

A UNION WORLD CATALOG OF MANUSCRIPT BOOKS

PRELIMINARY STUDIES IN METHOD

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By Henry A. Grubbs. 1933.
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A UNION WORLD CATALOG
OF MANUSCRIPT BOOKS

Preliminary Studies in Method

Made under the direction of
ERNEST CUSHING RICHARDSON

VI. SUMMARY OF METHOD

by E. C. RICHARDSON

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1937

P R E F A C E

In the preceding prefaces it has been explained that in the failure of the American Library Association to obtain grants for the purpose, these studies have been made with "very limited means" and printed quite without the "editing" which will be applied to a final edition in which it is the expectation (Pt. V, p. v.) that "a high percentage of accuracy" will be possible.

The lists were described as "rough material," "published as *manuscript*." They were published in this unfinished state as "strictly a study in method form not a contribution in a model form."

The reason for printing in this rough unfinished state was said to be that in the absence of financial grants "it seemed idle to spend more time and money elaborating preparations" which "would contribute little which is material to the present purpose" but rather the contrary since for a study of method the editing out of the errors of the many original catalogers would be misleading as to the difficulty of the task and its expense.

It was printed it was said as a guide to the Committee "in re-thinking its method" and as an aid "to whatever agencies shall in the end undertake the preparation of this much needed tool for research library service." It was "published as manuscript" instead of merely printed for the private use of the Committee because it was "believed that this material rough as it is will be of some service to scholars meantime." With this explanation, it was said, "the material is offered without further apologies."

I still do not think that further apology is needed. The language seems to be plain and the situation plain while the material published has in fact served its purpose as a useful basis for a study of the method and has in fact also proved useful to several appreciative research workers.

Nevertheless the seemingly plain language has been misunderstood by certain foreign language reviewers of highest standing. They have assumed that this material was prepared with adequate financial grants

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("Nouvelles subventions") and is presented as a model guide for catalogers attempting a definitive list. They infer therefore that it is a fair sample of what the final results, edited with reasonable means will be.

In view of this misunderstanding it seems necessary to repeat what has been said and try to be still more plain. The material has been prepared with scantiest means. It has not been presented as a model of cataloging but merely as an illustration of the form proposed. It does not constitute a fair sample of what is to be expected from final results, if project should be directed by the present editor who has expressly stated and now re-states that final results will be much more accurate if means are tolerable—and it will not be undertaken if they are not.

The whole story in a nutshell lies in the fact that this material was produced at ten cents per title while as the result of this experience we have asked for grants of a minimum of twenty cents per title and a maximum of thirty three cents per title. With this amount and in this method "a high degree of accuracy" would be insured, although not of course all the meticulousness and detail of those projects which take from two dollars to six dollars per title or of course of those which cost from ten to forty dollars per title.

It should be added that whatever the faults of this work, of whatever kind, the general editor is solely responsible. He refused to allow Dr. Grubbs whose feeling of accuracy was outraged by the publication of uncorrected matter to take the time to edit out errors. It seemed to the editor and still seems, wasted effort in a matter which in the end must be edited carefully. An attempt to edit carefully at this stage would have cost far more money than we had and the results without the extensive and expensive preliminary standardizing projects described in the following pages, worthless and misleading.

ERNEST CUSHING RICHARDSON

Washington, D. C.
November 18, 1937.

TABLE OF CONTENTS

Preface	v
Table of Contents	1
Chapter I. Of Method in General; (1) Methodology; (2) The Problem; Uses of Manuscripts, All the Manuscripts, Present Finding Methods; (3) The Solution of the Problem, A Union World Catalog, (a) An Organized Collection of Printed Catalogs, (b) A Printed Series of Catalogs, (c) A Series with General Index, (d) An Alphabetical Index Catalog	3
Chapter II. The Project Type of Union Catalog; (1) Manuscript Books, (2) An Alphabetical List, (3) An Index Catalog, (4) A Finding Catalog, (5) A Card Catalog, (6) A Cumulative Catalog, (7) An Inexpensive Catalog, (8) A Contingent Printed Catalog	12
Chapter III. Production and Operation of the Catalog; (1) The Plan (2) The Location of Operations, (3) Means; (a) Financial Means, (b) Cooperation, (c) Existing Material, (d) The Library of Congress Facilities, (4) Organization; (a) Accounting, (b) Administration, (c) Staff, (5) Preparatory Projects; (a) Gathering Catalogs, (b) Rules, (c) A Standard List of Entry Names, (d) A Survey of Existing Manuscript Collections, (e) A Survey of Existing Catalogs, (f) A Union Catalog of Printed Catalogs in American Libraries, (6) Compilation; (a) Short Titling of Printed Volumes, Sub-volumes, Written Catalogs, Uncataloged Collections, (b) Proof Reading and Rechecking, (c) Proof Reading by Librarians, (d) Filing, (e) Revising and Editing, (7) Service of the Catalog	15
Chapter IV. Standards; (1) Fullness, (2) Accuracy	30
Chapter V. Cost of the Project Type	37
Chapter VI. Earlier Union Catalog Projects and Proposals	42
Chapter VII. Origin of the Present Project	45
Chapter VIII. The Studies; (1) The World's Collections, (2) Collections of Spain and Portugal, (3) Printed Catalogs, (4) Oriental Manuscripts, (5) Supplement to Collections of Spain and Portugal	62

CHAPTER I OF METHOD IN GENERAL.

(1) *Methodology* is the science of applying means to ends. It is the way to an objective. It is the art of getting results.

Method is a main factor in every project in whatever field of human endeavor where effort is exerted to produce a result. In the economic world, where the effort is typically to produce material objects or units of service, methodology is called scientific management or business engineering or efficiency. In science, which is business management applied to the production of new ideas, methodology is called scientific method. Its unit of production is a new idea. In education which is the mass production of these ideas in other minds and where the unit is one copy in one mind, it is called educational method. In religion it is universally known as the Way or Path or Road.

Whatever the field every project involves, first a clean cut definition of the objective, second, a survey of the means available and the selection of suitable elements for the purpose, third, adjustment or adaptation of these selected elements and the devising of new methods, fourth, a detailed plan, fifth, the application of this plan by demonstration experiment to the production of a model or sample of what the method used will produce, sixth mass production.

Factors of means are time, material, brains, research, experience, system (order) and labor. In a business project these means on last analysis resolve themselves chiefly into financial means. The project may include a variety of means, materials, voluntary labor, leisure and brains but these may, in general, and for the most part, be translated into terms of money.

The practical point of method is to get the best results possible in the shortest time with given means.

The application of means to a project, whatever the objective and whatever the means, involves first the brain factor in defining the problem and framing the detailed plan. The plan is expressed in terms of the means to be used and the cost of these means. If a man intends to build a tower or a union catalog or a military campaign he "sitteth down first and counteth the cost whether he have sufficient to finish it."

The commonest vice of projects is that they attempt too much quantity or too much quality for the money or time available. They fail to sit down and count the cost beforehand. The result is that at the end of the time set the project must have more time and more money or stop. The experienced producer plays safe. He estimates well within the limits of means while all the time trying to produce more results in a shorter time than his safety first estimates require. In order to do this

he relies on the carefully prepared and detailed plan with analysed costs and the application of the plan in a demonstration experiment before attempting general application.

A union catalog is a business proposition. The object to be produced is a joint index of books in two or more libraries. Its unit is a located book. It takes on existence first in one place only but copies may or may not be made by printing, photography, photostat, film, typewriting or handwriting and set up in as many places as desired. These replicas are exact duplicates of the catalog but the methodology of each kind of replica is again peculiar to itself and differs from that of the original.

These studies have to do both with the problem of the original formation of a catalog and with that of possible multiplication but its chief concern is with the formation of the original catalog and its operation, not with the possible multiplication of this unit by printing or film or otherwise.

(2) *The problem.* "The first thing to do," in any undertaking the teachers of scientific method say, "is to get a clearly defined conception of what the problem is."

The problem in this case is to locate promptly and surely for a research student of early manuscript books, all the manuscripts of any work with which he is concerned. The heart of the problem is to find quicker, surer and less expensive ways of doing this than those now in operation.

Uses of manuscripts. The main purposes for which American research scholars use book manuscripts are; text criticism, art study and paleographical science and teaching. Manuscripts are used also directly more or less in all kinds of historical research; social, political, linguistic, literary, medical, theological and the rest. This direct use however is relatively small in this latter field and is limited mainly to the use of a few unpublished works or the crosschecking of works that are very badly edited in printed editions. The bulk of such work is done not from manuscripts but from printed editions and satisfaction in the use of printed editions depends on the accuracy of the editions used, hence the increasing use of manuscripts by text critics.

The direct use of manuscripts for art, paleography and text criticism is on the other hand considerable and increasing. In spite of the handicap of distance from the great collections of manuscripts, American scholars have made distinguished contributions in all these fields during the last sixty years. Recently the work in art has reached a high degree of international distinction and recognition. American paleographical teaching and instruction too has advanced by strides and produced scholars of international distinction. The chief use and demand here however has been, as it is the world over, for the production of better editions of early writings. This is by far the greatest use of manuscripts. The demand for texts for this purpose is extensive. The introduction of the genealogical method has made

pretty much all editions before 1868 obsolete. The demand for better texts is insistent and textual critics have not been able to catch up with the situation. The demand far exceeds the supply. Naturally the bulk of new editions is by European scholars. They are nearer the manuscripts and can visit or borrow them much more readily than American scholars and what is still more to the point their nearness to their material has led to a greater familiarity with the subject and to much better and more extensive paleographical and text criticism instruction in the schools of higher learning. Until the recent rapid development of research work in American universities too the demand by researchers for better editions was much more general and insistent among European than among American scholars but recent developments have changed the situation radically. American scholars in every field of early history are realizing the situation and demanding better texts.

In this field American scholars have already made noteworthy contributions both to the science of textual criticism and to production. Ezra Abbot, Caspar René Gregory and Charles Henry Thayer, among the pioneers are outstanding world figures and the number of internationally known names among contemporary or recent producers is becoming large.

It is a most promising field for real service by American scholarship and bound to be a great field if the handicap of distance from the great collections can be overcome by practical aids. Much has been done in aid of the work of collation through the development of photographic copying and the development of international lending. Much more can be done by improving present finding aids, in methods now well understood. Most can be done by a union catalog.

All the manuscripts. The problem of manuscript finding is far more exacting today than it was a couple of generations ago when the "best manuscripts" were the oldest and handsomest manuscripts. It was not so hard to locate these. They were mostly well known and the scouts for learned societies and private bibliographical tourists were fast gleaning out the remainder.

The discovery of the genealogical method changed all that. In this method a poorly written late manuscript may be worth a dozen older ones or a dozen more beautiful ones. The cry now is therefore for all the manuscripts. No textual critic is any longer satisfied with his work until he has examined test passages from every manuscript and found a provisional place for each in his stemma.

The difference between then and now in the number of manuscripts to be seen is illustrated by three cases of manuscript searching by the editor. In the first case the number of manuscripts found was ninety two compared with the two used in the previous edition of 1838, reprinted in the Migne. In the second case one hundred and eighteen were found (and 114 personally seen) compared with five used in the current Teubner edition. In the third case the standard edition does not seem to have used anything but printed editions and most of the previous

one hundred or more editions seem to have used only one or no manuscripts. Ninety nine manuscripts of this work have been seen and a provisional stemma of 65 of these was printed some twenty years or more ago. Recently the list has been increased by a Johns Hopkins graduate student, Mr. Hugo Weisgall, from ninety nine to more than four hundred manuscripts, gleaned from printed catalogs alone.

And the story does not end even here as the list of Spanish manuscripts prepared for these studies shows. It adds several manuscripts to the Golden Legend list, gives locations of manuscripts of other Varagine writings, not hitherto listed and adds items to one and perhaps both of the other lists. This is in spite of the fact that the chief Spanish printed catalogs had already been exhausted and the chief libraries had been visited and their written catalogs exhausted during three manuscript hunting journeys to Spain. It is likely that even after the long, laborious and expensive work of compiling these three lists so far, a good union catalog would add possibly ten percent more, on the average. A main object of Part V. of these studies was expressly to illustrate this point and it does show that even an incomplete and hastily executed union list of a rather small number of libraries will contribute automatically an appreciable amount to almost any list of any work whose manuscripts are widely distributed. It is the whole problem in a nutshell.

Altogether the finding and cataloging (which must include test passages and stemma) have taken on altogether new and vital importance, in recent times, exacting a very much larger share of research time and cost than before.

Altogether too the problem calls for much quicker and surer methods of finding. Too much time has to be spent getting ready for work. At present one must spend months and perhaps years exhausting available sources, printed and manuscript, before he gets at the real work of collating the manuscripts and editing his text.

Present finding methods being so slow and expensive discourage production and are therefore a serious handicap to the development of scientific text critical and paleographical studies in America. The aids are insufficient and cumbersome. The would be producer gleans the prolegomena of earlier editions, the literary histories and biographies and gets very little help as a rule, except from very modern editions and these are of course the texts which least need re-editing, while what the research scholar looks for is precisely those which most need editing. Now and then he finds a monographic list in some periodical article or literary history which is really helpful but very few even the best of these are definitive enough to satisfy his scholarly conscience and spare him the pains of going through the printed catalogs and extensive bibliographical journeys.

His chief dependence is the printed catalogs and even to exhaust these is a

laborious task costing months of diligent work. There are literally thousands of such printed lists of whole or partial collections to be examined and he does not dare skip any of these.

The task is comparatively simple in the case of volume catalogs. There are now tolerable collections of such catalogs in many American libraries especially at the L.C., Harvard and N.Y. Public Library. None of these is equal to the Vatican or Paris or other great European collections and few or none of them are grouped for the convenience of users. They are generally scattered through the literature about libraries, general and individual, or at least mingled with the catalogs of printed books in a way which doubles the time cost of handling, compared with collections arranged like those of Rome and Paris. At best all the American collections put together do not equal the great European collections. A few years ago a union card list of the Harvard, N.Y. Public and L.C. material was made and was found to fall a good bit short of the printed Paris list and this collection is short of the Vatican.

The American researcher, after he has exhausted the Boston, N.Y. and Washington centers may pick up other titles in Baltimore, Chicago, Phila. or other centers and locate other individual items here and there by means of the L.C. union catalog of printed books but this is a slow process and he cannot very well borrow the items located just to see whether they contain his item or not. He may in some cases under modern methods of information service have the catalog searched for him but this is not a simple matter. It may involve looking under a dozen different entries with which no one but the researcher is familiar. At best anything but personal examination is an interminable process, unsatisfactory in its results and the time cost of correspondence and the information service by the libraries, makes it almost or quite prohibitive, except as a last resort in rare cases.

The net result is that after the researcher has exhausted the resources of two or three centers he finds it necessary and economical to go abroad and use the better collections, better arranged for his purposes and quite likely he finds it more economical both in time and money to do this to begin with, as soon as he has exhausted his home library and its near neighbors.

And exhausting the thousands of volume catalogs, although the most fruitful is much less troublesome than the three other factors; the lists in periodicals, the written catalogs and the uncataloged collections.

It is when the searcher comes to his second stage, the periodicals and collective sources, that his troubles really begin. American libraries are happily rich in periodicals and collections and a surprisingly large fraction of the references can be found at any of our book centers but the difficulties and time cost of finding and using these is much greater than in the case of volume lists and the American stock of periodicals while very rich in the best standard serials is far from complete

and is especially lacking in the more specialized fields of historical research where such lists are apt to be found. Dr. Grubbs mentions some sixty periodicals which have special lists of Spanish manuscripts but not all of these are to be found in America and the list itself although unusually comprehensive misses some. A pointed illustration of this turned up only the other day. A Belgian scholar mentioned in a review a work which quotes two or three manuscripts belonging to the list which is being compiled by Mr. Weisgall, extending the editor's list of editions of the Golden Legend. No copy of this periodical was to be found mentioned in the great A.L.A. union catalog of serials or in the L.C. union catalog. The union catalog division of the L.C. circularized the forty one most probable libraries in vain. The periodical in question was a very high class scholarly production of one of the Catholic Orders and the information was then sought from the Monasteries of this order. A copy was finally located and borrowed for very satisfactory use but the process was long and prohibitive to the average researcher for his brief use in finding or not finding whether a given work is contained in any of hundreds of lists.

And when the volumes and periodical articles have been exhausted the problem of collections which do not have printed lists remains. Many of these have local unprinted catalogs but some important collections have no printed catalogs or only partial catalogs and many small collections have no catalogs at all, printed or unprinted. As a matter of fact many of the small collections are not even to be found mentioned in the various library lists available. To handle this problem of unprinted catalogs the researcher must rely on bibliographical journeys which may and will be combined with journeys for the use of the material but at a time cost greatly in excess of what would be needed if he had his information organized before travel.

It is quite hopeless for an ordinary researcher to try to exhaust all the minor collections by bibliographical travel and he can never be certain that some do not contain something for him. He finishes work haunted by the fear that he has missed something. Many a researcher has visited many unlisted collections with few or no results, driven by his fears. Correspondence is ineffective. There seems to be no substitute for or escape from this but a Union catalog.

(3) *The solution of the problem is obviously a Union world catalog.*

A union catalog is one which lists books located in two or more libraries. A union world catalog of manuscript books aims to locate for the use of research workers any manuscript of any work that he may wish to use.

There are at least four types of existing union catalogs of manuscripts either on a world scale or on a national scale; (a) an organized collection of printed catalogs, (b) a collection of catalogs printed in uniform style and published as a series, (c) such a collective catalog with a general index, (d) an alphabetical index

catalog.

(a) The simple organized collection of printed catalogs. The mere possession of a number of printed catalogs by a library does not constitute a union catalog but when these catalogs are segregated and organized as a collection they become a true union catalog.

There are many examples of such a catalog in European libraries which have large collections of manuscripts. The outstanding examples are those of the Vatican and of the Paris National library. These union catalogs, incomplete as they are, even if every existing printed catalog is included, are vast labor savers for the research student—time savers and money savers.

There is no example of this type of catalog in America known to the editor. Such a catalog was projected for the L.C. and one was actually formed for the paleographic seminar of Princeton University but the Princeton collection has been broken up and the catalogs distributed among the literature of libraries while the L.C. project has remained chiefly, though not wholly, a project.

The Princeton collection although not containing as many printed catalogs as may be found in the three largest collections was considerable and was a true union catalog. It was segregated and kept with other paleographical material in a special seminar room, organized in classified form with a printed finding list. It was used for the graduate course in the method of paleographical research. It was dispersed when the graduate course was discontinued at the retirement of the giver.

The L.C. project for such a collective union catalog was formed in co-operation with the A.L.A. Committee on Bibliography shortly after 1923, as a necessary preliminary tool and part of a project for a union world catalog of manuscript books. This sub project was formally approved by the Librarian of Congress as a natural factor in the L.C. service to research and as a suitable way of co-operating with the libraries of the Association in producing a union catalog of manuscript books. He allocated Dr. William Dawson Johnston to the task under the director of the general project.

This preliminary project as developed for the L.C. contemplated not only the picking out, gathering together and organizing of the rather large number of volume catalogs already in the library but a purchase list of all other obtainable volume catalogs and manuscripts, a union catalog of such catalogs in American libraries, a list of great manuscript collections, a union catalog of facsimiles of manuscripts in American libraries and a union catalog of paleographical literature supporting these. The work proceeded slowly in the absence of special grants for the purpose and was interrupted and slowed further by the death of Dr. Johnston, but the union catalog of manuscript facsimiles was carried through and was printed in two editions in 1929. This has been continued to date by the union catalogs division and the number of entries has doubled since 1929. A union catalog of

paleographic material, including catalogs of manuscripts, covering the collections of Harvard, New York Public and the L.C. was also formed, by photostat methods, on cards and is kept with other paleographical references as material for the projected union catalog but no attempt has been made to carry this to completion. Altogether there is a very considerable body of material already prepared for this collective union catalog only waiting for the American Library Association Executive Board to secure the necessary funds for its organization and extension, which was the cooperative share in the task accepted by the Association.

Meantime with the development of photostat and film service the problem of the purchasing of printed lists or copying the unpurchasable has been simplified and made much less expensive. It is now possible to extend with reasonable means to lists printed in scattered periodicals and lists which exist only in written form in the local libraries, making it possible to do the whole work of compilation at the Library of Congress except in the matter of the collections which have no catalogs printed or written even in the local library.

(b) The second type of collective catalog is that which prints a series of catalogs in uniform style and publishes as a series. Several such on a national or world scale have been published. The most familiar and perhaps only existing one on a world scale is that of Migne and the best illustrations of a national or very large scale are two for France and one for Italy. The French catalogs are also the best illustrations of the respective uses of full or bibliographical cataloging on the one hand and of the extreme short cataloging or finding method on the other. The one is the governmentally published catalog of manuscripts in the French departments and the second is Robert's series of otherwise uncataloged French collections, hastily compiled, casual, extremely short titled but an invaluable aid, suggesting how little meticulous bibliographical detail has to do with the finding problem of the research student.

The Italian illustration is the catalog of Mazzatinti-Sorbelli. This is rather short titled and includes a very large proportion of documents and manuscript books written since printed publication became general but it is a very useful example of extreme inclusion method and like DeRicci's catalog is a suggestive illustration of the uses and the disadvantage of the inclusive method.

(c) The third type is such a collective catalog with a general index. The best illustrations of this type on a world scale are the catalogs of Montfaucon and Haenel. The best on a nationwide scale is the unfinished catalog of American manuscripts by DeRicci. This last is actually more than nationwide in that it includes also British-American collections, but it is not worldwide.

(d) The fourth type is the alphabetical index catalog which is a catalog of all libraries arranged by authors, titles and *initia*. Such a catalog may or may not have also a collective catalog of the individual libraries included accompanying this

alphabetical union catalog; but this is not essential to the method and it is not of much use to the average researcher. The catalogs of Montfaucon and Haenel since they are indexed approach this method but they differ from it in one important respect. The indexes to their collective catalogs does not give the finding data but refer the searcher to collective catalogs for his finding data. The alphabetical index union catalog on the other hand has all necessary data for finding without need of reference to any other catalog.

