

LAWRENCE E. LEONARD

Colorado Academic Libraries Book Processing Center: A Feasibility Study

At present, there appear to be no centers serving exclusively the technical processing needs of a group of academic libraries. A National Science Foundation funded study was begun in Colorado in February 1967 to explore the feasibility of establishing such a processing center. This article describes the background of the study and the methodology employed in carrying out the outlined research goals of the project.

ABOUT ONCE in so long articles appear in different countries rehearsing the follies of the present system of doing the same thing over a thousand times, as we librarians do in cataloging books that reach so many libraries. But right here they all stop. There somehow seems to be an idea among certain leaders of our craft "that such a thing [cooperative cataloging] is wholly visionary, at least their failure to take any practical steps in the matter would seem to indicate such a belief." So spoke Melvil Dewey at the Conference of Librarians, October 1876, in Philadelphia.¹ These sentiments have been expressed many times since, though evidently not often enough.

The concept of cooperative centralized cataloging of library materials is obviously not a recent one. One hundred and seventeen years ago Charles Coffin Jewett proposed that the Smithsonian Institution begin accumulating stereotype blocks of its cataloging and

that of other contributing libraries to be used in compiling printed catalogs of different libraries, joint catalogs of two or more libraries, and possibly a union catalog of all libraries in the country.² Although no action was taken by the Smithsonian, the proposal influenced the thinking of Dewey and his contemporaries and through their urging led to the card catalog service begun in 1901 by the Library of Congress.³

The advent of the processing center is a much more recent phenomenon. A processing center has been defined as:

A single agency which processes materials for a wider group of Libraries. This may be, among other types, a library system with its branch of departmental libraries, a central agency such as a state or county library agency, some arrangement among a group of independent library systems whereby they agree to set up and operate

¹ Melvil Dewey, Statement Made at the Conference of Librarians, Philadelphia, 1876, reported in *Library Journal*, I (November 1876), 118.

Mr. Leonard is a doctoral candidate at the Graduate School of Library Science, University of Illinois, Urbana.

² Charles C. Jewett, "A Plan for Stereotyping Catalogues by Separate Titles; and for Forming a General Stereotyped Catalogue of Public Libraries in the United States," in *Proceedings of the American Association for the Advancement of Science*, 1850, IV (Washington: S. F. Baird, 1851), 165-76; Jewett, *Smithsonian Report on the Construction of Catalogues of Libraries* . . . (Washington: Smithsonian Institution, 1852), 78p.

³ Melvil Dewey, Printed Catalog Cards from a Central Bureau, *Library*, 2d Series, II (January 1901), 130-34.

such a center cooperatively, or where independent libraries contract to purchase this service from some other established library;⁴

Also as "an agency ordering, receiving, cataloging, and preparing materials for two or more libraries."⁵ Centralized processing has been described as:

Those steps whereby library materials for several independent libraries, either by contract or informal agreement, are ordered, cataloged, and physically prepared for use by library patrons, these operations being performed in one location with billing, packing, and distribution to these same libraries.⁶

Although there are isolated examples of centralized processing in the early 1900's, processing centers as such came into existence in the 1940's, grew in number in the 1950's, and have proliferated during the 1960's. These centers serve public and school libraries almost without exception. The Veterans Administration Cataloging Section (an exception),⁷ the California State Library Processing Center,⁸ Southwest Missouri Library Service, Inc.,⁹ Northern Colorado Processing Center,¹⁰ and Library

Service Center of Eastern Ohio,¹¹ are but a few of the many centers now operating successfully.

Though there are many centers processing materials for public and school libraries, an exhaustive literature search did not reveal centers now performing technical processing for a group of academic libraries. As book prices and processing costs continue to rise, academic libraries are showing more interest in exploring the feasibility of such centers to serve their needs. There is indication that this interest will increase, particularly if the ongoing studies demonstrate that centralized processing is a viable approach to the problems now faced by many academic librarians.

Several studies are now in progress. The Council on Library Resources has awarded grants to the New England Board of Higher Education to design a mechanized Regional Library Cataloging and Processing Center for six New England university libraries.¹² The study is being conducted by Inforonics, Inc. of Cambridge, Massachusetts. The California state colleges have been considering the possibility of a processing center or centers for their system, as have libraries in Nevada and Hawaii. Academic libraries in Ohio are including centralized processing in a developing plan.¹³ The Colorado Academic Libraries Book Processing Center study funded by a National Science Foundation grant appears to

⁴ Evelyn Day Mullen, "Guidelines for Establishing a Centralized Library Processing Center," *Library Resources and Technical Services*, II (Summer 1958), 171.

⁵ American Library Association Resources and Technical Services Division, Regional Processing Committee, "Guidelines for Centralized Technical Services," *Library Resources and Technical Services*, X (Spring 1966), 233.

