges from both ribbon film and inserts in cards and does it by the Electrofax principle, which is similar to Xerox. It takes up as much floor space as an average desk and sells for about \$10,000.²³ One laboratory which has been using it for a few months finds it quite satisfactory if the quality of the original negative can be controlled. It reports some trouble at first with the narrow latitude of sensitivity in the "emulsion" but has noted improvement. As more machines are used, and as the "emulsion" coaters have a chance to improve their product further, it should become a very attractive item for the larger laboratories.

Last year's survey hinted at the many projects in copying methods that stemmed from the Council on Library Resources. A number of the projects already noted have continued into this year, and more have been started. In May a meeting was held in Washington on problems of the microform in libraries.²⁴ At this meeting about a dozen participants (librarians, microfilm experts, editors and others interested in this field) met with representatives from the Council. Among the subjects covered were: library storage problems, scientific publications in microform, improvement of the physical characteristics of microform, free service of microfilm, and the system's approach to the problem. Lines were set down for future work in this field, some of which has begun and will bear fruit in the coming years.

From the published notes on work done under the sponsorship of the Council, we can select a few of interest. The University of Virginia Li-

brary was engaged on a project involving the use of closed-circuit television in the library.²⁵ This is carrying copying methods to an extent that may at first glance appear grandiose, but it is something which will have to be considered seriously for the future. Out of this project came the realization that although many of the operations in transmitting books by television can be mechanized, the human hand is still required to turn the pages of the book. Automatic page turners were tried but were far from successful. Another project has been established to try and find a solution to this weak link in the chain of automation.²⁶ This will have a bearing on microphotography, as well.

The Listomatic camera was reported in last year's survey. This machine uses photography to make it possible to print, in editions, lists that have been compiled by the use of the easily-manipulated tabulating cards. A grant from the Council to the National Library of Medicine will be used for the improvement of the *Current List of Medical Literature*.²⁷ One of the tools to be tried out on this project is the Listomatic camera.

A dream dear to the heart of the micropaper enthusiast has been that of publishing a journal on micropaper.²⁸ With help from the Council, this dream may soon come true. The journal, *Wildlife Diseases*, is a publication that would seem to be designed for such a project; not only does it have a limited subscription list (500), but half of the subscribers are libraries which might be expected to have reading machines. Summaries of the articles will be published in conventional print. The articles themselves will be prepared with microcarding in mind and will be published on Microcard.

The average library user does not meet the microcopy until he has to use it on the reading machine. Therefore, this piece of equipment has had to bear the brunt of the criticism aimed at the medium. Reading machines range in cost (and likewise in complexity) from a few cents to many thousands of dollars. One of the studies that makes up the Rutgers' *Targets for Research . . .* project has been on such reading devices.²⁹ This 166-page study has uncovered and organized the literature on reading machines in a way that cannot but elicit admiration from the reader. It lays a foundation for work that is greatly needed and long overdue.

Another project under the Council has to do with a reading device. The Microcard Corporation has offered a "Pocket Size" reader for some time. This viewer has a light bulb powered from self-contained batteries or from house current which illuminates the image on the card. At \$25.00 this useful little tool is priced too high for many users who might benefit by it. A grant has been given the Corporation to develop a less expensive reader using ambient light for illumination.³⁰ This type of equipment would appear to bolster the statement: "The means are at hand for a complete departure from the conventional book; probably microfilm read from a pocket viewer with built-in light and magnifying lens."³¹

Speaking of pocket viewers leads us to pocket libraries. In an article about the IGY bases at the Antarctic we find the following statement: "Most of the reference library . . . made the trip to the Polar region in

the pockets of the scientists.”³² It must be admitted that meteorologists at the South Pole will probably put up with greater inconveniences than their brothers back home, but we are all going to have to make adjustments to keep up with the spread and flood of specialized literature.

The year brought forth reports on about the usual number of micro-reproduction projects. The Library of Congress Microfilming Clearing House noted some 66 titles reported to it, many of them newspapers.³³ The St. Louis University project of microfilming the Vatican manuscripts originated in 1950, but in 1958 there were a number of articles about it. One report in a popular magazine is illustrated in color, showing an illuminated manuscript.³⁴ Most microfilming projects can be handled adequately in black-and-white, but some cry out for color. It is cheering to note that consideration is being given to microfilming some of this Vatican material in color.³⁵

In 1951 the sponsors of the Human Relations Area Files at Yale tested the possibilities of publishing their cross-cultural files on micro-paper. As the originals varied too much in quality and had also been subjected to a two-generation reproduction through Xerox and offset printing, they did not reproduce satisfactorily on micropaper. Subsequently, it was decided to try microfilming and then inserting the film into acetate jackets, so as not to lose the flexibility of the file system.³⁶ This has been tested and appears quite feasible. This project is an example of unitized microfilm. An example of a library use of unitized micropaper can be found in the Archives of American Art project of the Detroit Institute of Art. Material is collected by microfilming in many scattered collections and then transferred to 3 x 5 cards through the use of Microtape. It is suggested that: “The sheer volume of the records . . . is such that they are difficult to consult . . . its historical records may well be easier to consult on microfilm in Detroit than in the original. . . .”³⁷ Industry and the armed forces have been quick to pick up the use of unitized microrecords, but the more conventional libraries have been slow to adopt it. In a paper presented at the New Orleans meeting of the National Microfilm Association we find a number of questions that should be asked before deciding to unitize and a simple definition of the term: “We cut a roll of film—to make units—because we wish to unite all of one type of thing together.”³⁸

Three smaller projects reported at the end of the year show a diversity of interest. The New York Public Library has been filming the telephone directories of the metropolitan area from 1878 to the present.³⁹ Positive prints of the film will be made for the Library of Congress, the Brooklyn Public Library, and the New York Telephone Company, as well as for its own use. A second example of the cooperation of a bank owning microfilm equipment and a library wishing to microfilm but not owning microfilm equipment, has been reported.⁴⁰ In this case the film was prepared on the bank's cameras in order to gather data for a union catalog in North Carolina. There are probably many latent possibilities for this sort of cooperation. The secret to their success lies in a careful scheduling

of the work, so as not to interfere with the flow of work in the institution owning the camera. I have heard it said that we can use microfilm in a university library, but that we cannot expect undergraduates to put up with this sort of foolishness. Now we have a report of a high school library that uses five reading machines and keeps the back issues of many serials on microfilm.⁴¹

There has been a lot of criticism lately, both in print and in discussion, of the numerous micro-publishing projects. Some people have questioned the quality of the micro-reproduction, others the choice of originals being filmed. In a thought-provoking and outspoken article in an English library periodical the following statement is made about one of these projects: "The objection to projects of this type is not that they are useless, but that they are unnecessarily wasteful."⁴² At the San Francisco ALA meeting, a sub-committee of the Resources Committee of RTSD was formed:

" . . . to serve as a coordinating body to which publishers who wish to inaugurate Micro-publishing projects may turn for advice from librarians, and to which librarians may turn for advice when they are considering purchasing proposed Micro-publishing projects.

The Sub-Committee will offer to explore with any sponsor or producer of microcopy the relative merits and potential market for any specific proposal, and advise as to whether a given project is really needed in its originally proposed scope and form, or whether some more selective scope or different format or other solution might be better. The Sub-Committee will also serve as a channel for inviting the consideration of producers in discovering ways and means of bringing into being other worthwhile microcopy projects suggested by librarians and scholars, or developed from studies of needs undertaken by the Sub-Committee itself."⁴³

The Sub-Committee is composed of Edward B. Stanford, University of Minnesota; Herman Fussler, University of Chicago; George Schwegmann, Library of Congress, Rudolf Hirsch, University of Pennsylvania; Frederick H. Wagman, University of Michigan; Richard Harwell, ALA Headquarters; and Raynard C. Swank, Stanford University, Chairman. Mr. Harwell has been asked to provide a focal point for the Sub-Committee's activities. He will maintain a file of proposed micro-publishing projects and will be in a position to coordinate work by informing sponsors of projects whether or not similar efforts are underway somewhere else.

We may remember 1958 as the year when the microfiche was recognized in this country. Sheet microfilm is not something new over here; it was considered in 1939, and a number of American versions have been used. However, because of economic factors, Americans have tended to favor the ribbon version of microfilm and to give it the versatility of the sheet through use of the jacket and aperture card. In Europe the microsheet has been developed along with the ribbon version and has been responsible for the European lack of interest in micropaper. An article origi-

nating in the Netherlands raises a persuasive voice for the microfiche.⁴⁴ The report describes its manufacture and applications and gives a brief account of the Mikrokaart Stichting (Microfiche Foundation) set up to advance its use. It also describes the Dagmar reading machine which can be used with ribbon film as well and appears to be one answer to the demand for a scholar's reader.

Further signs of interest in sheet microfilm can be found in two papers presented at the N.M.A. annual meeting. One was by a representative of the Douglas Aircraft Company concerning its CIM (continuous image microfilm) card.⁴⁵ A maker of giant airplanes uses large engineering drawings (some up to 120 feet long), and breaking them up into conventional microfilm frames makes them difficult to examine on a reader. Using a continuous 35-mm. camera to make the negative, diazo prints are made with an Ozalid Actifilm printer to produce a sheet the size of an IBM tab card.

Another indication of the rising interest in sheet microfilm was shown at this meeting by the Filmsort Company, the major producer of the jacket and insert card, which is preparing to market a modified version of the Dutch step-and-repeat camera in this country.⁴⁶ The Company has chosen a name for the camera and the resulting sheets—Microplat—which will add one more confusing term to the glossary of "micro" words.

There were about twenty new pieces of microreproduction equipment noted in the literature this year; so as not to make this report a monograph, I will skip most of them. Early in the year the Fairchild Camera and Instrument Corporation introduced its Mini-Rapid 16-film processor. This small unit (not much bigger than one drawer of a letter file) is self-loading, uses only 16 ounces of each processing solution, and delivers a completely processed and dried roll of 16-mm. film in less than 20 minutes.⁴⁷ The film produced on this machine is not archival, but the company contemplates making a model with added wash tanks which will add to the processing time in order to add life to the film. A brief note announces the Unipro processor being introduced by Remington Rand which will process 16, 35 or 70-mm. film.⁴⁸ It will process 100 feet of film in 30 minutes, and the result is reported to meet the National Bureau of Standards requirements for archival permanence.

Of what importance are these relatively expensive machines to the average photoduplication department? With Xerox and Electrofax for rapid enlarging, we need a lot of rapidly-produced, short-lived microfilm as an intermediate between the original and the electrostatic print. Rapid cameras, rapid processors, rapid enlargers, and a great quantity of work will justify the expensive equipment necessary to produce an inexpensive end product.

When we do not throw the film away after enlarging it electrostatically, we have the problem of finding the frame or frames wanted. In the FLIP (Film Library Instantaneous Presentation) automatic microfilm searching machine produced by Benson-Lehner of Los Angeles we have one answer. This machine resembles a small Rapid Selector and is de-

signed to scan a 1200-foot reel of 16-mm. film in $3\frac{3}{4}$ minutes. It will locate any desired frame out of the 72,000 on the reel and project this frame on the viewing screen. It is suggested that, "It is not inconceivable that the basic locating apparatus of FLIP might be added to a Copy-Flo machine for the quick location and reproduction of particular sections of a long film."⁴⁹

In the field of the diazotype reproduction there are a few reports of interest. A condensed directory tabulates information gathered by the National Association of Blueprints and Diazotype Coaters concerning 33 types of materials listed by 37 producers.⁵⁰ As 182 listings out of a total of 305 are for diazo, it shows the wealth of materials available for this method. The FAO library of the United Nations uses diazo to route 3,750 periodicals to 330 users.⁵¹ It has long been the hope of workers in diazo that an emulsion would be developed that would be fast enough for enlargements for microfilm and yet stable enough to give reasonable shelf life. It appears that Keuffel & Esser has come up with an emulsion which can be enlarged in its Helios enlarger and produces 18×24 inch prints from 35-mm. microfilm frames with an exposure of under thirty seconds.⁵²

Closely akin to diazo is the Kalfax process; this is a plastic emulsion coated on a Mylar base. It is exposed by ultra-violet light and processed by heat. It produces an image on the screen of the microfilm reader by light scattering (reflection out of the path of transmission) rather than light absorption as in conventional films.⁵³ It is negative working like silver-halide emulsions, rather than positive working like most diazo. The new Kalvar microfilm printer can print and process film at the rate of twenty feet a minute. Simple descriptions of the process can be found in recent popular photographic magazines, because the Beseler Corporation is releasing "Slide-O-Film" which is a version aimed at the amateur field.

A number of serials pertaining to this field made their appearance this year. The Associazione Nazionale Microfilm in Rome brought out its bulletin, *Microfilm . . .* in November 1957. This publication ". . . will deal with technical problems connected with microfilm apparatus and equipment, the organization of services and legislative problems."⁵⁴ In January, *Photo Methods for Industry* made its appearance; this covers much the same field as *Industrial Photography* which is now in its seventh year. So far it has not devoted as much interest to copying methods as the other, but there are signs that it will cover the field more fully in the coming year. April saw the appearance of *Micro Library*, a publication of the International Documentation Centre in Stockholm. It looks very much like the early issues of *The Microcard Bulletin*. Two trade publications very similar to University Microfilm's *Microcosm* made their appearance this year. The first is *Filmsort Facts*; coming from the Filmsort Division of Miehle-Goss-Dexter, Inc., it combines original illustrated articles about applications of unitized microfilm systems with reprints of timely articles from sources not usually available to the average reader. The second is *The Micro Photo Reader*, which made its appearance in October, and is a news sheet concerning the activities of Micro Photo, Inc., of Cleveland.

In closing, I would like to note three reports of photographic technology outside the present field of interest but which may have a bearing on future developments. Descriptions of monobath processing are appearing with increasing regularity in the technical literature. In one: "A combined developing and fixing bath is described that retains, to a marked degree, the sensitometric characteristics of conventionally-developed film and paper. . . . The utilization of the monobath as a high-speed developer is also discussed."⁵⁵ In another report a photographic system is described that allows the projection of photographic data in two-tenths of a second after exposure. This also involves a monobath as well as the use of some tricky equipment.⁵⁶ The final report is about a "Piggy-back" processor that can process 500 feet of film per minute and is designed to be attached directly to the camera.⁵⁷ It uses a viscous developer of the consistency of axle grease which is spread in a thin layer on the film. All of these were developed for use by the armed services, but we must remember that microfilm as a working tool got its big push from V-mail.

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Subject Headings and Codes*

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THE PROGRAM meeting of the RTSD Cataloging and Classification Section at the San Francisco Conference was concerned with the history, theory, and practice of subject heading assignment in library catalogs. Jennette E. Hitchcock discussed "The Subject Heading Code: Its Development and Implications"; George Piternick, "Designing Tomorrow's Catalog"; Harry Dewey, "Basic Subject Heading Theory"; and Maria Teresa Chavez, "Subject Cataloging Viewed From Across the Border." In addition, Richard S. Angell, Chief of the Subject Cataloging Division, Library of Congress, reported on plans for the continuation of the subject heading code begun by the late David J. Haykin. This paper attempts to summarize and evaluate the content of these papers for which full publication at this time is not feasible.

The untimely death of David Haykin in April has prompted many questions about the future of his code for subject headings on which he had been working for some years and for which he had collected much material. Mr. Haykin had been making steady progress, and shortly before his death he had distributed drafts of statements concerning the selection and assignment of subject headings for materials relating to Archaeology and Biography. At the San Francisco meeting, Mr. Angell made the following announcement:

The Library will continue to work on Mr. Haykin's Subject Cataloging Code. It will be a code describing Library of Congress practice. The work will be carried on under the supervision of the Subject Cataloging Division. Mr. Haykin's files and materials are being codified and thoroughly indexed. No assignment of persons to the project has been made and accordingly no time schedule for completion can now be predicted. Progress reports will be made regularly in the future.

* Summary of and comments on papers presented at the meeting of the ALA-RTSD Cataloging and Classification Section, San Francisco, July 18, 1958.

Mr. Angell observed also that the Library of Congress wishes to have the continued interest of the Section in the project and particularly invites suggestions and comment concerning scope (materials to be cataloged), setting (type of catalog), and content (principles, formulation, and application).

Miss Hitchcock's sub-title for her paper is, "Subject Analysis—the Short Story Up to Now." And it is a relatively short story. With Cutter's *Rules* of 1876 still the basis for subject heading work in libraries, there is not very much to say about theory and principles, except to re-formulate those which he stated, to object to them, or to ignore them. And libraries and librarians have done all three in the years since 1876. Miss Hitchcock identifies the major steps in the development of subject heading practice as we know it today in libraries: Cutter's *Rules*, the three editions of the ALA *List of Subject Headings for Use in Dictionary Catalogs* (1895-1911), the Library of Congress *Subject Headings used in the Dictionary Catalogs of the Library of Congress* (1st ed., 1909 through the 6th ed., 1957), the many lists for diverse subject fields or special purposes devised by individuals, individual libraries, or professional groups during the period under review, and Haykin's *Subject Headings: A Practical Guide* (1951). She also calls attention to opposing opinions concerning the need for a national subject heading code: on the one hand, that subject headings are not subject to codification since they depend upon the size and interests of individual, particular libraries, and, on the other, that a national code to replace the outmoded Cutter is necessary. This latter point of view has received support in recent years from various groups which have met to discuss the problems of subject headings; it is the position which Miss Hitchcock supports in her paper. She points out that there has been relatively little effort by compilers of special subject heading lists to work from any new approaches. She calls attention to recent developments looking toward international cooperation in cataloging and to the projected plans for "cataloging in source," and suggests that the need for standardization in subject heading practice may be more urgent in the future than it has been in the past. In this connection, she raises the question of whether differences in language and language structure may prove to be an impediment to the development of an international code. Miss Hitchcock's review is useful in reminding us that there has been fairly consistent effort by American librarians to make the subject content of their collections available to users.

In his paper, George Piternick pieces together the comments which have been made about subject catalogs—1) the criticisms, 2) such evidence as we have that they are useful up to a point (Frarey's summary¹ of his examination of catalog use studies is referred to, as well as the Jackson-Mostecky *Catalog Use Study*²), and 3) the absence of a modern code for subject cataloging. He writes:

We are thus led to the conclusion, from the available evidence, that the subject catalog is not being used to any great extent in the rather Utopian pattern of use in which it was conceived. The most important and quanti-

tatively largest use it serves, that of providing a user with one or a few recently published works in the English language on his subject of interest, it serves abundantly, and, in the large majority of cases, satisfactorily. It seems likely that this function could be performed more satisfactorily by an instrument less bulky, less complicated, and less costly to construct and maintain.

Piternick observes that we have not had enough sound studies of the subject entries in card catalogs. He repeats criticisms that have been made of the dictionary catalog and of obsolete subject headings, and he refers to the administrative problems which impede keeping catalogs up to date or maintaining them at a size at which modernization is feasible. He, too, calls for a subject heading code.

What are Piternick's prescriptions for the future? In the first place, he recommends division of catalogs into author-title and subject components in order that subject catalogs may be more easily studied and managed. Secondly, he suggests that formulation of the subject heading code be completed during the next five years, and when the code is completed, new subject catalogs based upon it be started. All old subject catalogs in card form might then be converted to abbreviated indexes, in book form, to the full entries to be found in the author-title catalog.

Let us repeat this process of separation and publication every twenty years or so. If we control our instinctive desires to edit and perfect our catalogs in the course of reducing them to book form, the cost of subject index publications, in modern format, by offset or photographic methods, need not be prohibitive.

Thus he puts into the form of a positive recommendation a suggestion which has been aired many times in the past. In view of the frequency with which this suggestion has been made, it seems high time that efforts be made to find the funds necessary for experimentation with this plan in one or more libraries.

Harry Dewey's recent book, *An Introduction to Library Cataloging and Classification* (4th ed., rev. and enl., Madison, Wis., Capital Press, 1957) includes substantially the material incorporated in his paper at the San Francisco meeting (pps. 91-96). He lists six "principles" in his proposal for a basic subject heading theory. Librarians who are familiar with Cutter's rules will not find anything essentially new in the principles which Dewey enumerates, although it is useful to have his categories: 1) the principle of multiple approach and economical response, 2) the principle of unique entry (making one entry-place for any one subject and employing cross-references from alternative approaches), 3) the principle of specific entry (why cross-reference is made from general terms to specific ones, but not from the specific to the general), 4) the principle of probable association (how to choose between alternative names for the same subject), 5) the principle of inevitable association (the selection of the sequence of words in any multiple-word heading), 6) the principle of juxtaposition of related material (its use in the classified catalog, and limited use in the dictionary catalog). Dewey contends that a subject

heading code is feasible and possible if these principles are used consistently in constructing the dictionary catalog.