This is the method adopted for this project. An illustration of it, which may be considered either as a union catalog of national scope or as an unfinished world catalog, is to be found in the cumulated author list of twenty seven Spanish libraries in volume V of this series.

The alphabetical index union catalog proposed in this project is perhaps best visualized as a simple index to the volume catalogs of type (a) extended to other printed lists, to manuscript lists and then again to original lists of uncataloged collections.

CHAPTER II

THE PROJECT TYPE OF UNION CATALOG.

The union catalog proposed by this project is an alphabetical, author and title, short cataloged, cumulative, index, finding, card, Union catalog of early manuscript books, rigidly short title, rigidly excluding manuscript documents (archival or diplomatic documents etc. etc.), inscriptions (epigraphic documents) and all bibliographical cataloging, and inexpensive. Specifically it proposes such a catalog at the Library of Congress as one of the units of the union catalogs division. With sufficient means this catalog may of course be printed but print is not an essential and is contingent.

The present practical project is devised to meet the conditions mentioned in the definition and yet to solve the problem of the research manuscript hunter—not help to solve, but solve. This does not quite mean that a perfect list of all manuscripts will be expected. There will always be manuscripts hidden away or inaccessible which will from time to time be brought out and increase the stock of accessible manuscripts. It does not mean either, necessarily, that it will be completed at once by this project although it might be with reasonably sufficient means. It does mean that the probem of the researcher will be solved and solved better than he could solve it himself, his problem being a complete list of findable, not of lost manuscripts. The point of the matter is that this probably will be solved far more quickly and surely than the research worker could solve it himself, even with plenty of time and money. It will produce in a few hours or perhaps a few minutes at the cost of a few dimes or at most a few dollars a more complete list than he could produce under present conditions in months or years of time and hundreds or thousands of dollars.

(1) A catalog of *manuscript books*: A manuscript book is distinguished from a manuscript document whether rolled or folded or flat and on whatever material inscribed, broadly speaking, by the fact that the book is written for continuous reading or perusal rather than for reference as evidence or record of fact. It is typically a private matter not public. The document is properly a manuscript used for evidence rather than for consecutive reading. It is properly an official record but the term is used commonly also of private documents, letters, etc. The "book" is more apt to be a volume (codex, roll or film) a document, to be a folded or rolled sheet but there is no hard and fast distinction. The two classes are however broadly, very distinct indeed. Each has its own recognized science, paleography for books, diplomatics for documents. Books are commonly housed in libraries and documents in archives. The two are treated in cataloging under quite different codes of rules. In European usage as represented by the Minerva, the Index Generalis and

like publications the very term manuscript means a book manuscript, in library statistics usually a volume manuscript. Documents are usually named and numbered separately, either as "documents" or specific kinds of documents such as acts, inventories, autographs and whatnot.

In American statistics however a manuscript is any written record, book or document. No distinction is made of form or content. Any handwritten item is a manuscript. This results in some curious statistics. In the automatically gathered statistics e. g. of Part I of these studies gathered from report records there were, before analysis, 12,441,989 "manuscripts" of which 7,620,176 were in America and only 188,039 in Great Britain. The Connecticut state library is credited with 1,650,000 against 95,000 for the British Museum, 125,000 for Paris Bibliothéque Nationale and 54,000 for the Vatican!

(2) An *alphabetical author and title index catalog* as distinguished from an unalphabeted unindexed series of catalogs like that of Migne or Robert or even an indexed series like those of Haenel and Montfaucon has the advantage of directly pointing to the manuscript instead of to some place where the finding information may be obtained. The alphabetical form is best because the manuscript is almost always sought by author entry or title entry where author is not known but the title is.

In an alphabetical catalog titles are arranged by authors where known, by title if any where author is unknown. Where neither author or title is known, the *initium* or first word of the text is used as artificial title, even when the manuscript is a fragment with beginning lost. In the case of fragments, a title which is simply the first word of text is rather lost in an alphabet. To make these useful a cross reference under a few general alphabetical subjects is needed or a separate alphabetical list (compare Part IV of this series) or a classed index list. (Compare the Vienna catalog.)

(3) An *index catalog* as distinguished from an indexed catalog or collective catalog with index is one which points directly to location of manuscript not to some place in some other catalog where finding information as to location can be found.

In this project it is an index catalog in a double sense. It not only gives finding information in itself, instead of finding information as to some other catalog in which the finding information can be found but it gives also index references to the source catalogs which are used not for finding purposes but for fuller bibliographical description.

(4) A *finding catalog* is distinguished from a bibliographical catalog. It gives strictly only such information as is necessary for locating the manuscript but since this is also a self contained index catalog, such minimum amount of helpful bibliographical detail is given as to physical form and handwriting as will ordin-

arily save the trouble of reference to fuller bibliographical description.

(5) A *card catalog*, printed or written as distinguished from a bound volume catalog printed or written, is like a loose leaf volume or a relative location of books in a library as distinguished from fixed location. It allows the insertion of titles in the existing series and permits therefore cumulation instead of aggregation. While the project calls for a card catalog and such a catalog must first be formed it does not exclude going on to a printed volume catalog also if means permit.

The card catalog has now been standardized in size internationally and conveniently as twelve and a half by seven and a half centimeters. This permits cumulative union catalogs.

The thickness of cards is not so well standardized as size, but most libraries use three rough standardized styles; thick, thin or medium. In this case the thinnest style employed by the Library of Congress is used, for convenience of handling in photostating.

The form of typing or writing on the card is also pretty well standardized, but not so thoroughly as the size. Cards in America often are ruled to guide in typing or writing. In this project the typing is placed rather high on the card also for convenience in photostating.

(6) A *cumulative catalog* as distinguished from a serial or successively published catalog, with or without an index, is a self indexing device formed by inserting the cards in alphabetical order as fast as received, and making it possible therefore to keep service up to date during compilation. This was done in the Library of Congress union catalog of printed books while it was growing from two and a half million to eight million titles. In the case of this catalog of manuscripts, it is hoped to bring up to date for service daily.

(7) An *inexpensive catalog* is distinguished from other catalog projects which involve prohibitive cost of time or money. It is so planned as to be executed in a brief time, at near minimum cost, and to be operated simply and cheaply by photostat or film methods.

(8) In the possibility of going on to a printed catalog a special study has been made of economical methods for its contingent print production. (See Part V.)

CHAPTER III.

PRODUCTION AND OPERATION OF THE CATALOG

The problems to be considered in the actual formation of a concrete catalog include, (1) the plan, (2) the location of operations, (3) means, (4) organization, (5) preparatory projects, (6) compilation and (7) service or operation of the catalog.

(1) The *plan* or final project is contained in these studies, its summary in this Part VI and the gist of the matter in the following outline of the plan of production.

The plan was worked out to a certain point by the American Library Association Committee with the cooperation of the Division chiefs of the Library of Congress affected by the proposal and in consultation with various library experts at home and abroad, familiar with the problem, or experienced in the method. None of the details of the plan are regarded as final although the putting into printed form of some ten thousand titles would compel the scrapping of this material if different rules for inclusion, sequence or punctuation were adopted. It is an applied project rather than a theoretical project or proposal, by this much. But this does not mean that this small demonstration fraction could not be and should not be scrapped and the method modified if it seemed worthwhile.

(2) The *location* of the catalog at Washington was not the first idea nor is it necessarily final but as matters developed it seemed to be the most practicable. Theoretically a European site at first seemed indicated, the chief collections are there, and the majority of users.

In the earlier stages of discussion in the A.L.A. or A.L.I. the idea of locating such a catalog in America although suggested was generally subordinated to the idea of production and operation at Rome or Paris or Geneva. It is still not intended to dogmatize as to this. The question is in some sort left open until the question of means, their source and the wish of givers is known. American scholars want the catalog somewhere, where it can be used, but they do not insist on their own convenience if it can be made and used elsewhere.

For some time just after 1922 discussion as to location of the earliest catalog inclined towards a European site at Rome or Paris or specifically, for a couple of years, Geneva. The Committee on International Intellectual Cooperation of the League of Nations composed of the foremost research productive scholars of the world had declared that bibliography was the fundamental of research and that the great practical need of research and learning was an international library or series of libraries each containing a copy of every book which might be wanted by any research scholar. When however the practical situation was studied and it was

found that such a collection even of printed books which could be purchased in the market would cost at least thirty million dollars for a beginning, an indefinite amount for the photographic copying of manuscript books and an impossible amount for manuscript documents it was realized that such libraries were a physical impossibility. The fact was however developed that an approximation could be reached to such libraries in any great library center by the production of a union catalog. This is the simple and sufficient organization to turn any group of libraries into an integrated library functioning for all scholars within reach. The Committee therefore recommended that such cooperative libraries be constituted. Several constituent nations especially France adopted the resolution and passed necessary legislation. It had been suggested that such local union catalogs, of which one of the earliest was that of the Zurich libraries and the latest and best matured in method that of the Philadelphia libraries, would form reservoir sources from which there could be made by simple methods of reproduction a union catalog of union catalogs.

This movement was directed first at printed book Union catalogs but it necessarily included Union catalogs of manuscripts and of facsimiles of manuscripts.

The natural location of the International "library without books" as the late John Cotton Dana used aptly to call such a library, was Geneva. It was a world project calling for the practical cooperation of all constituent nations and therefore best operated at the point where administration could keep in direct touch with the representatives of the nations and where its prestige would attract the direct co-operation from the libraries of the respective nations. Practical considerations however intervened. The League was in its infancy. There was no building space. The budget was very timid. It had been hinted that the French government might be willing to provide a library building at Vincennes and possibly a Secretariat for the League Committee but nothing tangible matured. Then it developed that the Belgium government was willing to supply the Bibliographical Institute of Brussels with plenty of working space. The Institute had gathered some four million titles of books for a Bibliography of world literature and could and would adjust its method so as to make its collection the nucleus of a Union Catalog of located copies on the lines of the League idea. This pointed to Brussels as the location but later when the issue was raised the Brussels Institute indicated a willingness even to remove to Geneva or even possibly under some circumstances to Paris. American libraries were willing to cooperate and encourage the soliciting of funds at any of these locations.

The League entered into formal agreement in 1924 that the Brussels Institute should be the exclusive agent of the League for this matter (compare Chapter VII) but without any prescription as to the location of the catalog. About that time the French Government made good on its proposal to equip a secretariat for the League Committee on International Intellectual Cooperation at Paris and this

shifted attentions again to Paris as site for the catalog, but nothing came of the International catalog project, which the League Committee in the fall of 1925 referred back to constituent and cooperating states for national union catalogs of national resources.

When the American Committee began pushing the American union catalogs at the Library of Congress the project for manuscripts naturally went with these but the Committee continued to inquire about the possibilities of Rome, Brussels, Geneva and Paris until the progress of the projects for union catalogs of printed books, special collections (including manuscripts) of facsimiles of manuscripts and of American manuscripts cumulated reasons for a Washington location. Even then the decision was not counted final although strongly indicated and almost inevitable.

(3) The *means* for carrying out this project include, first financial grants but second very substantial secondary means in the way of voluntary cooperation and existing material, of which the Library of Congress facilities in material and organized service are outstanding.

a. For *financial* means the chief hope has lain and lies in grants from the organized educational foundations. The values of the catalog are so strictly specialized to the field of research and higher learning that if those who are professionally concerned in such matters cannot be convinced of the value of this tool in its financial proportion to a thousand and one other worthy objects pressing for their attention, it seems vain to look elsewhere for such means. It has been plainly understood from the beginning that the Librarian of Congress could not and would not co-operate in the Association projects by asking Congress for appropriations. This is not a matter to interest Congressmen. It clearly belongs to the considerable and growing body of utilities, National in their service, for which there is provision in law through the Library of Congress trust fund Board and the Librarian's authority to accept and expend current donations.

There is of course a vague hope that if the matter is published among the many Associations for the advancement of learning which are by way of understanding the fundamental significance of manuscript research and its many indirect bearings on education as well as learning that there may spring up from somewhere or nowhere some individual giver, as there did in the case of the union catalog of printed books when Mr. Rockefeller went over the head of his organized agencies and personally provided the means. But in the ordinary course of events it will be to the great organized educational and research agencies that manuscript scholars will look and for which they will have to wait. The chief grounds of hope for the selection for early attention to this highly specialized object out of thousands of proposals most of which must be rejected are first of course its intrinsic merits as a recognized means of service in a recognized field of learning. In this field there is some special ground of emphasis in the fact of the need of modernized editions

which modern methods have developed. Some reasons for giving priority to this project are the known fact that its concrete service will begin from the very beginning, increasing with every day and dollar expended until the end. The sooner it is begun therefore the sooner service will begin. A second reason is that it is a closed project. When the end is reached it is the end. The number of book manuscripts in the world produced before 1500 or 1550 is fixed and though large, is limited. The catalog will be a permanent utility finished and complete where similar catalogs of printed books are continuing projects involving hundreds of thousands of new items printed every year. This must and will be produced sometime. It will always involve the same number of items. Why not do now and as soon as possible, so that it may benefit as many research workers as possible.

When the project was discussed in the A.L.A. Council and its Executive Board was authorized to solicit funds for the group of union catalogs it was at a time when the Association was attempting to raise funds for various purposes in order to match the original generous offer of endowment by the Carnegie Foundation which has done so much to promote the educational service of libraries for elementary, secondary and adult education. It was thought that the appeal for service to the higher education and research might be effective under the circumstances. Inquiry had been made of two of the organized endowments, not as to their willingness to make grants, but merely as to how such matters should be presented in order to gain the attention of any such Foundation. It was said that the obvious matter was to obtain the formal assurance of appropriate recognized Associations in the field as to the value of the project and its fitness for financial attention. These projects were approved at the same meeting at which the Executive Board was authorized and instructed to meet the Carnegie proposal. Shortly after this the American Library Institute also voted approval of the projects and of the solicitation of funds for the purpose. A special Woods Hole conference of bibliographers and librarians in Natural Science, did the same. The American Historical Association and others followed. The Executive board worked from this basis but nothing has yet come of it.

The amount of financial means asked has been \$25,000 a year for five years for producing a catalog of half a million titles of individual manuscript books. If it was ever thought that half a million titles would cover the matter this is no longer the case. The studies of Part I in this series and especially the studies of Spanish libraries in Part II have made certain the already growing belief that the actual number was very much larger than supposed. It may be one million or two million or even more but a catalog of half a million titles would do an appreciable fraction of the work and the task of its formation would thoroughly explore the at present unfathomed resources and chart their locations so that the remaining work could be done with precision and economy.

It might not be wise to undertake this first half million titles however unless there should be in the background some rather well defined hope that, if this project should show that the matter can be brought to substantial completion within a reasonable time at a reasonable cost per title, well within the estimate of the present project, the necessary support would be forthcoming.

(b) *Cooperation* as a means of producing begins with the pledged cooperation of the American Library Association, the American Library Institute and other bodies which have approved solicitation of funds for the purpose. These agencies are the main reliance in the solicitation of grants.

Direct cooperation is also a valuable factor of means in the formation of the catalog itself. American libraries may be relied on to lend copies of such of their catalogs of manuscripts as are not in the Library of Congress and to help secure photostats of lists of manuscripts printed in the various periodicals. It is not practicable for American libraries to contribute volunteer help in compiling after the old Poole Index pattern but it may easily happen that if certain properly equipped librarians happen to be going abroad their aid can be enlisted where it involves no special expense to them.

In the same way some cooperation from traveling American scholars may be expected where these are traveling for their own manuscript study, either in cataloging uncataloged collections or at least in locating such uncataloged collections.

How much cooperation may be expected from the librarians of manuscript collections in the way of proof reading, correcting and enlarging lists prepared from catalogs and sent them in proof or photostat is problematical but it is likely that if assured of a few separate copies of a corrected proof edition of their collections, it might get a rather general response with gain to quality but considerable added expense in handling and some delay in getting cumulated cards into service. However there will certainly be many cases where it will be worth while sending out photostat lists—and taking what cooperation they may bring.

(c) Existing materials are chiefly the catalogs of libraries (volume, sub-volume and unprinted), union lists of manuscripts of single works or single authors or single subjects contained in the prolegomena of editions, scattered through periodicals or occasionally monographic, together with similar lists in biographical dictionaries or lives of writers or literary histories, records of bibliographical travel, etc. etc.

These of course so far as they go are means which reduce the otherwise impossible task to manageable proportions. The actual catalogs of libraries are the primary material which reduce the financial expense of compilation from dollars to cents per title. The others are secondary but highly valuable for tracing small and otherwise uncataloged and unknown collections and gleaning up generally.

(d) *The Library of Congress facilities* include the existing bibliographical ap-

paratus, routines, copying apparatus and other facilities which may be usefully employed without farther appropriation, grants or process of gathering. These are very substantial.

They include its printed catalogs of manuscripts which are many, well arranged and cataloged and only need segregating for the work, an operation which will be of direct service not only to the work of preparing the catalog but to the research workers in the library using it. Segregation may therefore perhaps be done in routine by the staff. The facilities include also the union catalog from which the located list of catalogs of manuscripts in American libraries may be extracted automatically by means of the check list of existing manuscript catalogs. The Library will doubtless also be by way of helping to complete the list of existing published catalogs of manuscripts since this is needed for the use of the purchase department. It will certainly cooperate also in gathering the working collection of these by purchase, copying and borrowing. It will moreover furnish sufficient floor space and it has already sufficient cabinets and minor furniture as well as other important facilities which can be used automatically. All these are important wholesale savers of financial means which automatically reduce cost.

Not the least is the spirit of cooperation and the expert help of its many consultants and Chiefs of Divisions. All of these are within the stride of the library and effect great economies in the production of the catalog without extra expense to the Library.

Wherever the operations of the project shall be conducted the local library facilities make some contribution to the means of catalog production. If conducted at Rome or Paris or any great manuscript center, certain means, e.g. paleographical apparatus and advice, might be as effective, possibly more so, than at the Library of Congress at present but a somewhat intimate acquaintance with most of the great manuscript center libraries and with the Library of Congress seems to justify the belief that on the whole for the purpose of practical formation and operation of such a catalog means available here translated into terms of money will amount to more than at any other point.

(4) *Organization* follows the choice of location and the provision or survey of means. It includes the organizing of accounting, of administration and of compilation staff.

a. *Accounting* for such a project is fully provided for, as it was in the case of the union catalog of printed books, in the routine of the Library of Congress system. Gifts for immediate use are made to the Librarian of Congress direct and managed at his sole discretion under the library accounting methods. In the case of endowments where income only is used for the purposes the funds are administered by the trust Board, the income by the Librarian.

b. *Administration* was provided for under the plan accepted by the Librarian

of Congress, through making the L.C. Consultant in Bibliography and Research who was also Chairman of the A.L.A. Committee, Director of the project, with the intention of giving it over after it was finished and accepted, to the Union Catalogs for administration and operation.

When the section on American manuscripts was made a separate project (Project C), with a more elaborate method, the organization for this was made special. Its Director and assistant Director operated under the responsible direction of the Librarian much as in other projects but with the advice of a Committee of the Modern Language Association corresponding somewhat closely with the position of the A.L.A. Committee on Bibliography in other projects but perhaps more advisory and less cooperative and administrative than that of the other projects. In both cases of course when funds were given to the Library or the Librarian the ultimate administrative authority is exercised by the Librarian and they are Library projects however thoroughly cooperative they may be. In any case the responsible administrative staff consists of a Director and an Executive assistant or assistants responsible for the selection of personnel, productive operations and immediate management. This is the key to success where the result depends on producing a large number of units per dollar. At this point the project will have the advantage of tested expertness through the cooperation of the Director of Union Catalogs, Mr. Schwegmann who was engaged on these projects even before the other Union Catalogs were implemented by Mr. Rockefeller's gift with Mr. Ernest Kletsch as Executive Curator. Mr. Kletsch was an outstanding manager and Mr. Schwegmann as his right hand man and successor has shown very exceptional ability in this crucial factor of management, staff selection and direction.

c. The *staff* involves typing and photography groups, filing, revising and service operation groups, during the formation of the catalog. It involved during the compilation of the three other catalogs copying groups at several other libraries operating at the same time or successively and transmitting results to the central office. In this case it will involve operations at many libraries and library centers abroad and will involve a special technique and a staff of special experts in language and in paleography, especially for the traveling staff but extensively for expert rechecking and editing work at the home office.

(5) The actual work of production of the catalog involves first a series of special *preparatory projects*; (a) The gathering of the catalogs and copies of catalogs for the work of actual compilation, (b) rules, (c) a list of entry names, (d) a survey of existing manuscript collections, (e) a survey of existing catalogs, (f) a union catalog of existing catalogs in American location.

(a) *Gathering catalogs* for use in compiling is the first process. It involves first organizing the L.C. material, second borrowing catalogs from other libraries,

third copying lists printed in periodicals etc., fourth copying written catalogs in the local collections and finally making lists of uncataloged collections. This will be a continuous process throughout the duration of the project. There will be no need of haste. The only pressure will be to keep far enough ahead of the compilers to prevent hitches. The bulk of this work will be done at the L.C., the remainder by traveling experts, by the cooperation of the librarians of collections without printed catalogs and by the cooperation of foreign scholars and learned associations.

This first process of actual work in production is of significance both for the economy and thoroughness of compilation itself and for the use of the index material by the researchers. A main factor of the method as worked out is the reference on the index card to the catalog from which it is taken. This reference allows the researcher to turn to the fuller sources of information in these catalogs.

The gathering together in one place therefore of a complete hand apparatus of catalogs will in effect form a union catalog of the first type i.e. an organized collection of the printed or manuscript catalogs indexed in the union catalog. Thanks to modern processes of photostat and film it will be possible and not difficult and not too expensive to gather in one handy organized collection all existing printed catalogs and copies of practically all others. Having the complete collection together for systematic handling by headquarters staff will tend to reduce cost of production to an amount in excess of the cost of copying and getting together. In the matter of the use by researchers it will do for workers not only what the great collections of the Vatican and Paris now do but do it much more fully and through the index reduce the time cost of consulting, wholesale. In short the collection will not only facilitate and reduce the cost of indexing but will produce a bibliographical tool of almost unlimited possibilities through the use of the index union catalog. The collection of catalogs and the union catalog together will form an indexed catalog collection which with utmost simplicity and in the briefest time furnishes the worker with all that he can now get from the most extended and laborious research.

