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ACQUISITIONS POLICY  
OF THE  
NATIONAL MEDICAL LIBRARY

PROCEEDINGS OF A SYMPOSIUM  
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ARMED FORCES MEDICAL LIBRARY  
WASHINGTON, D. C.

On October 1, 1956, in accordance with legislation enacted by the 84th Congress and approved by the President on August 3, 1956, the Armed Forces Medical Library became the National Library of Medicine and was transferred from the Department of Defense to the Public Health Service of the Department of Health, Education and Welfare.

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## FOREWORD

The present acquisitions policy of the National Library of Medicine is based on the recommendation of the 1944 Survey Committee that the then Army Medical Library should "acquire... all publications, in all languages, directly relating to the science of medicine". We have followed this recommendation as faithfully and as diligently as our resources have permitted. During all these years a considerable amount of staff time has been spent in discussion of the problems involved in the practical implementation of this policy, especially as we have become increasingly concerned by the mass of published literature and the heavy costs of processing it.

Late in 1955 it seemed the part of wisdom again to seek a view of the problem from the outside. A group of subject specialists was therefore invited to discuss the adequacy of our policy and its relevance to the ever-changing conditions under which the Library must operate. The papers which follow were delivered at the Symposium on Acquisitions Policy of the National Medical Library, held at the Library on April 12, 1956; the views presented in these papers furnish new points of reference in the continuing reappraisal of the acquisitions policy of the National Library of Medicine.

Samuel Lazerow  
Assistant Librarian for Acquisitions  
National Library of Medicine

March 1957



## INTRODUCTION AND STATEMENT OF THE PROBLEM

FRANK B. ROGERS, Lt. Col., M. C., U. S. A.

"... Most of the books in a large research library are subjected to an extremely low, almost negligible, amount of use. The use of a large research library is clearly concentrated at any one point in time over a small percentage of its total holdings."

-- Herman Fussler<sup>1</sup>

"An Army is maintained for a thousand days so that it may be used on one particular morning... That is the luxury and utility of libraries of rare and very rare items."

-- Hu Shih<sup>2</sup>

Acquisition is the first process, in a sequence of processes, in which a library engages. The acquiring of material is, therefore, basic, in the fundamental sense that it precedes other processes. Books not acquired need not be cataloged, bound, stored or serviced; neither can they be used in the answering of reference queries. The problem of what books to try to acquire, out of the vast number it is possible to acquire, is a problem of very great importance to every library, of whatever kind. It is of the very greatest importance to the large research library.

The large research library is established and operated to serve the community of scholars. The demands of scholarship are expansive, and they place upon the research library an exceedingly heavy requirement for extending its collecting policies in both breadth and depth. Yet however large a library may be, and however ambitious its program, the time comes when every library must face the question "How far?", and strive to find useful and realistic policies which will keep collections manageable -- which will make it possible to maintain collections from which items of information are, in fact, retrievable.

This would seem to raise financial considerations as primary, at the very outset of our discussion. This is both true and not true. We can accept it as a fact of life that we can do almost anything if we are provided with sufficient time and sufficient funds and sufficient manpower. In this sense, if we wanted to collect everything, we could do so. But it is likely that food and shelter, guns and butter, will be basic preoccupations of mankind for a long time to come, and that the building of library collections, and other similar activities, can hope to claim only their fair share of the remaining resources available. For libraries this means that something less than totality in collecting is all that can be hoped for. The question becomes what degree of comprehensiveness in collecting is reasonable, considering the major purposes which must be served. What policies can be set to explain exactly what this objective of reasonable comprehensiveness consists in? It is likely that this policy goal can best be determined and placed in action by establishing some sort of a priority system, some scale of values for assessing different kinds of materials. With such a system we could cut our cloth to fit more closely the changing financial patterns obtaining from time to time. So I hope that, in the discussion which follows, most of our panel members will pay no special attention to fiscal matters, but will merely tuck away in the back of their minds the basic fact of the primacy of fiscal considerations. We may safely leave matters of cost to Mr. Clapp, who will discuss the problem from the aspect of library technology.

There are, however, two special considerations which I hope all our speakers will remember. We are here discussing the Acquisitions Policy of the Armed Forces Medical Library. This Library is a large research library; it differs from many other large research libraries in that it is also a national library, a library of record, a library which has a special responsibility to the nation, beyond the responsibilities of all other research libraries in its field. For medicine, this Library must serve as the ultimate recourse for all other library facilities in this country. This is a heavy obligation; we have always to remember it.