The paper by Dr. Chavez describes the use of subject headings in catalogs of Mexican libraries. She outlines in detail the development of a list of subject headings at the Biblioteca de México. The basis for this list was the fifth edition of the LC subject heading list. Translation of the headings was not done literally; efforts have been made to interpret the exact meaning in accordance with the special structure of the Spanish language. Terms are introduced as needed to catalog the new materials received by the library. In general, the terminology of this list of subject headings is Spanish, but non-Spanish terms and expressions are used when there is no accurate Spanish equivalent. The headings are specific and, so far as possible, they are modern in expression and phrased in common rather than technical language. Plural forms are employed extensively, the singular only in cases where words have different meanings; inverted headings are avoided wherever possible, compound headings and phrase forms used sparingly, and subdivision is used whenever it is applicable. Like the LC list, this Spanish version includes scope notes, and *see*, *see also*, and *refer from* references. Efforts are being made to revise the list constantly and to eliminate inconsistencies when these are identified.

Dr. Chavez points out that it is not easy to take over a list from one language and use it without changes in another. Although "noun" headings present little difficulty, headings which include adjectival modifiers require special study before they can be accepted in the Spanish list. For example, phrase headings in English may be expressible in Spanish in a single word—*Women as librarians* becomes *Bibliotecarias*. Other phrases in English may be expressed more accurately in Spanish by subdivision—*Symbolism of flowers* becomes *Flores—Simbolismo*. Similar changes may occur also in headings which are given in English in inverted form. There are many more differences in application. The LC practice respecting direct and indirect headings is being studied for possible use in this Mexican list.

What do these four papers add up to respecting the development of subject heading theory and subject heading practice? Three observations may be made. First, they emphasize the need for a code of subject heading practice which will modernize, reformulate, or augment the rules and principles developed by Cutter. Second, they point to the need for basic studies of subject headings which are essential to the refinement and perfection of our subject catalogs. And third, they show that it is not easy to develop international rules for subject cataloging which will be universally applicable. Such rules, if promulgated, need to be supported by careful application which respects differences in language and language structure. But if the principles upon which such rules are based are correct, the difficulties in application may well be minimal.

In 1952, the Institute on the Subject Analysis of Library Materials held at Columbia University produced a series of papers which made

some progress in identifying and examining background and procedural problems in subject analysis. These papers collectively and individually recognized the need for more studies of subject headings even though they evidenced an awareness of the unlikelihood, indeed of the undesirability, that subject heading method and subject heading use be reduced to the exactness of a chemical formula. In fact, Lilley's study describing the approach of individuals to the subject entries in a catalog³ makes it relatively clear that it would be impossible to devise such a formula even if the attempt were to be made seriously. Other studies of the subject approach made by users seeking information in a library catalog confirm and support this finding.

What is the answer? Undoubtedly the work begun by Haykin should be continued. Jay E. Daily's recent study, "The Grammar of Subject Headings,"⁴ explores the grammatical structure of subject headings found in the LC list. His findings, together with the findings of other basic studies of this kind, should be useful in giving guidance to those who are interested in developing subject headings systematically rather than haphazardly. Carlyle J. Frarey's current study of the nature of subject heading development in the United States⁵ should be helpful too in assessing the value and success of our efforts to isolate the subject content of library materials for the use of library patrons. Oliver L. Lilley's study of progress in subject headings in the field of English literature⁶ is an example of an investigation of the subject analysis problems in a specific subject area, and Vaclav Mostecky's study of headings in international law⁷ may also be cited as an effort to explore subject concepts and the interweaving of subject headings. The four-year study of the use by readers of subject entries in the catalog of the Yale University Library provides information on use in terms of specific books.⁸

Much has been said in the recent literature on the "function of the subject catalog." May G. Hardy, in her evaluation of the LC *Subject Catalog* pointed up some of the basic issues to be resolved in developing a national subject analysis service. Now that there is some discussion of a comprehensive subject catalog to be issued by the Library of Congress as a complement to *The National Union Catalog*, it may be well to recall her summary statement:

If the *Subject Catalog* can be accurate and dependable in its subject analysis of books; if the subject headings in it are adequate, up to date, and logically integrated; and if it can be made prompt and really comprehensive in its coverage of recent American and foreign works available in American libraries, then its place in the organization of American bibliography will be assured, and its usefulness will be great indeed. Libraries throughout the country could be relieved of much of the burden of the subject cataloging of current publications and might even discontinue their subject card catalogs for them; and we should see an end to the senseless waste involved when a hundred, or fifty, or even five catalogers in different libraries must analyze the same book.⁹

This is the goal toward which we must work. The evidence is clear

that we are providing a useful service through our subject catalogs. It is a distinct contribution of American libraries. That there is considerable room for improvement, however, is apparent from the San Francisco papers. To do a satisfactory job in subject analysis, in either card or book form, coordinated efforts by all librarians will be needed.

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Cats: An Example of Concealed Classification in Subject Headings

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IN RECENT years there have been repeated references to a "concealed" classification in the syndetic section of the subject heading system.¹ Julia Pettee has given an example of this in the case of the term *money*, a very broad subject heading with a complex group of hierarchies whose relationships are best illustrated in a chart.² Her chart forms one section of a classification table or map. In elaborating the relationships inherent in the subject heading *money*, however, the index potentialities of a subject heading list are illustrated better than its latent classification. Classification characteristics may be shown more clearly when one is dealing with a simpler subject. For this purpose, the subject heading *cats* has been picked as an example.

Before proceeding to an analysis of the term *cats*, it seems advisable to state plainly the basic premises to be followed in this study. The first fundamental assumption is that there is a classification in the "see also" or syndetic part of the subject headings, thus accepting George Scheerer's view that "every subject heading list presupposes a basis in classification either through category analysis or through reference to a real or ideal classification, because this is the way we organize and clarify our knowledge."³ The second assumption is that, because of the nature of subject heading structure, this classification is hidden and therefore has not been subjected to the logical criticism which overtakes an open classification. The third basic premise is that in the "see also" references, classification should proceed from the general to the particular, or in the related

1st level	MAMMALS	sa Carnivora [etc., etc.] also names of families, genera, species, etc.
2nd level	DOMESTIC ANIMALS	sa Cats [etc.]
	CARNIVORA	sa names of carnivorous animals
3rd level	CATS x Cat.	sa Angora cat, Cacomitl cat, Cheetahs, Eyra, Lynx, Marbled cat, Siamese cat
	PANTHERS	sa Pumas
	LEOPARDS	sa Clouded leopards
	LIONS	
	TIGERS	
	FOSSIL CATS	
4th level	ANGORA CAT	
	CACOMITL CAT	
	CHEETAHS x Cheetas, Chetahs, Chetas, Chitahs, Hunting leopards	
	CLOUDED LEOPARD x Clouded tiger, <i>Felis nebulosa</i> , <i>Neofelis nebulosa</i>	
	EYRA	
	LYNX x Wildcat	
	MARBLED CAT x <i>Felis marmorata</i> , <i>Pardofelis marmorata</i>	
	PUMAS x Catamounts, Cougars, Mountain lions.	sa Panthers
	SIAMESE CAT	

FIGURE 1. Classification of cats in the Library of Congress subject heading list. cf. U. S. Library of Congress. Subject Cataloging Division. *Subject headings used in the dictionary catalogs of the Library of Congress*. 6th ed. (Washington: U. S. Govt. Print. Off., 1957).

sequence of the subject's internal classification (chain), and that when there are lateral cross-references these should be made only to terms on the same classification level (array). There should be no references from particular to general.⁴ These views run counter to those expressed by Charles A. Cutter and David J. Haykin, who, under certain circumstances, would permit lateral cross-references under less restricting conditions, or even refer from particular to general.⁵ While it is possible to have an inductive classification, from particular to general, the analytic method involved is more satisfactory for the classified type of subject heading, which is beyond the scope of this paper.⁶

In general, the "see also" references lead from the term selected to *related* terms which might also be pertinent to the topic being searched. By collecting all the subject headings on cats and the cat family from the Library of Congress list and supplements to date,⁷ one may construct a table showing these relationships (Fig. 1). This table has been limited to recognizable cats, and excludes cat-like creatures comprising other branches of the superfamily *Feloidea*, such as civets, mongooses, hyenas, suricates, fossas, and so forth. It may be seen immediately from the table that there are four levels of classification, beginning with the most general, *mammals*, and proceeding to the most specific, *Angora cat*, *Cacomitl cat*, *Cheetah*, and others. For the sake of clarity, the "see also from" references leading back from the specific to the general are omitted. This chart, then, gives the classification of the cat family, or some of it, as derived from the Library of Congress subject headings.

The question may be asked: How well does this subject heading classification fit current zoological classification for the same subject? One must admit that in zoological classification there is no hard and fast agreement on the placing of the various members of the cat family. Some zoologists put all kinds of cats in one big group, genus *Felis*. Others make a genus for each cat in creation. This is the pattern followed by Mivart⁸ and, to a considerable degree, by Bliss in his classification scheme.⁹ George Gaylord Simpson, of the American Museum, whose classification is reproduced here (Fig. 2) uses three genera for non-extinct cats with sub-genera indicated under each.¹⁰ Regardless of which kind of zoological classification is selected, there is reason to believe that the classification latent in the subject headings could be improved by recognizing it as such and by bringing it into line with more accepted scientific forms.

Comparison of Library of Congress subject heading classification for *cats* and the zoological system of Simpson reveals some strange bed-fellows. In the first place, the "Cacomitl cat" is no cat. He is a close relative of the raccoon, as his family tree shows.¹¹ (Fig. 3) The subject heading *Cacomitl cat* should be changed to *Cacomistle* with "see" references from Ring-tailed cat, and Cacomitl cat.

In the second place, cross-references should not mix levels of classification. Cats which are a species of a subgenus, such as the divisions of *Felis* (*felis*): Angora, Siamese, Manx, domestic shorthair, Old World wild cat

FAMILY Felidae Gray, 1821

SUBFAMILY [3 extinct subfamilies]
Felinae Trouessart, 1885. . . Cats

GENUS [3 extinct genera]
Felis Linnaeus, 1758

SUBGENERAs and synonyms of *Felis*:

Felis (Felis) Linnaeus, 1758. Domestic cat, Old World wild cat
Felis (Microfelis) Roberts, 1926. Black footed cat
Felis (Lynx) Kerr, 1792. Lynx, bobcat, caracal
Felis (Otocolobus) Brandt, 1842. Manul
Felis (Liptailurus) Severtzov, 1858. Serval
Felis (Prionailurus) Severtzov, 1858. Dwarf "tiger" cat
Felis (Pardofelis) Severtzov, 1858. Marble cat
Felis (Badiofelis) Pocock, 1932. (Borneo) marble cat
Felis (Profelis) Severtzov, 1858. Golden cat
Felis (Zibethailurus) Severtzov, 1858. Fishing cat
Felis (Ictailurus) Severtzov, 1858
Felis (Leopardus) Gray, 1842. Ocelot
Felis (Noctofelis) Severtzov, 1858. Margay, guíña
Felis (Herpailurus) Severtzov, 1858. Eyra, jaguarundi
Felis (Dendrailurus) Severtzov, 1858. Kodkod, pampa cat, grass cat ("gato pajera")
Felis (Puma) Jardine, 1854. Puma, cougar, mountain "lion," (American) "panther."

GENUS Panthera Oken, 1816

SUBGENERAs and synonyms of *Panthera*:

Panthera (Panthera) Oken, 1816. Panther, leopard
Panthera (Leo) Oken, 1816. Lion
Panthera (Tigris) Oken, 1816. Tiger
Panthera (Jaguaris) Severtzov, 1858. Jaguar
Panthera (Neofelis) Gray, 1867. Clouded leopard
Panthera (Uncia) Gray, 1867. Irbis, snow leopard, "ounce."
[1 extinct subgenus]

GENUS Acinonyx Brookes, 1828. Cheetah, guepard, hunting "leopard"

SUBFAMILY Machairodontinas Gill, 1872. . . Saber-teeth
[10 extinct genera]

FIGURE 2. Zoological classification of the cat family. Taken from George G. Simpson, *Principles of classification and a classification of mammals* (Bulletin of the American Museum of Natural History, v. 85; New York, 1945), pp. 119-120.

FAMILY	Procyonidae Bonaparte, 1850
SUBFAMILY	Procyoninae Gill, 1872
GENERA	Bassariscus Coues, 1887. Cacomistle, ring-tailed "cat" Procyon Storr, 1780. Raccoon Nasua Storr, 1780. Coati, coati-mundi Potos Cuvier & Geoffroy, 1795. Kinkajou

FIGURE 3. Zoological classification of the Cacomistle (from Simpson).

and such, certainly should not be entered on the same level of classification as those which are distinct sub-genera in the same line: lynx, eyra, marble cat, etc. This is equivalent to mixing generations, as may be seen from a genealogical-type table. (Fig. 4)

Thirdly, cross-references should not cut across genus lines. Cats which belong to a higher level—those which form a separate genus, such as the cheetah—should certainly not be considered on the same level of classification as species of domestic cats or the subgenera lynx, marble cat and eyra. This point is also illustrated by Figure 4.

Fourthly, cross-references should not be made between cats which stand in the relationship of first cousins. The references from *pumas* to *panthers* and vice versa violate this rule. In this case, as in the Cacomistle "cat," an ambiguity in common names has caused the difficulty, since the puma is sometimes called the American "panther."

Finally, terms which are zoological synonyms, as "leopard" and "panther," should be used as such.

There are at least two ways in which the classification difficulties in the subject heading *cats* may be resolved. One is to use the term "cats" for all members of the subfamily *Felinae*, which would cover all kinds of cats. The addition of *lynx*, *eyra*, *cheetahs* and *marbled cat* to the "see also" references from *cats* in the Library of Congress system suggests that this alternative was followed at one time. However, if followed consistently, it would be necessary to add *lions*, *tigers*, *panthers*, *clouded leopards* and similar headings to the "see also" references from *cats*.

Another alternative is to restrict the use of the term "cats" to the members of the genus *Felis*. This would eliminate *cheetahs* from the "see also" references, but would add *pumas*. If this alternative is followed, one would need a heading *Domestic cat* for the common garden variety of pussy. It might even prove advisable to use *cats* for the genus and *cat* for the subgenus. A similar solution would also be necessary for the panther group, genus *Panthera*, unless one took *panther* for the genus and its synonym *leopard* for the subgenus. The cheetah, genus *Acinonyx*, is fortunately unique in the respect that there is no subgenus with the identical name to confuse with the genus name.

Even if one restricts the term "cats" to the genus *Felis*, nine-tenths of the cats in this category are not domestic animals. In fact, most are very much the opposite. Therefore, reference to some general subject head-

[Subfamily]

Felinae

[Genera]

Felis

Panthera

Acinonyx
(Cheetah)

[Subgenera]

Domestic
cat

Myra
Lynx
Marbled
cat

Panther
(leopard)

Lion
Tiger
Clouded
leopard

[Species]

Angora
cat

Siamese
cat

FIGURE 4. Abbreviated family tree indicating kinship among cats

ing, such as *Carnivora*, is to be prepared at the upper level, and the heading *Domestic animals* should be limited to the tamer members of cat society: domestic cats and cheetahs.

These suggested revisions of the subject heading *cats*, following the second of the alternatives given above, are outlined in Figure 5. No re-

1st level	MAMMALS sa <i>Carnivora</i> , Domestic animals [etc., etc.] also names of families, genera, species, etc.
2nd level	CARNIVORA sa Cats, Panthers, Cheetahs [& other kinds of carnivorous animals] DOMESTIC ANIMALS sa Domestic cat, Cheetahs [& other kinds of domesticated animals]
3rd level	CATS [Genus <i>Felis</i>] sa Domestic cat [etc.] PANTHERS [Genus <i>Panthera</i>] sa Panther [etc.] CHEETAHS [Genus <i>Acinonyx</i>] x Guepard, Hunting leopard, Chetas, Chetahs, [etc.] FOSSIL CATS [not subdivided]
4th level	DOMESTIC CAT sa Angora cat, Siamese cat [etc.] BLACK FOOTED CAT LYNX x Bobcat, caracal, wildcat MANUL SERVAL DWARF "TIGER" CAT MARBLE CAT x <i>Felis marmorata</i> , <i>Pardofelis marmorata</i> BORNEO MARBLE CAT GOLDEN CAT FISHING CAT OCELOT MARGAY x <i>Guiña</i> EYRA x <i>Jaguarundi</i> KODKOD x <i>Pampa</i> cat, Grass cat PUMA x Cougar, Mountain lion, Catamount, American panther PANTHER x Leopard LION TIGER JAGUAR CLOUDED LEOPARD x <i>Clouded tiger</i> , <i>Felis nebulosa</i> , <i>Neofelis nebulosa</i> SNOW LEOPARD x <i>Irbis</i> , Ounce
5th level	ANGORA CAT SIAMESE CAT

FIGURE 5. Suggested revision of the Library of Congress subject heading *cats*. Additions at the fourth level to be adopted as needed. There are many different names for the subgenera of *Felis*, so that many more cross-references undoubtedly would be needed. Except for the domestic cat, a species has been made a direct cross-reference of its subgenus.

vision has been suggested for the term *Fossil cats*, which at present covers all pre-historic cats. If needed, however, one could easily work out a classified arrangement by consulting Simpson's classification. The presence of fossil cats has been indicated in Figure 2, but their names omitted.

In summary, the classification of cats in the Library of Congress subject headings leaves something to be desired. The very fact that the hierarchial arrangement is concealed prevents the discovery of such obvious errors as the inclusion of a raccoon relative in the midst of the felines. The less apparent oddities are also hidden until one constructs a chart or makes some similar analysis.

In defense of the concealed classification, one may claim that (1) the subject heading list is only meant to be an index, or (2) subject headings are based on words and not ideas, or (3) subject headings are designed as relatively non-specific topical guides for the general reader, with cross-references added at random as directed by "experience." The first argument would be more potent if the cross-references had been limited to the "see" type. The classification, unfortunately, came inevitably with the addition of the "see also" type. The argument that subject headings are only words and not ideas is more subtle. It explains why *Cacomitl* "cat" was placed with cats instead of raccoons, and puma with panther. It can lead to ludicrous as well as dangerous errors. The word "cat," after all, has many applications. The variety of meaning in words of the English language makes context a necessity for truly accurate definition.¹² Classification is one way of supplying context. It has proved necessary in both indexes and subject heading lists to use such classifications as:

Escape (Ethics)
Escape (Law)

or many modifications of a large topic such as Photography:

Photography, Aerial
Photography, Architectural
Photography, Ballistic [etc., etc.]

or "see also" references. Isolated words are about the weakest reeds upon which to lean.

The first part of the third argument, that subject headings should be non-technical, may be a valid reason for the treatment given some of the more esoteric branches of knowledge or for advanced sections of the common divisions, but it falls flat as an excuse for illogical references in a mundane subject such as cats. If the subject heading *cats*, when treated logically, thereby becomes too advanced for general usage, what on earth is a simple subject? The second half of the proposition, that cross-references have grown from experience undoubtedly explains what has happened, but it is scarcely an argument in favor of such a haphazard approach.

The method of comparison, which has been used in this study, offers one way of ascertaining whether the relationship tables constructed from "see also" subject heading references are in accordance with current classification practice in the subject field. This method works best for biological subjects or others with a very definite internal classification. Otherwise, the method outlined by Julia Pettee and refined by Vaclav Mostecky,¹³ though somewhat more complex, is preferable. In either case, the purpose of the analysis is to achieve a more logical organization in subject heading structure, and thereby to make the cross-references more rational and more useful than they are at present. The results of current language studies should lead to considerable improvement in the matter of terminology.¹⁴ Ultimately, the results of both the classification and linguistic approaches should benefit the user of the subject catalog by enabling him to find things in a more familiar setting.

From the specific example, *cats*, used in this study, several practical suggestions for future application may be implied, though further work should be undertaken before any of these are considered as conclusive. First, it is possible to develop an analytic approach to the problem of making syndetic cross-references in subject headings. This may be either the deductive method utilized in the *cats* case above, or an inductive one as suggested by Prevost and Vickery.¹⁵ Either of these methods should result in a more systematic and logical cross-reference structure, on an acceptable classification basis. If the deductive approach is used, the classification will still be latent.