(b) The *rules* as so far provisionally fixed and applied are exhibited in the demonstration experiments of Parts II, IV and V. These are broadly the rules developed by the editor out of his own experience in manuscript hunting and printed for his graduate course in paleographic method at Princeton as a serviceable method of record for traveling scholars.

If however the project shall be actually undertaken it will be necessary to restudy the whole matter of the rules with view to adjusting to the *Vatican Norme*. It is hoped that in the meantime the new edition of the A.L.A. (International) rules for cataloging which is now being compiled will take up the matter of cataloging manuscripts and the possibility of standardizing this on the

basis of the *Norme*.

It is hoped too that this committee on rules will take up the matter of standardizing author entries for all writers before manuscript publication came to an end, with reference to the publication of an approved standardized list of all authors and all recognized anonymous works to this date. This would not be difficult to compile but might be very difficult to fully standardize in a way which could be accepted by the libraries of all countries but it ought to be attempted and if not done by the librarians must necessarily be done by this project, if it is ever concretely undertaken.

As the matter now stands and as illustrated in these studies the *content of the cards* will include the following particulars; (1) author title or *initium*, (2) a short short title, (3) location (place and library), (4) catalog and call number, (5) language, (6) date, (7) material, (8) size, (9) number of folios or pages.

(c) A *standardized list of entry names* would naturally be those of the Library of Congress so far as these have been established. Where however these have been anglicised they are unsuited to a world catalog for which in the case of Greek and Latin writers the Latin form seems indicated. There is however a good deal of variety even in Latin forms. The use of Fabricius has been as severely criticized as the use of the Library of Congress forms. Probably the new short catalog of the Vatican library is now the best basis but whatever the basis and whether such a list can be made final to begin with or not such a list must be prepared to avoid as far as possible the entry under different forms and the resulting changes in editing. There will be many such changes in any event and the work will involve many cross references but they will be best made in a master list of names to begin with, avoiding in this way the highly expensive work of adjusting.

It will be hard to over-emphasize the value of this factor either for the production of this union catalog, for general literary historical usage or for the library cataloging of printed books. The economies will be huge, the conveniences and time cost savings large. Thanks to the recent work of the Vatican cataloging the task will be simple, perhaps not quite as simple as the mere copying and publication of this list because there are various obscure matters which involve differences of usage but the chances are that the mere publication of this list with cross references for variant entries much in use would cover most of the matter.

(d) A *survey of existing manuscript collections* necessarily precedes operations since the very plan and financing depend on it. Such a survey was made in Part I of this series supplemented from Part II. It is quite preliminary in character so far and will need to be very much more complete. How much more this involves is suggested by the fact that while the total of all sources used revealed 2,247 manuscript collections of which 321 are in Spain and Portugal only forty of 321 Spanish libraries are mentioned in the two chief sources of library statistics the *Minerva*

and the Index Generalis. A large majority of these collections consist of less than a dozen manuscripts each but it is precisely these little outlying collections which give most trouble and anxiety to the research student and which may cost most per title in compilation although it is to be said on the other hand that these many tiny collections are for the most part discovered through books of bibliographical travel and specially exhaustive list prolegomena etc. where they are already by the nature of the case sufficiently cataloged for the purpose and may be automatically exhausted at slight expense. This rough preliminary survey therefore does give sufficient information for preliminary estimates of extent and costs or would if it were not for the fact of the very different standards for inclusion used by the different library reports and lists of statistics. This will involve the constant extension and correction of this list for the elimination of libraries which contain only documents not books and the elimination from other catalogs of items which were written after print publication became general or which come under the head of autograph documents, letters, etc. This makes a rather wholesale elimination in many catalogs. This project will be in continuous operation until the catalog is finished.

(e) *A survey of existing catalogs of manuscripts.* This is a major factor in the material for compilation and a valuable aid as well in estimating the extent of the task. The rough list prepared as basis for such a project is still incomplete but contains some eight thousand catalogs more or less of which an appreciable but not very large percentage duplicate one another, being older or later catalogs of the same collection. There is no way of estimating at present what unpublished catalogs there are in the various collections, of which photostat or film copies may be had but personal experience suggests that there are rather many. As a part of the preliminary survey these are a large factor.

(f) *A union catalog of printed catalogs in American libraries* will be necessary in order to borrow from the respective libraries such catalogs as are not contained in the Library of Congress collections. It can be made rather simply owing to the circumstance of the check list of printed catalogs of which an alphabetical list can be made by cutting and pasting and with this alphabetical check list the union catalog can be automatically made by comparing with the titles in the union catalog of printed books and drawing off on the cards the location references. Since these cards include also the Library of Congress titles this will automatically show both what can be borrowed from other libraries and by checking with the list of collections, what libraries there are which have no printed catalogs.

(6) *Compilation* involves; a. short titling of entries on standard cards by a reasonably competent typist, b. proof reading and rechecking by expert, c. perhaps sending to the librarian of the collection for possible corrections or additions, d. filing, e. revising and editing.

a. *Short titling* starts with the printed volume catalogs. They are the chief source. It goes on to printed lists in periodicals, in the prolegomena to editions, in literary histories, records of bibliographical tours, reports of libraries and wherever else they are to be found. From these it goes on to unpublished catalogs and from there to original lists of uncataloged collections.

The actual compilation of the catalog will begin with the *printed volume catalogs*.

The second stage is the exhausting of *sub-volume lists* in periodicals or collective union catalogs, records of bibliographical tours, prolegomena, encyclopedias, literary histories, biographies etc. etc. This stage is far from simple. The material is scattered all over the library and no library has all of it. The preliminary process will naturally be to gather photostat or film copies of all sizable lists for treatment at the central office. This will be followed by typewritten or handwritten cards of the shorter lists and it will become a nice question of operation how far it is worthwhile to exhaust these minor sources most of whose titles will duplicate titles in the printed catalogs. On the other hand such lists made by specialist researcher are likely to contain a good many manuscripts in uncataloged collections which will not get into the catalog otherwise until the final stages of compilation from uncataloged collections and they may be the ones most important for immediate research use. As the cost of producing such titles is slight being almost the cheapest form of getting expert work, they will be included if possible and duplicate entries later removed.

The third stage of compilation which, however, may be, like the second stage, carried on simultaneously with the volume catalog compilation is the *exhausting of manuscript catalogs of manuscripts*. This factor is considerable. There are a good many manuscript collections which have no printed catalogs. Most of these if they are of any size have hand written or typewritten catalogs in the library. It is expected that a large proportion of the larger catalogs may perhaps be copied by micro-photography or photostat and written up at the home office. The photostat copies are a most desirable factor of the method especially because they secure a permanent copy of these catalogs at the Library of Congress supplementing its printed catalogs of manuscripts and providing the additional bibliographical information commonly found in the local catalogs. This bibliographical information is a matter of real importance although very secondary to the finding factor and quite non-essential therefore to the main problem. As a by-product however it must be counted as extremely valuable. It gives for certain classes of users information important for their special use. The main object of the copies however is the convenience of making cards at headquarters. This tends to reduce travel costs.

Under any circumstances however the time and money expense jumps rapidly with this third factor and the per title expense very rapidly indeed, it involves at

best a great amount of research travel. In late years a great reduction of this need has been made possible through interlibrary information service and inexpensive mechanical methods of transcription by photostat or film but it still involves much extensive travel to arrange for transcriptional service, identify the catalogs useful for transcription and often supervision of the transcription. With the modern methods however most of the work on these collections which have local handwritten or privately printed but unpublished catalogs of their collections can be done in an American office by getting a mechanical transcription of these catalogs.

And in the end, after all that is possible has been done in the way of mechanical copies, a good deal of work must be done on the spot. The local hand written catalogs are often in form difficult to reproduce and in many cases the machinery of reproduction cannot be obtained locally. In many cases the lists are short titled even below the index standard and it is far easier to exhaust these in regular method on the spot where they can in necessary cases be confronted with the manuscripts themselves. The traveling expert will have to make arrangements for copying such lists as may be copied profitably and do the rest himself. The traveling experts probably will be in general and for detailed work, local paleographical workers since such workers are on the whole more numerous, better trained and less expensive abroad than at home.

The fourth factor in the problem of compilation is the *Uncataloged collections*. After the volume catalogs, the analytic lists and the unpublished lists of manuscripts have been exhausted there remains the problem of the uncataloged collections. These are numerous. Most of them are small collections but there is still a rather large number of considerable collections, often special collections in large libraries, which are quite uncataloged and must be cataloged from the beginning. Something of the extent of this factor may be got from checking the number of collections in Seymour DeRicci's union catalog of American collections which have no catalogs but had to be fresh cataloged by M. DeRicci. There are scores of such collections in America alone or were until M. DeRicci cataloged them.

It is at this point that the private researcher becomes wholly lost. There are scores of considerable collections uncataloged and hundreds, if not thousands, of minor ones. He cannot begin to visit them all just to find out whether they have an item or not. Correspondence is quite out of the question except perhaps for a few uncataloged collections which he finds mentioned here and there. As a rule he has to give up at this point. At best he cannot exhaust. On the other hand it will be no stupendous task for expert manuscript catalogers like M. DeRicci to visit all these libraries and exhaust their contents in short title index catalog form. Travel is the main money cost and time cost factor but an exceptional expert like M. DeRicci can do actual cataloging at the rate of sixty or seventy a day in large collections, and even in the very small collections a carefully organized tour may

exhaust more than one collection a day of these although short hours of opening and difficult access make this hard. And it will be possible in this problem to have very many of these done by local cooperation. The cost is therefore not prohibitive although rather expensive.

This original *short titling* from the catalogs will be by typists reasonably equipped in language and competent to apply rules but not necessarily highly expert scholars or editors. Experience has shown that in the case of many catalogs the material is so displayed in the catalog or in its index that it can be used automatically by a good typist without very much more equipment than a business college training in typing and accuracy. In such cases the output by an expert typist becomes something huge. In experiment it has some times produced for long stretches eighty to ninety titles per hour. In the case of one typist it reached one hundred and ten per hour.

In other catalogs where short titling is comparatively simple it becomes almost automatic for a typist moderately equipped in the languages. In either of these cases it so reduces the time cost of the super expert rechecker or reviser of this work as to greatly increase the output and the quality over the original production by tolerable experts. In any event the cost of expert revision is very greatly reduced if the expert has the type-script before him instead of having to do the mechanical work of production for himself.

b. *proof reading and rechecking* will be by experts. If working from prepared material the work will be rapid, the corrections if any will be made in handwriting and if substantial the cards will be copied, except that changes in author entry will retain handwriting or if copied be added in parentheses at least on cards if not in printing.

c. *proof reading by librarians* will not be strictly necessary where the work is done from complete and modern catalogs and will not be counted essential in any event if it involves too much delay and detail. It will be too optimistic to expect general and prompt attention to the matter by the libraries and long delay in introducing the cards into the alphabetical series is highly undesirable. Nevertheless the advantage in the way of completeness and accuracy especially in the case of the older and less well executed catalogs will be very considerable and a good many librarians may find it worth the trouble to cooperate, especially if it should be possible to submit these lists in type and supply a few proof copies of corrected material to the libraries to serve their local cataloging purposes. In some cases, at least in the case of short or moderate lists, it will be possible and useful to send at least photostat lists of the short titled work. By keeping a duplicate master list of the short titled work and making any corrections sent, on these cards in handwriting, it will be possible to maintain the contact between the edited titles of the alphabetical index and the original entries of the catalog.

d. The *Filing* of the cards will follow their preparation as soon as possible. It is not yet clear, if or in what cases, lists should be held up until they have been submitted to the librarians of the respective libraries but except for the somewhat increased cost of the process of recording corrections there seems no question that it will be better to file immediately a list has been prepared—the list being made in duplicate, one copy retained in the order of the catalog the other distributed in the alphabetical index ready for immediate service on demand.

The filing will follow the Library of Congress rules, standardizing with other catalogs of the Congressional Library. It will be done automatically following the entry of the cards as made by headquarters staff or by voluntary cooperators in libraries anywhere. No entry changes will be made by filers except as they are called for by the filing rules and are evident without research. In this case any change of entry will be made also on the duplicate list in the order of the library catalog—the standard of reference. Filing to this point will be fairly rapid and inexpensive amounting to not more than two or three dollars a thousand.

e. *The serious revising and editing* will follow filing and will be done by the most highly expert catalogers available. It will not be done before filing or in filing because it involves repeating expensive research unnecessarily. Nevertheless it will be understood that the second process of proof reading and rechecking by expert assistance will apply expert attention to the matter of entry so far as it is standardized or a matter of the application of rules and does not involve research beyond reference to standard entry list or standard filing rules. These two processes eliminate the bulk of the work of final expert editing and reduce the final process of revising and editing to a low minimum.

(7) The *service* or operation of the catalog is primarily for the fast growing body of research scholars working in the Congressional library itself. This service will be the usual automatic self help service of an alphabetical card catalog in convenient cabinets and trays with a competent information personnel in the background to guide the user to and help him in its use. As the customary use will be simply to copy the titles of a given author or work this will be done for the user if desired by photostat methods at the trifling service fee of the Congressional library service.

The secondary service by correspondence is likely however to become the major problem in bulk but offers no new problem in method which will follow the established information methods of the library with its customary modest service charges. The application of this service to manuscripts will naturally be on the alert for any developments of the international information and loan service so ardently promoted by the League agencies, now especially by the so-called documentation agencies.

The catalog may be and is perhaps likely to be more used internationally even

than nationally as a matter of quantity but it will be more important and more of a relief to North and South American, and still more to the remoter nationals who feel more keenly the handicap of distance from the great manuscript collections.

While the service of the catalog will be chiefly by photostat it may perhaps be rendered by film if desired or if long sections are wanted, or if lists desired are short, they will be typewritten.

The mechanical process of service is simply to extract the bunch of titles desired, spread them out in overlapping form and take the photostat copy. Since the thinnest standard card is best for this service it will be used in the catalog and since it economizes the use of photostat paper and makes a better publication sheet in case for any reason copies are to be multiplied, the typing of the titles will be made rather near the top of the card and uniform as to style.

It is expected that this service will begin immediately with the first catalogs exhausted and it will probably be possible to keep the filing and service up to date daily. Something approaching this was the case with the great union catalog of printed books during its compilation but with that experience it will probably be possible to keep up to date as fast as the cards are prepared, the only doubtful factor being the question whether the cards will be finished ready for filing before submitting to the libraries or not and the probability is that the alphabetical filing will not wait for this. The motive for the catalog is to supply information as soon as possible without waiting for the endless process of the production of adequate catalogs by the libraries. The driving interest of the situation is precisely the refusal to let finding service, the only service that the worker cares much about, wait on the perfecting of details, which however useful in their way and for their purpose, are quite irrelevant to the finding.

CHAPTER IV.

STANDARDS OF FULLNESS AND ACCURACY FOR THE PROJECT.

(1) The standard of *fullness* will be the short short title, strictly avoiding temptation to fullness of title or any unnecessary matter whatever. Ultra abbreviation will be encouraged and the fact that the list is strictly an index to, as a rule, fuller catalogs which may be consulted for farther detail, insisted on. As a rule main entry will be confined to not more than two or very occasionally three or four typewritten lines of not more than sixty letters each.

The proposal to apply to this index catalog the extreme short short catalog method has aroused something the same polemic on the part of some convinced full catalogers that its application to finding lists of printed books has called forth. Although it is a matter of this or nothing they urge that nothing is better, just as the extreme book catalogers urge that it is better to keep piling up arrears than to apply photostat, clipping and short title methods.

The distinction between full and short cataloging is best and accurately described by the terms bibliographical and finding catalog. One serves readers about books and writers of books about books, the other serves readers and writers of books of all kinds including the writers of bibliographies. The one serves those who deal with the outside of books the other with users of the inside.

The chief trouble with full cataloging is that it costs through the nose. When a protest was made against a cost of five dollars a title for cataloging books which had themselves cost on an average two dollars apiece it was said "what of it—if this cost is necessary why not?" The answer is of course the Yankee answer, the question, Necessary for what? One earnest cataloger urged that, "we are taught that every card should be a work of art"—have every possible perfection that is except perhaps usefulness. The purpose of the cataloging entry is not to minister to the esthetic pleasure of the reader but to minister to finding needs. If that need can be served for five cents as well as for five dollars, four dollars and ninety five cents have been spent for other than primary library purposes. The Library of Congress union catalog of printed books freshly cataloged several hundred thousand titles at the cost of a little over three cents per title, ninety nine percent plus accurate for finding purposes. Bibliographical cataloging is strictly not the business of libraries at all. It is the responsibility of bibliographers and bibliographical societies. It belongs to science and learning not to the primary service of books. The business of the library is to furnish finding cataloging.

All this is true also of manuscript cataloging. Full cataloging absorbs so much of the funds of many manuscript collections that the bulk of the manuscripts remain uncataloged for decades.

Certainly the full method can never be applied to a union catalog for reasons of sheer cost. It is short short method or nothing.

And this is not the only disadvantage of full or part full method although it is the decisive one. The bulk itself is a disadvantage for finding purposes. The full method of the French department union catalog is an example. It is far more troublesome to use than the inventory catalogs of various special collections which are characteristic of French practice. It is true that all libraries may sometime have full catalogs of their manuscripts. These will form a union catalog of type one but although manuscript books are a strictly limited group—a closed objective, such a catalog will not be finished for use for a thousand years.

At all events a union world catalog of manuscripts with at least a million titles in full method is wholly impracticable under present circumstances both on account of cost and bulk.

Those who refuse to give up full cataloging for finding cataloging still urge the old cliché, "what's worth doing is worth doing well," meaning by well a quantity of various more or less useful information irrelevant to finding, meticulously executed. Others who are reluctant to recognize short method as the only method which can serve the complete finding purpose urge a middle way. These have won over so good a short cataloger and experienced finder of manuscripts as M. Seymour DeRicci.

Probably the best examples of extreme full cataloging, high standard short cataloging and extremest short cataloging are to be found at the Vatican; the first two in the cataloging of manuscripts, the third in a finding catalog of printed books.

The full method printed catalog of manuscripts by Pelzer represents the high water mark of modern bibliographical cataloging, accurate, learned, competent to a high degree. Every bibliographer will welcome it. It deserves the highest possible recognition that a learned institution can give to bibliographical work. But it covers only four hundred fifty-five mss. out of sixty thousand and cost twenty years of time or more than two weeks per manuscript. It bulks correspondingly. The service of such a catalog is for bibliographical research, especially paleographical research rather than technical historical or linguistic service but it is a true scientific service in this narrow field—as far as it goes. Like all full cataloging from the bibliographical standpoint however, it stops short of the most essential factor in modern manuscript cataloging—perhaps wisely for to attempt the final stage of description which is the location of the manuscript in its place in the best published stemma, involves an amount of time consuming detail which may well daunt even the most conscientious full cataloger. The climax of manuscript description is however certainly the locating of its position in a stemma as is now commonly done in specialist cataloging. Even the full-

est of library cataloging does not so far attempt this but with the multiplied cases of the specialized union cataloging of individual works, which make this the very end and object of its cataloging; the introduction of this feature of full cataloging is only a question of time. The shortest short cataloging with a carefully compiled stemma is more useful to research scholars than hundreds of pages of customary bibliographical detail. The description of a manuscript which does not point out its genealogical relation to other manuscripts is Hamlet with Hamlet left out. Library school instruction in the rules for manuscript cataloging should and sometime will teach the method of finding and incorporating this most important of all information in cataloging. This might well apply not only to full cataloging but to medium cataloging. In cases where the information is available it is far more important to the researcher than information as to provenance or other external matters of interest to collectors and bibliographers but not important for scientific study.

The short title card catalog of the Vatican library manuscripts represents the *ne plus ultra* of short cataloging as that of Pelzer does of full cataloging. Its rules (*norme*) are model rules for short cataloging. The work has been done confronting the manuscripts themselves and by a well trained staff of expert paleographers. The highest standards of accuracy are observed. Data are not now at hand for comparison of cost but the cost is very much less than either full cataloging or medium cataloging and is no more than is quite reasonable for the Vatican cataloging. The amount produced per dollar is amazing to an American librarian. Altogether it is a well judged common sense standard applied with extreme thoroughness by a competent staff and direction. It sets a model for all great collections of manuscripts such as research workers have long desired. A world catalog on this basis is not unimaginable but expense and even bulk seem to put even this standard out of the question.

Interestingly enough the Vatican not only supplies the best examples of both fullest and short method but also supplies the best example known to the editor of the extreme rough and ready and cheap method of short cataloging unless perhaps the union catalog of the Rhineland printed books at Frankfort is to be excepted. It is a union catalog of the eleven special printed book collections of the Vatican library. These collections have been hitherto practically unusable by the visiting researcher. Now they are entirely usable through a card catalog rapidly thrown together by clipping and quick copying on uniform cards at little cost of time or money and this has proved in use an invaluable finding means, as well as revealing the very great bibliographical richness of these collections hitherto only guessed at.

The best modern illustration of the medium or compromise method is the work of DeRicci in his census of American manuscripts. This has taken nearly

ten years for perhaps six thousand book manuscripts and something the same number of vellum and paper documents—deeds, acts, etc. It bulks perhaps ten times the volume of this project and costs at least twenty times as much.

The present project is gauged to a method which turns out perhaps sixty titles per person per day at a cost of ten cents per title unedited, twenty cents edited and thirty three cents printed. If printed it bulks fifty eight titles to the page. At this level a catalog becomes imaginable as to time cost, money cost and bulk. This compares with DeRicci's shorter method at seventy five cents per title, his medium style at say five dollars per title and the full style of Pelzer which probably means at least four times medium style. Any of these would be quite impossible to finance for a million titles.

The short short method of DeRicci as proposed to the French Institute some years ago approaches the standard of this project both in method and cost but it contemplated somewhat less careful handling.