The second special consideration must be recognition of the fact that this Library does not stand alone in having national responsibilities. Our sister libraries -- the Library of Congress and the Library of the Department of Agriculture -- are as heavily committed as we are, or more so. We must constantly bear in mind this division of responsibilities, which by reason of the fundamental organization of the institutions involved, is on a subject basis. In some areas -- the core areas -- this division is relatively easy. We do not collect medical fiction because the Library of Congress covers all fiction. We do not collect extensively in the field of veterinary medicine because the Library of the Department of Agriculture does so. In other areas, this sort of division of responsibility is extremely difficult; as the periphery of any large subject area is approached, fine distinctions are very hard to make.

The surveyors recommended that "the Library should acquire on publication, or as soon thereafter as possible, all publications, in all languages, directly relating to the science of medicine. These would include books, pamphlets, serials, government publications, ephemeral material, prints, pictures, etc. Quack and crank publications should not be omitted. Acquisitions in this whole medical field should be, as far as feasible, inclusive rather than selective, and the only material to be omitted would be minor editions in which no changes in text occur, publications obviously made simply to sell, or those priced at entirely unreasonable figures when the prospect for later acquisition at a much lower price would seem good."<sup>5</sup>

The survey recommendation was very broad and wide. In an effort to chart the course in more specific terms, the Library began to study the problem intensively, issuing its policy on scope and coverage of the collections early in 1951. This policy statement went far toward rationalizing the Library's collecting policies, and its subsequent use has served the Library well.

But in the decade which has elapsed since the Survey, the Library's yearly acquisitions have increased to the point where the Library is receiving materials at a rate in excess of three times that of ten years ago.

We have, in fact, long since reached the point where we begin to wonder whether our acquisitions are not now too inclusive, where once they were not inclusive enough.

We begin to look with a jaundiced eye at our definition of an exhaustive collection, and we are collecting exhaustively in all the core areas of medicine. An exhaustive collection, says our policy, "is one which includes everything written in the field -- books, pamphlets, periodicals, abstracting and reviewing media, government documents, loose-leaf systems, congress reports, Festschriften, dissertations, symposia, institutional reports, school catalogs, leaflets, broadsides, notices, etc. -- whether printed, near-printed, typewritten, or in manuscript; in all languages; of all time; in all editions, but not necessarily in translation or in variant issues. Ephemera such as commercial promotional literature may be kept permanently only in representative samples."

In both instances -- the Survey recommendation of 1944 and the policy statement of 1951 -- the use of the "etc." has perhaps served us ill. And perhaps we have not paid enough attention to the 1944 statement that "publications obviously made simply to sell" need not be collected, or to the 1951 exception for "ephemera such as commercial promotional literature"; the qualification such as may have been too frequently overlooked.

This, it seems to me, is the point at which the two major facets of an acquisition policy should be mentioned and defined. These two facets may be named the facet of scope and the facet of coverage. Scope may be defined as range in breadth of a subject field; in considering matters of scope, only subject content is pertinent. Coverage may be defined as depth of penetration into a subject field; in matters of coverage, language, physical format, imprint date, quality level -- all these may be pertinent.

Problems of scope can be very difficult. In our discussion today, however, we are not primarily concerned with these problems. Since, among them, the Library of Congress, the Library of the Department of Agriculture and the Armed Forces Medical Library attempt to embrace the totality of knowledge, matters of scope may best be left to joint consideration by these libraries. What we are mainly interested in here today is the problem of coverage.

Scope and coverage are inextricably linked, as for any particular library the problem of coverage arises only for those subjects considered to be in scope. The Armed Forces Medical Library has made a detailed statement of its scope policy, and this statement is in the hands of all participants in this discussion. While our scope policy must undoubtedly be modified, in discussion with our sister libraries, we would like to have our panelists assume that the question of scope is solved, and is as outlined in the statements they have in hand. We would like to have them consider our problems mainly from the viewpoint of coverage.

The Armed Forces Medical Library has long debated this problem. In an address before the Army Medical School on 8 February 1897 Robert Fletcher, the disciple, friend and protégé of Billings, said that "it is of importance in forming a great medical library to avoid loading its shelves with books which, however valuable in themselves, have not a distinct relation to the purpose of the collection, and this view has been rigorously adhered to [at the Surgeon General's Library] from both policy and economy."<sup>3</sup>

If indeed there was such a policy it must have existed only in the minds of Billings, Fletcher, and their co-workers. And whatever unwritten policy there was inevitably was diluted and deformed as the years passed. To the extent that there was a policy, it could probably be stated no more definitely than "to collect everything medical," and this is practically the same as having no policy at all.