Secondly, one might seriously consider eliminating the "see also" references altogether. Obviously this is a negative attitude: it would solve the ticklish problem of classification in the syndetic catalog by abolishing the whole system. Such radical surgery of the subject catalog could scarcely be undertaken without a full-fledged inquiry to determine the present effectiveness or ineffectiveness of the "see also" references from the user's point of view. The elimination of syndetic references would leave the subject catalog a mixture of catchword and alphabetic-classed entries, which, in turn, perhaps would be less desirable than either type of entry alone. One could convert the "see also" references to alphabetic-classed subject headings, but this would presuppose that such a list is preferred to a catchword one—again a major decision.

There is one final consideration in the matter of practical application of the logical treatment of cross-reference structure in subject headings. Such a methodical approach is a necessity in the mechanization of the subject catalog, a process which has already begun in some quarters. The creation of a general information system for a machine may be made in several ways. One may proceed through classification *per se*, a procedure advocated by the Classification Research Group in England,¹⁶ or one may use existing subject headings *if there is a logical relationship pattern among them*. The machines cannot function without some kind of patterns of related sequences. One may also attack the problem linguistically through conceptual, transformational, or other analysis of

words and phrases. This is now being done to some extent as a by-product of the mechanical translation process.¹⁷ It is difficult to see how any subject approach to a general information system can be made without indicating logical relationship patterns, though the classification involved may not be in a conventional form.

Conclusion

The subject catalog functions on the theory that information on any given subject, stored in books, periodicals or other media, may be extracted by means of key index words or phrases familiar to the major proportion of potential users. There is neither general agreement on what form these words should take, nor on what organization is most effective in displaying them. In the present study, a single word, *cats*, has been demonstrated in one type of organization, the "see also" cross-reference, which has a concealed classification inherent in it because of the very nature of the connective pattern of the references. The organization in the subject heading's cross-references has been compared with a subject norm, and, on the assumption that the cross-reference structure should parallel the subject's internal classification, a logical example has been constructed. It has been suggested that the adoption of classification principles in making "see also" references should result in a more rational and therefore a more functional structure for this part of the subject catalog.

REFERENCES AND NOTES

1. See, for example: Bradford, S. C. *Documentation*. Washington, Public Affairs Press, 1950, p. 51; Sayers, Berwick. "Classification," *Library Trends*, 2:239, 1953; Vickery, B. C. "Developments in Subject Indexing," *Journal of Documentation*, 11:1-11, 1955; Clapp, V. W. "Subject Controls—Nature and Level of Controls," *American Documentation*, 3:11-14, 1952; Scheerer, George. "The Subject Catalog Examined," *Library Quarterly*, 17:191-194, 1957.
2. Pettee, Julia. *Subject Headings: the History and Theory of the Alphabetical Subject Approach in Books*. New York, H. W. Wilson, 1946, pp. 3-4, 57-60, 73-80.
3. Scheerer, George. "Subject Catalog Examined," *Library Quarterly*, 17:192, 1957.
4. It is possible to view the "see also" cross-reference system as a maze instead of a classification. This presupposes no intentional or logical organization and seeks merely the shortest point-to-point path through the maze by means of a rather simple technique. Cf. Estrin, Gerald. "Maze Structure and Information Retrieval," *Preprints for the International Conference on Scientific Information, Washington, D. C., November 16-21, 1958*. Washington; National Academy of Sciences, National Research Council, 1958. (Hereafter referred to as *Preprints*), Area 6, pp. 115-119. If the lattice idea in subject analysis and classification structure should prove generally acceptable, the views expressed in this paper may be rendered untenable. Cf. Vickery, B. C. "Subject Analysis for Information Retrieval," *Preprints*, area 5, pp. 41-51; "The Structure of Information Retrieval Systems," *Preprints*, area 6, pp. 5-19; Masterman, M., Needham, R. M., and Spärck Jones, K. (Cambridge Language Research Unit) "The Analogy Between Mechanical Translation and Library Retrieval," *Preprints*, Area 5, pp. 111-112, 121; Fairthorne, R. A. "The Patterns of Retrieval," *American Documentation*, 7:65-70, 1956.
5. Cf. Cutter, C. A. *Rules for a Dictionary Catalog*, Washington, GPO, 1876, p. 15, 48-49; 3rd ed. (1891), p. 57-58; 4th ed. (1904), p. 79-80. Cutter's definition: "Syndetic, connective, applied to that kind of dictionary catalogue which binds its entries

- together by means of cross-references so as to form a whole, the references being made from the most comprehensive subject to those of the next lower degree of comprehensiveness, and from each of these to their subordinate subjects, and so on. These cross-references correspond to and are an important substitute for the arrangement in a systematic catalogue. [The present author does not know whether this means that they are intended as an alternate form of classification, replacing the multiple entries of a classified catalog, or as an alternative to a classified subject heading list.] References are also made in the syndetic catalogue to illustrative and co-ordinate subjects." (1876, p. 15); Haykin, D. J. *Subject Headings, a Practical Guide*, Washington, GPO, 1951, pp. 14-15.
6. The rudiments of such a system for subject headings are contained in Prevost, M. L. "An Approach to Theory and Method in General Subject Headings," *Library Quarterly*, 16:140-151, 1946. It is a very short step from the work of Miss Prevost to the process of facet analysis. Cf. Vickery, B. C. "Systematic Subject Indexing," *Journal of Documentation*, 9:48-57, 1953. The inductive approach is ably defended in Morris, Jack. "The Duality Concept in Subject Analysis," *American Documentation*, 5:117-146, 1954.
 7. U. S. Library of Congress. Subject Cataloging Division. *Subject Headings Used in the Dictionary Catalogs of the Library of Congress*. 6th ed. Washington, GPO, 1957, and *Supplements to Sept.*, 1958.
 8. Mivart, St. George. *The Cat; an Introduction to the Study of Backboned Animals Especially Mammals*, New York, Scribner, 1881, pp. 390-430.
 9. Bliss, H. E. *A Bibliographic Classification, Extended by Systematic Auxiliary Schedules for Composite Specification and Notation*. New York, H. W. Wilson, 1940, I, 463.
 10. Simpson, G. G. *Principles of Classification and a Classification of Mammals*. American Museum of Natural History. *Bulletin*, v. 85, New York, 1945, pp. 118-121. An equally sophisticated and exhaustive treatment, limited to the genera *Felis* and *Otocolobus*, has been given in Pocock, R. I. *Catalogue of the Genus Felis*. London, British Museum, 1951.
 11. Simpson, *op. cit.*, p. 112.
 12. Chomsky, Noam. "Logical Structure in Language," *American Documentation*, 8:284-291, 1957. An interesting discussion of meaning and an example of a noun "slip" with at least 18 distinct meanings may be found in Singer, T. E. R. "The Need for Imagination and Skepticism in Making Literature Searches." *Record of Chemical Progress*, 8:27-28, 1957.
 13. Pettee, *op. cit.*, p. 73-76; Mostecky, Vaclav. "Study of the See also Reference Structure in Relation to the Subject of International Law." *American Documentation*, 7:294-314, 1956.
 14. See Daily, Jay. "Subject Headings and the Theory of Classification." *American Documentation*, 8:269-274, 1957; Williams, Thyllis. "Language Engineering," in Shera, J. H., Kent, A., and Perry, J. W. *Documentation in Action*. New York, Reinhold, 1956, pp. 330-337. "Language engineering" here means a process of concept analysis of phrases, not, as Joshua Whatmough uses the term, mathematical linguistics; Smith, C. G. "Basic Documentation," *Preprints*, Area 5, p. 272, 277; Koller, H. R., Marden, Ethel, and Pfeffer, Harold "The Haystaq System: Past, Present and Future," *Preprints*, Area 5, p. 340.
 15. Prevost, M. L. "Approach to Theory and Method in General Subject Heading." *Library Quarterly*, 16:140-151, 1946; Vickery, B. C. "Systematic Subject Indexing." *Journal of Documentation*, 9:48-57, 1953.
 16. *Proceedings of the International Conference on Classification for Information Retrieval Held at Beatrice Webb House, Dorking, England, 13th-17th May, 1957*. London, ASLIB, 1957, Appendix 2, pp. 137-147.
 17. Masterman, Needham and Spärck Jones, K., "The Analogy Between Mechanical Translation and Library Retrieval," *Preprints*, Area 5, pp. 103-121.

Basic Cataloging Tools: Serial Supplement

THIS highly selective list, to be used in conjunction with the list of Basic General Cataloging Tools (*Journal of Cataloging and Classification*, 11:153-55) was compiled by Ian W. Thom, Chief of Preparations, the Princeton University Library. The compiler is grateful for the comments, advice, and suggestions sent to him by F. Bernice Field, Jane Ganfield and Susan M. Haskins and colleagues.

Although the list was intended primarily for the large research library, many of the items are pertinent to the needs of the smaller library. Beginning dates are given for those tools which are serials, even though in many cases only the latest issues have everyday value for the cataloger.

Group A. Primary Tools

Since this is a supplement, items in the above mentioned general list should presumably not be repeated here. This perhaps unnecessary remark is made to explain the absence of the three most important serial cataloging tools (*New Serial Titles*, *Union List of Serials*, and the LC catalogs, now the *National Union Catalog*) which were quite properly given as subsidiary tools (Group C) on that list. There remain, therefore:

Allerding, Johanna E. *German and French Abbreviations Used in Serial Publications and in Bibliographical Citations* (reprinted from *Special Libraries*, November, 1952) 6p.

American Newspapers, 1821-1936; a Union List of Files Available in the United States and Canada. Ed. by Winifred Gregory. New York, Wilson, 1937. 791p.

Baer, Eleanor Agnes. *Titles in Series; A Handbook for Librarians and Students*. New York, Scarcecrow Press, 1953. (Supplement, 1957)

British Union-Catalogue of Periodicals; A Record of the Periodicals of the World From the Seventeenth Century to the Present Day. London, Butterworth, 1955-58. 4v.

Bulletin of Bibliography and Magazine Notes. Boston, Faxon, 1897-to date. (for its "Births, Deaths and Magazine Notes")

International Congresses and Conferences, 1840-1937; A Union List of Their Publications. . . Ed. by Winifred Gregory. New York, Wilson, 1938. 229p.

List of the Serial Publications of Foreign Governments, 1815-1931, Ed. by Winifred Gregory. New York, Wilson, 1932. 720p.

United Nations. Library. *United Nations Documents Index*, 1950-to date.

U. S. Library of Congress. Card Division. *List of Series of Publications for Which Cards are in Stock*. 4th ed. Washington, 1932. 152p. Supplements, 1933-37.

— Processing Dept. *East European Accessions List*, 1951-to date.

— — *Monthly Checklist of State Publications*, 1910-to date.

— — *Monthly Index of Russian Accessions*, 1948-to date.

U. S. Superintendent of Documents. *Monthly Catalogue of United States Government Publications*, 1895-to date.

World List of Scientific Periodicals Published in the Years 1900-1950. 3d ed. New York, Academic Press, 1952. 1058p.

Group B. Interpretative Aids

Osborn, Andrew D. *Serial Publications: Their Place and Treatment in Libraries.* Chicago, ALA, 1955. 309p.

Markley, Anne E. *Library Records for Government Publications.* Berkeley, University of California Press, 1951. 66p.

Group C. Subsidiary Tools

American Chemical Society. *List of Periodicals Abstracted by Chemical Abstracts with Key to Library Files and Other Information.* Columbus, Ohio State University, 1922-to date.

Ayer, firm, Philadelphia. *Directory of Newspapers and Periodicals.* Philadelphia, 1880-to date.

Boyd, Anne M. *United States Government Publications.* 3d ed. Rev. by Rae Elizabeth Rips. N. Y., Wilson, 1949. 627p.

British Museum. Dept. of Printed Books. *The British Museum Catalogue of Printed Books, 1881-1900.* Ann Arbor, Edwards, 1946. 58v. (Included for its volumes for "Academies" and "Periodical Publications" respectively)

Childs, James B. *Author Entry for Government Publications.* Washington, GPO, 1941. 38p.

Indiana University. Library. *Union List of Little Magazines . . .* Chicago, Midwest Inter-Library Center, 1956. 98p.

Minerva: Jahrbuch der Gelehrten Welt. Berlin, de Gruyter. 1891/92 to date.

National Research Council. *Scientific and Technical Societies of the United States and Canada.* 6th ed. Washington, National Academy of Sciences, 1955. 447p.

New York (City) Public Library. *Current Newspapers, United States and Foreign; A Union List of Newspapers Available in the Libraries of the New York Metropolitan Area.* Comp. by Aaron L. Fessler and Saro J. Riccardi. Provisional ed. New York, NYPL, 1957. 66p.

Schley, Ruth. *Serials Notes Compiled From Library of Congress Cards Issued 1947-April 1951,* by Ruth Schley and Jane B. Davies. New York, Columbia University Libraries, 1952. 27p.

Scudder, Samuel H. *Catalogue of Scientific Serials of All Countries Including the Transactions of Learned Societies in the Natural, Physical, and Mathematical Sciences, 1633-1876.* Cambridge, Library of Harvard University, 1879. 358p.

Special Libraries Association. Science-Technology Group. *Union List of Technical Periodicals in Two Hundred Libraries.* . . . 3d ed. Comp. by Elizabeth G. Bowerman. New York, Special Libraries Assoc., 1947. 285p.

Ulrich's Periodicals Directory; A Classified Guide to a Selected List of Current Periodicals, Foreign and Domestic. New York, Bowker, 1932-to date.

U. S. Library of Congress. Reference Dept. *Postwar Foreign Newspapers; A Union List.* 1953. 231p.

U. S. Superintendent of Documents. *Catalogue of the Public Documents of the 53d to the 76th Congress and of all Departments of the Government of the United States from March 4, 1893 to Dec. 31, 1940.* Washington, GPO, 1896-1945. 25v.

United States Government Organization Manual. Washington, 1935-to date.

The World of Learning. London, Europa Publications, 1947-to date.

Group D. Background Materials

- Childs, James B. *Government Document Bibliography in the United States and Elsewhere*. 3d ed. Washington, GPO, 1942. 78p.
- Gable, J. Harris *Manual of Serials Work*. Chicago, ALA, 1937. 229p.
- Grenfell, David. *Periodicals and Serials: Their Treatment in Special Libraries*. London, ASLIB, 1953. 200p.
- Lubetzky, Seymour. *Cataloguing Rules and Principles; A Critique of the A.L.A. Rules for Entry and a Proposed Design for Their Revision*. Washington, Library of Congress, 1953. 65p.
- McNair, Mary Wilson. *Guide to the Cataloguing of Periodicals*. 3d ed. Washington, GPO, 1925. 23p.
- Pierson, Harriet W. *Guide to the Cataloguing of the Serial Publications of Societies and Institutions*. 2d ed. Washington, GPO, 1931. 128p.
- Library Resources and Technical Services*. ALA Resources and Technical Services Division, 1957-to date.
- Serial Slants*. Official Organ of Serials Round Table, American Library Association, 1950-56 (Succeeded by *LRTS*)

Alton H. Keller

1912-1959

ALTON H. KELLER, Chief of LC's Exchange and Gift Division, died in Washington on February 8, following an illness of several months. Joining the Library of Congress staff in 1933, he served there in positions of increasing importance in the Card Division, Classification Division, Processing Department Office, Order Division, and the Exchange and Gift Division.

Mr. Keller was an active member of ALA and served on many committees, chairing several of them. At the time of his death he was chairman of the ACRL Program Committee for the Washington Conference and also chairman of the Survey and Standards Committee of the American Association of State Libraries. One of his last assignments was the responsibility for planning the arrangements for the first Assembly of State Librarians which was held at the Library of Congress in November, 1958.

Long a leader among acquisitions librarians, Mr. Keller served as member and chairman of the ALA Board on Acquisition of Library Materials and, among his other activities, he was one of those responsible for the establishment of the Reprint Expediting Service. He was active in the organization of the Acquisitions Section of the Resources and Technical Services Division and served as a member of its first Executive Committee, chairman of its Bylaws Committee, and member of the Division Constitution and Bylaws Committee.

We have lost one of our strong members.

Union List of Serials Program Announced

Plans for a third edition of the *Union List of Serials* by the end of 1962 were announced following a meeting of the Joint Committee on the Union List of Serials held in Chicago on January 29. The Committee's Chairman, Dr. Frank B. Rogers of the National Library of Medicine, stated that work on details of organization will be pressed as rapidly as possible. Funds required for editorial costs have been greatly reduced under the new plan, and it is anticipated that a sales price can be set within the capacity of many of the smaller libraries.

The third edition will incorporate the titles and holdings in the second edition and its two supplements into one alphabet. To this more useful arrangement there will be added a substantial amount of new material and many corrections of present holding records will be made. Information for revisions and corrections will come from the following sources:

1. A large amount of information already in hand which has been previously reported by cooperating libraries.

2. New titles and holdings represented by records of serials in the National Union Catalog at the Library of Congress. New holdings will be added to the present *Union List of Serials* records to give better regional representation. Titles found to be new to the *Union List of Serials*, and within the Gregory definition of serials, will be published in a checking edition to collect holdings of libraries.

3. New holdings and information for deletions and corrections voluntarily submitted by participating libraries.

After editorial work on the third edition of the *Union List of Serials* has been completed, it is contemplated that *New Serial Titles* will be enlarged to include pre-1950 serials within the scope of the *Union List of Serials* but not included in the new edition. At the present time, a limited number of copies of the second supplement to the *Union List of Serials* are available from the H. W. Wilson Company.

It is anticipated that an editorial office will be established at the Library of Congress under general policy direction of the Joint Committee and administrative direction of the Library of Congress. A full description of the program for the third edition of the *Union List of Serials* is expected to appear in press by early June. The officers of the Joint Committee will announce new developments as the program progresses.

SLAVIC MATERIALS

A new list of Slavic serials has been produced by the Hoover Institution on War, Revolution and Peace: Periodicals and Newspapers concerning East-Central and East Europe in the Library of the Hoover Institution, 1958. The list of 314 current titles arranged by country of origin should be useful as a source of Slavic serials. It is offered for free distribution from the Institution, at Stanford University, Stanford, California, Attention Philip McLean, Librarian.

The Service Load of a Cataloger in a Small College Library

BERNICE E. HEADINGS

*College Librarian, University of Dubuque
Dubuque, Iowa*

A CAREFUL study of college library statistics in the U. S. Office of Education Circular No. 415, shows that 201 liberal arts colleges with enrollment between 500 and 999 added an average of 1873 volumes in 1951-2. Recent ACRL statistics within that enrollment range show that many small colleges are adding from 2500 to 3000 volumes annually, and some from 4000 to 5000. From study of statistics and general experience it would seem that to keep up with publication, to secure variety, and at the same time add some older titles, it is advisable to add from 1630 to 3000 volumes annually. In our own institution, when confronted with cataloging records, scores, and slides, it was necessary to find how much cataloging a small library staff could be expected to accomplish.

Questionnaire

In December, 1957, and January, 1958, a questionnaire was sent to 31 colleges in 7 states. Information was requested concerning: (1) kinds of materials and number added in the year 1956-57 (books, periodicals, pamphlets, scores, records, etc.); (2) composition and status of the library staff; and (3) number of professional, clerical, and student assistants who helped with the cataloging process.

Statistics were received from 22 accredited colleges. Three were in the 1956-57 report of college and university library statistics (*C&RL*, January, 1958) Group II (total budget more than \$35,000). Their budgets for books and related materials ranged from \$8,692 to \$17,286 (excluding binding); enrollment 782 to 1116. Nineteen colleges were in the Group III class (budgets less than \$35,000). Fourteen of these were included in the Group III published report; their budgets for books and related materials varied from \$3,136 to \$10,073 (exclusive of binding); enrollment ranged from 381 to 1061. Of the 22 colleges which sent statistics, 9 were from Iowa, 7 from Illinois, 2 from Minnesota, and one each from Wisconsin, Indiana, Pennsylvania, and Maryland.

In the entire group the number of professional librarians per institution varied from 1 to 5, and the total number of people on the staff ranged from 1 to 8½. In every instance the head librarian had faculty status, and in 11 colleges some or all of the other professional librarians had been granted it. A subprofessional level was recognized in those colleges which had staff members with library experience but little or no graduate library school training. All libraries used student assistants.

It is evident that many things must be considered in estimating a cataloging load—e.g. number of printed cards available; cataloging rules used, amount of material on card; non-cataloging duties, background, and experience of the cataloger. Hazel Dean's figures (*C&RL*, January, 1946) which concerned load in large institutions, are useful only as a guide to the small college with fewer research materials, and different problems. Because the work differs in various small libraries, it is extremely difficult to estimate the amount of work which can be accomplished. In the short one-page questionnaire there was no plan to consider the problems presented above. However, the answers did prove an aid in determining roughly how many people handled cataloging in each institution studied.