(2) The standard of *accuracy* set up is, "all the accuracy that means will allow." This involves absolute accuracy in essentials—entry, reference and fidelity to the source. It does not involve correction of the data given in the sources—a constant temptation—if this involves research time. It will however automatically produce many slight corrections. In the case of one catalog it has produced hundreds. Accuracy is at bottom a personal equation. It is a matter of attention. Some people are habitually accurate others not. All men are more accurate while their attention is fresh but become less accurate as exhaustion proceeds. Professor von Gebhardt used to hold that no man could collate for more than four hours in a day without errors beginning to multiply rapidly. This can be cross-checked in the experience of most collators. It is less marked in the proof reading of print but is an ever present factor even there. It may be ignored when the proof is to be re-read especially by another eye, but re-reading introduces another cost factor.

There has been so much discussion of or polemic on this matter of accuracy and it has been so pointedly applied to these particular studies that it is necessary to explain in detail why these studies contain and this project at very best will necessarily contain more non-essential error than most books although all books always contain some errata and often publish lists of typographical errors.

There is bound to be more or less error material or negligible in every product of human endeavor. Everything which passes through the human mind is tainted. Even a divine verbal revelation to the most highly sensitized prophet would inevitably contain a percentage of error.

There is however a great distinction to be made between material error and negligible error and it is the failure to make this distinction which is a basic vice of criticism. It is the distinction between straining out gnats and swallowing camels.

This distinction is made even in the exact sciences. There is always, so the treatises on scientific method say, a tiny percentage of error in even the very best scientific work. It is always an approximation. Exactness is never quite exact. If the figures are carried to enough decimal points they may be used for mathematical computation but still they are only approximate.

The same thing is true in the stern realism of mechanical production. The approximation to exactness of the interchangeable standardized parts of an automobile in mass production is amazing. They fit to an unbelievable degree of exactness so that any part may be used in any machine but even in the most perfect fit there is always a tiny decimal of variation allowed for. There is negligible error within incredibly narrow limits.

This same thing is notoriously true of proof reading or collation which is in effect the problem of this union catalog. After the revised New Testament had passed through the hands of several of the most expert proof readers to be found and had been scanned by all the revisers, who were all by way of being professional experts in collation, the publishers offered a guinea apiece to the public for the discovery of farther typographical errors and such errors were found.

A foreign reviewer of these studies who is perhaps the head of the profession of manuscript cataloging whose standard is uncompromising and whose work in cataloging manuscripts is perhaps the most thorough and competent existing to date, nevertheless in reviewing and pointing out many mistakes in the nine thousand more or less titles of Part V, himself makes two slight typographical errors in the title of the book which he is reviewing and might therefore be said to justify eighteen thousand such errors in the book reviewed. But even if there were eighteen thousand errors of this type in the list they would not affect finding service of the catalog in the slightest—anymore than the permissible variations in an automobile part.

The reason why this project must necessarily contain many more errors than, say, the Vatican short title catalog, is because it is not first hand work. It is not done from the manuscripts themselves. It will contain therefore all the material errors of the original catalog plus any errors which may be made by the staff of the project. It is true that thousands of strictly immaterial errors in the sources will be corrected by the catalogers or editors but in this kind of work it is highly dangerous to correct even apparently obvious typographical errors, for these may be and often are the spelling of the manuscript itself and to correct this to any other standard than that of the original author or scribe is itself an error and throws everything out of gear. Some of the worst errors in modern books come from gratuitous editorial correction. The present writer once received the proof of an article of his when he was abroad. The editor had changed "mana" to "manna," making nonsense of the point. The correction was cabled back but was too late

for use. To attempt such corrections is like the "conjectural emendation" so abhorred by critics. The "correction" of an error is itself an error where the "error" is in the original manuscript. Even the correction of typographical errors will therefore not be made unless absolutely unmistakeable as e.g. where the index to a catalog of manuscripts is found to conflict with the text of the catalog. Project catalogers will be held strictly to account for fidelity to the catalog used, not for its mistakes—and catalogs are often slipshod.

The editor of this series has always stood and now stands for that standard of accuracy which is the counsel of perfection. He has never intended to try to justify himself for any lapse from this standard although he has had plenty of mortifying occasions to pardon himself as a repentant sinner for his slips. He has had occasion in a long lifetime of industrious, if intermittent, collation of manuscripts to recollate the work of far better collators than himself and has always found an appreciable number of errors. In one case he had occasion to recollate two manuscripts done by a first class professional for a round professional compensation and undoubtedly checked over once or twice by the collator himself. In both these cases he found a number of errors and corrected the collation accordingly and then finding later that a number of passages conflicted with what the *stemma* showed they ought to be, he again examined for these readings and corrected most of them, finding the *stemma* correct about it. In another instance he had occasion to use the transcript of a palimpsest made at great expense by an absolutely first class professional. He was told that it had been done with care and since a free use of chemicals had been made to bring out the readings it would be no longer possible to read on account of the blackened state of the vellum after the chemical application. Any attempt to recollate therefore it was said would be futile. But after the *stemma* had been formed and the readings found to be frequently conflicting, the transcription was marked for several hundred apparent contradictions and comparing this with the original more than five hundred slight (with a few important) corrections and tiny additions were made. Most of these were immaterial for text but in the modern genealogical method even variations useless for text may help the *stemma* and the importance of absolute accuracy is greatly increased while even a few definite errors may not only vitiate the effectiveness of the *stemma* but throw on the manuscript a suspicion of conflation which materially lessens its value in evidence. At all events this experience shows that some errors are bound to be made even by the very best of experts.

Everyone will agree that in exact scientific work no amount of pains, time and money is to be spared to avoid material error or even negligible error if means hold out but where an urgent end of practical service is set, means are limited and the choice is between the elimination of negligible error and not doing at all,

eliminating just doesn't make sense. Whether error is negligible or material depends on whether the finished work does the service or not. The old rule of the Princeton Cataloging Division used to be that, "an uncataloged book is one hundred percent error"—because if uncataloged the reader does not find it at all. This rule permitted the finding cataloging of every book every year and as a rule every day while other libraries insistent on full cataloging were piling up tens of thousands and even hundreds of thousands of arrears because of their conviction that only "full cataloged cards," meticulously standardized, should be introduced into their catalog. There were of course errors, sometimes "ludicrous errors" even but it has often happened that more errors have been found in fullest cataloging than in short cataloging and not infrequently the most meticulous catalogers have been caught in the most material errors. It is a mistake to suppose that short and rapid cataloging is likely to be more inaccurate than full cataloging. It is a matter of attention and absence of hurry. In fact, other things being equal, short cataloging is more accurate than full cataloging because there are fewer letters and therefore chances to make error and there is of course much more time at disposal of the catalogers for deliberate attention in a short than in a long title.

The standard for this catalog requires one re-checking by the original short titler himself and a second, confronting with the catalog again, by a moderately expensive expert.

In short the standards of accuracy will be, except for author entry, uncompromising conformity to the source, not however to the source of the source. The cataloger will not be required to correct his sources or permitted to do so when there is any possible doubt.

In the matter of author entry the original short titler will conform to the catalog but even the first reviser will be expected to change this entry to conform to the standardized list of authors, making the correction in handwriting in order to preserve the entry which the scholar must use in turning to the catalog.

It hardly needs to be said that no careless error will be tolerated and that catalogers will be taken only from tested copyists. These copyists will, in America, preferably be picked from Library School graduates and American Library Schools teach a meticulousness in tiny details which has never before been equaled since the Schools of Massoretes.

CHAPTER V.

COST OF THE PROJECT TYPE.

The method proposed for this project is not quite the extremest short method for a simple finding catalog. It includes a reference to the original catalog from which fuller information on the manuscript can be found. It also includes a few data as to age, size, etc. These can be supplied at nominal additional cost where they can be found from the catalog used without further research and they give the most useful information for the orientation of the user. Simple finding information with reference would compel the user to consult the original catalog. With this amount added at negligible cost the user will have in the index list itself all the data necessary for the first orientation of his work. It makes a self sufficient work therefore without turning to another source while the reference gives prompt access to full cataloging and bibliographical details.

The detail of the method is described elsewhere and some comparison of cost with the full method of Pelzer and the compromise method of DeRicci, the short and shortest method of the Vatican and DeRicci's shorter and shortest proposals, is given in the preceding chapter.

The financial program of the American Library Association's Committee on Bibliography asks for a grant of \$25,000 per year for five years "aiming at half a million titles at least," distributed as, (1) a preparatory survey, \$5,000, (2) a demonstration experiment in the field of the A.L.A. Committee projects 10 (manuscripts in American libraries) and 11 (foreign library manuscripts) \$20,000, (3) the remainder of half a million titles, \$100,000. It was expected that the first two would be completed in one year and the third in the four years following. Any remainder would be provided for later, on the experience of the first half million, at which time very definite estimates could be made, impossible at present while statistical information is so confused and insufficient.

These figures estimate an average cost of twenty five cents per title for a double card catalog. Ten cents per title more or less additional would be needed for a printed catalog, income from sales disregarded.

These projects and the estimates were first published in November 1930 but had been arrived at sometime before. Since that time the work of the model short cataloging system of the Vatican library and the experience of Project C with a seventy five cent basis for minimum method and a five or six dollar per title standard for a medium method has led to a published proposal that the estimate for formation apart from printing be raised to 33 cents per title. The result of the demonstration experiment as conducted meantime has however tended to confirm the feeling that the original estimates of ten cents for compilation and ten cents

for editing would be sufficient for formation of the catalog and ten cents or at most thirteen cents additional sufficient for printing, understanding that the dubious returns from the sale of printed catalogs would accrue to the extension of the project.

The grant proposed remains therefore as before, but the feeling of the then Chairman has tended more and more towards a hope that the output might perhaps be doubled over the figure first proposed e.g. a million titles for \$125,000, instead of half a million.

As a matter of fact the experiment with Part V together with the experience of the union catalog of printed books and other concrete projects give reasonable hope that production per dollar may at least be very greatly increased so far as original transcription and editing is concerned and there is a fighting chance even for the doubling but no one would like to take the responsibility for guaranteeing such a figure if the right amount of expense is to be put upon the editing and costs of material, cabinets etc. are included. But everything taken into account he might certainly venture to commit himself to the twenty cent basis, throwing himself on the mercy of the critics and the granters if he did not reach the full half million titles but having little fear. The estimate is made on the same professional experience which has proved sufficient for three or four other large projects. In the case of the union catalog of printed books, the project called for a maximum of six million titles for a quarter of a million dollars. As a matter of fact production ran a million titles above estimate reaching more than seven million titles, an average production of more than twenty five titles per dollar or less than four cents a piece, all processes, materials, working cabinets with seven thousand containers and the rest included. As a matter of fact at least a million titles were short titled and typed at from one and a half to two and a half cents per title and at least half of these done by first class catalogers, with first class revision. Several hundred thousand were moreover fresh cataloged at a cost of less than four cents each.

This experience seems to justify the hope that with the amount asked for much more than the half million titles can be produced, so far as the work can be done from printed catalogs.

When it comes to travel expenses and high degree of expertness for original cataloging from the manuscripts, the cost will of course be a good deal more and the production correspondingly low but the experience of these studies and of Project C suggests that for a project of half a million titles for \$125,000 a considerable percentage of original work can be included, the excessive cost being taken up in the surplus of a ten cent per title estimate on work from printed catalogs.

Another confirmatory experience is the experiment of these studies with Oriental manuscripts and the experience of Dr. Randall with the Arabic manu-

scripts of the Hartford Seminary Foundation. Each of these has shown that this work can be done by a reliable expert at the rate of eight or nine an hour even in this more difficult field, and with original cataloging from the manuscripts themselves.

Mr. Faris short titled 355 manuscripts from the catalog by Professor Littmann and 493 fragments freshly, including a very general characterization of the subject of each—using the *initium* of the fragment as alphabetical entry word or artificial title.

These 848 titles were produced typewritten on cards at the rate of seven and seven tenth titles per hour.

It is true of course that Mr. Faris is a rapid worker and his native language is Arabic but this rate is cross-checked by the independent experience of Dr. Randall with Hartford Arabic manuscripts and his estimate of "seven or eight manuscripts per hour" for short title cards done with the manuscript. The basis seems therefore sound.

If the A.L.A. project for Arabic titles in American libraries had been put in operation in the beginning it would have been done under the direction of Dr. Randall. If it had been carried out later in 1933 after Mr. Faris finished his Part IV, it would have been done by Mr. Faris, Dr. Randall having been appropriated for more important duties meantime. It happens that Mr. Faris was used by Professor Hitti for another project financed by the General Education Board—the cataloging in a well considered and admirable full method of all the twenty three hundred or more Arabic manuscripts at Princeton. This has been completed at a cost not given out but certainly not half the cost per title of the medium method used for Western manuscripts and correspondingly less than most full method cataloging. If the A.L.A. project had been financed it would have been completed before this at a cost of not more than \$3,000 for fifteen thousand titles.

The experience of Dr. Randall and Mr. Faris with Arabic manuscripts is again crosschecked by the fact that M. DeRicci has been known to do from fifty to sixty manuscripts a day even in his much longer method. It is true that there is probably no other manuscript cataloger in existence who works so surely and rapidly as M. DeRicci but the method is much fuller and the material less difficult, so that a fairly well trained paleographer can undoubtedly produce Western titles at least as fast as Dr. Randall and Dr. Faris can Arabic titles.

The editor's own experience with a few uncataloged collections and quite a number of small collections cataloged only in handwriting corresponds to this in time rate, although perhaps his own work would not be as reliable in details of age, style of handwriting, etc. as that of the others. As a matter of fact the results have been entirely usable—punctuated with a certain number of interrogation points.

Another and to the editor especially convincing experience is the fact that at Princeton 236,000 titles of printed books were prepared as copy for a printed list for not much more than a cent apiece and printed for less than five cents each.

Still another Princeton experience points in the same direction. When the library was reorganized in 1900 something like 140,000 volumes were roughly re-cataloged in triple card form, author, subject and shelf, for about seven cents per title. It is true that library salaries have doubled since that time and printing costs have gone up correspondingly but the practical lesson of relative cost is the same and easily read out of the experience.

The cost per title of the work from printed catalogs depends a good deal on how far the short titling can be done automatically. This works three ways and may depend a good deal on management methods of production. In a few cases where the original list or the index to that list is already short titled and the work can be done automatically by typists, good final cards can be produced for one or two cents a piece by fairly rapid typists having a trifling knowledge of languages and these revised by a moderate priced editor getting perhaps a dollar an hour and doing at least a hundred an hour or in short for not more than two or three cents a title. Even this situation however has its pitfalls. Some thirty thousand cards more or less were made from the index of one such catalog at the cost of about a cent a piece. These were automatically short titled and promised complete simplicity. They were re-arranged by volume, page and codex number and the supplementary information as to date, etc., added from the text by a rather competent professor although not an expert in manuscript cataloging. Here however trouble began for hundreds of errors turned up, some of which required a great deal of attention or correction and often calling for detailed study or research, with corrections on cards requiring the re-copying of these cards. Perhaps half of the cards of this catalog were corrected before the work was laid aside as too expensive to justify carrying farther, for mere study in method, although the work was reserved for completion in case of a grant. The very considerable body of titles fully done with corrections suggested however that cost would not reach to much more than five cents per title.

Another very large possibility of cost reduction by management methods is by having a large fraction of the work done in European libraries where both typing and expert revision cost less than in America where real expertness is still scarce except among high bracket University Professors and even good typewriting catalogers are expensive compared with Europeans.

This is so true as to suggest the inquiry whether the whole project might not just as well be produced and operated at Rome, Paris, London, Berlin or perhaps especially Geneva, although Geneva would be almost as expensive as Washington. An American would not object to the location of the catalog at any

of these places, although he would feel that most of the advantage of inexpensive expert production might be obtained by partial production abroad, while retaining the compensating American advantages, through American ways and means both in formation and operation. At all events however this is a way in which the average cost of production per unit can be brought down without injury to quality whether it is used wholly or in judicious parts. A unit set up at Rome with the use of the Vatican's unparalleled collection of printed catalogs would certainly help the financial problem and would probably command more expert workers of all grades at a just rate of pay than any other place. M. DeRicci's first short title plan submitted to the French Academy estimated a very low rate indeed for work done in Paris. The experience of the project in Paris has been hopeful as to doing work there but for various reasons other than actual cost per hour, work in Rome is the most promising type of this method which can probably be extended in the end, if ever the whole problem is met, to other great manuscript centers, especially Munich.

An unknown factor of increased production (and diminished cost) is the amount of material which might be contributed by voluntary cooperation. This might perhaps simplify the problem of the cost of uncataloged material a good deal. And there are other factors.

It is hardly necessary to say that all this calls for very rigid attention to management economy. It will be quite easy to fritter away two or three times the amount suggested without extreme care. A good deal will depend on good fortune in finding the right Executive assistance but it is believed that for work done at the Library of Congress the experience of the union catalog division and its Director on the printed books catalog will insure right personnel.

Farther observations on the cost are made in the prefaces to other parts of this study and repeated in Chapter VIII of this Part of the Studies; also *passim* in this Part.

CHAPTER VI.

EARLIER UNION CATALOG PROJECTS AND PROPOSALS

The union catalog is no new thing. It dates certainly from early manuscript times. The earliest union catalogs are themselves manuscripts. The method had been quite fully developed before the invention of printing. The union catalog by Boston (c. 1400) covered some 195 libraries and there are hints of such catalogs two thousand or more years before Boston. When Ashurbanapal set out to enrich his library at Nineveh by getting copies of the choicest books in the libraries of surrounding nations he must have had something like a select union list of books in these libraries from which to make his choice. The same is true of the promoters of the libraries at Pergamon, Alexandria and elsewhere.

However that may be the motive for such catalogs during the manuscript age was just this motive of locating books to copy or to borrow for copying, rather than to borrow for the use of readers. They were borrowed for the scriptoria of the various monasteries.

And curiously enough history is now repeating itself in the fact that a main use for American scholars of the modern union catalog, perhaps the main use, is not to borrow for readers to use nor even to guide scholars to a manuscript for its use in its home library but to secure micro-photographic or photostatic copies for the American scholar to use in his home library—precisely the motive of Ashurbanapal. The getting of such copies of manuscripts for their clients is already a part of the declared policy and practice of some research libraries and it might well become the fixed policy of all such libraries. Certainly nothing, except the basic union catalog itself, the necessary foundation of such practice, will contribute so much to scientific production, especially text production, as putting this method into full operation. The progress of photographic methods has made the matter so simple and inexpensive compared with the older methods of published facsimiles that something like an actual realization of the dream of Professor Gayley and his contemporaries in the earliest years of this century, of a full American apparatus of facsimiles, at least of all important manuscripts, may yet be realized. At all events the method is already in considerable operation and results are organized by the union catalog of manuscript facsimiles which is one of the union catalogs of the L.C. If and when the union catalog of book manuscripts is in operation, present practice will tend to rapid and automatic extension towards the ideal of complete apparatus and by its means this can be systematically carried on as fast and as far as means permit. Facsimile reproduction is not a part of the present project but if the project is carried through it will tend automatically to quicken progress in such reproduction.

Since the invention of printing many types of union catalogs have been published. Catalogs of single works, single writers, single languages, single periods, single countries, single libraries; various combinations of two or more of these types, and universal catalogs combining all works of all writers of all subjects of all periods, existing in all localities of all countries. Existing catalogs, projects and proposals in this field cover various special areas (national, international, regional or local), various special subjects (papyri, autographs, etc.) various special periods ("before the 10th century," "before 1600, etc.") various special authors or single literary works (Virgil, Jerome, The Greek New Testament and its translations, the Vulgate) various special languages (Latin, Arabic, French, etc.) or groups of languages (Western, Romance, Oriental) various special libraries (Vatican, etc.) and various permutations of these (Western—All subjects—Before 1600—North America).

The nearest approach to the universal union catalog or world catalog is the group which includes the works of Montfaucon, Haenel and Migne. These have few Oriental titles and what there are, are given as a rule in Latin. The same is true of the titles of Greek manuscripts. For typographical reasons and cataloging reasons even Greek manuscripts are often given in Latin translation. These three are typical attempts at a universal catalog of all existing public manuscript collections or semi-public although they hardly contain so much as ten percent of those now known to exist.

The most familiar example of the National union catalogs covering manuscripts in various languages, periods, subjects are, among the older ones, Bernard's catalog of British manuscripts. The best example of an attempt of a National union catalog in full method is the catalog of the French departments. The great union catalog of Italian libraries by Mazzatinti-Sorbelli is still in progress and only a fraction of Italian libraries is yet covered.

The most recent and at the same time most complete local and regional union catalog is that compiled under the direction of Seymour DeRicci for Project C of the Library of Congress and covering American and Canadian libraries.

The best illustration of the index union catalog of many individual collections in a single library which is one of the most important aspects of modern union catalog practice is the recent Vatican union catalog of its many collections.

Perhaps the best illustration of the monographic type is the list of New Testament manuscripts by Gregory and Abbot as literary executors of Tischendorf published in Tischendorf's *Critica Major*. The list includes all known manuscripts of the whole work or any of its parts together with manuscripts of early translations in whatever language. It is a monumental example of what such a list should be.

Among the modern proposals or projects for union lists which for one

reason or another are outstanding, the first which is of special interest to American workers is perhaps the proposal made at the beginning of the century by the classical association to the then new Carnegie Institution at Washington for a universal catalog of Western manuscripts to be executed in three years on a grant of \$25,000 per year. The initiative in this matter was with the classical scholars but the catalog was intended to cover all Western manuscript books, ecclesiastical and modern language as well as classical. Dean Andrew F. West was a leading figure in this project which did not get its grant.

The subsequent proposals were for the most part mere proposals or general propaganda rather than serious projects. These too were largely from the standpoint of the classics, but aimed to include all Western or all manuscripts generally. Those proposals with which the present editor was associated include a special plea made by him at the international conference in St. Louis in 1904 and the proposal advanced by him before the A.L.I. in 1922, which was taken up by the A.L.A., developed by its committee, approved for solicitation by the council and matured into the present project. Some account of this will be given in the following chapter.