When the Army Medical Library was surveyed in 1943-44 the surveyors found that "the Library has followed a somewhat wavering policy as to what constitutes a complete collection of medical literature."<sup>4</sup>

## THE PROBLEM

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It would seem that we must ask ourselves what, fundamentally, are the purposes which our collections are to serve.

In a national library of medicine the collections have several outstanding objectives:

(1) They serve medical research. They provide new ideas, new data, new techniques, new hypotheses, which may be drawn upon and incorporated into new studies, new experiments, and new hypotheses which advance the frontiers of science. The use of the word "new" here is relative; long periods of time may elapse before a datum or a hypothesis is needed, or is recognized as relevant, for the further development of current work in progress.

(2) They serve the workaday practice of medicine. For this purpose, compendia of the "best that is known" are needed. Since "the best" is hard to recognize and agree upon, more than one, but certainly less than all, are required. In the highly developed nations of the West it is probable that works in the national language are largely sufficient to this end.

(3) They serve as the basic documents of intelligence studies, at various levels.

(4) They serve as the basic records of the history of medicine, the history of science, and the general history of civilization. History means change; obscure items may reflect this change, or epitomize it, as well as or better than more prominent items. History is also the history of man's stupidity and blindness; it is necessary to know the quack as well as the saint. To the historian, quantity may reveal the extent of penetration of an idea or prejudice, or the extent of transfer of ideas across barriers of space and custom.

(5) They serve important auxiliary functions, such as in furnishing materials in legal disputes, or as guides to the writers of textbooks and popular materials, or assistance in the conduct of "Point Four" programs, in one form or another.

We must note that all these are facets of one single corpus; breaking them down is just a convenient analytical device. All will fit conveniently under the headings of medical research and practice, and medical history. And the practice of tomorrow will become the history of yesterday, from which another tomorrow must draw its strength.

On the face of it, our analysis would make it appear that exhaustively must really mean exhaustively. And yet -- and yet -- is this not presumptuous pride at its worst? How can any collection, even one limited to a specific subject field, presume to be all-sufficient for all purposes, even in that one field? How measure the possible values against the known cost?

Looking around for help, we have found little outside opinion that is pertinent to our predicament. "Comprehensive" and "total record" are words that carry different levels of meaning to different people. To most libraries, acquisition policy is largely a question of which monographs, which journals, to procure. Our problem is not large in the area of books and journals; our problem lies in the tougher realms of which mimeographed annual reports of which of thousands of provincial hospitals we are to acquire; which popular pamphlets on tooth-brushing, fly-killing, or toilet-training; which weekly sheet of morbidity statistics from which obscure counties. It is the same problem facing others, but for us it is raised to an exponential pitch, thereby assuming a different character. We have to remember that even such a program as the Farmington Plan carries limiting language such as "of research value", and that the Library of Congress, in its third canon of selection, introduces limiting phrases such as "the material parts of the record" and "representative records... of most immediate concern to the people of the United States."

We do not underestimate the inherent difficulties of this vexing problem, and we are unwilling to settle for any illusory simple answer, however attractive. We realize we are playing a dangerous game. We have had some experience in pruning our old collection in accordance with our newly developed scope policy, and we have had some examples of what a nightmare this can occasionally be. Harry Bauer tells a story<sup>o</sup> which well illustrates this dilemma:

"In his essay, 'A Mathematician's Apology', the late Godfrey Harold Hardy tells of a terrible dream that tormented Bertrand Russell. In the dream Russell found himself in the stacks of the Cambridge University Library about the year 2100 A.D. He observed a library attendant sorting books which after examination were either returned to the shelves or dumped into an enormous waste basket. Eventually, the librarian reached the shelf where the only extant copy of Principia Mathematica reposed. He opened the first volume of this famous three-volume work by Whitehead and Russell, and skimmed through a few pages. 'Puzzled for a moment by the curious symbolism, the librarian shut the book, balanced it in his hand and hesitated...' Presumably, that is all there is to the dream, since the Hardy essay does not reveal whether or not Russell was wakened by the dull thud of a heavy tome tumbling among the discards."