The smallest cataloging load (600 books, 18 records and other materials) was in a college with one librarian and a clerical assistant. In the only college which did not even have an assistant, the librarian had cataloged 1100 books and periodicals, as well as other materials. However, it is possible that the other library work may have been neglected in order to do that much cataloging. At College X (Group III), one professional librarian and two part-time clerical assistants cataloged 4196 volumes. At College Y (Group II), a cataloging staff of one professional, with one half-time clerical assistant, and 8 weekly hours of student assistance cataloged 4098 books and periodicals plus records and other materials. The professional cataloger at College Z, with one clerical assistant, and 10 hours of student help, cataloged 3632 books and periodicals, as well as other types of materials. At another institution, well-known throughout the nation, a professional cataloger handled 2519 volumes—books and related materials. However, five students helped with the process. Four of the colleges reported that they processed between 3000 and 5000 books and periodicals; seven, 2000 to 2099; three, 1500-1999; and eight, less than 1500.

None of the colleges studied had more than one full-time professional cataloger, but 14 had either part-time or full-time clerical assistance with the cataloging process. In almost every instance when the number of books cataloged was more than 2000, there was some clerical assistance. Almost all the libraries used students for filing, typing, pasting, lettering, or labeling. The smallest libraries had an average of two students helping with the process, while in the larger libraries there were from seven to ten.

It was evident that if a library handled music scores, it bound them, and considered them as books. Only six libraries kept separate records for scores. The libraries which cataloged phonograph records, as a whole, were those with a fairly adequate staff, to handle both necessary books and also other materials. When libraries of the Group III class did catalog records, the number added was seldom higher than 75 to 100. It is evident that if a college wishes a library to handle scores, records, maps, and other materials, it is necessary to have an additional person on the staff to help with the process.

The study of questionnaire statistics compared with the *C&RL* figures revealed in many instances, the inclusion of records and microfilm, as well as scores, in the number reported as "Books and Other Materials."

The Worries of a Public Library Administrator*

HERBERT GOLDHOR
Chief Librarian

Public Library, Evansville, Ind.

ONE OF the things which worries me about catalogers and cataloging departments is the lack of a clear goal or objective. Is the catalog, for example, in a public library for the staff or for the public? If you look at the results, I don't see how you can conclude that it is for the public. All the studies ever made of public use of the catalog have shown how wide a spread there is between the intent of the cataloger and the effect on the average patron. The intelligent, well-educated laymen, the student, the college graduate probably come closer to being a staff member equivalent than do the thousands of other persons served by a public library and at whose level the cataloger has got to pitch his efforts if he's interested in building a catalog for the public. What worries me is that catalogers plead the one thing but do the other; they say the catalog is for the public, but only the staff can use it effectively.

Does the catalog necessarily have to include all books in a public library? Ours in Evansville no longer includes mysteries, westerns, science fiction, or light loves. This is based on the theory that a person who wants a mystery is not going to look through the catalog but will select one from those on the shelf at the time. That's a theory no more proven than the reverse and no more disproven. Nor do we catalog paper-bound books, and I predict that other groups of books will be excluded in time, such as older books, in a public library. I can only hastily agree that the lack of a clear goal of catalog departments is a reflection of the fact that the institution has no clear goal. But I'm not sure which comes first. Maybe the various departments of the library ought to hammer out for themselves their own goals; it might be easier for them to do so on their own level and within their own sphere of work and then to build up toward an integrated goal for the whole institution, than the reverse.

A second aspect of catalogers and cataloging departments which worries me is their failure to evaluate what they do and what they don't do. We don't have many measures of work done and not used, in cata-

* Adapted from an address before the Ohio Valley Regional Group of Catalogers, Greencastle, Indiana, 25 April, 1958.

logging; and we have even less of a measure of what's needed and not done. In communication terminology there's no feedback from the work that is done to the people who have done it. To what use is a shelf-list put in a branch of the Evansville Public Library? Typically only for maintenance; cards are filed into and withdrawn from it and corrected. We don't even take an inventory any longer, and few ever use it as a classified catalog or in considering new purchases. Like the rest of us, catalogers fail to evaluate what they do and what they don't do; but perhaps more than some of the rest of us they need to do it.

A third way in which I think I have cause for worry about catalogers is that they do too little experimentation. They have a tendency *not* to experiment, to do things the way they've always been done simply because they've always been done that way. I know of no other field in librarianship which has as many didactic and ex cathedra statements as in cataloging rules and procedures. We are told that *this* is what happens when no one actually knows what happens. We need experimentation, studies, a chance to get at the facts. There are two suggestions I can offer here. One is "work simplification," two words which cover many techniques, but the most important of them is elimination. You can simplify work fast by eliminating things. Why do we use periodical check-in cards, for example? In a library our size, we can check the new issues against those on the open shelves and eliminate one small step but one which is done thousands of times a year. Or take the information on the sourcing page of new books; one of my colleagues calculates it takes her six man-days a year just to pencil the call number there though it also appears two other places in the book. We have long ago dropped the source of purchase, price, and date.

The second suggestion in the direction of experimentation is to conduct factual studies using controls. Recently we've been revising our filing rules and could not decide how to file cards beginning with forenames like Mary or Elizabeth. The official rule has several parts, and not even catalogers always remember it correctly. We got 25 patrons to test the conventional arrangement and a straight alphabetical file by finding the duplicate of a sample card in each of two packs. No matter which pack they were using, the patrons used the same approach, card by card from front to back. And when I stop to think of it, that's how I do it too! Most of them said they preferred the alphabetical arrangement, though they didn't always recognize it as such. We came to the conclusion that we could use any system as far as patrons are concerned, and the straight alphabet is certainly easier to follow in filing than the complicated rule. But this is simply to say that catalogers who are interested in experimentation ought also to accompany it by factual studies with built-in controls in order to evaluate the results properly.

Fourthly, I worry about the state of cataloging because I feel that no major break-through has been made in cataloging techniques and utilizing modern devices. As I understand cataloging today, it is basically the same as it was 50 years ago, except that we type our cards or Xerox them in-

stead of writing them out; we've changed some rules, but the approach is basically the same. Compare this with the break-through achieved by Henry Ford in industry with his development of the assembly line system of production. Standardized and interchangeable parts, high volume of production, low unit cost, utilizing persons with relatively little skill, and other aspects constituted a revolution in its way such as we need of the same stature in cataloging. More relevant to cataloging is integrated data processing which is automation in the office. It means that information is organized by intelligent human beings once, and thereafter handled automatically by machines according to directions. Many of the implications of IDP speak remarkably to the condition of cataloging, such as book catalogs prepared by punched cards. And giant brains and computers lie ahead.

Perhaps a better way by which to express this need for a major break-through in cataloging is to restate the fact that thousands of highly-trained and technically-qualified catalogers are currently and at approximately the same time working on the same book and for all practical purposes with the same results. To an administrator, i.e., someone who has to find the funds for all the many projects which need doing, such waste is appalling. Study after study has shown how often Wilson and LC cards are changed and how long a delay there is in getting them. We don't use them in Evansville (except for LC proofslips as guides in cataloging) because we aim at having the new books cataloged and ready for circulation by date of publication. In this sort of situation, the proposal to reproduce catalog card information on the back of the title-page makes sense and is the sort of major breakthrough which is due and overdue in cataloging. May I cite some examples in other fields than cataloging? Transaction card charging is one; any public library circulation system which requires the slipping or discharging of books is outmoded. Modular architecture represents a break-through in the planning of library buildings, just as fifty years ago the principle of open stacks was a major innovation. Walter Brahm has suggested that in a century or so there will be only one public library system in Ohio with branches in every city. In terms of the organization of libraries, that represents a major break-through.

I have emphasized change and the desirability of change, and that can perhaps best be justified by reference to Toynbee's *Study of History*. Toynbee came to the conclusion that civilizations flourish and grow or decline and perish depending on the extent to which the people who hold the power controls are able and willing to modify the techniques by which they exercise that power in order to solve the challenging problems of their age. That is, the one thing we can be sure of is that there are going to be changes, and drastic changes over long enough periods of time. But the people in power are accustomed, shall we say, to certain ways of cataloging and are loath to change them. They know those ways, they're proficient in them, they've been adequate up to now perhaps, so why change to something new and untried? Because new ma-

terials arise to be cataloged or other problems develop, and Toynbee says among other things that it's in the nature of these challenge problems not to die down if unsolved but to recur in ever more intense fashion. But if the ruling groups are able and willing to modify their techniques successfully to solve the challenge problems, they go on to a new burst of power in a sort of regeneration of vitality. It seems to me, in looking at the literature of librarianship, that the problems confronting catalogers are recurring ones, and maybe that it's time some changes were made in basic approaches and techniques to meet these problems.

BUDGET CONTROL

San Francisco State College is assigned state funds for new books on the basis of a formula, and divides its allocation among its eight broad subject categories by means of another formula. The total amount is determined on the basis on an average cost per volume (\$5.00 for the current fiscal year, estimated by the California Department of Finance), and the number of volumes allowed is determined by the following standard: four volumes per student for the first 1,000 full-time students (or full-time equivalents), 2 volumes per student for the next 4,000 and 1 volume per student for those beyond 5,000. For the fiscal year 1958/59, the College Library received \$58,200 for books.

Forty thousand dollars of the total was allocated to the eight instructional divisions on the basis of the following formula: 35% on the basis of weighted enrollment (lower divisions units plus twice the upper division units) in the several divisions: 20% on the basis of the number of faculty members in each division; 35% on the basis of average cost of books purchased by each division during the preceding year; and 10% according to the subjective judgment of the Librarian and the Order Librarian. According to A. S. Pickett, the Order Librarian, this formula was devised by the College President's Cabinet and has been in operation for a decade.

A recent study made by Mr. Pickett revealed that 31% of the College faculty were taking an active part in selecting the books to be purchased on their division funds.

CLASSIFICATION SCHEMES

As a result of the special classification scheme survey conducted last winter by the ALA-RTSD CCS Classification Committee under the chairmanship of J. Elias Jones, many libraries have contributed copies of their special classifications to the central pool at the SLA Loan Collection, School of Library Science, Western Reserve University. Those libraries which promised schemes, but have not yet sent them, are reminded to do so promptly as these are urgently needed to round out the Collection.

Institute on Catalog Code Revision: A Composite Report

THE INSTITUTE on Catalog Code Revision was held July 9-12, 1958, at Stanford University preceding the ALA Conference in San Francisco. The Catalog Code Revision Committee of the Cataloging and Classification Section, RTSD, and the Stanford University Libraries were sponsors of the Institute; and Wyllis Wright, Chairman of the Committee, served as Director. Over 175 librarians attended.

Prior to the Institute, Seymour Lubetzky, Editor, prepared a Draft Code consisting of a revised draft of all rules previously submitted to the Committee; and Mr. Wright and eight other librarians each prepared a paper on some troublesome aspect of code revision. This Draft Code and the Papers were distributed to registrants in advance of the meetings. Each session consisted of a brief resume of a Paper and discussion of the Paper and the rules with which it dealt.

The discussion was recorded, then edited by Olivia Faulkner of LC; copies of the edited version were distributed to those attending the Institute and those purchasing the papers.

The following account of the Institute is in four parts:

- A. General Remarks on the Draft Code and the Stanford Papers. (Paul S. Dunkin)
- B. General remarks on the discussions at the Institute. (Esther J. Piercy)
- C. 1-9. Papers
 - a. Summaries of the Papers (Dunkin) Each Summary is followed by:
 - b. Comment on the Paper (Dunkin)
 - c. Report of Institute discussion of the Paper. (Piercy)
- D. Epilogue. (Seymour Lubetzky)

The Summaries of the Papers do not attempt to present all important points raised by each Paper; instead, they note only those aspects which seem to require comment in this brief report.

A. *Draft Code and Stanford Papers: General Remarks*

The genius of Seymour Lubetzky now dominates our thinking about the catalog as completely as Cutter once did. Nowhere is this more striking than in the Draft Code and the Stanford Papers.

The Draft Code, like Cutter's *Rules*, begins with a statement of the objectives of the catalog: 1) "To facilitate the location of a particular work"; and 2) "To relate and bring together the works of an author and the editions of a work." These objectives the Draft Code proposes to achieve by the technique of main entry and, when necessary, added entries and references.

Cutter's objectives were: 1) "To enable a person to find a book of which either the author or the title is known"; and 2) "To show what the library has by a given author." His technique was "author entry with the necessary references" and "title-entry or title-reference."

In these two statements there is no great difference except perhaps in the Draft Code's use of the word "work" rather than "book." Perhaps this is somewhat more exact because the reader may often be content with any version of the "work" he wants regardless of the particular "book" in which it may appear. (In this distinction between the terms the Draft Code yields to popular usage; the dictionary definitions of the two terms overlap.)

The difference lies, not in the statements, but in their application. "The convenience of the public," wrote Cutter (4th ed. 1904, p. 6) "is always to be set before the ease of the cataloger . . . Strict consistency in a rule and uniformity in its application sometimes lead to practices which clash with the public's habitual way of looking at things. When these habits are general and deeply rooted, it is unwise for the cataloger to ignore them, even if they demand a sacrifice of system and simplicity."

Now "convenience of the public" is like Virtue. Everybody is for it. Probably every cataloger who ever lived would proclaim that he had only "convenience of the public" in mind. But how define "convenience"? As with true Virtue, it is not easy. For Cutter "convenience of the public" was a maze of bypaths down which he led catalogers to psychoanalyze the absent reader. Codes became an infinite variety of intricate exceptions to rules and exceptions to exceptions, each to provide for some special case of suspected "convenience."

The Draft Code changes all that. It states that its principles of main entry are "related directly to the objectives" and "designed to serve those objectives." Here is the basic assumption that the "public" is intelligent enough to understand a logical arrangement and that the "convenience of the public" will be served if the arrangement is kept logical. The Draft Code tries only to move logically and simply toward its objectives; and the Papers measure it by its success in the attempt.

Thus, the Draft Code's "Method of Cataloging" quite properly requires that main entry should be such as to preserve the second objective—i.e., it must be the name of the author or (if the author is unknown) the title. This requirement leads logically to rejecting *Laws, statutes, etc.* and similar words and phrases as subdivisions of an entry because they are not properly either author or title. Likewise it leads logically to extending the anonymous classic uniform title entry to apply to all anonymous works. And it requires title entry for what it calls "works of fugitive authorship"—i.e., encyclopedias and other standard reference works whose successive editions may be prepared by different compilers.

It is, of course, only a Draft Code. The unfolding logic of Code and Papers suggests a changing attitude toward the second objective: "To relate and bring together the works of an author and the editions of a work."

The first objective, "To facilitate the location of a particular work," grew out of the demand for a finding list catalog. The second objective proposes a finding list not only for specific works but also for groups of works. Thus the second objective, as the Draft Code itself points out, is often in conflict with the first because it requires a uniform entry which may not be recorded at all in a specific book. Moreover, uniform entry requires research; and thus the second objective becomes also more costly and more difficult than the first.

In the Draft Code, when the conflict arises, the second objective is sometimes bypassed. Entry of a personal author sometimes under both his pseudonym and his real name, and entry of a serial or a corporate body under successive names are outstanding examples. In none of these cases will all works of an author and all editions of a work be located together. Generally the Papers agree with this neglect of the second objective.

Also, as we noted above, dependent on the second objective is the nature of the main entry—i.e., entry by the name of the author or (if the author is unknown) by title. But the Draft Code suggests that certain special materials such as maps or newspapers (and presumably others) may be exempted from this requirement and represented in the catalog only under geographical area or subject. And Mr. Osborn suggests that we think (not in terms of author entry but) only in terms of headings which are "entry words" which we can "control and adapt" to "suit our practical library purpose" (Paper 9, p. 8).

Thus both the Draft Code and the Papers sometimes modify the application of the second objective and weaken the status of the author (or title) as the only possible main entry.

Where will this trend lead us?

Apparently we are moving toward strict application of the second objective (and its corollary, main entry exclusively under author or title) only to personal authors and anonymous works. This may be logical. Is the author often important if he is not a personal author? If a personal author is not involved, is it often important to list all the works of that author together and all the editions of each work? Is even a personal author often important except in creative works of art and literature? A Poem by Dryden, for instance, will always be looked for under Dryden's name even though it may have major political (i.e., subject) implications. On the other hand, will a government pamphlet on flies be sought under author (corporate or personal) or under subject?

Moreover, we might reason, perhaps quite properly, that each change in the name of a corporate body or a serial probably (or at least often) reflects some rather drastic change in the nature of the corporate body or serial, and that for this reason a corresponding change in entry does not really often violate the second objective. Certainly such a change in name does mark a change in the nature of the body more frequently than a similar change in name marks a change in the nature of a personal author.

Are we, in short, really neglecting the second objective? Or are we simply recognizing that with regard to such works (corporate authors and serials) the second objective strictly applied may become an objective without a purpose?

The finished Code will, no doubt, tell specifically, both under statement of the second objective and under discussion of main entry, precisely what exception may be made and the logical reason for making exception.

Else we shall be drawn as by a magnet into that ancient trap "Convenience of the public."

B. *Institute Discussions: General Remarks*

The Institute was marked (undoubtedly abetted by the superb local arrangements) by a feeling of friendly cooperation, relaxed and full discussion, and admiration for both Seymour Lubetzky (who answered all challenges fully, patiently, and with an open mind) and Wyllis Wright (who chaired all meetings in a relaxed but firm manner). Everyone who was so moved had his say, and on each paper there was time for discussion until it wound down. The participation of Messrs. Chaplin and Sickmann, officers of IFLA's Working Group on Cataloging Principles, gave the group an added feeling of being part of something important and effective. And, through them, discovering that librarians in other countries were wrestling with the same problems was warming.

Though tempered by good will and reasonableness, there was, nevertheless, much sharp divergence of opinion and some criticism.

Two facets of the Institute itself were challenged. When asked if the proposed rules could not be taken up one by one, Mr. Wright explained that such a discussion would take much more than four days, that on many of the rules there appeared no disagreement, and that the Steering Committee had deliberately chosen the most controversial points to publicize the problems and to obtain wider assistance. When it was pointed out that the program was completely dominated by people from university and research libraries, the explanation was that the prospective user as originally selected by the Steering and the Code Revision committees was the "general research" library.

Again and again the second of Mr. Lubetzky's two basic "objectives" of the catalog came under fire. No one challenged the first ("to facilitate the location of a particular work"), but many felt that to hold rigidly to the second ("to relate and bring together the works of an author and the editions of a work") can result in tortured thinking, unrealistic goals, and overly-complex and detailed rules. Mr. Lubetzky, backed by the university librarians present, pleaded for strict adherence to this precept; feels he has built the entire structure of the revised Code on these principles and, further, without the second, he said, the catalog becomes chaotic. The public library people were among those who supported the idea of making the second objective subordinate to the first in case of conflict and in qualifying it by some such phrase as "so far as feasible," they

argued that service to a library's clientele was fundamental, and ease in locating individual titles was most important in some libraries and should be the goal even though it meant using multiple forms of entry in certain cases. The seeker of completeness would be taken care of by reference and history cards.

Probably no one present failed to feel that the Institute was highly successful, both individually and cooperatively. Each participant was broadened by learning about the work on the Code revision, by getting Mr. Lubetzky's reasoning behind the decisions, by realizing more fully the problems involved, and by exchanging experience, opinions, problems, and reactions. Although disagreement was often deep, much was talked through to solution; and work on the Code was unquestionably furthered.

C. *The Papers: Summaries, Comments, and Institute Discussion*

1. *Wyllis E. Wright: General Philosophy and Structure of the Code* 1—a. *Summary*

The new code is to be based logically and consistently on the general principle that the catalog is primarily a finding list with two functions: "to show whether the library has a particular book," and "to present what the library has by a given author." The new code can rest on this principle only if it disregards the old code, current practice, and the cost of changing to new practices.

The entry for an author, personal or corporate, should be detailed enough only to set that author apart from other authors; no additional information, such as the author's civil or ecclesiastical title, is needed. The shortest form of a name, personal or corporate, should be used; and subject, form, or title subdivisions of a corporate entry—e.g., "Laws, statutes, etc.," "Treaties," and Liturgy and ritual"—should be omitted. Title entry should begin with the first word not an article. Occasionally the code will have to use permissive or relativistic terms such as "may be entered" or "best known," but such phrases should be used with caution.

The rules aim at meeting the needs of the general research library. They will include also instructions for description and for cataloging certain special classes of material.