In the twenties proposals began to take on a more concrete form though still rather proposals than projects. M. Seymour DeRicci advanced such a proposal restricted to classical manuscripts. Toward the end of the decade he agitated for a general catalog of Western manuscripts in a specific short title method. He presented this with specimen pages and details which brought the matter beyond the stage of mere proposal into the neighborhood of concrete project with estimates. He presented this abroad and urged it on American attention but dropped it when he took up the project for a union catalog of mediaeval and renaissance manuscripts in American libraries. This project, in the form that it is being carried out, was initiated by the American Modern Language Association, which has shown great interest in and understanding of paleographical matters, and which initiated also the collection of manuscript facsimiles of modern language works now deposited by it in the L.C. It was at first intended that the method of this project should be the method of the short title project approved by the A.L.A., and restricted to volume manuscripts. The work of Project C was at first organized on this basis but with the change of Chairmanship and personnel of the Committee it was decided that an ampler method was advisable and funds were solicited and obtained on the basis of this ampler method. Some farther account of this project will be given in the following chapter, together with an account of the Vatican short catalog the latest and best executed of modern union catalogs of mss, both of these having played an important part in the evolution of the present project.

CHAPTER VII.

ORIGIN OF THE PRESENT PROJECT.

When in 1880 the editor of these studies was first introduced to the exacting art of text criticism by Professor Matthew B. Riddle of the Hartford Theological Seminary, the Migne catalog was, as it still is, the most recent union catalog of manuscript books. There were few if any copies of this or of any printed catalogs of manuscripts in this country at that time. Paleography and text criticism had been almost unknown fields in American learning.

This year 1880 was a turning point. It was one of the peaks in the history of text criticism generally, notably in the English speaking countries. The revisers of the English New Testament were bringing their labors to a finish. The revised version was published the following year and the Greek text of Westcott and Hort on which the revisers had chiefly relied was published at the same time. For ten years the British and American committees had been diligently at work, not simply on a translation of the received Greek text, but on a thorough critical examination of the manuscript evidences for that text, and had incidentally trained a large number of their students into some notion of the new genealogical method.

Westcott and Hort, following the footsteps of Tregelles, were the chief textual experts for the English revisers; and Dr. Ezra Abbot, on whom, together with Caspar René Gregory, the mantle of Tischendorf had fallen, was leading expert for the American revisers.

The long continued work of the revisers, many of them Professors of Greek in the Seminaries and Universities, had greatly stimulated the teaching of textual criticism. It had never before been taught in America with such intelligent understanding of what it is all about until the few years just succeeding 1881—perhaps on the whole never since taught with such intelligent enthusiasm and practical understanding of its value, although the study itself has shared in a general progress as to materials and technique and has produced a number of critics and teachers of criticism of real distinction especially in the classics. It may certainly be doubted whether there has been a time since, when students of the New Testament generally have been so well instructed in this dry but fundamental science.

Dr. Riddle was one the American revisers. He was Heidelberg educated and a brilliant teacher. He was an exegete rather than a textual critic but he was trained in criticism and he drilled all his students in weighing the evidence of the various readings and more or less in methods of gathering and displaying this evidence, the collating of facsimiles etc. He made the subject seem live and important and he was supported in this by a couple of colleagues who used the method in their work and especially one who used it constantly in a matter of

course way which made it seem a natural and necessary part of every scholars equipment. This was Dr. Chester D. Hartranft, Professor of History, afterwards President of the Seminary and at that time also Librarian of the Seminary.

Dr. Hartranft had been one of the founders of the American Library Association in 1876, and he was interested in manuscripts both as a species of book and as materials for his own specialized work.

He was a man of prodigious learning, uncompromising ideals of scientific scholarship and overwhelming personality. He was not a Reviser. He did not teach textual criticism directly and he was a less finished teacher than Riddle but in his lectures on Methodology he taught the history of texts and the literature of paleography, and in his teaching of Old Testament History he applied textual criticism in a matter of course fashion which rather took the breath of the students away but which backed by his vitality, impressed them, as the most skilled teaching could not have impressed them, with the practical application of the method to historical questions. Marching up and down between the rows of students at their desks, his only text book, the Hebrew Old Testament, in hand, as he came to passages with variant readings in the Septuagint or Targums or Vulgate or other old Greek, Latin, Syriac and whatnot versions he would reel off the evidence extemporaneously as if it were the most natural thing in the world to do. In his Church History teaching he was constantly pointing out the inaccuracies of the Migne text and his preference for the Benedictine editions where there were any and the need of new modern editions. In his Historical Seminaries he usually assigned some thesis which involved the use of Mediaeval text.

Before going to Hartford, Dr. Hartranft had been, as a New Brunswick pastor, closely identified with the work of the New Brunswick Seminary and chiefly responsible for its outstanding Library equipment in source material. He carried the same ideals into his new field and office in which he dominated book selection during the years of the greatest expansion of the Seminary library when it increased nearly five fold in five years. As librarian he encouraged textual study by purchasing such manuscript facsimiles as were then to be had, the polyglots, many editions for the history of Biblical text criticism, and the great collections of Mediaval texts, Migne, Pertz Monuments and the like at a time when these were not common in America. He purchased also material for Paleographic study and even a few manuscripts and manuscript specimens at a time when ancient manuscripts in American libraries were almost entirely lacking.

A little later Dr. Hartranft became himself one of the most diligent and successful hunters of early foreign manuscripts, in the history of American learning and the editor of one of the most scholarly and ambitious series of texts ever attempted in America—the Corpus Schwenckfeldianorum, a work which falls within the chronological period of the DeRicci project. His list of the manuscripts

of Schwenckfeld forms one of the most complete union catalogs of the manuscripts of a single author ever compiled and the collection of facsimiles of these manuscripts now in the Library of the Schwenckfelder Histoical Society at Pennsburg, Pa., with its more than a thousand facsimiles, is unexcelled perhaps unequalled among such American collections. Altogether, although his work does not quite fall within the period of this project, it does fall within the DeRicci period and Dr. Hartranft deserves the credit for the first and best special union catalog of manuscripts and he with his successor, Dr. Johnson, the credit for the best collection of facsimiles of a pre-colonial foreign language author that has been produced in America.

As Executive Assistant to Dr. Hartranft while he was Librarian and his successor when he was President, the Editor of these studies was for ten years in intimate daily association with Dr. Hartranft, constantly exposed to his highly contagious ideas about library service and about manuscripts and many things. This project is the logical if inadequate result. Dr. Hartranft did not originate the project but he was its efficient cause and on several counts. The history of the project begins with his teaching, was promoted by his encouragement and was stimulated and oriented by his example and experience in listing and copying the eleven hundred or so manuscripts of Caspar von Schwenckfeld.

When his Assistant finished his Theological course in 1883 Dr. Hartranft had already slated him for the Librarianship and had given him to understand what was expected of a librarian. This was nothing less than the unattainable but it was rather a fascinating unattainable. It would be his duty to perfect himself in all the accomplishments laid down in the textbooks of Library service from Schmidt on to date. He would be active in Library Association work. He would visit and study libraries at home and abroad first hand for their methods of service especially such as related to original research. He would give special attentions to manuscript service and other fields then ignored in American Library service. He would teach a little orally in the field of Bibliology not so much as to interfere with technical work, itself regarded as a method instruction, but enough to keep him in sympathy with oral instruction in general and the uses of the library in such instruction. He would in the same spirit do a little original research work himself in order to keep in sympathy and touch with the research work of the Professors and their Seminary instruction in the method of research. This meant manuscript hunting, perhaps publishing a text or two and perhaps something in Library History. To these ends the new librarian would have the usual two years University rank as Instructor, five as Associate Professor and then full Professorship. This meant also four months summer vacation free for study and research, with such study and research expected of him.

The next year, 1884, Dr. Hartranft resigned his librarianship. His Assistant

was made Librarian and devoted his first four months vacation to a Bibliographical tour in Europe for the purposes which had been indicated and for which he had been making preparations meantime.

In the matter of research, he had looked for some work which needed re-editing, was of literary and Bibliographical interest and not too long or involving too many manuscripts to be handled in four months. Somebody told him that the Rufinus Latin translation of the Clementine Recognitions was such a work. It was "the first Christian novel." It had rather an important constructive bearing on the live question of St. Peter's Roman residence. The current edition (Gersdorf 1838) embodied in Migne, was founded on two very defective MSS. and the printed editions and manuscripts, it was supposed, were not too numerous.

Preparations included visits to American libraries in order to see real manuscripts and to glean their scanty stock of foreign catalogs of manuscripts, for titles. At Harvard there were not only some catalogs but a few interesting Greek manuscripts. The visitor was personally conducted through a couple of these with characteristic kindness for some hours by Professor Ezra Abbot who was and is the best textual critic that America has produced.

Preparations for the summers work also included securing copies of the printed text for collation purposes, selection of test passages and printing these for use. Everything seemed set for a one summer job when it was discovered, just before sailing, that Delagarde in his introduction to the Greek Clementine Homilies had listed something like a dozen more manuscripts of the Latin Recognitions than had so far been gathered from the German and French editions and from printed catalogs of manuscripts. No copy of Montfaucon, Haenel or Migne had been found in the libraries visited or this find would have been less disconcerting. As it was, it was a bit staggering but still, if the test passages did their work well and a reliable table of descent emerged soon, something might yet be done in a four months vacation.

On reaching the European libraries this hope soon vanished. The catalog collections of the British museum and Paris National manuscript Reading rooms again doubled the original estimate and put an end to the hope that one summer would do the work. However there was a neat bibliographical problem in a mere list of manuscripts, with test readings and the would be researcher again girded his loins, had a hundred copies of the test passages printed at Paris and set out to hunt down his manuscripts in person but the list still kept growing. During the summer he visited a hundred or more manuscript collections, got collations of the test passages from perhaps half a hundred manuscripts and full collations of the whole 250 pages from several of the most promising ones but completion of apparatus in one summer was quite impossible and he returned, if not a sadder man, at least one much wiser as to the problem of manuscript finding and with

some settled convictions as to what should be done about it.

These conclusions were in brief; (1) that the chief obstacle to the development of textual research in America is the difficulty of locating manuscripts, (2) that the only adequate solution of the problem is a union catalog after the general style of Montfaucon, Haenel and Migne, (3) that such a catalog would save centuries of research time and add a concrete something to the value of most texts produced.

Since then a dozen or fifteen more manuscript hunting tours of four months each in Europe and several tours in America have again nearly doubled the twice doubled list and have deepened these convictions as to what can be done about it.

While digesting the material on Clement gathered on the first trip and preparing for a second manuscript hunting trip, another much shorter work, more strictly bibliographical in character and equally in need of re-editing turned up in Jerome's Lives of Church Writers (*Hieronymus, De Viris Inlustribus* or *De Scriptoribus Ecclesiasticis*.) Since, in visiting a library, it costs very little more time to note the manuscripts of two works than of one, a list of the manuscripts of this work was also begun, as a side study on following trips.

Meantime in spite of the insistence of some American librarians (Cutter) that American libraries had no use for manuscripts and manuscript study, there had been a certain amount of Paleographical instruction introduced into the Universities. As early as 1885 Mr. Melvil Dewey, making plans for a School of Librarianship at Columbia began to talk of introducing into it the study of manuscripts and at his request in 1887, as an "extra lecturer" in this School the writer had the pleasure of introducing the subject briefly in a few lectures to the first class of the Columbia Library School when the School was opened in 1887. Later he gave a few lectures on the matter at the Pratt Library School where some elementary practical instruction in the subject was being given and at the Illinois Library School.

In 1890 the basis of operations was changed to the library of Princeton University already socalled but then legally named the College of New Jersey. Princeton with a new administration and new ambitions was developing graduate studies and was about to take on the name and tasks of a university. It did not expect to develop the usual professional faculties which operate better in a city location but based its pretensions chiefly on the development of research work, of graduate school teaching and special schools for the modern professions of chemical and electrical engineering, architecture and the like. For these lines it was preparing to develop its library adequately and all aspects of research work for which the library is the normal laboratory. It was therefore hospitable to the Hartranft theory of librarianship which it adopted as a recognized policy in most of its aspects and specifically included the study of foreign libraries and book sellers, the active

sharing in cooperative library work through the library association, the study of manuscripts as well as printed books, a little concrete teaching, a little concrete research and prolonged vacations to do these things in. This gave opportunity for and incentive to farther manuscript research and to the effort to promote manuscript study in America.

Shortly after going to Princeton Professor Harnack offered to print the list of Recognitions manuscripts in his *Geschichte der Altchristlichen Litteratur* and it appeared in 1893 in the first volume of this work. The list then contained 74 manuscripts of which 71 had been personally seen by the compiler. Some thirty years later when Professor von Harnack, in behalf of the Berlin Academy, asked for the use of the material gathered and still unused, to be used for what it might be worth by the editor of the Clement volume in its collection of the texts of early Christian writers, the list numbered 92 of which the compiler had seen all but half a dozen.

Meantime the plan for publishing an edition of the Recognitions had come to a halt. It had been arranged that it would be published together with an edition of the Greek Clementine Homilies by Bishop Lightfoot, in a supplementary volume to Lightfoot's Apostolic Fathers and under the editorship of Bishop Lightfoot. This arrangement came to an end with the death of Bishop Lightfoot and at about this time the editor had been invited by professor von Gebhardt to contribute an edition of the Hieronymus and Gennadius to the series of *Texte und Untersuchungen* edited by him with Professor Harnack and he had undertaken the edition.

On removing to Princeton this task was taken along. The edition was published in 1896. One hundred and eighteen manuscripts were listed in the introduction nearly all (114) seen personally. 88 of these had been collated for test passages and included in the stemma.

In this year 1896 Princeton held its Sesquicentennial and took on the name of University. As a part of this move a new library building was provided with Seminar rooms on a scale unprecedented in America at that time and the librarian among other things was encouraged by the authorities and aided by two or three sympathetic Alumni, notably the Pyne family which gave the library building, to provide a sufficient apparatus for teaching the method of paleography and text criticism. A few manuscripts too began to be bought for the library or for deposit in the library as an aid to paleographical teaching.

Already, before completing the Hieronymus text in 1896, another list had been undertaken, a list of the manuscripts of Jacobus de Varagine author of the Golden Legend, "the most popular writer of the middle ages." This had been kept subordinate and was confined to manuscripts personally examined but it already contained some scores of titles.

Altogether by this time several hundred manuscript collections had been visited and several thousand hours spent in their reading rooms handling their collections of printed catalogs in other libraries, using their own catalogs and examining and collating manuscripts. A diligent study had also been made of the seminar collections of apparatus for the study of manuscripts in various universities abroad and visits had been made to sundry paleographical schools, with a continually growing feeling that in spite of American distance from the great collections there was no real reason why American scholars should not take a much greater part in these studies if they could have better apparatus and instruction in the finding and use of manuscripts and better aids to finding so that they could start on their bibliographical journeys prepared with methods and lists without having to do all this preparatory work after they got abroad.

The year following the completion of the library building, the usual bibliographical tour gave some special attention to the matter of the visiting and study of the paleographical Seminar libraries in the Universities abroad with reference to the apparatus of the Princeton Seminar. This culminated in the observation that even in the matter of book apparatus for manuscript studies and the preparation of students for their work abroad, American libraries were lagging far behind the foreign libraries although these were matters in which they might easily compete on a par since it was simply a matter of money and understanding. The dearth of manuscripts in America did not enter into this factor.

At the A.L.A. meeting in 1898 therefore he contributed a short paper, written abroad, on "American Libraries and the study of Ancient Manuscripts," making the point of our relative poverty even in purchasable material, on the text of a visit to the outstanding apparatus of the Archaeologico-Epigraphic Seminar of the University of Vienna. This paper referred also to the experience of American students abroad in the matter and to the opinion of Professor Smith of the American School in Rome as to the handicap of American students working abroad from the lack of such previous training at home as Professor Smith himself was then giving at Rome. The point was made that the old excuse for small production by American students, that we had no ancient manuscripts to speak of in America was no longer valid wth the modern methods for facsimile reproduction and the improved materials for paleographical study. Any University library with tolerable means might provide a reasonable collection of treatises, facsimiles, printed catalogs of manuscripts and the rest necessary for preliminary studies, while American libraries by cooperation might through the photographic reproduction of whole manuscripts even provide the actual apparatus for advanced textual work.

In 1900 the Princeton librarian was made chairman of the new A.L.A. Committee on International Library Cooperation. This Committee found the promotion of standardized International cataloging the most hopeful field for practical

International cooperation and special attention to the cataloging especially the union cataloging of manuscripts naturally fell to the chairman although matters were far from ripe for action in this field and efforts were chiefly confined to the promotion of cooperative printed book cataloging. This however gave occasion and opportunity to compare notes with foreign librarians on the possibility of co-operation in standardizing cataloging rules for manuscripts, producing aids and producing the needed union catalog. He remained on this Committee or its successors for some twenty odd years until its work in this field was merged in the work of the new Committee on Bibliography with its International duties and of which he became chairman, specially charged with the matter of a union catalog of manuscripts.

With the turn of the century the spirit of graduate studies and the increase of the hand apparatus in the field of paleography led to the introduction of a graduate Seminar course in the classical Seminary at Princeton, given by the librarian, on the method of paleography and text criticism. This was described in the 1901 catalog as, "Method of paleography and text criticism. Seminary: Lectures and drill in text making—search for manuscripts, collation, formation of genealogies and construction of text." The course, in varied form, was given until its giver became Emeritus in 1925 and its operation was a perpetual comment on the need of a union catalog.

For instruction in this course a stemma of 65 of the manuscripts of the Golden Legend, the list of which had then grown to ninety nine was prepared and printed together with brief rules in a form of cataloging to be used by the students. The list has recently been extended by a graduate student of Johns Hopkins, Mr. Hugo Weisgall, out of printed catalogs of manuscripts to more than four hundred and the end is not yet. Dr. Grubbs' lists of Spanish libraries in this series (Parts II & V) add several new ones in spite of the fact that three manuscript hunting visits had been made to Spain in the meantime.

Shortly after the turn of the century something came near happening. Those who were active in the promotion of classical studies had come to realize the importance of this work for text critical research in their field. The Association prepared a project for a union catalog of Western classical manuscripts. Dean West of Princeton was active in this and the Princeton librarian had a very unimportant share in the preparation. This project asked a grant of \$25,000 a year for three years and was brought to the attention of the Carnegie Institution of Washington. The grant was not made but the need had been recognized by the Association and the solution of the problem was pointed out in a very definite way. It marked therefore a step in the progress of American manuscript studies, then beginning to show signs of special activity in several directions.

At the International Library Conference at the St. Louis exposition in 1904

the Princeton Librarian as chairman of the A.L.A. committee on International cooperation and vice-president of the Association read a paper on International Bibliography in which he maintained that "the joint catalog or cooperative catalog, or inter-library catalog, is the highest development of applied Bibliography today." In this he elaborated the fact that the outstanding example of the International Union catalog was the Union catalog of manuscripts of which there were many examples and urged that "one of the most practical and attractive things which could be undertaken would be a new general catalog of manuscripts." He observed that "there are few things that would save as great an aggregate number of hours of research as a complete short title index to all codices."

Soon after this Professor Gayley took up the promotion of the facsimile aspect of the matter, inaugurating a somewhat remarkable symposium of leading educators and librarians published in the New York Evening Post. This was based on the possibility of a wholesale supply of published facsimiles of manuscripts. No concrete project followed but the discussion stimulated the production of published facsimiles somewhat and had an important part in the formation of opinion which led later to a greatly increased and more systematized production of photographic facsimiles for the use of individual scholars at the expense of their libraries. This in turn led to a demand for Union catalogs of these facsimiles, a matter in which the late Thomas L. Montgomery of the Penn. State Library took a leading share (1911) and which was carried out at the Library of Congress in 1929. Two editions of the catalog were published in this year and the card union catalog, now more than doubled, is one of the union card catalogs of the Library of Congress.

Nothing came of the St. Louis proposal. The year following this proposal the proposer had according to Association custom become President of the Association and he returned to the subject briefly but other matters were pressing for first attention so that in conscience he had to refrain from pressing his favorite thesis. The problem was however diligently studied with view to reducing the cost of such a project to a point which would allow of reasonable solicitation.

In 1907-08 seven months was spent abroad and shorter trips were made in 1911 and 1913. Passage had been booked again for August 1914 but war interfered and journeys were not resumed until 1920.

In 1920 thanks to a successful university drive for funds and with the returning students, a fresh activity developed at Princeton both in graduate study and in library activities, and the way was paved for farther bibliographical journeys. The drive had made it possible to make a substantial addition to overhead staff and unexpected circumstances made it possible to get as Executive Librarian a man of exceptional library experience and ability and high professional standing and responsibility. This freed the librarian from exacting detail and he became Director of the library reserving for his duties only, "general policies, teaching

aspects and matters of interlibrary cooperation," with a very strong emphasis on the matter of promoting interlibrary cooperation at home and abroad.

From the beginning in 1890 there had been a definite policy actively supported by the President and trustees of giving all necessary time and attention to work in the library Associations for promoting economy in library administration through methods of cooperative cataloging, cooperative acquisition, cooperative information service and cooperative lending service. This now became the major duty of the Director and two years later "general policies" having been turned over to the librarian, this, with his paleographical teaching and his duties as "Research Professor" became his sole responsibilities. He was able to resume and to lengthen his frequent bibliographical journeys, give more time to his one semester graduate course in paleography and put his main energies technically on the promotion of cooperative matters.

In the Fall of 1920, being now free for such matters, the Director resumed his visits to foreign libraries. Being a member of the A.L.A. Committee on Foreign Relations of which the Librarian of Congress was Chairman he began this trip by a visit to the two new League libraries at Geneva, the library of the League and that of the Labor Bureau. The librarian of the League was Miss Florence Wilson with whom he had been, as member of the State department (House) Inquiry Commission, closely associated in preparing Mr. Lansing's collection of books for the Peace Conference, which she accompanied to Paris and from which she graduated into the League librarianship. She was then busy with American assistance in organizing the League library on American methods and was closely in touch with Secretariat. Through her and a couple of friends at Geneva interesting contacts were made with various members of the Secretariat and of the Assembly. A couple of months were spent in Geneva and the rest of the winter in Italy in the Archives and the collections of book manuscripts.

The interesting thing for American librarians at this first Assembly of the League had been the introduction by Senator Lafontaine of Belgium a delegate, of a proposal for a Committee on International Intellectual Cooperation. The discussion of this project was precisely to the point of the A.L.A. Committee activities and opened up wide possibilities of International library cooperation notably that of the union catalogs.