⁶ James R. Hunt, "The Historical Development of Processing Centers in the United States," *Library Resources and Technical Services*, VIII (Winter 1964), 54.

⁷ Richard H. Logsdon, "The V.A. Speeds Cataloging Procedures," *Library Journal*, LXXIII (February 1, 1948), 166-68.

⁸ Margaret W. Thompson, "California State Library Processing Center under Library Services Act," *Library Resources and Technical Services*, II (Summer 1958), 184-85.

⁹ Brigitte L. Kenney, "Centralized Processing Missouri Style," *Library Resources and Technical Services*, II (Summer 1958), 185-90.

¹⁰ Elizabeth Adcock, "Centralized Technical Processes in a County Library," *Library Resources and Technical Services*, II (Summer 1958), 191-95.

¹¹ Mary Lathrop Eckford, "The Library Service Center of Eastern Ohio: An Experiment in Centralized Processing," *Library Resources and Technical Services*, V (Winter 1961), 5-33.

¹² Council on Library Resources. "Grant to New England Board of Higher Education to Help Six-State, Inter-University Library Cataloging Project," *Recent Developments*, no. 216, released June 1, 1967; "Regional Library Technical Processing Center," *Scientific Information Notes*, IX (August-September 1967), 9.

¹³ "College Library Center to be Created in Ohio," *Library Journal*, XCII (February 15, 1967), 726; also Lewis C. Branscomb, "The Ohio College Library Center," *The Rub-Off*, XVIII (March-April 1967).

be the only other active research now being conducted in the area of centralized processing for academic libraries.

BACKGROUND

Colorado's academic libraries have long been interested in the possible establishment of a center which would acquire and process book materials for the participating libraries. A special committee, elected by the Colorado College and Head Librarians Conference in April of 1941, outlined approaches to a study of centralized cataloging and other technical processes, including centralized book buying.¹⁴ Several reports and many favorable recommendations resulted from the committee's efforts. Unfortunately, the timing for a project was not right, even though the ideas and the talent were present.

A study financed by the Council on Library Resources at the request of the Colorado Council of Librarians, Association of State Institutions of Higher Education in Colorado, was conducted by Donald Oehlerts in 1962 to investigate the possibility of establishing a technical processing center to serve state supported academic libraries. Direct transmission of interlibrary loans by special courier was also considered in this study.¹⁵ The courier service was subsequently established and presently makes a round-trip delivery from Fort Collins to Denver twice weekly, stopping at nine libraries along the way. It provides rapid interlibrary loan service among the participating libraries. A plan is now under study to extend the courier service to that of a daily run between Fort

Collins and Pueblo, with a considerably increased number of participants.

In late 1965 the National Science Foundation was approached to determine their interest in funding the Processing Center project. Based on NSF's favorable reaction, a formal proposal was prepared for submission to the Foundation. The project was outlined to be conducted in three phases: Phase I concerned with data collection and evaluation; Phase II with systems design; and Phase III, an operational center on a one- or two-year trial basis.

In October 1966 the National Science Foundation awarded the University of Colorado and the Colorado Council of Librarians¹⁶ a grant of \$54,000 to conduct a one-year study (Phase I) concerning practicability of establishing a book processing center in Colorado.¹⁷ The member libraries of the Council contributed a total of \$10,500 to the study. A subsequent grant of \$27,500 was awarded in June 1967 to conduct Phase II of the study.

The center will initially serve the nine state supported college and university libraries, and if successful will expand its operation to include interested private academic institutions. The objective of such a center will be to order and deliver to a central point books requested by the member libraries; to catalog, classify, process, and prepare the books; to maintain appropriate records; and to forward completely processed books and catalog cards to the requesting library. Disposition of the bibliographic data generated through technical processing of titles will be examined in the opera-

¹⁴ Colorado College and Head Librarians Conference. "Special Committee on Centralized Technical Processes and Book Buying," *First Report*, August 1942; *Second Report*, February 1943.

¹⁵ Donald E. Oehlerts, *A Study to Determine the Feasibility of Establishing a Cooperative Technical Processing Program and Direct Transmission of Interlibrary Loans* (Denver, Colorado: Association of State Institutions of Higher Education in Colorado, 1962).

¹⁶ Principal investigators for the study are Ralph E. Ellsworth and Richard M. Dougherty of the University of Colorado libraries and Don S. Culbertson, American Library Association, Information Science and Automation Division (formerly with Colorado State University libraries).