1—b. *Comment*

The second objective—here phrased "to present what the library has by a given author"—is less closely related to the finding list catalog than to the subject catalog or the classified catalog in which *groups* of books (rather than individual items) are sought because of the one thing—subject, form, author, what not?—which they have in common. Perhaps this fact suggests that the new code should, like Cutter's, also consider subject headings and, indeed, all aspects of the dictionary catalog in establishing its principles.

At least three additional topics may have deserved some consideration at the Institute:

(1) Rules for description. Although the LC code is based on general principles instead of being, like the "Red Book," a conglomeration of decisions to meet special cases, it is still rather detailed. The involved statements on imprint and on illustrative matter, for instance, could be drastically pruned and somewhat clarified. What will be the attitude of the new Code?

(2) Special classes of material. Can the two objectives suitable for printed books apply also to such things as maps and prints? Or would an entry more closely related to subject than to author be appropriate? Here again there may be reason for a more comprehensive code like Cutter's.

(3) Cost of change to new practices. Although such cost must be ignored in writing a new code, yet it is a practical problem. It is not too early to begin thinking of devices by which libraries could adapt to new rules. (The most drastic might be to start a brand new catalog under the new rules on a given date and allow all previously cataloged material to stand as it is.)

1—c. *Institute Discussion*

Mr. Wright's paper outlined objectives and decisions reached in relation to the revision of the Code. Two of his points which caused the most discussion were: (1) the planners have decided to prepare the best and clearest Code possible regardless of past practices, and (2) many rules are presented in the permissive mode ("May") because the only means of presenting rigid rules is to take one of two extremes: always follow the title page (chaotic results) or always get the legal name or form of name (prohibitive in time and cost).

To the first of these, many objected because of the expense of recataloging, the difficulties of teaching (old or new?), the lack of uniformity, and other "practical" problems. Many were won over to the stand of Wright, Lubetzky and others that we should get the best we could and then consider the practical problems of adopting. One comment was that something revolutionary (such as punched cards) might by then make the card catalog obsolete and the question academic. The same answers hold on international planning—rather than try to consider international implications on each rule, prepare the best for us to present and support in international meetings.

The discussion on permissive rules got into semantics: are "permissive" and "vague" synonymous? There is no quarrel between the practical and the philosophical since "philosophy is rationalizing the practical," etc. However, the consensus seemed to lean toward the definite wherever possible.

2. *Mary Darrah Herrick: Entry for Works of Single Authorship and Anonyma*

2—a. *Summary*

Because there are wide areas of agreement about personal authorship, discussion here is chiefly of pseudonyma and anonyma.

Study of various codes and the discussions of the Steering Committee suggest entry under the true name of the author with reference from pseudonyms. There may be entry under two names for the same author when two genres are involved, but subjective criteria such as "best known" or "easiest to find" should not affect the choice of entry.

We should give thought to problems of establishing the latest form of name; possible entry under family name for persons of title; and permissive rules for two or three "levels" of cataloging.

Consistent entry of both "classics" and other anonymous works under uniform title is both possible and valid. Objections have dwelt on such matters as conflict between spelling of the title page and uniform (preferably modern) spelling; entry under original language; the proposal to enter directly by name such legends as "King Arthur" rather than by distinctive part of the title ("Arthur"); and entry for parts of a cycle under its own title if the title is distinctive.

2—b. *Comment*

Here again is the problem of the second objective: "To relate and bring together the works of an author and the editions of a work." Entry under two forms of a name, even when two genres are involved, violates the principle. On the other hand, the second objective is the chief justification for uniform entry of all anonymous works.

Permissive rules for various types of libraries also violates the principle. Is it, then, a good objective only for large research libraries? If so, the permissive rules may be different indeed from those now being worked out. What objective will they substitute? Or will permissive rules be merely a batch of things the compilers will think fitter for the simpler sort of library users?

But who are these Great Unwashed, the Simpler Sort? Everybody. Even you and I. A specialist is a specialist only in his specialty. When he steps out of his specialty, he is only an average layman. The student of economic history, for instance, may want to look at an anonymous pamphlet attributed to DeFoe; or the physicist may want to relax with Ellery Queen. Neither man will know or care if anonymous and/or pseudonymous works are entered in the best way for a special library dealing with English literature or in the best way for a general public library. All that each will ask will be to *find* the book. And where will he look for the book? Probably in the very same large research library catalog in which he looks for books in his specialty.

Is the requirement several codes of varying complexity? Or is it one code based on the lowest common denominator? A special library dealing with only (say) chemistry might want some special rules. But a general research library—even a large general research library—cannot hope to meet the specialized needs of each specialist who consults it.

2—c. *Institute Discussion*

This brewed a lively debate over pseudonyms. The gauntlet was thrown down by the university people that the public libraries were down-grading scholarship; the challenge was picked up by spokesmen for the latter who made a strong plea for the use of pseudonyms, at least for current fiction. Public libraries cannot hold materials back long enough to establish real names (it sometimes takes years) and *they* think there is more important work than recataloging this type of writing every time a real name comes to light or a lady writer marries again. This is particularly so of large library systems with many catalogs; and with the mushrooming of centralized processing, this problem grows. Further, it is the pseudonym which is most used in requests, especially at the time the use is heaviest. Public libraries, of course, have a much more highly-developed discarding practice; and this lessens the need for too much agony over the situations which time will take care of.

It was suggested that current and retrospective cataloging presented different problems; perhaps this is the point of demarcation rather than alternative rules for different kinds of libraries.

In the discussion on anonyms, in general the idea of abolishing the distinction between anonymous classics and other anonymous works was approved. There was criticism of using the "original" title since it would sometimes be difficult to identify and sometimes result in long and unwieldy entries; many favored title page title with references from "uniform" title. The proposed change from inverted to direct form for uniform titles (King Arthur for Arthur, King) found no objections.

3. *F. Bernice Field: Serial Entry*

3—a. *Summary*

This paper was a study based on 44 questionnaires returned by 15 university libraries, 7 college libraries, 12 large public libraries, and 10 special libraries. Of these libraries, 1 makes entry under earliest title, 34 under latest title, and 7 under successive titles, while 2 have overlapping varieties.

In general, the conflict is between direct access from a citation to the title as cited, and access to the entire run of the serial; but both approaches seem to be needed. Entry under latest title supplied both kinds of information with much less work for the person who wants the entire run.

Recataloging is necessary with both latest title and successive title entries; and the successive title system means subject and added entry duplication. Catalogers are not agreed as to which is less work. Indexes and supplements are more easily cataloged under the latest title system. For serials entered under corporate authors, catalogers tend to use the successive corporate names.

In the new Code, preference should be given to that system which seems most practical for the largest number of libraries; but the other two systems should be included also as alternatives.

3—b. *Comment*

Here again we meet the conflict of the two objectives and the conclusion that both are necessary.

While it is true that latest title entry supplies both kinds of information with much less work for the person who wants the entire run of the serial, it is also true that latest title entry supplies access to the title as cited only *indirectly* and at definitely more work for the person who wants *that* kind of information. Moreover, we do not know how often, if ever, anyone except catalogers wants to know about the entire run of a serial.

With successive title entry what you do to the preceding title may be "recataloging," but it is not the same kind of "recataloging" needed with latest title entry. It is not impossible that successive title "recataloging" might be worked out somewhat more simply than appears in the sample entries in this paper.

How shall we find out what is the system most practical for the largest number of libraries?

And, even if we can find out, may we give this much weight to the personal preference of catalogers? Catalogers' ideas are so largely determined by (1) training in library schools, and in many schools this still means undue attention to details; (2) experience, and in general this means continued practice of what was the practice when the cataloger began work in the first years of his career; (3) the fact that the people vocal on this subject (or, at least, those vocal with a chance of being heard) are, in general, middle aged or older with set ideas. On the whole, this would seem to be substituting "convenience of the catalogers" for Cutter's "convenience of the public."

Nor can we give much weight to any existing study of the user. Even the latest, *Catalog Use Study*, gives curiously little help on what should or should not be the rules apart from suggesting (not necessarily on strong grounds) that the user is not much bothered by things as they are.

What is left is logic and the attempt to build a lucid statement based on specific objectives, such as Mr. Lubetzky is trying to do.

3—c. *Institute Discussion*

Miss Field selected from her paper a few points to start discussion: (1) The possibility of entering all serials under title. The massing of material under such words as "Bulletin" and "Proceedings" was pointed out, also the fact that to make these terms meaningful, words ("of the") which are not strictly title had to be forced into serving as such. It was reported that the Germans, long defenders of the title entry, were realizing that they would have to change, were only waiting to find the best way to change. (2) Latest title vs. first vs. successive. Only one library represented pleaded for first title, the Department of Agriculture library entering under the first where the serial was left until it ended, then cataloged fully in the light of its complete history. The practice of recording holdings on the catalog cards affected the amount of work necessary

for each practice, it was mentioned. It was not felt necessary to reclassify for each recataloging. There was, perhaps, a tendency to say that all three practices should be permitted in the Code with each library deciding how best to serve its users; thus the university or college library, whose serials were assumedly used most by specialists, favored keeping sets together and cataloging under the latest title; public libraries, who often do not classify serials, bind, shelve and catalog them under the title as issued since they have found that the majority of the use is via references from bibliography or index. To Miss Morsch's question, what, then, should LC do, one nodded-upon answer was that entry under the last title gave the full history in one place and thus supplied all of the information for libraries to use as they preferred.

(3) Subject entries for serials. If cataloged by title as issued, subject and added entry cards (and work) multiplied. This brought various suggestions: Why use subjects for serials? Why not depend on visible files or other listing for current serials with one cataloging after serial is ended? Why not use subject only for the latest title? It was pointed out that this gets into questions of administration rather than of the cataloging Code.

4. *M. Ruth MacDonald: Entry of Corporate Body under Successive Names*

4—a. *Summary*

Collections and catalogs have rapidly grown larger, more complex, and more costly; and the person who uses them wants a specific item as quickly as possible. Corporate entry must be worked out against this background.

Entry under the earliest form of name has one strong attribute: stability. This would be useful in publishing union lists and in cataloging in source. But it is inexact; for instance, the RTSD Cataloging and Classification Section would be entered under the pre-1940 ALA Cataloging Section. Moreover, it would cause trouble in claiming missing issues of publications.

Entry under latest form of name is always up to date. But it destroys stability; publishing union lists and recataloging in individual libraries would both be much too costly, and cataloging in source would be impossible. Finally, it also is inexact.

Entry under the form of name used at time of publication would be stable, up to date, and exact, with direct access to material as cited. It would not bring together the complete record of a corporate body's publications, but there is no evidence that users ever want such a record.

Entry under an arbitrary or symbolic name would be radical, but it would be stable, up to date, exact; and it would bring together all entries.

Entry in any of these four forms would require cross references.

4—b. *Comment*

Here the conflict of the two objectives is resolved by rejecting the second: "To relate and bring together the works of an author and the

editions of a work." There is, indeed, no evidence that users often, if ever, want such a record of corporate body publications. Moreover, as noted in the General Remarks on the Draft Code and the Stanford Papers, this is not so much outright rejection as modification for logical reasons.

The possibilities of the fourth form of entry (arbitrary or symbolic name) should be explored.

4—c. *Institute Discussion*

Miss MacDonald's study evoked specific questions of procedure. What, for instance, is done about a subject entry for a book about an institution covering its history through successive names? (Answer: history subject cards.) What is meant by arbitrary symbols? (Answer: number or abbreviations such as "Unesco" or coded letters such as employed in the *Union List of Serials* for the holding libraries.) How maintain the principle of keeping authors and editions of works together? (Answer: they are tied together by cross references and history cards.) How justify the use of successive names here when not permitting variant names of individuals? (Lubetzky answer: identity of an individual never changes; a corporation changing names may be assumed as signifying a change of identity.) What about different editions of a work issued by a body with different names? (Answer: Enter under latest with added entry for earlier or enter under title.)

Here, as in the preceding session on serials, a showing of hands revealed a majority in favor of a single entry under the latest form; on the call for a show of hands representing those libraries whose recataloging was up-to-date on these matters, none was visible! (Are we acting like ostriches?)

5. *Laura C. Colvin: Entry of All Institutions under Name rather than Place*

5—a. *Summary*

Cutter set the pattern of entry of a corporate body under name or under place depending on whether the name was distinctive or not. Separation of societies from institutions in the 1908 code became an elaborate and complex business by 1949. Psychological speculations about the reader's convenience was more important than consistency based on bibliographic principles.

The new Code proposes to enter corporate bodies generally only under name, with homonymous bodies distinguished by place name at the end of their headings. As with the old code, research will sometimes be needed to determine the exact form of the entry.

There is some controversy about possible concentration of entries under homonymous rather than geographical headings. A rough sampling of some 400 entries taken chiefly from the LC catalog shows a maximum of 40 entries under one place by the ALA rules and a maximum of 12 under one homonymous heading when the Lubetzky rules are applied. It may be that under the new rules more than 75 per cent of place name

entries will be for government publications (to be dealt with in a separate section).

Of alternatives to this principle perhaps the chief would be entry under place for non-distinctive names.

5—b. *Comment*

This sampling of entries seems pretty conclusive. If several thousands instead of hundreds were studied, the trend might not be so striking; but it would surely not be completely reversed. Certainly this is a much sounder approach than that of studies such as the *Catalog Use Study*.

5—c. *Institute Discussion*

Miss Colvin's comprehensive and thoughtful paper on this subject was thrown somewhat off balance by the fact that her critique was based on the first draft of the code revision, and Mr. Lubetzky's newer one, released just prior to the meeting, made considerable alteration here.

Although the discussion appeared to indicate growing approval of the principle of name rather than place, there was some pleading for exceptions, particularly in cases of generic and non-distinctive names. It was reported that European librarians were also leaning more and more to the use of name rather than place but not yet ready to say "never" to place. In opposition, Harry Dewey made an impassioned plea for retaining what he terms "inevitable association" place.

As to form of name, there was wider disagreement, some in favor of the vernacular where language is concerned, some for a translation; some favored "best known" or distinctive," others favored the form found on the work itself, others favored the official name—this last group included Mr. Lubetzky who quoted Panizzi to the effect that there is only one way to cite accurately, numerous ways to cite inaccurately. This brought objections, particularly from the public library group again, who cannot hold up cataloging to establish an official name which may be too new to be listed in any reference work, and who can't afford unlimited recataloging.

There was almost unanimous approval for treating societies and institutions in the same way.

6. *Susan Haskins: Problems of Subdivisions in the Entries for Corporate Bodies*

6—a. *Summary*

The approach to an entry should be as direct as possible and should require as little research as possible by the cataloger. In general this would mean to:

(1) Treat the division as an independent body if it has a self-sufficient name without research to determine if its function is also self-sufficient, or

(2) Enter a subdivision directly under the name of the larger body

omitting intervening divisions to which the subdivision may be attached, or

(3) Omit entirely the names of divisions and subdivisions if they simply express the activity of the main body and if the extent of the main body's material in the collection justifies the omission.

The principle of responsibility, like that of function, cannot be used economically in determining authorship because it involves too much research to determine responsibility.

6—b. *Comment*

In general this seems a sound approach. The first possibility, and perhaps the others to some extent, would ignore the second objective: "To relate and bring together the works of an author and the editions of a work." Miss Haskins meets this head-on: "But how often does the reader have any interest in the complete listing of a library's holdings of the Department of Commerce publications? This approach is frequent with respect to a personal author; but with works of corporate authorship the reader more often searches for a particular item" (p. 3).

6—c. *Institute Discussion*

These problems evoked considerable disagreement, and no little amount of word definition and pat phraseology. What is self-sufficient? What is a dependent body? How determine function or activity? What is distinctive? What is specific? Should hierarchy be emphasized or ignored? How determine hierarchy and how keep up with change caused by reorganization? What of an agency administratively functioning under one name and publishing under another? How define "affiliated" and "integral"? A plea was made to insure that terms implying subordination (as "division" and "committee") follow the name of the parent body; and it was pointed out that even these words can be used by independent bodies.

Mr. Lubetzky ruefully summed things up by saying that the problem of subdivision is one of the problems which continue to trouble him. He agreed with others that more work was needed on the function vs. name concept. He mentioned the possible solution (not previously mentioned) of entering everything directly, eliminating all show of hierarchy or organization. He said showing the whole hierarchy was the most definite but often became ridiculous (think of entering a Russian institution), required constant recataloging, and required more research. Skipping steps in the hierarchy is indefinite, and omission of the responsible subdivision could cause embarrassment, if not actual misrepresentation (example: the Ladies' Aid group of a Church publishing rules for Bingo parties to raise money).

The session ended with a straw vote showing that, although everyone agreed simplification of entry was needed, name and function both need consideration—at least, so far in the thinking.

7. *Arthur B. Berthold: Form Sub-headings under Government Bodies*

7—a. Summary

The form sub-headings *Charter, Constitution, Laws, Statutes, etc., Ordinances, and Treaties* are rejected because the rules call for entry under only author or title.

Constitution and *Charter* might be accepted as sub-headings because they are in effect stylized titles. But the others are only subject or form headings questionable on the grounds of logic and expediency.

7—b. Comment

The logic involved here is not too obvious. If it is wrong to bastardize an author entry with subject elements, how can it be right to bastardize it by introducing title elements? Neither entry is "pure."

But what is the fundamental reason for objection to subject elements? Apparently—although this is nowhere specifically stated—such elements would sometimes thwart the second objective: "To relate and bring together the works of an author and the editions of a work." This would, indeed, allow us to retain "Constitution" and "Charter." But they should not be sub-headings; instead, as in the Draft Code, they should come within parentheses at the head of the title.

If we insist on thorough-going application of logic in this area, then we must deal with the fact that the United States, for instance, is not the author of the Declaration of Independence or the Constitution, and that Annapolis is not the author of the charter and code of the city. Instead, "U. S." and "Annapolis" are, if anything, the subjects of these documents.

It is unfortunate that form sub-headings only under government bodies were considered. The conclusions might have rested on a broader base if sub-headings of other entries (e.g., *Liturgy and ritual*) had also been studied.

7—c. Institute Discussion

From the storm of reaction and the fuzziness of the thinking, this appeared to be the topic farthest from agreement; in fact it appeared to be one which few people have thought through to their own satisfaction. Those who do have firm opinions (e.g. Mr. Lubetzky and Werner Ellinger) are in stout disagreement. The exchange of Messrs. Ellinger and Lubetzky on "Non-Author Headings" (*Journal of Cataloging and Classification*, 10: 61-73; 147-155, 1954) and the Report of the Committee on Cataloging of the American Association of Law Libraries (*Law Library Journal*, 48:3-39) were recommended as background for understanding of the problems involved.

The meeting closed with assurances that the Code Committees would study the question further before making definite recommendations.

8. Joseph W. Rogers: *Miscellaneous Rules, including the Entries for Congresses, Conferences, etc.*

8—a. Summary

Problems created by the ALA rules included failure to provide clearly

for entry of a conference with no particular name or affiliation with a corporate body, and the need to identify a conference as itself an organized corporate body if it was to be considered an author.

The new rules provide in the first case for anonymous entry, and in the second case they remove the requirement that the conference be an organized corporate body.

There should be some reasonable basis, generally supplied in the work itself, for applying a name to a conference; otherwise even a non-distinctive title is a better choice for entry.

If a work is not entered under the name of the conference or under the title, responsibility for what is communicated should determine authorship. The general definition of corporate authorship in the new rules is, with respect to this matter of responsibility, too much concerned with differing categories of materials rather than with differing bibliographical situations.

8—b. *Comment*

The new rules are an improvement, but it can still take a long time to find the name of a conference unless we limit the search to the work in hand.

The comment on the general approach to corporate entry may be justified. But responsibility for what is communicated is not often clear without research, which costs time and money.

8-c. *Institute Discussion*

There was considerable dissatisfaction expressed over the section of the proposed Code dealing with corporate entries for vaguely-identified groups. It was felt that catalogers were encouraged herein to improvise too freely, that cooperative cataloging and union lists would suffer. Mr. Spalding said that the question of identifying corporate bodies was the greatest single problem to LC and cooperative cataloging. Many felt that the title of the publication, however complicated, was a firmer entry than plunging at a corporate name which may be differently phrased in various parts of the work. It was also pointed out that these put-together group names can offend the author-title concept as much as do form subdivisions.

9. *Andrew D. Osborn: International Aspects of Code Revision, the Long-standing Desire for Standardization*

9—a. *Summary*

International agreement on cataloging principles has in the past been halted by the Anglo-American insistence on corporate entry and the feeling on the part of users of the Prussian Instructions that our corporate entry rules lack directness and simplicity.