Returning to America in the Spring of 1921 he made his report to the Association and read or published several accounts of the matter in papers before Historical and library Associations and articles in the library periodicals.

In the spring of 1922 following up the matter of promoting cooperation he read a paper before the American Library Institute on "University Library Cooperation and Business Management" in which he made the same points that had interested the Princeton Trustees. In this he pointed out several concrete lines in

which large economies might be produced for each cooperating library by applying the principles of management which have been effective in big business generally. The first of these was, "Union Catalogs of printed books, manuscripts and special collections."

The matter appealed to the business minded members of the conference, especially to Mr. R. R. Bowker, and the conference voted to ask the A.L.A. to appoint a special committee to cooperate in promoting the group of projects suggested; these included cooperative acquisition, cooperative cataloging with published cards and "Union catalogs of printed books, manuscripts and special collections." Mr. Bowker featured the matter in the Library Journal and a good deal of influential support for the group of projects followed. At the A.L.A. conference of 1922 a few months later Professor Root in his Presidential address made a very forcible plea from the angle of the taxpayer in the same direction of management economy or as he put it, "quicker and less expensive ways of doing business."

The summer of 1922 was spent in Europe. A good deal of time on this trip was taken up with Library Association matters in the promotion of international cooperation, as member of the committee on International Relations and as special delegate of the A.L.A. to several conferences. The American association had again had introduced to it the matter of cooperation with the International Institute of Bibliography, whose sponsor was Senator Lafontaine, in its International meetings, its International University and its Universal Repertory of Bibliography. Its delegate was therefore specially charged by the Council with an inquiry as to this, as to the League Libraries and as to the League Committee on intellectual cooperation, which had now been organized, had held a couple of meetings and was about to make its first report to the Assembly.

At the Brussels meeting of International Associations a representative of the League Committee read a paper on the plans of the Committee and took part in the discussions. At one of these meetings the American delegate also read a short paper on "American cooperation in intellectual work" in which he had occasion to remark that the "union of International Associations had expressly handed over leadership and responsibility to the League committee." He had been asked to give some account of "what the A.L.A. had done in the way of promoting cooperation," in view of the possible usefulness of its experience in working out the plans of the Union and of the League. Later (in 1924) at the request of the League committee he amplified this paper and in it suggested that the first concrete project in International Bibliography might be a Union catalog of manuscript books.

He spent several weeks at Geneva studying the two libraries of the League with reference to his report to the A.L.A. and in informal conferences with the Librarian of the Secretariat, and members of the League committee, on their plans.

The matters of most practical interest here to American librarians were the pronunciamento of the League committee to the effect that Bibliography was the necessary foundation of all intellectual cooperation, its formal resolution to give it and especially the library aspect of it, precedence over the other problems of research, education etc. and the appointment of a sub-committee on Bibliography, which, with associated experts, should promote such matters.

On his return in the Fall of 1922, the delegate made extensive reports to the Chairman of the Committee, Dr. Putnam, on Committee matters and to the Council of the Association on their special commissions. With the approval of the Chairman he recommended to the Council and the Executive Board the appointment of a special committee whose primary duty should be to consider and make recommendations on any proposals for International cooperation, which should be presented by the League for the cooperation of the A.L.A.

The Executive Board decided to unite this committee on the League with the Committee proposed by the American Library Institute on union catalogs, cooperative purchase, etc., since these topics were being hinted at in the plans of the League committee.

At the mid-winter meeting 1922-23 therefore a committee was appointed which took its name from the League committee on Bibliography and whose tasks should include all such matters as might be included in the League program and specifically the matters proposed by the vote of the American Library Institute, one of which was a union catalog of manuscripts. The proposer of the committee and of the A.L.I. resolution was made Chairman.

The Committee took up its work at once, in January 1923, with a program which included specifically union catalogs of books, manuscripts and special collections together with whatever cooperative projects might be undertaken or recommended for international cooperation by the League of Nations through its subCommittee on Bibliography. These recommendations had already proposed a union world catalog of books.

The A.L.A. Committee turned first as a matter of course to the Librarian of Congress who had for more than twenty years been the recognized leader of applied cooperative ideas, National or International, and whose library was already so developed in the foundation machinery for such work that it would be idle to attempt concrete projects along the specified lines of the Committee work anywhere except in the near neighborhood of its collections.

At a conference with Dr. Putnam a beginning program of selective projects in which the Library of Congress could give practical cooperative aid either by extending its own collections and services or by furnishing space for A.L.A. operations in the vicinity of its facilities was agreed on. These included specifically a union catalog of manuscripts.

In November 1923 the Chairman again went abroad for six months visiting manuscript collections in France, Belgium, England, Spain, Italy, Switzerland and library schools and spending ten days at Geneva attending the first meeting of the enlarged council, (1924) visiting the libraries and having some contacts with the League Committee. At the request of the Committee he prepared for it (Dec. 1924) an enlarged version of his paper given at Brussels two years before on American books and libraries from the standpoint of cooperation. In this he suggested as two projects which would interest Americans for cooperative international action; a union catalog of codices and the cooperative reproduction and indexed location of photostat negatives of manuscripts, for lending or borrowing by libraries. ("Some aspects of International Cooperation." 36-7)

The League Committee was then discussing and developing the topic of the International union catalog as a substitute for the International Library system first agitated in 1922 and had agreed (November 1924) with the Brussels Institute of Bibliography, that its Bibliographical Repertory should serve as basis for such an International union catalog.

The American Library Association was asked to cooperate. Its Council and Executive Board welcomed the proposal as "a concrete way of indicating the American disposition to cooperate with the League in every practicable way." In January 1925 these bodies, for the Association, instructed its Committee to investigate the situation, "with reference to the possibility of early cooperation." The Chairman went abroad early in February and spent seven months on this and related matters. Among other things he was present as one of two experts for the League Committee at a joint meeting of a League Sub-Committee and a Committee of the Brussels Institute to determine according to the terms of agreement between the League and the Institute in what order projects agreed on between the League and the Institute should be taken up.

Action however lagged and in Sept. 1925 the League Committee notified the A.L.A. Committee that it had decided to give up for the present the idea of an International Library or Union Catalog in favor of National union catalogs, urging each constituent or cooperating Nation to make a National union catalog for itself.

The A.L.A. Committee therefore turned again to its own program of union catalogs at the Library of Congress with the added interest of understanding that the promotion of its National catalogs was a recognized sharing in an International movement.

Meantime the Chairman of the A.L.A. Committee having reached the retiring age at Princeton and been made Emeritus was invited to become Consultant in Bibliography and Research to the Librarian of Congress with the special task of directing the cooperative projects shared with the American Library Associa-

tion, to which he was now in position to give his entire time.

By the following Spring (1926) the plans of the Committee for union catalogs of books, manuscripts and special collections had been matured, presented to the Council of the Association, approved for solicitation of means and the Executive Board had been authorized to solicit. Shortly after, these projects were endorsed also by the American Library Institute and other Associations.

In the summer of this year 1926 the negotiations for an International union catalog at Brussels, Geneva or Paris were again resumed by the Brussels and Paris Institutes. In July, the Brussels Institute, still charged by the League with the matter, proposed (July 14, 1926) to the Executive Board of the A.L.A. that it should conduct the compilation of the International union catalog for five years. The Association was far from anxious to take the responsibility but this was the first proposal for concrete cooperation with the League at a time when Americans were keen to do something or anything to show their will to cooperate with the League. It therefore voted to undertake the matter as requested, "provided reasonable support, say \$25,000 per year for five years, is secured beforehand, full cooperation of the League Committee. . . is assured and free hand and full responsibility given to the A.L.A., with active cooperation by the Institute in detail of operation." Nothing came of this.

In 1927 the Library of Congress received from Mr. John D. Rockefeller the generous grant of \$50,000 a year for five years for the extension of the bibliographical apparatus of the Library of Congress. This was applicable to all three of the union catalogs but the Librarian wisely decided to limit to the union catalogs of printed books and of special collections holding up the union catalog of manuscripts for future provision. Both the union catalogs undertaken had however important by-product results in preparation for a union catalog of manuscripts and they included a union catalog of facsimiles of manuscripts which was printed in 1929 and has since been extended in card form.

Meantime the matter of getting grants for the union catalog of manuscripts had been agitated in other directions. The Modern Language Association became interested in a union catalog of volume manuscripts in American location and pushed the matter effectively. Its Committee approached the Librarian of Congress who agreed that if such a proposal were adequately financed the Library would accept its results for incorporation in and administration by the Library. He was willing farther to undertake the responsible direction of operations in the Library of Congress method which was satisfactory to the Committee. The Director of union catalogs submitted plan and method of operation to the Librarian and it was approved. It developed however later that the Modern Language Committee under a new Chairmanship was not satisfied with the short method, had received encouragement for grants for a somewhat fuller method involving a total of fif-

teen thousand dollars for twenty thousand titles and had entered into direct negotiations with M. DeRicci for a project on this scale to issue in a printed volume of one thousand pages of twenty titles to a page, this being three times fuller method than the A.L.A. plan adopted by the L.C. and fuller still than the method before considered by M. DeRicci, the A.L.A. Chairman and various European librarians. Shortly after a grant was received for a still fuller method. This grant was for \$35,000 with proceeds of sale of catalog estimated at \$7,000. It was decided also to omit Oriental manuscripts which reduced the estimated twenty thousand to five thousand volume manuscripts. Manuscript documents were however included and the period was extended to the year 1600. The Librarian accepted the revised project and it was organized as Project C under the direction of M. DeRicci, certainly the most competent rapid cataloger in the profession. The project was planned for three years but at the end of the three years, in 1932, it proved that it would take more time and more means.

By this time, 1932, it was quite clear that a medium method costing at least five dollars per title could never be made practical for a world catalog, which had five years before been estimated as a million titles and had proved in the meantime, on the Vatican experience, and more careful analysis to involve perhaps two million and possibly a good many more.

Meantime however the experience of the Vatican union catalog of its own collections had not only shown the increased numerical seriousness of the problem but had made very important contribution to what may be called the final solution of the whole problem. Begun in April 1929 it had already in 1932 shown that there may be as many as forty thousand titles in 3032 volumes in any collection where the common habit of binding many manuscripts in one volume has prevailed. Crosschecking this with various catalogs suggested that this was somewhat extreme but developed the fact that in many large libraries the average was six titles per volume or more.

Much more important than this statistical fact was the fact that for this project a model set of rules had been developed and applied. The results had been made usable as fast as they were finished and the results formed an adequate and highly reliable index guide to the collections, good enough for all finding purposes and costing very far less not merely than its own full method of Pelzer but than the DeRicci method. It set a mark and established a method for the full solution of the problem on the highest standard of accuracy and paleographic expertness. It set a standard of adequate short cataloging for all other large collections which if adopted by them would reduce the problem of a complete world index catalog to very simple and relatively inexpensive terms.

The original project was practically finished in 1936 but with more material work is being continued. It probably represents a standard of perfection not to be

attempted in a world catalog where only a small fraction of the cataloging can be done confronting the manuscripts and it is probably too expensive for a world list, which must be satisfied probably with a compromise between its method for the Vatican collections of manuscripts and the method of the Vatican union catalog of its printed collections.

The Vatican now exhibits the *ne plus ultra* models of both full and short cataloging and what was of great interest to the American committee it is furnishing an equally conclusive experiment in model provisional inexpensive union cataloging. This was not in the field of manuscripts but in the field of printed books. It was a union catalog of the eleven famous printed book collections of the Vatican which had been almost unusable on account of the variety and scantiness of their cataloging. In a very short time by clipping and pasting and copying, the various material was got together on uniform cards and exhibited in a single alphabet entirely adequate for most finding purposes and found in fact by research students who could make nothing of it before, to afford immediate and full service. The editor of these studies e. g. collecting a list of editions of the works of St. Augustine had gathered the titles from a dozen of the largest world libraries, had tried in vain to use the catalogs previously and was now able in a very few hours work to add to his list many editions not found in any of the other big libraries.

It was this triple experience and experimentation by the Vatican library which above all other circumstances put together encouraged the American committee to believe that a project could be so shaped that it would fill the research need approximately, at once, and be so organized as to permit of automatic perfecting until it should reach a satisfactory standard of accuracy and learning, closely comparable to the short Vatican standard.

The tenure of office of the chairman of the American committee on bibliography had now expired and the catalog had not been produced. There was some question whether technically the agreement of the Librarian of Congress to accept this catalog when it should be fully prepared was binding but the former chairman was still consultant to the Librarian of Congress and felt personally that if it should be adequately provided with grants the Librarian would feel justified in carrying through and operating with the same efficiency as the union catalog of printed books. He therefore continued to present the matter from the detached standpoint of a consultant whose advice might or might not be taken by the Librarian and taking responsibility wholly on himself until matters all mature to justify presentation for action. He felt that with matters matured so far it would, from his long acquaintance with American librarians, University professors and American educational benefactors, be at least possible that the matter might be implemented soon on an adequate scale.

One or two of the preliminary studies in method had been prepared before

he gave up his chairmanship and others partly prepared. He accordingly continued their publication in the feeling that if they did not produce immediate results they would at least be of some service to such a project if anyone ever got around to it.

The fifth and final one of these studies, except for this present Summary, was published in 1935.

Note

TOTAL PROGRESS IN THE GENERAL INDEX OF MSS AT THE VATICAN LIBRARY

- 1) MSS analyzed: 9745 (from 1928, when the Summary index was begun, until October, 31, 1937).
- 2) Number of index cards for the MSS analyzed: 235,510.
- 3) MSS still to be analyzed: 36,034.
- 4) Number of index cards for item 3) cannot be calculated.

Observation

The great difference between the number of MSS analyzed and the resultant number of index cards is due to the method by which we initiated the summary index. Instead of following the numerical order of MSS in the various collections, our staff chose first for analysis those MSS which are either not cataloged or inadequately cataloged, particularly miscellaneous MSS and fragments bound together, which are of high literary and historical value and often require several hundred index cards.

Comment E. C. R.

The above memorandum from P. Anselmo M. Albareda, Prefect of the Vatican Library, dated, Vatican City, Nov. 16, 1937, was received by kindness of the Carnegie Peace Foundation. It came to hand after the *Summary* was in type. The surprising number of items per volume averaged (25) is fully accounted for by the fact stated in the *Observation* that the catalogers chose to do first the many-itemed manuscripts. Moreover, most volumes containing "several hundred" items do not fall within the definition of "early book manuscripts." Even the De Ricci standard handles these as groups not individuals. The fact as to average is probably best and accurately shown by Pelzer's recent catalog of manuscripts 679 to 1134 which shows an average of 2.7 items per volume.

The truly surprising thing about this report is that the actual cost per item of this highly expert and careful work confronting the manuscripts is no more than the cost per item estimated for this project. This encourages the hope of the largest production hinted at above (p. 38) as possible.

CHAPTER VIII.

THE STUDIES.

(1) Part I. The World's Collections of Manuscript Books: A Preliminary Survey.

After accepting the union catalog of manuscripts on its program as an outstanding matter for practical attention by the Committee the first step was to gauge the size of the problem—how many collections there were to be included and the extent of these collections. The matter looked easy. We had the Minerva the Index Generalis and several extended encyclopedia lists of manuscript libraries. These in fact gave material for first orientation but were almost as misleading as they were informing, first because of the different standards for inclusion as between manuscript books and manuscript documents and the failure to distinguish between these two types of handwritten material. It was misleading in the second place because only the larger collections were included while the various national lists of manuscript book collections contained many more smaller collections. The range of the problem is suggested by the fact that while Minerva and the Index Generalis give only 40 collections, Dr. Grubbs names 321 for Spain and Portugal.

It was obvious therefore, almost from the beginning, that when matters reached the point of concrete planning for a concrete catalog, the first stage would be a careful survey of the world's collection of manuscript books, involving an exhaustive gathering of printed statistics and probably a considerable amount of travel search before a reasonably dependable list of collections could be formed discriminating between books and documents sufficiently to judge how many units would be involved in a project for manuscript books. Superficial estimates or guesses previously made suggested that there might be half a million volume manuscripts and perhaps half a billion documents in public depositories but thousands of the volumes contained each from half a dozen to a dozen book manuscripts and tens of thousands of volume manuscripts were written since the invention of printing and included in usual statistics.

It was quite impossible for the committee without means, except the very limited means of its own pockets, to conduct a proper survey such as would necessarily be undertaken when the project was financed with suitable means. All that it could do was to make a preliminary survey by exhausting the chief general and national lists. There were eleven of these outstanding. These were exhausted for this preliminary list and a more detailed study made of a single region—Spain and Portugal—suggesting what was to be expected of other countries in respect of the added number of smaller collections.

The list of collections can be extended from several sources. The best and

richest of these are collections of printed catalogs and bibliographies of the same, books on library history and statistics of the various countries, bibliographical travel lists, encyclopedia lists, etc.

This Preliminary Survey is automatic, its method is simply to combine the references of the eleven standard statistical lists in a single index list giving authority and figures and when available the dates of the figures. These eleven major sources, including all the references to the Minerva and Index Generalis, were exhausted. They yielded 2247 libraries with a total of 12,441,989 "manuscripts." The face results are highly misleading. America is credited with 7,620,176 manuscripts in 173 collections while Great Britain has only 188,039 in 183 collections. The Connecticut State Library is credited with 1,650,000 manuscripts while the Paris National Library has only 125,000 volumes, the Vatican Library, 54,000, the British Museum from 54 to 95,000.

The analysis of these figures is not easy or even entirely possible in the absence of comprehensive sources but a rough analysis taking into account various earmarks familiar to one acquainted with the collections themselves reduces the probable total volumes from 12,000,000 to not much more than 2,500,000 with a probable farther reduction by at least one half which leaves a possible total of perhaps a million volumes, likely to be reduced considerably when volume manuscripts after the time when printed publication became usual are excluded. Only a systematic survey including perhaps a good deal of travel can get anything like accurate figures but an experienced scholar can probably get near enough for practical estimate by a farther study of library statistics as published and a minimum amount of travel.

The following *selections from the preface* to Part I are self explanatory.

One of the projects for which the American Library Association Committee on Bibliography was constituted in 1923 was the promotion of a project for a union catalog of world manuscripts, a tool more and more urgently demanded by American research scholars during the previous 25 years.

In 1926 the project had been matured as a union card catalog at the Library of Congress and was approved by the American Library Association, which authorized solicitation of funds for this purpose by the Executive Board. The project was also endorsed for solicitation by the American Library Institute and other bodies. No grants have so far been obtained.

The Committee has, however, by its own voluntary efforts, under the executive direction of its Chairman, and at its own expense, made provisional surveys, developed methods of operation, conducted minor demonstration experiments, and gathered a good deal of preliminary material illustrative of the method or furnishing apparatus for its application. This included the quite essential and difficult matter of a union catalog of published catalogs of manuscript collections. Meantime the

parallel project for union catalogs of printed books in American locations and of special collections had secured grants from Mr. John D. Rockefeller, Jr., on information by the Librarian of Congress and were being carried forward. As these projects approached completion, the Committee turned its special attention again to the Union Catalog of Manuscripts and asked the Association and the Institute for special diligence in securing funds for the vigorous prosecution of the Catalog of Manuscripts as soon as the projects for printed books were brought to completion. The prospect was hopeful. The very adequate financing meantime of fragmentary sections of the problem in the more expensive methods, by the educational endowments sympathetic with the needs of research, showed that they were not unresponsive to the appeals of research scholars.

When the other Union Catalog projects were concluded in 1932, and no grants had been obtained for manuscripts, the Committee could only mark time, and mature its preparations so far as it could without special means.

In October, 1933, the A.L.A. Board, having decided that it could not solicit for the project, it seemed idle to spend more time and money elaborating preparations and it was decided to publish the rough material gathered in the way of a survey, a union catalog of catalogs and studies in method, publishing as manuscript without pretending to complete or edit beyond the point reached automatically in compiling.

It is believed that this material, rough as it is, will be of some service to scholars meantime, and prove a rather large economy to whatever agencies shall in the end undertake the preparation of this much needed tool for research library service.

With this explanation the material is offered without further apologies. It consists of, (1) a rough summary of the collections of manuscripts which should be included in the Catalog, (2) a demonstration in method based on Spanish libraries, (3) a list of printed catalogs of manuscripts, and (4) other studies and experiments in method.

The present study is a contribution to the problem of how many collections and how many individual manuscripts are involved in a general Union Card Catalog of book or volume manuscripts at the Library of Congress. It is an automatic survey. Its method is simply to combine the references of the standard statistical lists of manuscript collections, general and national, in a single index list, giving authority and dates of the figures. This forms the necessary and rather simple basis for a true survey such as is essential to the definite organization of indexing work. No such survey even up to the point of this list has been available and guess work as to the number of items included has been rather wild and generally based on the older printed union catalogs of Haenel, Migne, Montfaucon, Bernard, none of which list as many as one hundred thousand items. The

union catalogs of the French departments and the Italian series of catalogs point to a much larger number however and guesses have been made up to half a million or even a million volumes. Items run much higher.

The statistics given in this list are the actual figures given by the various authorities. These show on their face the difficulty of proper estimate and the extent of the problem. The chief trouble is the indiscriminate use of the term "manuscript" for manuscript books and those manuscript documents which belong not to bibliothecal, but to archival science. The actual research problem concerns mainly codices or early volume manuscripts.

On their face; the figures given in the Minerva, the Index Generalis and the rest indicate 2247 libraries and a total of 12,441,989 "manuscripts." Weeding these of obvious manuscript documents reduces them to 2,770,991. Of these, judging by those libraries which have printed catalogs, more than half will be historical or literary, autograph books, letters and documents. The problem to be faced, therefore, is probably not much more than a million volumes, and half a million would probably meet the major needs of research scholars to the point of saving a total of centuries of good research time. Certainly a million items would go far toward solving the problem as to ancient manuscripts.

On the other hand, the various projects put forward for indexing manuscript documents will not be covered by 12,000,000 manuscripts, perhaps not by ten times that. A significant hint as to the actual situation is the fact that where America is credited in these lists with 7,680,176 "manuscripts," it has been estimated that its total stocks of manuscripts in the usual library sense, both Western and Oriental, is not much more than twenty thousand.