¹⁷ Richard M. Dougherty, "A Central Processing Center for Colorado Academic Libraries," *The Colorado Academic Library*, III (Summer and Fall 1966), 4-6.

tional study (Phase III). A record of titles processed will be forwarded to the Bibliographical Center for Research, Denver, and to the Library of Congress, for inclusion in the regional and national union catalogs. Machine readable record possibilities will be investigated during Phase III (e.g., production of a book catalog of member library holdings, issuance of periodic acquisitions lists, bibliographies). One aspect will likely include testing of LC's MARC output as a data base.

A DESCRIPTION OF THE STUDY

Libraries of the nine state supported Colorado academic institutions are participating in the feasibility study. They are Adams State College, Alamosa; Colorado State College, Greeley; Colorado School of Mines, Golden; Colorado State University, Fort Collins; Fort Lewis College, Durango; Metropolitan State College, Denver; Southern Colorado State College, Pueblo; University of Colorado, Boulder; and Western State College, Gunnison.

An exhaustive search of the literature was performed prior to the study revealing a plethora of articles concerning public library and school library processing centers. There were very few references pertaining to academic library processing center studies, and no information regarding operational academic library centers, bearing out the impression that virtually nothing of a practical nature has been attempted in this area.

Phase I

Comparative operational data. Following several preliminary meetings of the investigators and staff of the nine member libraries, Phase I of the study was begun February 1, 1967. The tasks to be performed during the first phase concentrated on data collection and evaluation. A principal consideration during the initial stage is to ascertain whether a centralized operation can perform more effectively and econom-

ically than each library processing its own material. The possibility of centralization per se is not being questioned but rather the effectiveness of centralized processing given \times number of libraries in an identified geographic location.

Unit cost. Calculation of a valid unit cost figure for acquiring and processing a book has been accomplished by on-site study at each participating library. Flow charts have been prepared for the technical processing areas of each library, time observation studies have been conducted, existing records examined, and diary studies performed by selected library staff members for two periods of one week each. These studies have produced sufficient data to permit reliable cost figures to be calculated.

Title duplication. The study has established the level of acquisition duplication among the participating libraries to determine whether there is sufficient duplication to warrant bulk processing. A sample drawn from the January-December 1966 *American Book Publishing Record* has been employed to measure interinstitutional duplication within an identifiable group of publishers and subject areas. Significant duplication of titles has been identified.

BPR sample. A systematic sample was prepared by clipping every thirtieth entry from *BPR*. Entries were taken from all sections of *BPR*, including juvenile and fiction titles. (Note: *BPR* excludes federal and state government publications; subscription books; dissertations; second, third, fourth, etc., printings or impressions; serials, quarterlies, and other periodicals; pamphlets under forty-nine pages). Only paperback fiction titles under \$1 were excluded from the sample drawn. As the juvenile and fiction titles are not LC classified, and as this same sample will be used to determine modification of LC classification by each member library, further titles were systematically drawn from *BPR*—

1966 to bring the sample size to 1,206 titles. With a universe of 30,050 titles,¹⁸ a sample size of 1,206 titles selected randomly has proved to match the subject distribution of the universe, using the chi-square distribution test. The sample has been checked against holdings of the outstanding orders file, public catalog, shelflist, and serials records of each library to determine per cent of American imprints announced in 1966 that have been ordered/received by each library; per cent duplication of American imprint titles among the member libraries; per cent modification of LC copy by each library; and per cent of titles for which more than one copy is ordered.

Materials processed. The study will identify the type(s) of material which the center can process most effectively to provide a substantive contribution to the technical processing effort of the libraries involved; *i.e.*, will the center process only current United States imprints, will it handle foreign titles (what languages), serials, or standing orders?

Volume of processing. The current volume of ordering and processing by category of material at each library has been calculated. The study must provide a reasonable estimate of the anticipated volume of processing which the center could expect from the libraries and structure its processing system to handle at least that level of work.

Processing cycle time. Four processing dates are of interest in the study. The first, date of receipt of a request in the library, will be considered as an element in the attitude survey to be conducted in Phase I. The other three dates will be used to calculate the mean (average) processing time for each library. These dates are: date the library places an order with a vendor; date the requested title is received by the library; date the

processed book is forwarded to circulation.

It has been assumed that an operational center must process books at least as rapidly as the participating libraries now process materials to render effective service to each library. If it does not, why should libraries bother to send materials through a central agency, unless a reduced processing cost might offset inconvenience of delay in receiving books?

Outstanding orders file sample. A statistically valid sample has been drawn from the outstanding orders file at each library. Order slips were pulled in a systematic sample, reproduced on the library's available copying machine, and the order slips were then refiled. The reproduced slips were cut apart for tabulation. Tabulated results from the sample show the percentage of American and foreign imprints on order; the specific foreign languages which the library orders; the source of order—whether placed through a vendor or directly to the publisher; percentage of rush requests placed by each library; percentage of gift items received.