The goal of the IFLA conferences now being planned is not a universal code but agreement on a set of principles upon which national

codes can be based so that entries made in one country will be findable in another. Delay in the final statement of our own code until after this international agreement on principles is justified by such developments as the increasing use of BNB cards in this country and the world-wide prospects of cataloging in source. The international agreement should express the views of all nations, not simply the Anglo-American-German group.

A basic problem is the principle of entry. In general we have tended to entry by author or (if there is no author) by title. But in at least ten cases we have in practice departed from the principle of authorship—e.g., LC entry under the issuing body when it is not the author of the work. An IFLA suggestion is that responsibility be the criterion of authorship.

If we "think of heading as entry words [rather than as authors] we can control and adapt them to suit our practical library purposes." (p. 8) This is necessary for international standardization.

Filing rules were part of the Prussian Instructions and should be considered in any code.

9—b. *Comment*

This is a thought-provoking discussion. But where will this theory of headings as entry words rather than as authors lead? Out of the realm of logic into which Mr. Lubetzky has brought us and straight into Cutter's "convenience of the public" with an infinite variety of possibilities for every entry? What are "practical library purposes"? Every librarian has his own answer based on his own guess about the "public" he serves.

Filing rules are, indeed, quite important and should be considered with the Code.

9—c. *Institute Discussion*

This paper came as the Institute was breaking up, and both the attendance and discussion were sparse. And Mr. Osborn's not being able to attend meant less discussion of the paper itself.

Mr. Wright, on behalf of the Code Steering Committee, said that they hoped to be able to present to an international meeting a set of rules well thought out and thoroughly discussed yet not solidified in print. This means a delay of two years or more before publishing.

Several speakers agreed that international cooperation was most important even though it resulted in some delay; it was further pointed out that we were some distance away from completion and agreement among ourselves. It was suggested that further case studies would be helpful.

On behalf of the IFLA Working Group on Coordination, Mr. Chaplin spoke of the mutual advantages of the continuous exchange of thinking and progress between countries. Although pleased over the fact that many countries are studying cataloging problems, he also warned of the danger of too many divergent codes becoming solidified if the international meeting is delayed too long.

D. *Epilogue*, by Seymour Lubetzky

The partial draft code presented at Stanford was evolved in light of a searching examination of cataloging history and might perhaps best be understood in light of the results of this examination. This note will therefore attempt to epitomize some of the more general and basic observations made.

A study of the development of cataloging thought since Panizzi impresses one with what appears to be the essential nature of the problem which the various cataloging codes have sought to resolve. That problem seems to stem directly from the dual character of the material dispensed by a library, specifically the book—which is a finite and tangible item, identified by a certain author's name and by a certain title, but also the carrier of a potentially elusive intellectual work that may appear at various times and places under different author's names and under different titles. Obviously, in many or most cases, when an author is identified by one particular name and a work by one particular title, the dichotomy of the book is without practical significance for cataloging purposes. If the name and title are found in the catalog, the work is in the library; if not, the work is not there. But if a work has been issued under different author's names or under different titles, a person may look for it under a given name and title while the library has it under a different name or title. Thus the framers of cataloging rules were confronted with a fundamental issue—whether books representing the same work but bearing different author's names or different titles should be entered in the catalog under their respective names and titles as so many different books, or should all be entered in one certain way as the carriers of the same work. In the course of development of cataloging codes there is apparent an increasing recognition of the paramount importance of a book as a carrier of the work contained in it, and of the consequent importance to preserve the identity and unity of a work under the vicissitudes of the author's name and title by which it is identified. To accomplish this purpose it was determined that an author should be identified in the catalog by one particular name (his first name, last name, or any other one name) and a work by one particular title (as "Bible," "Nibelungenlied")—with references from the other names and titles by which the author or the work is identified and might be sought in the catalog. Eventually some of the references were replaced by *added* entries, and the main entry was to identify and name the author and the work so that the works of an author appeared in the catalog under the same author's name and the editions of a work under the same title.

These objectives (to facilitate the location of a *work*, not merely of a particular *book*, and to bring together the works of an author and the editions of a work—which are essentially two aspects of the same thing) and this method (of identifying an author by one particular name and a work by one particular title) can be traced in various cataloging codes where, however, they are not expressly or fully recognized and are not

regularly and consistently followed. In the draft code presented at Stanford the objectives and method are clarified at the outset and are then carried through regularly and consistently under varying bibliographical conditions, with such qualifications and modifications as circumstances are deemed to warrant. And that is, basically, where the draft code resembles, and where it differs from, Cutter's, the ALA, and other cataloging rules. The detailed differences in many of the individual rules are frequently the specific results of the general and consistent application of the objectives and method adopted.

Card Catalog Arrangement

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NOT LONG ago six people were questioned at the public catalog about the filing of the journal titles *GP* and *MD*. One knew the conventional filing rules. The other five said they would expect to find the titles filed as "General practice" and "Doctor of medicine" or "Medical doctor." Two took pains to inform the cataloger that this was the usual practice. They could not be called wrong because the abbreviation and the initials they most frequently encounter, *Gt. Brit. and U.S.*, are filed as if they were spelled out. But where do the five look when they use the telephone directory? The local directory files initials, as well as *U.S.*, according to library rules.

It is, of course, easier to locate information in the telephone directory than in the card catalog. To see the difference one needs only to visualize the telephone directory transferred to a card file or, in a real situation, to compare the use of the Library of Congress and the National Library of Medicine book catalogs and the *British National Bibliography* with one's own card catalog.

The reasons bear repeating. In the printed catalog the unit of attention or visual span is large in scope, two open pages. The user can run down columns of entries and grasp them in a glance; by leafing the pages he can comprehend a whole subject area in a few seconds, searching and relating the subdivisions, and can get a clear idea of the structure of the entries and the filing system. In the card catalog, on the other hand, the unit of attention is the single card, one entry at a time. The user must finger his way through hundreds of cards, hunting out the hidden entries. Guide cards, unless there is one for each heading, serve only as signals; if there is one for each heading, they can also become physical obstacles to be moved in space.

This means that the card catalog must have a finding mechanism suitable to the medium and logically intelligible that will guide the user through the conceptual forest. It has not in the past been simply a mat-

ter of alphabetizing. Traditionally the arrangement is upon a grouped or "classed" basis.

Because of the large visual span group filing arrangements have proved workable in the printed catalog. The index to the Montgomery Ward classed catalog, for instance, presents with every two open pages a visual range of sixteen columns. The subject arrangement is basically a class-itemized one. Plural headings representing a general class of merchandise file first out of strict alphabetic order and are followed by inverted headings, phrase headings, and conjunctive headings. An abridged example illustrates this pattern in part.

Office supplies

Oils

Auto, Truck, Tractor

Baby

Cod Liver

Outboard Motor

Transmission, Auto

Oil Breathers

Oil Filters, Auto, Truck, Tractor

Oil Filter Cartridge

Oil Stove

Oilers

Flexible Spout

Mowing Machine

Pressure

Top Motor

Oleum Perco-morphum

As can be seen, the large page-inclusiveness and the eye-directing typography make the alphabetic order a secondary scanning device. The Alphabetical Section of the *BNB* has also the advantage of many headings to a page. A two-page span of six columns includes an average of 320 entries. The arrangement is as follows: personal names, subject headings (bias phrase, hierarchal, and phrase headings in different alphabets), governmental corporate entries, and, in one alphabet, title and private corporate entries. The terms *France* and *Kent* file in four alphabets. In contrast to the *BNB* the LC and NLM printed catalogs have a much smaller visual span because of the reproduction of full-entry cards under each heading. It should be remembered, too, that these catalogs are functionally divided. If the two parts were united and title and series added entries interfiled, they would offer, even though to a lesser degree, the same difficulties in use that are found in the dictionary card catalog.

Not one of these catalogs follows the alphabetic dictionary arrangement as it is usually understood or is exemplified in the telephone directory. Each is multi-alphabetical according to type of entry. The arrange-

ment is determined therefore by the entry-unit rather than by the order of the alphabet. While this method derives from Cutter's dogma, its survival appears to be due to a conflict between the two principles that have governed the "dictionary" catalog pattern. These are, of course, the alphabetic principle and the principle of congruity. The first, inherent in the theory of the dictionary catalog, has been formulated in the rule to file according to the order of the English alphabet, preferably word by word. In the author catalog the second principle requires that the works of an author, personal or corporate, be arranged alphabetically in one file. It is based upon the fact of personal authorship or upon the interpretation of the issuing body as the author. In the subject catalog congruity traditionally means filing the headings in different alphabets according to the forms of entry. When the two principles conflict the alphabetic one is jettisoned, and alphabets breed within alphabets.

Hence the outcry in the 40's against the complexity of the dictionary card catalog. To relieve the pressure libraries have divided the catalog (that is, two separate catalogs instead of two in one), modified the subject-heading structure, and "simplified" the filing. All of these methods have proved successful in so far as they have effect upon the real difficulty. In *Documentation in Action*, S. N. Alexander makes a useful distinction: "The machines have a high scanning rate but have a relatively low discriminating power for any one examination of a record; the human has a low scanning rate and a high discriminating and correlating capability." The only scanning mechanism in the dictionary catalog is the alphabetic arrangement. The scanning rate is low in the card catalog, much lower than that of the printed page, and when the arrangement is complicated for the sake of congruity the scanning rate decreases further. But the question is: Need there be a conflict between congruity (that is, the entry unit) and alphabetic arrangement?

In the author-title part of the catalog any conflict is, of course, inexcusable because this catalog is constructed upon the principle of no-conflict. Yet conflicts can occur in corporate entries, a notorious instance being the following:

National Research Council
National Research Council, Canada
National Research Council of Japan

If the catalog is filed alphabetically *National Research Council, Canada* files between *National Research Council. Advisory Committee on Artificial Limbs* and *National Research Council. Committee on Dental Health* and violates the principle of congruity which keeps together in one sequence all the works of a corporate body and its subdivisions. The remedy is simple:

National Research Council (Canada)
National Research Council (Japan)
National Research Council (U. S.)

Taking liberties with the title-page forms of names is standard practice. All that needs to be done is to recognize the new principle of no-conflict and to incorporate it into the code for the construction of author entries.

Remedies in the subject catalog have been drastic. The reasons are that form takes precedence over substance in this catalog and that there is no systematic method for subject analysis. The types of headings give evidence: they have no names except form designations. That they do express subject relationships relative to the classification is plain, but the reasoning behind the differentiated forms and the choice of any one is obscure. The LC heading NERVOUS SYSTEM—PHYSIOLOGY, when analyzed for instance, is with reference to the LC classification a specific-to-general chain, as is the BNB NERVOUS SYSTEM: PHYSIOLOGY: MEDICINE with reference to Dewey, and might be expected to take the form NERVOUS SYSTEM (PHYSIOLOGY) by analogy with a heading like INSURANCE, SOCIAL (INTERNATIONAL LAW); whereas the same heading in the NLM list is with reference to the NLM classification a general-to-specific chain and is a true subdivided heading in this case, if that is what is meant by "subdivision." What are the ordinal values of the dash, the comma, and the parenthesis? If it is true that the headings are modes without substantive distinction, they are then logically redundant. This could be one of the sources of complexity in the subject catalog, the other being the intractable language forms inherent in an alphabetic-order "classification."

Form groupings within an alphabetic system introduce an artificially classed arrangement. The conventional number of separate groups is five: headings with form and subject subdivisions, headings with geographical subdivisions, headings followed by words in parentheses (called "definition" headings), inverted or indirect headings, and direct phrase headings. Since the choice of any one heading is unpredictable (so far as we know at present), the user must be alert to the complexity and the possible alternatives, as well as to the filing of prefixes, hyphenated words, initials, and other language forms. To resolve the predicament and to guide the user through the alphabetic labyrinth several methods have been adopted by libraries, two of which can be observed in the printed catalogs.

The first is to insert scanning cross-references at all accessible points. This is the LC device for switching the user to the various alphabetic sequences. WATER—CONSERVATION *see* WATER CONSERVATION, WATER POLLUTION *see* WATER—POLLUTION, SUB-CONTRACTING *see* SUBCONTRACTING. In addition to the *see* references LC also uses *see also* scanning references, as INSURANCE *see also* INSURANCE POLICIES as well as INSURANCE—POLICIES *see* INSURANCE POLICIES and STORES, RETAIL *see also* STORE LOCATION though not also STORES, RETAIL—LOCATION *see* STORE LOCATION. A good illustration of this practice can be found under DOMICILE with its *see alsos* to the flabby prepositional phrase headings that follow in a second alphabetic sequence.

Turning to the NLM book catalog, one is struck by the complete absence of scanning references. NLM has taken the first step toward "simplification." The comma has been dropped and replaced by the dash, and the inverted headings are interfiled with the headings that were derived

through chain procedure from the classification. This is logical because the inverted headings always express or reveal a class relationship. There are then two straight alphabets, the dash or alphabetic classed one and the phrase one. The interesting thing is that many of the headings in each alphabet are interchangeable and that NLM has actually moved some from the first alphabet to the second, as BLOOD CIRCULATION, BLOOD COAGULATION, BLOOD SEDIMENTATION. The idea behind the system appears to be that the reader will learn through use of the catalog to look in the alternative file when he guesses wrong on the first one. In the printed catalog it works very well indeed.

In 1930 Mann noted the tendency to get away from the Cutter rules for filing which were "evidently borrowed from the classified catalog," and to adopt a more nearly alphabetic arrangement. In recent years, judging by reports in the literature, more and more libraries have gone over to the alphabetic word-by-word filing of the telephone directory that ignores the subject-heading forms. There has been no adverse reaction from users. No matter what system is followed for an alphabetic classification the reader has to jump irrelevant headings as he searches a subject area and picks out those that may be relevant to his purpose. Beyond this common drawback the strict alphabetic arrangement with its orderly precision has the advantage of being intelligible.

There is nothing alien to language or to thinking in the method. The choice of any term represents an act of classification. "Classification is one of the fundamental features of human speech," as Allen Kent points out: "The very act of denomination depends on a process of classification." This is more obvious when we combine two or more terms or concepts to form new concepts or to express conceptual relationships. It makes no difference in the catalog whether the word structures are "natural"—that is, phrases already in use in everyday speech—or new formula-like combinations derived through the classification act to specify the subject content of the book. The combination is typical of language and conventionally acceptable. Old English and German habitually combine words to express new concepts; modern English, when it does not coin a new word or borrow from a foreign language, vacillates between the single compound word, the hyphenated word, and the phrase. WATER—ANALYSIS; WATER BIRDS; WATER—POLLUTION; WATER POLLUTION: INDUSTRIAL WASTES: SANITARY ENGINEERING; WATER PUMPS, AUTO, TRUCK; WATER-SUPPLY ENGINEERING; WATER SUPPLY—RURAL are for the purposes of subject finding lists and indexes syntactically correct and are no more incongruous than the list of terms in a dictionary.

The order of the alphabet is inexorable. That was the mechanical advantage librarians saw when they rejected the systematic catalog for the quick-reference finding list. Theoretically the dictionary catalog should be as easy to use as any language or subject dictionary; but the graft of non-sequitur forms without the typographical guidance available in printed catalogs and dictionaries disarranges the advertised order and justifies the *Manchester Guardian* editor's belief that the cards "are ar-

ranged in some queer Yankee philosophical system to provide the maximum mystification." For the mystifying system there must, however, be a historical hypothesis. Having scrapped the classed catalog, Cutter and his school were faced with alternatives they could not accept—the strict alphabetic arrangement because of class incongruities that unavoidably arise and the alphabetico-classed catalog because of antipathy for an open classed order. Their product was a neither-this-nor-that compromise in communication that has become structurally misleading and meaningless. Each age has its own architecture.

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New Serial Titles*

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New Serial Titles, as it is today, is a response to two needs—a listing of current serials which can provide a basic selection and reference aid concerning newly-published serial titles, and a union list giving bibliographic information and showing the location of serials.

In 1950, a plan was conceived at the Library of Congress for putting the Library's records of serial holdings on punched cards and for listing and reproducing this information for display in various parts of the Library. Once this was done, it was thought that it would be possible to plan for the creation of a union catalog of serials on punched cards and the reproduction of union lists based on this catalog.

Since then, the Joint Committee on the Union list of Serials has discussed and considered the union list problem at its meetings, and a special study was made for the Committee early in 1957. Matters given continued attention have been the scope of the information to be gathered, the arrangement of the entries and the needed approaches to the catalog, the extent of holdings information, and methods of gathering and compiling the

* Revision of a paper presented at the meeting of the Serials Section, RTSD, San Francisco, American Library Association, July 17, 1958.

information to go into the catalog and the publications based on the catalog.

When *Serial Titles Newly Received* was first issued by the Library of Congress in 1951, its compilation was based on the punched card system which was part of the original plan. This provided a means of experimenting with the coding, punching, and printing processes inherent in the punched card method. In July, 1952, the scope of the publication was expanded to include serials newly acquired by the New York Public Library, and the first step was taken toward making the publication a union list as well as a source of information about new serials.

In 1953 the publication became *New Serial Titles*, and the H. W. Wilson Company published the second supplement to the *Union List of Serials*, announcing that they would publish no further supplements. Libraries which had reported to the *Union List of Serials* were urged to cooperate in the new venture by reporting their holdings in order to provide union list control for serials too recently published to be covered by previously published union lists. As a corollary action, it was decided to exclude serials first published before 1950 from the scope of *NST*. Like *Serial Titles Newly Received*, *NST* included certain types of publications such as government documents, serial publications of international conferences and congresses, and administrative reports, all of which had been excluded from the *ULS*. In 1954 the Library acquired improved punched card tabulating equipment and cards were re-punched. Entries which required it were edited to conform to a decision to return to ALA rules of entry for the Serial Record and for *NST*.

By the end of 1953, 102 libraries were reporting holdings; today there are about 300 participating libraries. Through a special arrangement with the Canadian National Library, the coverage of Canadian libraries was expanded and continues today.

An indication of the growth of *NST* and of the development of its union list functions can be found in the "vital" statistics of the last three cumulations. The 1955 volume contained close to 36,000 titles with an estimated 64,000 locations. In the 1956 annual volume, which incorporated the results of the checking of earlier receipts by many libraries, there were 24,596 titles with 103,565 locations. There were two titles with 100 or more locations that year. The 1957 annual volume listed 38,435 titles with 145,895 locations.

In 1955 and 1956 a number of libraries undertook the checking of the 1954 or 1955 annual cumulations in order to complete *NST* coverage of their acquisition of post-1949 serials. Some unbound copies of the 1957 annual volume are now available if there are other contributing libraries that would like to check a copy in order to show additional locations of *NST* titles and to make their reporting of post-1949 titles complete.

A separate section showing changes such as changes in title, cessations, and mergers for all serials, regardless of beginning date of publication, was added in 1955.

The same year, after two experimental issues had been published, the

publication of *New Serial Titles-Classed Subject Arrangement* began. The same entries which appear in the corresponding alphabetical arrangement are listed in these subject issues in classed subject arrangement. By taking apart the various subject sections, it is possible to have several people review an issue for acquisitions or reference purposes at one time. There is no annual cumulation of the classed subject issues.

A pattern of cumulation gradually evolved in accordance with the recommendations of the Joint Committee on the Union List of Serials. Monthly issues and annual cumulations, which went back to the earliest issues of *Serial Titles Newly Received*, were issued through 1955. A decision was then made to close off the first series of cumulations with that year and to start a second series of cumulations in 1956. Since this decision was not made until after the 1955 volume was printed, no allowance could be made for its being the last volume in a series and it seems to be rapidly becoming an "o.p." item, at least around the Library, where it has even been necessary to salvage some of the unbound copies returned by libraries which had checked their holdings. It is expected that in 1960 there will be a cumulation which will cover the ten preceding years. A number of titles have been and continue to be transferred from the first series of cumulations to the second in order to display additional holding and significant title changes. In making a search for a title it is necessary to search the latest available cumulation in the first and second series. It is a good idea to check the latest volume first, for it is possible that referral to the earlier series volume may not be necessary.

One of the groups represented on the Joint Committee on the Union List of Serials, which serves as a "board of directors" for *NST*, is the Association of Southeastern Research Libraries. Since the holdings of these libraries were not well covered in the *ULS*, this group was anxious to achieve bibliographical control of their serial holdings. In order to do this, they decided to compile a regional supplement to the *ULS* covering earlier serials and to make *NST* their means of inventorying post-1949 serials. Libraries in the area checked copies of the 1954 or 1955 annual cumulations and these holdings were published in the 1956 annual cumulation of *NST*. According to recent issues of the *Newsletters* of the Southeastern Interlibrary Research Facility, there has been good reporting for the forthcoming Southeastern supplement to the *ULS*.