Following is an analysis of the stock of manuscripts, as given by the authorities used here.

COUNTRY	COLLECTIONS	NO. OF MANUSCRIPTS
United States	173	7,620,176
Great Britain	183	188,039
France	402	216,583
Italy	354	803,153
Spain and Portugal	321	113,291
Germany	510	1,115,397
Others	303	2,385,350
	2,247	12,441,989
	Subtracting obvious manuscript documents	9,749,000
		2,692,989

This survey does not include all national lists by any means, or even all uni-

versal sources. The demonstration experiment in Spanish manuscripts indicates that the total number of collections, public or private, large or small, mentioned somewhere in print, is two or three times the number given in the standard lists. A proper survey as contemplated by the Committee would include first the exhausting of other printed lists and then a continuous revision by visit and correspondence as indexing work progressed. That is, however, as far as the Committee can possibly go under present circumstances.

(2) *Part II. The Manuscript Book Collections Of Spain And Portugal.*

This is a demonstration experiment in the method as proposed for Western manuscripts, applied in a narrow field. It includes, (1) an extended list of the collections in this field, (2) a list of printed catalogs of manuscripts in these collections and, (3) a sample list of a few small collections giving concrete example of the extreme short title method suited to cumulative printing and, (4) a cumulative index of these collections exhibiting concretely the method and the problems raised in the practical application of the method.

(1) The original list of Spanish and Portuguese collections as prepared for (but not printed in) the Preliminary Survey (Part I) revealed that the number of collections mentioned in the *Minerva* and the *Index Generalis* is only forty. This list includes 321. Many of these "collections" to be sure contain only one volume manuscript and a majority have less than ten. But it is precisely these small collections which escape the research worker. He cannot hope to visit three hundred collections and he cannot be sure that some manuscript of his work in one of the smallest collections will not prove a major factor of evidence when tabulated. The urge of research does not let him stop until all sources have been exhausted.

(2) The first aid to the student in finding his manuscripts is the printed lists, but even this is a time consuming task. The list of printed catalogs of Spanish and Portuguese collections here printed contains some five or six hundred references including analyticals. Many of these are descriptions of small groups or single manuscripts. The most significant fact brought out by this study is the large number of Bibliographical sources which must be examined by a worker in order to compile his finding list. Especially significant is the fact that no less than fifty-seven periodicals must be examined. Many of these are local and hard to find in American libraries in spite of our superb American equipment in periodical sets, and our equally superb apparatus for locating these through the A.L.A. Union list. Most of these periodicals lists are rather short and it takes little Bibliographical imagination to realize what a simple matter it would be to exhaust these once for all in a cumulative list, where the research scholar could get all his references at once instead of hunting up in 57 or more sources scattered in many geographical locations. And the scholar's task in exhausting volume catalogs of manuscripts is even more difficult in the fact that even the best American collections

like the Library of Congress, New York Public and Harvard are not very complete and there is no A.L.A. Union list of these, like the list of periodicals.

(3) The eight small collections indexed in short title method from printed lists exhibit (subject to criticism and change) an extreme short title form intended to exclude all matter not essential to identification and confined as a rule to one hundred letters more or less, this being the amount which is adapted to the title a bar cumulative method, which simplifies the problem of financial practicality. It has been said that any title of any book can be expressed for identification in less than eighty letters. This sample uses a condensed six point type which may be made to run in simplest cases to 120 letters, but, as printed here with liberal spacing, it seldom reaches more than 100 letters. The letters of these titles are counted automatically on the typewritten card since standard typing on a standard card gives 60 letters to the line and two lines therefore form a maximum.

For the typewritten card method which is the method proposed for the catalog at the Library of Congress, it is not necessary to condense strictly to the two lines, but it is recommended to approximate this remembering that the objective is an index finding list, whose function is like the index to a book and where primary purpose is hindered rather than helped by much detail.

In the method followed, the 90 or 100 letters is made to include author, title, library, catalog source, language, date, material, size and the number of leaves. Material, size and even the number of leaves and dates are, strictly speaking, non-essentials, but they give the most important secondary data for the researcher, material and size being least important. The indication of source, too, is not strictly essential, and it takes up a large fraction of space, but it points to fuller description and is therefore of the highest usefulness.

(4) The cumulative index tries out the possibility of automatic cumulation by simple union in one alphabet of the titles in the various libraries. This applies whether the catalog is on cards or printed. In the latter case the same bars used in the library list are alphabetized exactly as cards in a card catalog and at less than one-fourth the cost of recombination.

The experiment shows very plainly the need of a carefully prepared and defined method of entry since the forms used in the various libraries are so various. Thanks to the Vatican Library rules for its short cataloging of manuscripts, this is easy to provide for up to a certain point.

In this cumulative index Dr. Grubbs has done a certain small amount of editing by introducing a biographical card or bar, with the form of entry used by the Library of Congress or other modern library cataloging as found in the Union catalogs. When no precedent is found in standardized cataloging he has used the most familiar authorities, interpreted by the general library cataloging rules for entry. This experiment showed the futility of attempting to edit entries

at this stage and without extensive preparations.

The demonstration experiment shows the great range of possible variations and the need of a more thorough standardization for authors before the invention of printing, as a preliminary to a general catalog of manuscripts and as equally useful and time saving in the cataloging of printed books in the libraries.

Under the standardized entry Dr. Grubbs has arranged the various entries for a given author as they were found in the catalogs e. g. under Odo of Cheriton the entries Odo, magister, and Critonia, Odo de. Under Nicolaus Trivettus entries of Travet and Treveth, under Petrus Blaesensis, Blessen, Blescu, Petrus Blesensis, and Petrus Blessensis.

This method shows graphically the great variety in entry which exists in the actual sources. It points to the need of expert editing by well trained manuscript catalogers, but it points still more plainly to the crying need for a standardized entry for all writers before the invention of printing. With such a standardized list it would be possible for any well equipped and trained cataloger to carry the work to a point where a single expert could do final editing to a high degree of accuracy. Such an editor would however have to be a literary expert, in order to harmonize the different titles used for the same work and identify the works whose authors are not given. This is the case with many manuscripts even of well known authors.

This automatic cumulation also brings out various aspects of the problem of anonymous manuscripts. Many of these group alphabetically under form entry words like Breviarium, Calendarium, Ceremoniae or Ceremonial, Constitutiones, etc. etc. Others group under, De, Carta, Cedula, Historia, Excerpta, Fragmenta, Opuscula, Oratio, Ordo, Questiones, Tractatus, Vita and the like. In an alphabetical cumulation these can be found readily enough, if the title is well established and well known, which is far from being the case with most anonyms. The scattering of these through a long alphabet of authors serves only a very occasional use. As most of the manuscript catalogers have found, use is much better served by grouping all anonyms and still better served by grouping them again under subject, in spite of the difficulty of accurate subject entries.

The point of this matter is that titles will necessarily be gathered, first from thousands of lists printed or manuscript by as many compilers, in a field where standardization hardly exists, as is shown plainly by these concrete lists. In the absence of such standardized practice even the most expert paleographers, textual critics and literary historians will differ widely, as this list shows.

Extracts from preface.

This study of Spanish collections of book manuscripts by Dr. Grubbs is a concrete epitome of the general method of the Union World Catalog of manuscript books as planned for the committee and based on its list of special collections.

The Committee has been fortunate in getting Dr. Grubbs to make such an experiment for this project. His admirable scholarly equipment and the unusual methodical knack of extracting large results from small means which he demonstrated on work with the Committee for the Library of Congress Union Catalog of Printed Books, has produced, with only the scantiest means, in this experiment, an admirable guide for the Committee in a final rethinking of its method for general application to the problem.

The main results of the study are:

1. To show concretely how very much greater the number of collections to be dealt with is than is commonly supposed. The Minerva and the Index Generalis together enumerate only 40 collections. Dr. Grubbs names 321. These additions are mostly small collections but by the same token those are likely to be missed by researchers altogether.

2. To show, (1) how large a number of catalogs of small collections are printed in out of the way periodicals or surveys not easily accessible to the average student and, (2) how many and what known collections have no complete printed catalogs.

3. To exhibit plainly in print as to the eight small collections of Western manuscripts which have printed catalogs the methodical details of entry, fullness, abbreviations, anonyms, etc. in the form tentatively adopted, in order to serve as basis for further scrutiny before final fixing of rules.

These details are of course the same whether the entries are from printed catalogs, written catalogs or from the manuscripts themselves.

The cumulated list is strictly a study in methodical form not a sample contribution in approved model form. It has not been possible to apply to it the refinements of editing which will be applied to a final printed edition. This would involve a much greater expenditure of time and expertness than the means of the committee can now command and would contribute little which is material to the present purpose—rather the contrary, since, for a study of methods, the very inconsistencies which result from the attempt to combine automatically the work of eight independent catalogers, each with his own usages, are the best material for a study of the problems of the final harmonizing of the various usages.

It will be enough at this point to notice two matters which emerge plainly from the present study and concern anonyms and author entry.

Dr. Grubbs and the Chairman of the Committee agree that in the cumulative catalog anonymous books should be printed, not in the alphabetical order among the authors but grouped under the heading "anonymous," with a certain number of alphabetical sub groups in the case that form groups, like sermons, letters glossaries, various liturgical, etc. are plainly distinguishable. Alphabetical subject grouping under this head is more dubious since the subjects must be assigned from

the titles, often very brief titles, without confronting with the manuscripts. On the other hand, however, a large fraction of the entries will be made from full catalogued manuscripts and subjects can be assigned definitely and safely. And since, as a matter of practical service for research students, every tolerable grouping is so much to the good, it is reasonable to group so far as subjects are definite and leave a residuum group of titles, with subjects unassigned because uncertain. A final cumulation of the material in this way will obviously afford a practical working apparatus, often a very great service value indeed for students of special topics. Anyone who has used the index to anonymous manuscripts in the catalog of the Vienna State library, or similar indexes, will realize this. The idea of including these in the main alphabet as here printed was that there should also be a special classed catalog of anonyms, but a resurvey of the material suggests that it will be better to exclude from the alphabetical list.

A second matter which emerges on resurvey of the printed index is the fact, which has been often and strongly urged on the part of the Committee on Bibliography, that a primary need, perhaps the primary need, of "less expensive cataloging," is a standardized list of author entries in a form which may be placed on every cataloger's table. The standardized Library of Congress entries of its printed cards form a good basis for such work and are a great aid in every card depository library, but a very much enlarged list is needed and might easily be compiled, with the help of the Union catalog at the Library of Congress and a simple synthetic index to the various dictionaries of learned men and the great printed catalogs of European libraries. The economies would be prodigious and perhaps the greatest and quickest economies would be effected by such a standardized list of writers before the invention of printing. How great the need for such standardizing is, can be read on the face of the cumulated list. Dr. Grubbs has used the entries of the Library of Congress so far as they go, with the "authority cards" of Princeton or other well-staffed libraries so far as they are available. Where these are lacking he has in general followed Fabricius.

(3) Part III. A List of Printed Catalogs of Manuscript Books.

The first step in the method of the Union catalog of manuscripts is locating the existing collections. The second is identifying and locating the printed lists of these collections so far as they exist. This part is a provisional list of such lists. Actual compilation proceeds first on the basis of the printed lists which probably include three-fourths of existing manuscripts, perhaps more. It proceeds to exhaust the manuscript catalog of manuscripts, in collections without printed lists. It proceeds finally by cooperative contributions by the libraries themselves or by a traveling editor, of titles of which not even local written lists exist.

The greater bulk of the work of the Union catalog can be done by exhausting printed lists. Probably three quarters of the work could be done from the exten-

sive collections of such catalogs in Paris or in Vatican City. Not far from this amount could be done at the Library of Congress with its lesser but yet extensive collections of catalogs of manuscripts and borrowing from other libraries with the aid of the Union catalog. Or it could be done in some ways almost as efficiently at the New York Public or Harvard University Libraries which have somewhat less extensive collections of manuscript catalogs, but are more fully supplemented by neighboring libraries and are more extensively furnished with that important source of compilation, the prolegomena to the editions of the early and mediaeval writers, although even here the Catholic University at Washington by the nature of its work, furnishes a superb supplementary apparatus in the handling of mediaeval writers.

(a) The first result of this study is to show the seriousness of the problem of the research scholar when he sets out to get his preliminary list of manuscripts on the work in which he is engaged. The lesson lies on the face of this volume of nearly four hundred pages and perhaps seven thousand references. It is true of course that a great many of these references can be automatically eliminated; they may be in other languages or they may be duplicate and obsolete. But with all eliminations it still remains the fact that there are some five or six thousand printed lists of manuscripts in more than a thousand different places, a large fraction of which are scattered in some hundreds of periodicals, not located together with the volume catalog and never gathered in any one library. Since these studies were begun several cases have been brought to the attention of the editor where a university professor has turned to a highly expert reference librarian for his material. One of the group of Carnegie research librarians, which has done so much to focus attention on the constant demand for the highest expertness in this branch of library service, introduced such a case at the meeting of the Eastern College Librarians; the case of a professor who wished the manuscripts on a work by Beda. Another case had to do with alchemical manuscripts. As a matter of fact these cases crop up frequently in every University or research library. If a research assistant were to take up seriously the preparation of such lists it would cost him months of exclusive attention to exhaust even the printed lists. This fact can be read on the face of this volume and this rough gathering of course by no means exhausts even the printed lists.

(b) The study farther shows the need of a special Union catalog of locations of these catalogs in American libraries. It is true of course that a large number of these titles can be located in America by means of the Union catalog of the Library of Congress, and a large share of these are indicated on the group of cards from which this volume is printed. The matter of such a Union list based on this printed study as a check list may properly perhaps be put up to the Library of Congress by which it could be normally and best carried out, but it is one of

many special Union catalogs which are called to the attention of the Union catalog division and its competent but not unlimited staff would be swamped if it should undertake these without special means. It is always in danger of getting behind with its main work and most vital service by being distracted to these secondary matters, sometimes insistently urged. A very thorough Union catalog, however, with locations is an important matter in the method of compiling a Union catalog of manuscripts. It should be prepared as an economizing tool in the early stages of compilation, and some financial provision made for such a list in the grant.

This study is merely a rough check list compiled chiefly from the many printed sources, but it includes all titles in the Harvard, New York Public and Library of Congress collections when the Union List of these three libraries which forms the basis of the Library of Congress list was made. In attempting to digest a method for a Union Catalog of book manuscripts, it was found that some such list of printed catalogs was quite necessary, as a basis and also very much needed as a guide for the use of research students in searching the catalogs for the manuscripts with which they must deal. This latter need is one keenly felt by every researcher who has to do with book manuscripts. Until a Union Catalog of book manuscripts is provided, he must depend on the printed catalogs mainly for his material, and without some such aid as this checklist, his hunting is desultory and incomplete and his records cumbersome.

The catalogs are arranged alphabetically under place name and in alphabetical order by authors under place. They are not grouped under individual libraries.

It is greatly to be hoped that a much better book than this rough compilation will be produced at an early date, giving more locations of copies, grouping by libraries, and having a more adequate editing in general. This compilation should be of considerable help to this end. The editor is quite aware that this is a half loaf as to quality, although tolerably near a full loaf in quantity.

(4) Part IV. A Demonstration Experiment with Oriental Manuscripts.

This study is intended to show and shows:

(a) The application of a short title finding method to Arabic manuscripts. It has been doubted whether the short title which is applicable to printed books and to Western manuscripts could be applied to Oriental manuscripts, but Dr. Randall in the case of the Hartford Arabic manuscripts and Mr. Faris with the Princeton Arabic manuscripts have shown the entire practicality of a short and rapid method covering practically all the finding need, by rigidly subordinating and excluding bibliographical detail not essential to finding. Mr. Faris with a couple of other graduate students under the direction of Professor Hitti have since cataloged these manuscripts and the rest of the Princeton Arabic manuscripts under a

Rockefeller grant in a fuller bibliographical method, which is a commonsense expansion for local library cataloging, although still too expensive for a Universal Union catalog, and actually less serviceable for simple finding use than the index method. The study at least shows that there is no difficulty in adapting Oriental titles to the index finding method.

(b) The study shows also the possibility of relatively inexpensive printing by photographic methods. The titles are typewritten rather close to the top of the card, alphabetized, overlapped and photosated or reproduced by one of the various photographic reproduction processes. This experiment is by no means a good representation of the possibilities of this method. The cards were made for the card catalog without expectation of printing in this way or particular care for uniform work. It does show however just about what one would get by putting the cards of a cumulative catalog at the Library of Congress onto the photostat, if a research student should call for a list of the works of a given Arabic writer. For local library use the improved modern mimeograph as used by Columbia, Princeton and various University and reference libraries now, would produce more uniform and sightly results and these results could be reproduced by the National Process Company or any of the good photo printing processes in corresponding perfection.

(c) The study exhibits also a method of handling unidentified fragments; one of the most troublesome aspects of book manuscript cataloging. There are thousands of such uncataloged fragments in America. The research use of these is chiefly for work in identification, which is cataloging work calling for a very high degree of research equipment and aptitude. They are also of direct source usefulness if they are grouped by subjects. This grouping is also one of the chief helps to identification. If they are grouped the research student in a given matter, say poetry or grammar or arithmetic or astrology may be able to extract material for his thesis and any such survey by an expert in the literature of the subject may result in recognizing the author of some fragment.

Extracts from preface.

It has been doubted whether the short title index method which is satisfactory for Western manuscripts would be equally applicable to Oriental manuscripts, but several of the best Arabic scholars were of the opinion that it was. Dr. William M. Randall has applied the short method brilliantly to Hartford Theological Foundation Arabic manuscripts, and Mr. Faris has now made what seems to be a very successful application of it to a group of Princeton Arabic manuscripts in the Garrett collection. There is a printed catalog of three hundred and fifty-five of these manuscripts made by Professor Enno Littmann, but thirty-eight volumes containing 493 fragments were left untouched.

Mr. Faris has confronted all the titles listed in Littmann with the manuscripts themselves and adjusted them to the method of this project. He has also cataloged

the fragments in what is perhaps the only method applicable to fragments without a vast amount of research such as would be prohibitive in a universal catalog. The method consists simply in identifying the subject matter, giving the first words of the fragment as an arbitrary title for the fragment, and arranging the cards by subject. Whether the subjects should be arranged alphabetically, or classified as is done in some of the printed catalogs of western manuscripts, notably the Vienna manuscripts, is an open question, but some way of getting the material together in specific groups by subjects is the only method of bringing these fragments into use, in the first place use for the bibliographical task of identifying the works, and then for students working on these special subjects in Arabic. The essay of Mr. Faris in fragment cataloging is therefore an important contribution to the method and a certain contribution to research material.

Both Dr. Randall and Mr. Faris agree that material of this sort can be produced by a thoroughly competent Arabic scholar at the rate of eight or ten titles an hour. The guess has been made that there are twelve or fifteen thousand Arabic manuscripts in America, and a project was organized for this in which the interest of Dr. Randall was enlisted, but the Library Association did not succeed in arousing the interest of givers.

Several experiments have been made in the small edition printing of such lists by offset, mimeograph and photostat processes. No process can compete with the typographical, but for small editions the photostating from overlapping cards up to three or four copies or the use of the new mimeograph up to half a hundred or more copies is less expensive—and less satisfactory. The printing of this study is a reproduction by the National Process Company of three hundred and fifty-five titles from the overlapping cards and twenty-eight pages, first printed in a variation of the mimeograph process, from the mimeographed pages.

The National Process Company is in no wise responsible for the defective appearance of the fragment titles, for it simply reproduces the defects of the original printing. These show that the mimeograph or any facsimile reproducing process depends greatly on the quality of the original typewriting. . . .

Three projects for the cataloging of these manuscripts have at one time or another been considered, one calling for the fullest bibliographical, research and publication work at a cost of perhaps forty dollars a title, another for a method costing slightly over a dollar a title, and this present project which calls for an average maximum of thirty-two cents a title but has actually cost in this demonstration experiment less than half of this. The point of the method is to reduce cost to a point which brings the project within the reasonable possibility of completion. The policy of knocking off small fragments, like the Garrett manuscripts, or American codices or alchemical manuscripts, medical manuscripts, classical manuscripts and the like in an expensive method, can never get anywhere towards filling

the need of the actual research students, whose first and only essential need is to locate copies of the work with which they are dealing. It is obvious that the problem of the research student looking for his manuscript scattered in two or three thousand collections will never be met if it has to wait on a provision of forty dollars per title, or eight dollars per title, or even a dollar and a quarter a title for a million or more titles. It is estimated that even half a million titles would save the average researcher the bulk of his work, although the total volumes to be taken into account will not be far from a million, and a very large number of these contain several titles each.

The essence of the method as now put in operation by demonstration experiment at the Library of Congress is first, exhaustiveness, second, cataloging simplified to meet the problem of practical financing, third, the typing on a thin card and near the top so that cards can be readily photostated by overlapping.

The first section of this pamphlet is made directly from the overlapping type-written cards, and shows what may be done in this way compared with three or four times as much for typographical printing. It seems to be a good compromise between type and mimeograph, although mimeograph work can be made much better than in the twenty-eight pages of fragments here given for which typing was not well enough done to begin with.

(5) Part V. A Supplement to the Manuscript Book Collections of Spain and Portugal.

The objects of this study were, (a) a study in the cost of printing, (b) to exhibit a simplified cumulation, (c) somewhat casually to show the possibility of using student help and unemployment service, (d) show on a somewhat larger scale than in Part II the net result of the method.

(a) Cost of composition for about ten thousand bars arranged under the twenty-seven libraries was about five hundred dollars. The cost of the same ten thousand titles rearranged in alphabetical order was only \$83.08. Each title was printed on, and the bar inserted in, an envelope, the envelopes alphabetized, slugs removed, made up, proofs taken. The \$83.08 includes all processes and cost of the envelopes. This cost which figures 54 cents to a page is nearly twice the twenty eight cents which similar experiments cost in 1919. This is the direct consequence of increased cost of labor. The idea of the method is that the lists should be printed successively as fast as received, copies sent to the respective libraries for possible corrections and additions, kept standing in metal, and cumulated from time to time, but the working out of the experiment suggests that even if means should be sufficient to go on from the card catalog to index printing it will be economy to compile the short title lists of all easily accessible catalogs, printed or written, before printing, adding new lists as gleaned up, in an appendix which may or may not involve cumulating into an alphabetical list with the original alpha-

betical cumulation.