Existing policies and procedures. The present book selection policies, ordering procedures, payment methods, and processing operations of each of the libraries and business offices have been examined in detail and documented. The success of the center depends upon existing methods employed by the libraries, their compatibility of operation, and level of standardization which can reasonably be effected.

Attitude Survey. A study of user group needs (*i.e.*, information and bibliographic requirements of faculty, students, and participating libraries) was conducted in November and December 1967. Their reaction to existing library services and to possible services which the library could offer in conjunction with the center was sought (*e.g.*, a union list of recent acquisitions of the participating libraries; individual and union

¹⁸ 1966 Annual Statistics, Publishers Weekly (January 30, 1967), p. 34.

book catalogs; demand or routinely supplied bibliographies; a periodical contents service; a union list of serial holdings; telefacsimile transmission; an expanded courier service).

A draft questionnaire was reviewed by the director of each participating library. Suggested revisions were incorporated in the draft which a management consulting firm has examined for content and validity of methodology. A pilot test questionnaire was distributed to a small faculty group, responses noted, and necessary changes were made before the questionnaire was distributed generally. The respondents were selected on a random basis. A follow-up interview (structured interview) with participating faculty from each institution was conducted in November and December to obtain verbal reactions and validate the questionnaire.

Completion of Phase I (with exception of the attitude survey) will provide the necessary data to construct the design requirements for the processing center.

Phase II

This phase of the feasibility study was funded the latter part of June 1967 by NSF. Phase II was begun in September, overlapping with the completion of several elements of Phase I, *i.e.*, tabulation and analysis of data and the attitude survey. The project was funded through April 30, 1968. Phase II will identify and develop the systems design requirements for the proposed center. Data is being analyzed and reduced to workable systems design specifications. The study staff is now developing decision flow charts, work flow diagrams, flow process charts, forms design, organizational patterns, and space requirements for the center. A subcontract has been let with Westat Research, Inc., a management consulting firm, to construct a mathematical model of the developed system, and to test the system on an electronic computer using Phase I data and find-

ings as variable input to the system.¹⁹ A realistic unit processing charge will be calculated which would permit the center to operate on a self-supporting basis. Other resulting products of the Phase II study will be an optimum system design; personnel staffing requirements; expected processing time-lag; equipment and facility requirements needed for the center's operation.

Completion of Phase II will provide all of the criteria to answer the question of feasibility (economic and operational practicability) of a processing center to serve Colorado's academic libraries. If the simulated center can process books at twice the speed and half the cost of individual libraries, Phase III funding will be requested. If, however, the simulated center processes books at one-quarter the speed and four times the cost, then the project will be dropped. Some of the spin-off activities of the study will also be explored for more productive cooperative projects.

Phase III

The Colorado Academic Libraries Book Processing Center will become an operational unit on an experimental basis if Phase II shows positive results.²⁰

¹⁹ Ralph E. Ellsworth and Richard M. Dougherty, *A Proposal to National Science Foundation for Support of Development of an Academic Libraries Cooperative Processing Center for All Colorado Colleges and Universities*. State I: Design of the system. Proposal 65,5,242 as revised March, July 1966.

²⁰ A proposal has been drafted to fund a statewide bibliographic network in Colorado. Project BEACON (Bibliographic Exchange And COmmunications Network) will link participants by the national teletype system, expand an existing courier service, broaden an existing area union list of serials, and establish an intercampus delivery service among other proposed tasks. The study will measure the effectiveness of the network in improving access to and dissemination of bibliographic materials and bibliographic data. User attitudes to services before and after establishment of the network will be documented. The Book Processing Center was included in the funding request with submission of the BEACON proposal in November. This article was written in September 1967. The feasibility study was completed May 31, 1968, and the final report was submitted to the National Science Foundation in June 1968. The Project BEACON proposal was not funded; however, a revised proposal requesting centralized processing funding was submitted and is now being considered. The final report will be published by Scarecrow Press and should be available in late 1968.

During a trial period of one or two years, the effectiveness of the center will be measured to determine whether the outlined requirements and anticipated results are being met. Modifications will be implemented as necessary. The working relationship and exchange of data among the processing center, the Bibliographical Center for Research, and other elements in the developing regional bibliographical network will be established during this trial operational period. An enlightening "before" and "after" picture of a processing center operation will be obtained with completion of the

Phase III trial period.

Whatever the outcome of Phases I and II may be, a valuable mountain of data has already been collected which will be of benefit to the participating libraries, to all academic librarians interested in calculating unit processing costs for their library procedures, and to those libraries now considering centralized technical processing. Although all the data are not yet tabulated and all the returns are not yet in, the centralized processing concept definitely appears to be feasible for Colorado's academic libraries. ■■