By a process of trial and error, the editorial and punched card problems of *NST* are gradually being solved. A changeover in tabulating equipment required the re-punching of all cards in 1954, and corrections and changes in entries are made as they are discovered or reported. With more libraries participating in this cooperative effort, the *NST* Section of LC's Serial Record Division is becoming dependent upon these participating libraries for a larger share of the content of the individual issues of *NST*. The Library of Congress is both aware and appreciative of the part played by reporting libraries in making *NST* a better and more useful publication.

Because punched cards are used, the compilation of *NST* has become a

proving ground for the application of mechanical methods to bibliographic work. Mechanical methods are used in reproducing sets of cards for the secondary files, in the arrangement of the classed subject issue, and in preparing printers' copy; but the potentialities of mechanical methods are not being fully exploited at the present time. Since all entries are coded for country and language of imprint as well as by subject, there are many possibilities of selecting, listing, and reproducing serial titles (in card or list form).

Subjects are expressed in Dewey Decimal classification numbers, taken for the most part from the Third Summary. Only two digits beyond the decimal point are used, and ordinarily no more than two subjects are assigned to a title. When more than one subject is assigned, an extra set of punched cards must be made for the classed subject issue.

The library symbols are the same as those used in the National Union Catalog with one slight variation. Since the punched cards do not allow the printing of upper and lower case letters, it was necessary to use a space instead of a capital letter to indicate separate elements in the library symbols and permit arrangement in state groups. For example, libraries from the states of Illinois, Iowa, Idaho, and Indiana would all be interfiled if no space were left to set apart the state symbols of "I," "Ia," "Id" and "In" from the rest of the symbol. In cases where there has been conflict between *ULS* and National Union Catalog symbols, the National Union Catalog symbol is followed and a reference is made from the *ULS* symbol. Since there has been some variations in symbols, the list of participating libraries in *NST* itself serves as the definitive key to symbols.

Reports on post-1949 serials are received daily, and a record of their receipt is made in order to provide a measure of the amount of work on hand and of the reporting activity of participating libraries. Groups of reports are than alphabetized and searched in the *NST* control file. If a title is already there, the report slip represents an additional location which must be tabbed and clipped to the title so that a holding card can be punched and added to the entry in readiness for the next printing of the entry. If it is a new title, the Assistant Editors examine and analyze the entry and add the subject classification number and the country and language code numbers. Since each report has to be editorially compatible with reports coming from many sources and representing the choice of many different catalogers, it is sometimes necessary to change entries or to make a choice of entry when a title is reported under different headings and titles. The same problem exists at the Library of Congress when a cataloger in the Descriptive Cataloging Division sets up an entry in a way different from the one followed by the Serial Record Division. When this happens, the *NST* entry is changed to agree with the LC printed card, and the necessary cross references are made.

After the Assistant Editor has completed his work, the report slip is sent "across the street" to the Library's Tabulating Office. There the report is converted into the required number of punched cards and the cards are verified. Since many of the entries are in foreign languages, a

tabulated listing of the cards is also carefully read by the NST Section. After all the entries for an issue have been edited and cards punched, the sets of cards are interfiled and the entries are listed on plain white sheets which are used for copy for photo-off-set reproduction.

The pages are prepared by using masking tape and mounting the strips bearing the tabulated listing on pre-printed sheets. After initial headings and page numbers have been added, the pages are ready to be sent to the Government Printing Office.

With its coverage of post-1949 serials, NST serves as a continuing and growing supplement to the ULS. It is also building up a potential nucleus for a national union catalog of serials such as the one planned by the Joint Committee on the Union List of Serials and described in the Committee's report, *A Permanent Program for a Union List of Serials*.

REGIONAL GROUPS

EDITH SCOTT

Chairman, Council of Regional Groups

"Cooperation and Communication," the theme of the SOUTHEASTERN REGIONAL GROUP OF CATALOGERS meeting is also a felicitous description of total Regional Group activity.

Perhaps the most immediate objective of the Regional Groups is the communication or sharing of information. The importance of the *Code of Cataloging Rules* discussed at the Stanford Institute on Cataloging Code Revision insured further discussion at the Group level by members who were present at the Institute. The ILLINOIS LIBRARY CATALOGERS' SECTION heard Kathryn Luther Henderson (McCormick Theological Seminary) on entry for works of single authorship and anonymity and entry of all institutions under name rather than place. Arnold H. Trotier (University of Illinois) selected some of the most significant, including the most controversial, revisions for summary and comment. Approximately fifty members of the Group were thus able to acquire from these two well-organized and clearly stated papers a better acquaintance with the major problem areas in catalog code revision.

The discussion at the MOUNTAIN PLAINS REGIONAL GROUP was led by Pauline A. Seely (Denver Public). The Institute *Working Papers* on three of the major changes proposed, (entries for pseudonyms, corporate bodies, and serials), were summarized by Robert Trefz and Florence Wilson (both from Denver Public) and Lillian Cooper (University of Colorado) respectively. The OKLAHOMA REGIONAL GROUP held a one-day study session with Edmon Low and Alice Phelps Pattee (both Oklahoma State) and Edith Scott (University of Oklahoma) serving as communicators. Here, too, major revisions were the topics of discussion. Gertrude Oellrich (Newark Public) summarized informally highlights of the *Code* and Institute for the NEW JERSEY Group. Frances Lubovitz (Yale) reported on the Institute to the CONNECTICUT Group.

The MARYLAND, VIRGINIA, AND DISTRICT OF COLUMBIA REGIONAL GROUP included the Stanford Institute as part of a panel appropriately titled "What's New?" Catalog code revision is old as contrasted with closed-circuit television for library applications, the experiment at the University of Virginia reported by Roger P. Bristol. Esther J. Piercy (Enoch Pratt) brought members up-to-date on cataloging-in-source for which she is conducting a survey of consumer reaction. Recent developments in transliteration standards recounted by C. S. Spalding (LC) rounded out the panel presentation of cooperative efforts in progress, almost all of which have promise of further cooperation, nationally and internationally.

Dewey Decimal Classification, Edition 16, is the other "news" of the Fall meetings, so new that only the MICHIGAN REGIONAL GROUP was able, through Benjamin A. Custer as guest speaker, to give its full meeting to "Dewey Moves Forward."

Cooperation in centralized processing is receiving new appreciation and is expanding in new directions. "Centralized Cataloging for the School Library?" received unanimous approval from a panel of school librarians at the WISCONSIN Group meeting. Marcella Slocum (Wisconsin Dells H. S.), Sylvia Nicholson (Wilbur Wright Jr. H. S., Milwaukee), Barbara Bartley (Columbus H. S.), Lois Blau (East H. S., Madison) and Joann Boggs (Racine) were representative of teacher-librarians, librarians in school systems with centralized cataloging, as well as those without centralization and with varying amounts of clerical assistance.

The first year's operation of the Southwest Missouri Library Service, Inc., was described for the KANSAS Group by its president, Willard K. Dennis. Mr. Dennis predicts that "The small to medium-sized library which is not in a cooperative of this type will discover in time that it has become 'Too Soon Oldt and Too Late Schmartd.'" The Public Library and Trustees Sections of the Kansas Library Association joined the Catalogers' Section for this meeting.

Cooperation becomes a necessity in an area where other specialized interests overlap, e.g. Serials. A paper on the basics of "Serial Processing" by F. Bernice Field (Yale) was the first of a series planned by the BOSTON REGIONAL GROUP. The projected plan for the *Union List of Serials* was among the topics receiving emphasis in the discussion which followed. The NORTHERN CALIFORNIA Group also explored a topic requiring cooperation: "Discarding, A Basic Need in Acquisitions." Dorothy Keller (University of California) was moderator of the panel.

The ONTARIO REGIONAL GROUP and the Reference Workshop met together for a program on "Canada's History in Pictures," a slide show of early prints presented with commentary by F. St. George Spendlove, Curator of the Sigmund Samuel Canadiana Collections, Royal Ontario Museum. The NORTHERN OHIO CATALOGERS met in the Maumee and Lucas County Library. A brief history of that Library was included in the program, and Kathryn Moorehead then spoke on "American Folk Heroes."

New procedures and techniques are favored by the Groups on both the formal program level and in informal conversation at Group meetings. Marion Phillips (Minneapolis Public), in presenting the plans for the new Minneapolis Public Library building to the TWIN CITIES GROUP, sparked a lively discussion on methods of card reproduction for the new catalogs which will be required for the newly-created public service divisions in the new building. "Problems of Phono-Records" was the subject of a panel (Harriet Nicewanger, Music Library, University of California, moderator) for the cataloging session of the NORTHERN CALIFORNIA Group.

Our organized means of cooperation and communication, the Resources and Technical Services Division, was described by its President, F. Bernice Field, for the MARYLAND, VIRGINIA, AND DISTRICT OF COLUMBIA Group. Mrs. Mahoney (ALA-RTSD) brought news of current RTSD activities to the ILLINOIS Group.

These are only the highlights of the fifteen Group meetings held since the last report. The interest indicated by the attendance of more than 900 librarians and trustees was warranted by the significance of the program content of the meetings. To this gain in information Regional Group members may add those intangible benefits derived from participation in the Groups.

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Cataloging in Source Seeks Answers

THE Library of Congress, under a grant from the Council on Library Resources, Inc., is currently running an experiment in supplying cataloging information to be printed within books themselves. During the year of the experiment (July 1958—June 1959) cataloging information is appearing in over 1000 titles being published by trade, religious, government, university, and society publishers.

As part of this testing project, the Library is eager to receive as much information as possible as to the reaction on the proposal. How would libraries use this information if it were generally available and what effect would it have on their procedures and on their organization? Some 200 libraries of various sizes and kinds and locations have been selected for depth interviews by consultants working for LC on a Consumer Reaction Survey, but voluntary expressions are being sought from all interested libraries. Librarians are urged to write to the address below summarizing the reactions of their professional staffs to the ideas following.

It is hoped that books carrying their own cataloging information (being cataloged in source) would help libraries and their users by a) getting new books to users faster, b) cutting the present high cost of cataloging, and c) providing greater standardization in the identification of books. With these goals in mind, what would Cataloging in Source mean to your library? Might it:

- 1) Affect your library's ordering procedures, book selection, reference, or bibliographical work, particularly if bibliographic publishers and all libraries used the same form of author and title entry)?
- 2) Affect your library's method of obtaining and preparing catalog cards?
- 3) Simplify or complicate your library's work?
- 4) Eliminate equipment or create need for new equipment?
- 5) Affect inter-library relationships such as library systems, centralized or cooperative cataloging or processing, library deposits, interlibrary loans, union catalogs?

For the sake of greater bibliographical standardization, would you be willing to adopt the LC form of author and title entries? Always, or with specific exceptions?

You are urged to get your opinions on record by sending them (favorable or unfavorable) to the Director of this CIS Consumer Reaction Survey:

Miss Esther J. Piercy
Enoch Pratt Free Library
Baltimore 1, Maryland

REVIEWS

Jackson, Sidney L. *Catalog Use Study*; ed. by Vaclav Mostecky. A.L.A., 1958. 86p. \$2.25

Since about 1930 there has been increasing criticism of card catalogs. This period has also seen increased activity in studying catalog use, because we have not really known the demands made on the catalog and the effectiveness of the catalog in meeting these demands. Approximately 30 surveys have been made, but these have been limited to the use of the catalog in individual institutions and to securing varying kinds of information. These previous studies cannot claim general applicability—the body of uniform data accumulated was not large enough to be considered representative.

In 1954, with work commencing on a thorough revision of the catalog code, the need for information on the use of the catalog and a statement of the function of the catalog became especially important. A project for a large-scale survey of the use of the catalog was initiated by the Board on Cataloging Policy and Research of the ALA Division of Cataloging and Classification and carried out in 1955-56 with the aid of a \$1000 grant from the Norman Bassett Foundation and \$1000 from the United States Steel Foundation (the latter made available to the study by the Association of College and Reference Libraries). Dr. Sidney L. Jackson, a cataloger at the Brooklyn Public Library, served as director of the study and author of the overall report which is embodied in *Catalog Use Study*.

Thirty-nine libraries participated in the project, all located in the triangle between Washington, D. C., Detroit, and Boston. These libraries ranged in size from extremely large research libraries to small high school libraries.

Categories and the number of each were as follows: large research—2; college and university—15, divided into four size groups; large city central public—3; small city public—2; public branches—5; special purpose—6; high school—6. Since two thirds of the co-operating libraries were those of educational institutions it would seem that public libraries were not adequately represented in proportion to their total number. However, no attempt was made to secure a scientifically representative sampling, largely for practical reasons.

The data were obtained by means of interviews, with a questionnaire to be filled out by the interviewer for each patron interviewed. Here again there was no scientific sample, but it was not the purpose of this study to discover an overall pattern of library use. The choice of interviewees was left up to the interviewers, with the recommendation that they try to include a variety of types representative of the clientele of their libraries, the only requirement being that one interviewee in each 15 must be a library staff member. Each library supplied 15 interviews a week for a period of 12 weeks. A total of 5,494 interview reports are included in the study. The information on the report forms was recorded on punch cards, sorted, and analyzed with IBM equipment.

Since the primary purpose of the survey was to learn facts about the use of the catalog by the public, the basic pattern in the interview procedure was to observe the patron unaided at the catalog. Assistance was given by the librarian only if obviously expected or needed. Thirty-one per cent of the patrons interviewed sought help at some point in their search, particularly in matters involv-

ing subject headings; the number of cases where staff help was volunteered was not recorded.

Information was obtained on factors which might affect the patron's success in use of the catalog, such as size of the catalog, the filing rules used (although designation of use of *A.L.A. Rules for Filing Catalog Cards* reveals practically nothing since it includes so many alternatives), the patron's previous experience with the same catalog, his knowledge of the subject he was seeking, and the source of his information. Conclusions reached strongly support previously-expressed views that the size of the catalog is an important factor in its efficiency. Previous experience with the catalog also was a decisive factor in successful use; and in general the patrons lacking experience were the more likely to consult the staff. Incorrect or incomplete information on the part of the patron, rather than deficiencies in the catalog, appeared to be the leading cause of delay and failure in most libraries.

The type of material sought in the catalogs was almost evenly divided between known items and subjects, 48 per cent of the searches being for known items, 52 per cent for subjects. Corroborating previous opinion, the returns showed that graduate students somewhat, and faculty members in clear majority, sought known items more often than subject information. On the other hand, the returns from public libraries included more Subject Searches than Known-Item Searches.

Catalogers will be vitally interested in the findings of this study as they pertain to the catalog itself. As catalogers, we can be pleased, but not entirely complacent, to learn that close to 83 per cent, and not under 67 per cent, of the searches for known items in the card catalog were successful. Half of the failures were, reportedly, due to the item not being in the catalog. Hence, the range of 67 to 83 per

cent for successes is based on the total number of failures, 33 per cent, and the number as adjusted to allow for the items not in the catalog—in only 17 per cent of the cases did the patron fail to find the appropriate cards even though they were in the catalog. The effectiveness of the catalog for subject searches was even higher, between 80 and 87 per cent, although it was noted that in a number of instances the patron apparently did not locate the most appropriate subject heading and so missed the best material. It was not possible to give an absolute figure for the degree of success because there is no certainty that the patron was always correct when he reported that the item or subject he was seeking was not in the catalog. Analysis showed that in many instances the material was finally located with a librarian's assistance; how many did not find entries that were in the catalog because they did not ask for help? Although the interviewer frequently verified the patron's statement, this was not required and was not always done; also, there is the possibility that even the librarian may not have been able to find material that actually was in the catalog. This is a serious limitation in the study—these failures may be just the ones we need to know most about.

This study contains a wealth of findings and recommendations about the catalog that are of interest to catalogers. To mention only a few: the patron was least successful in subject searches in the fields of Education and Literature and most successful in Technology and Biography, thus verifying the familiar hypothesis that the alphabetical subject heading system works best in searches for names and specific physical things, that it is less effective where the terminology is abstract or conceptual; the selection of books under a subject heading was primarily by connotation of title and subtitle, recent publication date, and the fact that the book was in the English lan-

guage, giving rise to recommendations for serious consideration of chronological rather than alphabetical filing of subject cards, and selective cataloging of older and foreign language books; cross references are very important—those in the catalog were usually found and used, more would have been helpful, and in several cases a reference from the specific to the general would have saved the day; Metropolitan-Branch catalogs pose many problems, especially in regard to subjects.

It is particularly significant to note that the major, general findings of this large-scale survey conform very closely with the major findings of the previous individual studies of catalog use as summarized by Carlyle Frarey in 1952. ("Studies of Use of the Subject Catalog: Summary and Evaluation." In Tauber, M. F., ed., *The Subject Analysis of Library Materials*. New York, Columbia University School of Library Service, 1953. p. 147-166.) Apparently we are arriving at some valid conclusions. In fact, it is claimed that the findings of this study provide an objective, quantitative standard by which the performance of any catalog serving an adult collection of 40,000 volumes or more, or a high school catalog, may be measured. However, the present study identifies many specific areas which it did not cover adequately and problems on which more refined research is needed.

The results of the study in relation to catalog code revision are disappointing. Information on specific problems that need study, such as pseudonyms, corporate entries, place or name entry, will not be found here. Further detailed analyses of the interview reports may yield some pertinent data. The general conclusion of the study was that cataloging practices have little to do with the patron's difficulties with known items; although the *A.L.A. Cataloging Rules for Author and Title Entries* troubles many

librarians, its application by and large suits the patron. As long as the catalog provides adequate name and title added entries and SEE references from alternative forms of the author's name, the reader will locate the desired item, regardless of the choice of main entry. But these conclusions must be treated with caution, due to methodological deficiencies. One has been cited above, the matter of items reported not in the catalog. Another is a defect in the interview form in regard to added entries and series. In the very place where valuable exact information could have been obtained regarding the entries under which books were sought and found the questionnaire failed.

One of the purposes of the study was to produce a reliable interview form and related tools. As a result of the testing of the form used several defects were detected. The suggested revised form appears to be a simpler and more effective instrument.

Since the body of this report is largely quantitative, and packed full of detailed findings, it does not make easy reading. This reviewer, lacking previous knowledge of the conditions of the survey, also found the arrangement difficult—at an early stage it was necessary to turn to chapters and appendixes at the end of the report and ferret out the background information essential to an understanding of the report itself.

More readable, because more particularized and based on comments added by the interviewers, are the six case studies included in the appendix. Probably many catalogers, like this reviewer, will want to check the specific examples cited in these case studies against their own catalogs and perhaps thereby improve the catalogs in their libraries.

To sum it up, one can cite two extremes of users, 1) the reader who was found looking up the definition of a word in the "dictionary" catalog, and 2) the reader who understood the basic

dilemma so well that he stated it perfectly: "Catalogs have to have a system. Some people will learn whatever system there is well enough for use and some people will never take the trouble or never use it often enough to learn."—*Pauline A. Seely, Supervisor, Technical Services, Denver Public Library, Denver, Colo.*

U. S. Library of Congress. Subject Cataloging Divisions. *Subject Headings Used in the Dictionary Catalogs of the Library of Congress*. 6th ed. Ed. by Marguerite V. Quattlebaum. Washington, 1957. viii, 1357 p. \$9.75 (Order from Superintendent of Documents, Government Printing Office, Washington 25, D. C.)

This, the sixth edition of the Library of Congress list, reflects the state of these subject headings as they were at the end of 1955, three years ago. Changes and additions made since that date are recorded in monthly supplements which have been cumulated into single lists 1) for 1956 and 1957, 2) for January-June 1958, and 3) for July 1958 to date (at the time this review is written). If the practices used for the fifth edition are continued, there will be an annual cumulation for 1958—unless a single cumulation for 1956-1958 is published instead.

The list and its supplements are, as their title indicates, a record of the subject headings used in the catalogs at the Library of Congress except for some which are excluded from the list by the definition of its scope. This record is the purpose of this publication; this single purpose is the only really valid criterion by which to judge its accomplishment. Whether or not the list has achieved this purpose can only be determined by comparing it with the LC catalogs. But this is not an accomplishment in which libraries other than the Library of Congress are much interested.