An interesting variant of the method of the cumulative index method of printing, not needed in this project but of great value when it is desired to keep for one reason or another the original bars standing in the original order for cumulation in that order and at the same time have the alphabetical index, is in composition to cast two slugs for each title instead of one and alphabet the extra slug, the cost of this extra slug is one cent compared with the five or six cents of original composition. The method is especially adapted to a library catalog made from the classified shelf list with an alphabetical index and can be easily extended to a cumulative subject index or dictionary index by the simple measure of indicating on the printer's copy on each slip the number of subject slugs required.

(b) Simplified cumulation consists in a straight alphabetizing of the title bars without any effort to edit under a standard entry. It shows graphically and very plainly the great discrepancy in entries under the many standards used by the different catalogs. It also shows plainly the complexity of the problem of anonyms under any other method than entry and subject grouping. Both of these appear more plainly on the face of the list than was the case in the partly edited Part II. It also emphasizes a lesson from Part II; that anonymous entries are of little value in the alphabetical index unless they are also grouped by subjects in a special supplementary list.

(c) Student help and unemployment service was used to some extent, through the courtesy of Princeton University in turning some of its student aid in this direction and in arranging to have some part of the Government appropriation for unemployed students also used. Some of the students showed a high capacity for intelligent work and demonstrated the possibility of employing this kind of help on a large scale to the great advantage not only of the work done and the employment needs of the students but for the education and intellectual training of the workers themselves. It showed also that such workers must be selected and supervised with care. This aspect of the work suggested significantly that with care pretty much all the work of such a union catalog as is proposed might be done by relief workers as such workers are now used. There is in fact a very considerable number of highly educated retired professors for whom it is difficult to find any work at any rate who could be used on this and similar projects.

(d) The net result shows the method actually applied to 9526 titles arranged first by libraries then by alphabet and then carried through to printing. The alphabetical cumulated index (pages 147 to 302) is a sample of form and quantity but of course not of quality. This waits not only proper editing but on proper systematic standardized entry. As it stands, without elimination of its incongruities, it is of course better material for the bringing out the problems which must be met in compilation and editing than if edited. It moreover shows plainly what is the

most significant lesson of the whole series of studies:—The fact that at its roughest and cheapest such a list pretty nearly fills the finding need which is the only vital need of the research student. The cost of such a list is not one tithe of the cost of many of the less expensive catalogs of manuscripts and not more than one percent the cost of some of the most expensive projects.

The method produces almost full primary usefulness therefore at a cost which is within the range of reason. More elaborate projects put off for generations or centuries the filling of this simple vital need, in favor of a great amount of bibliographical detail useful mainly to bibliographers. This can be compiled very quickly and in card form suited for photostat copying is capable of providing the research student more than he would get by his own efforts at a hundred times the cost in time and travel expense. The whole matter in a nut-shell is shown by the fact that among these ten thousand titles from only twenty seven Spanish and Portuguese libraries the editor of these studies got not less than ten new manuscripts of Jacobus de Varagine for a list that he is compiling which before contained perhaps two hundred manuscripts. One of these (the manuscript of the Chronicle) happens to be of immediate interest in view of the edition of the Chronicle which is to be shortly published by the City of Genoa under the editorship of Professor Monleone whose list of manuscripts of the work includes thirty nine items compared with the twenty four seen by the editor of this series.

Extracts from the preface.

It is to be repeated that this work is a demonstration of method, rather than a contribution, and the general editor has taken the responsibility for any shortcomings which it may have due to his insistence on getting the necessary methodical presentation at a time and money cost within the limited means available. The project is under great obligations to Dr. Grubbs for making the study, and doubly grateful for his consenting to publication without insisting on his own highest critical standards. As a matter of fact, the result illustrates the fact which the general editor has frequently urged, that the practical usefulness of the index for finding purposes is almost as great as if several times as much care and money had been spent on it. In the final application of such a method to the whole project of world manuscripts, the percentage of error would be even smaller, and now that routines have been worked out, rapid production consistent with a high percentage of accuracy is possible. For the first eight collections (Studies Part II) some attempt was made to standardize entries but this has been given up in the cumulation of the twenty-seven collections in this supplement and the actual entries of the catalogs used without editing.

Each study makes it more obvious that an indispensable preliminary to the union catalog is a standardized list of cataloging entries for writers before the invention of printing. Since this list would be a very great labor saver to all cata-

logging staffs of libraries of learning, it is hoped that a grant may be obtained for this purpose, and also the cooperation of libraries and the A.L.A. committee.

The particular object of this study has been the method of a cumulated author list, card or printed.

The printing method involves restricting the entries to a single 29 em bar, or about 100 letters and spaces, and refiling bars like cards in a card catalog. This is done by printing each of the original lists on an open end envelope and alphabetizing these envelopes. In principle it is simply applying to the printed catalog, whether of books or manuscripts, the card catalog method. Like the card catalog, it makes possible cumulation at a comparatively nominal cost. The method is a natural evolution of the Jewett plan for stereotyped titles so efficiently developed by Mr. C. W. Andrews at the John Crerar library. This, however, while it might be applied to great full title catalogs like that of the British Museum, is not useful for a cumulative finding list on account of its bulkiness. With the development of bar-printing, however, it has become possible to apply the dictum of John Cotton Dana, during the discussion of the best size of cards for library cataloging, that any book ever printed can be sufficiently described for identification in eighty letters. By using a condensed 6 point type an average of one hundred letters can be had on a single twenty-nine em bar, this being a length which may be printed on a standard card of twelve and one half centimetres, or five inches. There are condensed styles which will run occasionally as high as 120 letters in 6 point and would of course run higher still in finer type. A good deal of work has been done in 5½ point type, which is very legible. The method is frankly an index method, and has or contemplates having back of it a fuller description on printed or manuscript cards.

The method of printing with cumulative bars is now applied commercially on a large scale. Its successful application to book titles is best exhibited in the huge cumulative indexes of the H. W. Wilson Company. It has frequently been applied more or less extensively to full title library cataloging, although such attempts have generally broken down with the bulk of material and literally with the weight of metal involved in keeping matter standing and in order for re-handling.

The short title index finding list style, however, has been successfully applied frequently in demonstration experiments and with some of these on a rather large scale. The first application of the method made by the editor of these studies was in the early nineties and to the finding list of the New London Library. Slug printing was then in its infancy, and the methods of handling slugs undeveloped. It was short bar, allowed more than one bar to the title and did not repeat the author's name after the first title. The hangovers without repeated name introduced too many chances of confusion and time consumption. Altogether, the sec-

ond edition in 1897, although it indicated savings, did not suggest large savings for small libraries. . . .

The H. W. Wilson Company has found ways of applying the multi-bar method which are profitable commercially, but for library use, experiment suggests that restriction to a single bar which will print on five inch cards, if not the only method of handling profitably, is at least the best method for doing it so cheaply as to keep within the means of an average large library budget.

The first application of the single bar method made by the present editor was to Princeton University Library accessions and to titles in the seminary and departmental libraries whose books were not kept in the central stack. This was about 1900. A weekly bulletin of accessions was published, and these slugs distributed for an author and shelf list catalog of each special library, the professors having indicated their willingness to accept this in lieu of special card catalogs for each seminary. In 1913, this catalog contained about 20,000 titles in 319 pages. 1556 titles of accessions from the weekly bulletin were filed into pages standing in type, and printed in twenty copies, one for each sub-library and three or four for central library use. The total cost of composition, filing, printing, paper, ink and interest on type metal was \$163.85. This low cost was, however, on account of the extremely low cost of composition and labor at that time. There were 22 cumulations during the year, made by keeping the catalogs in loose leaf ledger form, reprinting in 20 copies all pages affected by accessions and substituting these reprints for the original.

Later, a cumulation of 30,000 titles was printed on paper with margins wide enough so that accessions could be printed by hand with a pad, using the bar like rubber-faced type, on a soft paper.

In 1920, a complete index of the whole library was printed in both author and classified (or shelf) form. It included some 230,000 titles in 7000 pages, and was figured to have cost twelve thousand dollars. Other figuring has since stated cost to have been eighteen thousand dollars, but this, by-the-way, included new and later factors. The average cost of composition was a little over three cents a bar or about seven thousand, five hundred dollars. The cost of putting these bars in envelopes, alphabetizing, make-up and printing was about twenty-eight cents per page of sixty-one bars.

The present demonstration of the method has been made with particular care, and is probably accurately brought up to the modern cost.

The total cost of the cumulated author lists of the 27 library finding lists of manuscripts left standing in bars, up to the point of printing was \$83.08. This includes printing on and inserting in envelopes 9526 bars, alphabetizing, removal from envelopes and making up, proofs and cost of envelopes. The list of 157 pages of 61 lines of 6 point printed in proof is therefore 54 cents a page against 28 cents

in 1919-20. This fairly cross-checks and is the result of increase in wages.

All this may be restated as costing for the cumulated index less than one cent a bar compared with six cents original cost of composition.

It should be again stated distinctly that printing is not a necessary factor of this project for a union world catalog of manuscripts at the Library of Congress. The project is for a *card catalog, typewritten* on such cards and in such manner as are *best suited for photostat information service*. If printing can be added to this method, so much the better, but even in this case, the matter of printing might be postponed until near the completion of the project. On the other hand, however, if there were means for printing each list as finished, it would make it possible to cumulate gradually and be ready for the full index as soon as the last special library list was printed.

INDEX

- Abbott, Ezra, 5, 45, 48
- Abbreviation, 30
- Accounting, 20
- Accuracy, 33
- Administration, 20
- Aids to finding, 51
- Alchemical manuscripts, 71, 74
- Alphabetical index catalog, 10, 11, 13
- American codices, 74
- American Cooperation in intellectual work, 55
- American Historical Association, 18
- American Libraries, 16
- American Libraries and the study of Ancient Manuscripts, 51
- American Library Association, 51, 57, 63
- American Library Association Committee on Bibliography, 21, 44, 52, 56, 57, 60, 63, 70
- American Library Association Committee on International Library Cooperation, 51, 53
- American Library Association Committee on International Relations, 54, 55
- American Library Association Committee to cooperate with A.L.I., 55
- American Library Association Council, 18, 58
- American Library Association Executive Board, 10, 18, 58, 64
- American Library Association (International) rules for cataloging new edition, 22
- American Library Institute, 18, 44, 54, 56, 58, 63
- American manuscript studies, 52
- American manuscripts, 21
- American Revisers, 45
- American scholars, 51
- American school in Rome, 51
- Andrews, Clement W., 78
- Anonyms, 68, 69, 70 76
- Arabic manuscripts, 72, 74
- Archaeologico-Epigraphic Seminar of the University of Vienna, 51
- Ashurbanapal, 42
- Astrology, 73
- Automatic cumulation, 68
- Beda, 71
- "Best" manuscripts, 5
- Bibliographical cataloging, 30
- Bibliographical travel, 8, 19
- Bibliography the necessary foundation of all intellectual cooperation, 56
- Bibliology, 47
- Berlin, 40
- Berlin Academy, 50
- British museum, 48
- Boston, John, 42
- Bowker, Richard R., 55
- Brussels, 16, 58
- Brussels Institute of Bibliography, 16, 55, 57, 58
- Bulk, 31
- Carnegie Institution at Washington, 44, 52
- Catalog, alphabetical, 13
- Catalog, card, 14
- Catalog, cumulative, 14
- Catalog, finding, 13
- Catalog, Index, 13
- Catalog, inexpensive, 14
- Catalog of printed catalogs with index, 10
- Catholic University at Washington, 70
- Cheap method of short cataloging, 32
- Columbia Library School, 49
- Classical manuscripts, 44, 52, 74
- Classical Seminary at Princeton, 52
- Classics, 44
- Clementine Homilies, 48, 50
- Clementine Recognitions, 48
- Committee on International Intellectual Cooperation of the League of Nations, 15
- Committee proposed by the American Library Institute, 56
- Compilation, 24
- Connecticut State Library, 63
- Content of the cards, 23
- Cooperation, 78
- Cooperation as a means of producing, 19
- Cooperative acquisition, 54

Cooperative catalog, 53
 Cooperative cataloging, 54
 Cooperative information service, 54
 Cooperative lending, 54
 Cooperative reproduction of photostat negatives, 57
Corpus Schwenckfeldianorum, 46
 Cost, 31-41, 74
 Cost of composition, 75, 79
 Cost of cumulated author lists, 79
 Cost of expert revision, 27
 Cost of production, 41
 Cumulated list, 69, 78
 Cumulation, 75, 78
 Cumulation, simplified, 76
 Cumulative bars, 78
 Cumulative index method of printing, 76
 Cumulative indexes, 67, 78
 Dana, John Cotton, 16, 78
 Delagarde, 48
 Demonstration Experiment with Oriental manuscripts, 72-5
 Demonstration experiment with Spanish manuscripts, 66
 Demonstration experiments, 68, 78
 Demonstration of method, 77
 DeRicci, Seymour, 10, 26, 31, 39, 43, 44, 59
 DeRicci's first short title plan, 41
 DeRicci medium method, 59, 61
 Dewey, Melvil, 49
 Earlier Union Catalog Projects and Proposals, 42-4
 Error, 34
 Error, careless, 36
 Error, material, 33, 36
 Error, negligible, 33, 36
 European libraries 40
 Exactness, 34
 Exhausting manuscript catalogs, 25
 Exhausting printed lists, 70
 Expert editing, 68
 Facsimiles of manuscripts, 42, 53
 Faris, N.A., 39, 72, 73, 74
 Filing, 28
 Film, 22, 29
 Financial means, 17
 Financial program, 37

Finding catalog, 30
 Finding methods, 6
 Finding need, 77
 Foreign libraries, 54
 Fragment cataloging, 74
 Fragments, 73
 Full cataloging, 30
 Full method of Pelzer, 59
 Full method printed catalog, 31
 Fullness, 30
 Garrett collection, 73, 74
 Gathering and organizing printed catalogs, 9, 21
 Gayley, Professor, 42, 53
 Gebhardt, O. von, 33, 50
 Genealogical method, 5, 32
 General Education Board, 39
 Geneva, 15, 40, 54, 55, 57, 58
 Golden Legend, The, 6, 50
 Grants, 63
 Gregory, Caspar Rene, 5, 45
 Grubbs, Henry A., 8, 52, 62, 67, 69, 77
 Haenel, 10, 11, 43, 49
 Handwritten or typewritten catalogs, 25
 Harnack, A. von, 50
 Hartford Theological Seminaray Arabic manuscripts, 72, 73
 Harvard, 48, 72
 Hartranft, Chester D., 46, 49
 Hieronymus, De Viris Inlustribus, 49
 Hitti, Professor, 39
 Identification, 73
 Illinois Library School, 49
 Index Generalis, 12, 62, 63, 65
 Index method, 78
 Inexpensive printing, 73
 Inter-library catalog, 53
 Interlibrary information service, 26
 International Associations, 55
 International catalog project, 17
 International cataloging, 51
 International cooperation, 52
 International Library or Union Catalog, 57
 International Library conference at St. Louis, 44, 52
 International Union catalog, 53, 57, 58
 International University, 55
 International use, 28

Jewett Plan, 78
 John Crerar library, 78
 Johnson, Elmer E. S., 47
 Johnston, Dr. William Dawson, 9
 Joint Catalog, 53
 Jacobus de Varagine, 6, 50
 Jacobus de Varagine Chronicle, 77
 Kletsch, Ernest, 21
 Lafontaine, Senator, 54, 55
 League agencies, 28
 League agreement with Brussels Institute, 16
 League Committee on International Intellectual Cooperation, 16, 54, 55, 57
 League Libraries, 54, 55
 League Sub-committee on Bibliography, 56
 Librarian of Congress, 17, 56, 58, 60, 64
 See also Putnam, Herbert
 Librarians of manuscript collections, 19
 Library of Congress, 20, 58, 63
 Library of Congress Consultant in Bibliography and Research, 21, 57, 60
 Library of Congress Director of Union catalogs, 58
 Library of Congress facilities, 19
 Library of Congress Project C, 44, 59
 Library of Congress Rules, 28
 Library of Congress Union catalog of Printed Books, 20, 69, 70
 Library Schools, 36
 "Library without books," 16
 Lightfoot, 50
 List of entry names, 21
 List of printed catalogs of manuscript books, 70-2
 Littmann, Enno, 73
 Local and regional union catalog, 43
 London, 40
 "Manuscript," 65
 Manuscript Book Collections of Spain and Portugal, 66-70
 Manuscript books, 12
 Manuscript books and manuscript documents, 65
 Manuscript facsimiles, 44
 Manuscript hunting, 47, 49, 52
 Manuscripts, number of, 5
 Massoretes, 36
 Mazzatinti-Sorbelli, 10
 Means, 17
 Medical manuscripts, 74
 Medium method, 32, 59
 Method in General, 3-11
 Methodology, 3
 Micro-photography, 25, 42
 Migne, 10, 43, 46, 49
 Mimeograph 73, 74
 Minerva, 12, 62, 63, 65
 Modern Language Association, 21, 44, 58
 Monleone, Professor, 77
 Montfaucon, 10, 11, 43, 49
 Montgomery, Thomas L. 53
 Munich, 41
 Norme, 32
 National union catalogs, 43
 New Brunswick Seminary, 46
 New London Library, 78
 New Testament, 45
 New York Evening Post, 53
 New York Public Library, 72
 Offset printing, 74
 Organization of union catalog, 20
 Oriental manuscripts, 72, 73
 Paleographical Seminar libraries, 51
 Paleographical workers, 26
 Paris, 15, 17, 20, 40, 48, 58
 Pelzer, A., 31
 Periodical articles, 8
 Periodicals and collective source, 7
 Pertz Monumenta, 46
 Peter, St., 48
 Philadelphia Libraries, 16
 Photographic facsimiles, 53
 Photographic methods, 42
 Photographic reproduction of whole manuscripts, 51
 Photostat, 22, 29, 74
 Photostat copies, 25, 42
 Pratt Library School, 49
 Preliminary Survey, 63, 66
 Preparatory projects, 21
 Princeton University, 9, 40, 49, 76, 79
 Princeton Arabic manuscripts, 72, 73
 Princeton Sesquicentennial, 50
 Printed catalogs of manuscripts, 6, 20, 25, 66, 70, 72

Printed catalogs, organized collections, 9
 Printed union catalog, 37
 Printing method, 78
 Printing not a necessary factor, 80
 Problem, The, 4
 Problem of the Research Scholar, 71
 Production per dollar, 38
 Prolegomema, 19
 Proof reading and rechecking, 27
 Proof reading by libraries, 27
 Putnam, Herbert, 56
 See also Librarian of Congress
 Pyne family, 50
 Randall, William M., 38, 39, 72, 73
 Research Professor, 54
 Research student, 77
 Research travel, 26
 Revising and Editing, 28
 Richardson, E. C., 47
 Riddle, Matthew B., 45
 Root, Azariah, 55
 Robert, U., 10
 Rockefeller, John D., Jr., 17, 21, 58, 64, 73
 Rome, 15, 20, 40
 Rufinus, 48
 Rules, 21, 23
 Schwegmann, George A., Jr., 21
 Series of printed catalogs, 10
 Service by correspondence, 28
 Service fee of the Congressional library, 28
 Service of the catalog, 28, 29
 Short cataloging, 30
 Short short method of DeRicci, 33
 Short short title, 30
 Short title finding method, 72
 Short title index, 73
 Short title index finding list style, 78
 Short title method, 67
 Short titling, 17, 25, 40
 Standardized entry, 68, 76
 Standardized list of author entries, 23, 70, 77
 Standardized list of writers before the invention of printing, 70
 Spanish collections, 68
 Staff, 21
 Standards, 30
 Standards of accuracy, 36

State Department (House) Inquiry Commission, 54
 Stemma, 35
 Stemma of the Golden Legend, 52
 Student help, 75, 76
 Subject entries, 68
 Sub-volume lists, 25
 Supplement to the manuscript book collections of Spain and Portugal, 75-80
 Survey of existing catalogs of manuscripts, 21, 24
 Survey of existing manuscript collections, 21, 23
 Teaching Paleography, 50
 Texte und Untersuchungen, 50
 Thayer, Charles Henry, 5
 Tischendorf, 45
 Transcription by photostat, 26
 Traveling American scholars, 19
 Travel costs, 25
 Traveling experts, 22, 26
 Tregelles, 45
 Types of union catalogs, 43
 Typewritten card method, 67
 Typographical printing, 75
 Uncataloged collections, 10, 26, 36
 Unemployment service, 75, 76
 Union catalog of facsimiles of manuscripts, 9, 53, 58
 Union catalog of manuscripts, 56, 57, 58, 63, 64
 Union catalog of paleographical literature, 9
 Union catalog of printed catalogs of manuscripts in American libraries, 9, 21, 24, 71
 Union catalogs, 42, 58
 Union catalogs of Printed Books, 16, 64
 Union catalogs of printed books, manuscripts and special collections, 55, 58
 Union printed book catalog of the Rhine-land, 32
 Union world catalog of manuscript books, 8-15
 Union world catalog of manuscript books a closed project, 18
 Universal Repertory of Bibliography, 55
 University Library Cooperation and Business

Management, 54
 Unprinted catalogs, 8
 Unpublished catalogs, 26
 Uses of manuscripts, 4
 Vatican library, 60, 67
 Vatican Library Norme, 22
 Vatican Library short cataloging, 32
 Vatican Library union catalogs, 43, 59
 Vincennes, 16
 Volume catalogs of manuscripts, 7, 66
 Washington location, 17

Weisgall, Hugo, 6, 52
 West, Andrew F., 44, 52
 Westcott and Hort, 45
 Western manuscripts, 44, 72, 73
 Wilson, Florence, 54
 Wilson, H. W., Company, 78, 79
 Woods Hole conference, 18
 World's collections of Manuscript books, 62-6
 Zurich libraries, 16