Instead, this review seeks to evalu-

ate how well the list has achieved another purpose, one which is not professed overtly in any part of the sixth edition, but one, nevertheless, which is admitted tacitly by the very fact and manner of publication: the effectiveness of this edition of the subject heading list in providing models and guidance for subject heading assignment in libraries other than LC which try to follow its practices in their own subject catalogs. In seeking to make this evaluation, your reviewer has assumed that such libraries have collections comparable in scope, content, and purpose to those at the Library of Congress—that is, they are general collections of some size, not specifically focussed upon any particular specialty, which are, or seek to be, somewhat representative and comprehensive, and which have been assembled to provide for diverse informational needs among an almost infinite variety of subject catalog users. In addition, libraries which prepare cataloging copy for printing by LC, whatever their size or specialization, will also need models and guidance.

Within this frame of reference it is possible to make the generalization that the sixth edition of the LC list is comprehensive and does provide extensively for the literature of virtually all subject fields. It is also reasonably up-to-date both in headings for concepts and in the terminology used to express these concepts—except for the perpetuation of some amusing idiosyncrasies like the spelling "aeroplanes" for "airplanes." These are relative matters at best. Any library which uses the LC list almost certainly has identified pet instances in which the headings given are not sufficiently comprehensive for its needs, or for which the terminology used is not as familiar or as "modern" as that library's users require (or as that library's catalogers and reference librarians *think* its users require). It is obvious that no two libraries will use precisely the same

subject headings even though their collections are identical. Differing purposes and clientele should dictate some variation in the subject analysis provided. The crucial question is really not whether the list provides all of the model subject headings another library might need but rather how well it provides guidance to insure that when other headings are needed, these can be constructed to harmonize and integrate with headings chosen from the LC list.

A good list of subject headings ought to provide such guidance in several ways. It should give an adequate definition of its scope so that users may know what kinds and types of headings will not be found in the list but may be supplied freely as needed. It should specify clearly the ways in which the list may be manipulated, including such matters as when and how subjects can be subdivided by places or places by subject, what subdivisions by periods of time may be useful and how these are provided, and what terms may be used either as subject or as subdivision and how this differentiation in use is determined. It should provide sufficient discrimination between terms having the same or similar meanings and between the use of the same term in more than one sense or context in order that users may know what use is intended, and, ideally, it ought to show consistent patterns in the form of its headings so that supplementary headings needed in a library may be constructed to harmonize with those which are given in the list (and even to agree with those chosen for these concepts for later addition to the list).

For previous editions, the Library of Congress has provided this guidance in several ways: in the introduction to the list itself; by the inclusion of auxiliary lists such as that of common form subdivisions within the basic volume; by providing instructions and explanations within the list itself, for

example, by indicating which subjects may have geographic subdivision and of what kind and by differentiating in scope notes or in *see also* references between headings used for the general and for the limited treatment of a subject; by incorporating key lists within the main list of headings to demonstrate the full range of subject treatment for works about people or places or languages; and by publishing supplementary auxiliary lists such as *Period Subdivisions Under Names of Places* (Washington, 1950). When the fifth edition of the subject heading list was published an attempt to reduce dependence upon these auxiliary lists was made. More of this has now been done, and the introduction to the sixth edition suggests that the only one of these separate auxiliary lists still needed is the one for period subdivisions cited above.

To this reviewer, LC's accomplishment in the sixth edition has been magnificent. The introduction is clear and outlines quite precisely the scope of the list and calls attention to 1) the incidence and need for the auxiliary lists within the volume and their use, 2) the key or model headings for language, countries, and people (though it would be helpful if these were reiterated separately in a prominent place so that a user did not have to search the introduction for the several places where the key lists are described), 3) the general characteristics of the list including abbreviations used, typography and such matters, and 4) the relationship to the sixth edition of the supplementary auxiliary lists noted above. Within the list itself there are many scope notes (though not necessarily all which another library would find useful), extensive listings of examples, and a quantity of explanatory information, especially in conjunction with *see also* references.

Even so, there is still room for improvement and clarification in the guidance provided, particularly in

three areas: 1) indication of current LC practice and preference in the form and order of new subject headings; 2) clearer specification of the subdivisions which may be used under the names of places other than countries; and 3) adequate provision for variations in subdivision required for countries other than the U. S. when subdivisions used for the latter are not meaningful or applicable to other countries, or where the literature about the U. S. does not require some subdivisions useful for other countries, and for variations in the subdivisions used with the names of people other than those given as "key" figures.

The first of these weaknesses can be corrected only by a complete editorial revision of the entire list in order to harmonize forms with current LC philosophy and practice as described by the late David Haykin in his *Subject Headings: A Practical Guide* (Washington, 1951), and to eliminate inconsistencies and conflicts in form and wording. Since Mr. Haykin suggested in 1952 that the sixth edition would reflect such an editorial overhaul, it is obvious that the magnitude of the task has exceeded LC's ability to perform it. The list remains, therefore, as it has always been, "an accurate reflection of practice but not a complete embodiment of theory." Where LC has not found it possible to revise its older headings to harmonize with its current practices, the list demonstrates inconsistency in form and subdivision, and libraries must continue to wait for LC initiative in establishing form and subdivision for new headings since the practice exhibited by the list is inconsistent. For example, we have (1) MILITARY, and (2) MINE RAILROADS, but (3) RAILROADS, INDUSTRIAL; (1) ELECTRIC RAILROADS, but (2) RAILROADS, CABLE, and (3) RAILROADS, COMPRESSED-AIR. That LC is continually at work to reconcile these older headings with its current practice is evident from the extensive revision

reported monthly in the supplements of additions and changes. Accordingly, this is no serious criticism of the sixth edition, for these changes require time and the need for them is less urgent than the need promptly to devise new headings for current literature. Indeed, it is unrealistic for other libraries to expect a perfection in the complex catalogs of the Library of Congress which they probably do not exhibit in their own, and this shortcoming in the subject heading list is one which other users should accept graciously and with charity.

The other two weaknesses are of a different order, however. At one time LC did provide fairly effective guidance in these matters in its auxiliary pamphlet *Subject Subdivisions* (6th ed., 1924, reprinted 1936). Here were recorded 1) a list of subject subdivisions to be used under the names of countries, 2) a similar list for cities and towns, 3) a list of general form divisions to be used as needed under any subject, and 4) additional subdivisions used under special classes or subjects. The preface to the sixth edition of the subject heading list calls attention to the difficulty of keeping this auxiliary pamphlet up-to-date and suggests that the essential information contained in the pamphlet has been incorporated into the main list thus eliminating the need for the pamphlet. This is not entirely true.

Presumably the headings for the United States provide the subdivisions needed for any country, and where these vary for any reason, the reasons will be explained. The old auxiliary list indicated that BARONETAGE was a subdivision to be used with Great Britain. In 1956 LC so used it in current cataloging. But neither the sixth edition nor its supplements record this use. Nor do they indicate whether headings such as FRANCE—ESTATES; GERMANY—ESTATES; or BALKAN PENINSULA—POLITICS are still legitimate forms.

The sixth edition does not include

a key listing for cities like that provided for countries, nor did its predecessors. So long as the second section of *Subject Subdivisions* was effective, the need for a key list did not exist. (Neither was there any real need for a key list for countries, for section one of the pamphlet provided this information). With the elimination of the auxiliary pamphlet, however, inadequate provision is made for subdivisions to be used with headings for cities and towns. It is true, of course, that very many of the subdivisions commonly used with the names of cities are also used as independent subject headings. Differentiation between the use of such terms as subjects or as subdivisions is made in the sixth edition in explanatory notes or in *see* or *see also* references. But not all such subdivisions function as headings, and those which do not are not listed or explained in the sixth edition. How about such headings as: NEW YORK (CITY)—BUSINESS ASSOCIATIONS; CHICAGO—EXECUTIVE DEPARTMENTS; SAN FRANCISCO—HARBOR—PORT CHARGES; and LONDON—LIVERY COMPANIES? Are these still usable headings? The sixth edition affords no guidance.

Neither does the sixth edition provide competently for variations in the subdivisions used under the names of persons. The key lists for persons as subject are those for Lincoln, Napoleon, Shakespeare, Wagner, and Washington. We find, for example, the reference WAGNER, RICHARD—ALLEGORY *see* WAGNER, RICHARD—SYMBOLISM, but the form traditionally used for Dante has been DANTE—ALLEGORY AND SYMBOLISM. How will a library know what to do in the future? Are forms from the pamphlet not given in the sixth edition obsolete? Or have they merely been overlooked or inadvertently omitted?

The key lists provided in the main list of subject headings 1) do not provide for the variations which may be used under the names of other coun-

tries or other persons, and 2) do not provide complete or direct guidance for material about cities and towns since there is no key list for these. Moreover, where variations in subdivision from those shown in the key lists are desirable or necessary, these are imperfectly indicated and infrequently listed with the names of the places or persons to which they do apply.

One or two further comments concerning subdivisions may be in order. The supplementary pamphlet provided a listing of common form divisions; this list is given in the sixth edition at the end of the introduction. It is possible that some further economies in the subject heading list itself might be achieved by a systematic evaluation of other subdivisions now used under many subjects to determine whether these might be added to this list of form divisions. One example which comes readily to mind is the subdivision ABSTRACTS which appears to be as much a form division as BIBLIOGRAPHY OF DICTIONARIES.

The fourth section of *Subject Subdivisions* attempted to list a variety of other subject subdivisions and to indicate with which headings these had been used or could be used. Almost certainly it was this section of the pamphlet which was most difficult to keep up. In the sixth edition, presumably, all of these subdivisions have been listed with each subject where they are used. So far as a spot check reveals, this seems to have been done. Unquestionably such independent listing is more effective and more accurate than the older method.

A special comment is in order concerning subdivisions to be used under the names of languages. The introduction specifies that subdivisions are shown in full only under English language, implying that this serves as a key list of subdivisions for use with the names of other languages. However, the auxiliary pamphlet, *Litera-*

ture *Subject Headings . . . and Language Subject Headings*, 5th ed., 1926, is not cited specifically as one which has been superseded. Thereby some doubt is left whether the English language listing is indeed a key list in the sense, for example, as U. S., or Lincoln. Pages 143-147 of this auxiliary pamphlet comprise a special listing of "Subdivisions Under Languages." An item-by-item check of this list of subdivisions with those given under English language in the main list reveals that the latter list is limited, in general, to those subdivisions which have meaning or relevance in that context and that certain other subdivisions which are applicable only to languages other than English are not regularly shown or explained. This reviewer noted 21 subdivisions of this sort in the auxiliary list, 13 of which are provided for in the 6th edition by a) listing under some, but not necessarily all of the languages to which they do apply; b) a scope note or explanatory see also reference under the term in its use as an independent heading; c) a see reference from the subdividing term or some recognizable variant thereof in the main alphabetic sequence; or d) application of the list of general form divisions. The remaining 8 subdivisions, though given in the auxiliary list, seem not to be provided for in the main list insofar as a spot check reveals. What a pity that the cataloger will need to use the auxiliary list for only 8 subdivisions!

The criticism given here is not a plea for revision and re-publication of the auxiliary pamphlets, but rather a suggestion for the further perfection of the method by which subdivisions are shown in the sixth edition. The improvement sought should be achieved relatively easily by 1) listing systematically all of the subdivided forms which vary from those shown in the key lists; 2) explaining within the key lists what variations are used and when; 3) providing other key lists

as needed, most especially for cities and towns, or 4) incorporating into the main list as *see* references or as explanatory notes all other subdivisions which cannot be explained adequately by one or more of these other three methods. This, in effect, would incorporate into the LC list certain desirable features of the *Sears List of Subject Headings*.

The sixth edition is appreciably larger than the fifth—1357 pages instead of 1204, 4071 columns rather than 2408. Three columns have been printed on each page rather than two. This increase represents the addition and revision of many thousands of headings and references since 1947, the terminal date of the fifth edition. Another change in the sixth edition is the listing of all headings referred to (*see* and *see also* references and tracings for these) in a column, one heading to the line, rather than in paragraph form as in the fifth edition. Such listing is clearer and easier to use than paragraph enumeration, but it does require appreciably more space. In spite of the increase in size, the sixth edition has been published in a single volume, heavy, bulky, and as awkward to handle as an unabridged dictionary but probably one volume is still preferable to two smaller ones with the alphabet divided between them. The use of three column imposition does materially complicate the recording of revisions, additions, and changes to the list, however, and in only a relatively short time most libraries are likely to find that their lists have become illegible and incomprehensible from trying to note changes in the list itself. The development of separate subject authority files in card form—or the amalgamation of all applicable changes and revisions into a single alphabetic card supplement to which reference is made by appropriate notation in the basic list seem to this reviewer to be more sensible, usable, and ultimately more economical

alternatives to trying to keep the full record of change in the basic list. A more regular pattern in publishing cumulations of all changes and revisions by the Library of Congress might alleviate this problem somewhat. An ideal program would include the complete cumulation of all changes to the sixth edition at the end of every calendar year so that identification of these would never require consultation of more than three supplements, and for half of the year, at least, only two.

The I.C. subject heading list is attractively printed and bound and is impressively legible in spite of the 8-point type in which it has been set. Fortunately a larger type has been used in the introduction so that it is less forbidding in appearance than it was in the fifth edition. Perhaps more users will read it now and understand it better. Whatever its shortcomings, the sixth edition of the LC subject heading list is a great accomplishment. It reaffirms the place of this list as an indispensable aid in the construction of alphabetic subject catalogs. At \$9.75 the copy, it is an exceptional bargain.—*Carlyle J. Frarey, School of Library Science, University of North Carolina.*

Keys, Thomas E. *Applied Medical Library Practice*. Springfield, Illinois, Charles C. Thomas, 1958. 495p. \$10.75.

The author of this delightful and informative volume is well-qualified by his years of experience as Librarian of the Mayo Clinic, in Rochester, Minnesota, to accomplish his aim of providing "the physician-reader, the medical student, both graduate and undergraduate, and the medical administrator, information about the services and use of the medical library, and to introduce the librarian and potential librarian to the needs of the physician and the demands of the medical library."

Mr. Keys is generous in his acknowl-

edgment of the assistance of others in the preparation of his book, and gives credit on the title page and in the preface for the valuable chapters on abstract journals and on the patients' library, contributed respectively by Catherine Kennedy, Associate Librarian, and Ruth M. Tews, Hospital Librarian, of the Mayo Clinic.

Aspects of medical library practice and other subjects treated in the eighteen chapters of the book include administration, acquisition of books and journals, medical bibliography, the arrangement and use of reprints, the patients' library, the place of the medical library in graduate medical education, the function of the library in medical research, private medical libraries, representative medical libraries in the United States, medical publishers and significant medical books from earliest times to the present, the librarian and medical history, and changing concepts in library services.

The book is well-documented, with references at the end of each chapter. Other useful references, such as a list of pertinent tools on cataloging and classification, appear within the text. The five appendices contain lists of medical publishers and bookdealers in the United States, a list of 209 medical journals arranged according to their rank order of use in the Mayo Clinic Library over a two-year period, and a fifty-five page bibliography of medical works in facsimile. The index includes not only subjects but also authors and titles of books and journals referred to in the text, thus increasing the usefulness of the book as a reference tool. A feature that contributes much charm to the book is the quotation at the beginning of each chapter.

Mr. Keys' book will not serve as a manual of medical library practice, but it does offer many valuable and practical suggestions for both the librarian and the physician. The author has, in the opinion of this reviewer, achieved

his objective and has given the reader a work rich in information and inspiration for further reading, especially in medical history.—*Dorothy M. Cramer, Associate Librarian, National Institutes of Health, Bethesda 14, Maryland.*

California Library Association. Documents Committee. *California State Publications; a Manual for Acquisition, Processing, Use.* Free from California Department of Finance, Organization and Cost Control Division, Sacramento, 1957. unpagged.

The California Library Distribution Act of 1945 was passed largely through the efforts of the California Library Association. Now the Documents Committee of that Association has prepared a manual to help librarians with the handling of the approximately 1600 titles distributed yearly under the Distribution Act.

The manual is loose-leaf for the easy removal of obsolete material and insertion of new, and is arranged by sections and topics under an expandible numbering system. It has a table of contents and index to the six sections and nine appendices. The sections deal with the depository system, acquisitions, organization, records, reference work, and lending. Like all good manuals, it has many sample forms accompanying the instructional material.

The appendices include the text of the Library Distribution Act and the depository contract, disposal policies, the *Basic List of California State Documents*, minimum standards for depository libraries, a description of seven possible classification schemes, use and sources of different types of binders and pamphlet boxes, and lists of the complete and selective depository libraries.

The manual's usefulness is not limited to depository or California li-

braries. Aside from the helpful *Basic List of California Documents*, there are many suggestions on the administration and organization of materials that could be applied in the handling of any collection of state publications.

The introduction states that the manual was compiled at the request of the California Department of Finance. Mr. M. L. Blanchard from the Finance Department, in reviewing the progress made under the Distribution Act before the Committee at the 1957 Fresno meeting, mentioned the "patient reasoning" applied by the Committee when the Department "failed to see the light." The fine cooperation between the organizations and the manual should serve, as does the Distribution Act, as a model for librarians working under less favorable state laws or situations.—*Esther M. Clausen, Documents Librarian, University of Illinois, Urbana.*

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Further information about the Center and its services may be obtained from the SLA Translation Center, John Crerar Library, 86 East Randolph Street, Chicago 1, Illinois.

RETIREMENTS

Dr. Hazel Dean, former President of the DCC, retired last June from the Library School Faculty, University of Southern California. During the Fall semester 1958/59 she taught in the Dept. of Librarianship, State University College for Teachers, Albany, N. Y.

Gertrude L. Oellrich, Present Chairman of the Catalog and Classification Section of RTSD, retired at the end of the year from her position as Supervisor Librarian, Catalog Dept. of the Newark, N. J., Public Library.

LONG-TERM PERIODICAL SUBSCRIPTIONS

Periodicals Available on Long-Term Subscription, a list of 700 titles published in the United States which are available at cheaper rates when ordered for periods longer than one year, has been compiled by the RTSD Committee on Long-Term Periodical Subscriptions. The list supplements the report of the Committee, edited by James W. Barry, which appeared in the Winter issue (*LRTS*, 3:50-54). This first consolidation of this type of information may be obtained for 25 cents per copy (stamps or coins) from Mrs. Orcena Mahoney, Executive Secretary, RTSD, American Library Association, 50 East Huron Street, Chicago 11, Illinois.

CLOTH LABELS

As an incidental to its reclassification project, Michigan State University Library, Technical Processes Division, investigated the possibilities of cloth labels for call numbers. The advantages of cloth labels justified experimentation. A typewriter with oversize type is used to type call numbers on the labels. The labels then are placed on the book spines. Not only is this process faster, but the labels cover the old Dewey numbers, thereby eliminating an erasing operation. It then became necessary to find a suitable adhesive. This was solved by another University department.

The Michigan State University Forest Products Department completed in the Spring a test of five adhesives that were used to glue labels to buckram. Five labels, each using a different adhesive, were placed on one buckram panel and then were sprayed with Krylon. The same operation was performed with a second panel except that no Krylon was used.

The test consisted of weathering cycles every 24 hours ranging from hot and humid to cold and dry. The test started April 11 and was discontinued April 21.

The Krylon spray was the most significant factor—the labels all peeled from the unsprayed panel, whereas no label peeled from the sprayed panel, however, some of the corners curled slightly. The test results show that the following adhesives were most effective in the order named: (1) Pliobond, (2) Label Cement (manufacturer not identified) (3) Elmer's Glue, (4) Magic Mend, (5) Norbond.—*Gerard B. McCabe, Michigan State University Library, East Lansing, Michigan.*

NEWSPAPER REPAIR

In collating some old newspaper files, we encountered the usual problem of wrinkled pages, with many folds and torn edges. Investigation into possible treatments turned up only rather complicated systems, entailing equipment beyond the means of the average library. The treatment described below was used with eminently satisfactory results. It was devised by Mrs. Isabel Zuber, at the time doing our mending and now Elementary Librarian with the Durham (N. C.) City Schools. The treatment is suitable for newspapers, magazines, and for limited use on books.

Mix a sizing solution of about one drop of a library plastic adhesive (Magic Mend, Norbond, etc.) to two tablespoons of water. The solution should still be almost clear. Place item to be treated on a flat surface (preferably glass or marble) with wax paper underneath. Using a small sponge, lightly dampen the paper with the solution, spreading out folded pieces and turned-under corners, and putting tears together.

Blot with paper towel to prevent water circles.

Place wax paper on top of damp spots; place in a book press, or cover with heavy books until almost dry. When absolutely dry, mend tears and missing sections with Permafilm. Store in a dry area.—*Evan Ira Farber, Chief, Serials and Binding Division, Emory University.*