Nevertheless, if it is dangerous to use discrimination, it is nonetheless necessary. It is necessary if we are to discharge our Library duties successfully, and it is necessary also if we merely wish to claim the title of human beings in a world of human values.

What we want to do is to develop a positive acquisitions policy, with our eyes wide open, rather than backing into a safe, everything-goes policy merely because we are fearful of what other fearful people may say of us. We have striven mightily to develop such a policy, but our level of attainment in this area is far from satisfying. Out of our concern the organization of this symposium has arisen. We turn to our distinguished guests, and ask them to try to illuminate for us, from the aspects of their several disciplines, and out of their experience, their frustrations, and their longings, the multitude of factors which bear on the acquisitions policy of the national medical library. We ask them to what depth our coverage ought to extend, how comprehensive a comprehensive collection should be, how much is enough. We ask for guidance, for criteria of selection, however dimly they may be discerned. In return, we offer our pledge that all that transpires here will be given the most earnest consideration as we continue to seek out better solutions to our problem. And we hope and believe that all who participate in this symposium here today will have the satisfaction of knowing that they have contributed to a vital program of this Library which seeks to serve all those who work for the prevention of disease and the alleviation of human suffering.

#### References

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## THE PROBLEM FROM THE VIEWPOINT OF LIBRARY TECHNOLOGY

VERNER W. CLAPP

Colonel Rogers has just told us that in the decade since the American Library Association survey the rate of growth of the Armed Forces Medical Library has increased to a point at which it is questionable whether its acquisitions are not too inclusive instead of not being inclusive enough; and he asks this panel, in consequence, for its opinions as to the depth to which the AFML's acquisition coverage should extend, how comprehensive a comprehensive collection should be, and how much is enough.

In response to these questions I am to muster what assistance can be derived from library technology. Now, library technology is the assembly of techniques which are practiced in libraries and by librarians. These techniques, it may safely be said, are capable of taking care of any library operation--at a price. If Colonel Rogers will tell us how comprehensive he is willing and able to be, library technology will provide the processes for doing it.

But the question here is exactly this--to what degree of comprehensiveness should Colonel Rogers' willingness and ability extend? Now his willingness may be related to his ability in the sense that he may be willing to acquire no more than he is able to handle; and his ability to handle may in turn be related to library technology in the sense that he could handle twice the amount of material for the same price if he could find new techniques costing only half as much per unit as those in current use. But, even supposing that techniques could be devised so inexpensive as to exact few qualms in applying them to material of very dubious worth, there nevertheless comes a point at which willingness to acquire must be based neither upon ability nor upon techniques, but upon a value-judgment as to the desirability of the material per se. Here technology, in the usual reference to technical processes, does not help.

In a wider sense, however, library technology includes also the procedures by which librarians assemble and apply considerations to the making of value-judgments as to the desirability of potential acquisitions. And in a still more extended sense library technology may also be considered to embrace the techniques by which librarians seek the support which enables them to carry out their value-judgments. In the latter sense, library technology would include the organization of Friends-of-the-Library groups, the cultivation of wealthy donors, the education of trustees, and the holding of symposia on acquisition policy.

I shall, accordingly, attempt to touch, though necessarily briefly, on certain of each of these aspects--the techniques related to the making of value-judgments with respect to the acquisition of material; the techniques for carrying out the decisions thus reached; and the techniques for securing the support wherewith to enable the execution. It is obvious that each of these topics lends itself to extended treatment, and I may be excused if I touch only lightly on some salient considerations.

Let me commence with the last phase, that of securing support to enable the execution of value-judgments previously made. Colonel Rogers started at this point, and I may follow his example. He has told us that we can do almost anything if we have enough energy, time and money, and that if we wanted to collect everything we could in this sense do so; but that since there are certain basic demands upon the community's resources, and since libraries can claim only a fair share of the remainder, something less than totality in collecting is all that can be hoped for.

It seems to me that this statement of the problem either begs the question or involves a non-sequitur. It begs the question if the library's "fair share" is defined as one which permits only something short of totality in acquisitions. I do not think we should be prepared to accept this definition before making a value-judgment of totality and exploring its cost.

But if, on the other hand, we do not thus define the "fair share", it does not then follow that totality is not to be hoped for, unless some additional proposition is inserted between Colonel Rogers' premise and his conclusion. One such proposition might be: the cost of totality is so huge in comparison with its benefits that no money-granting body could ever be persuaded to appropriate the funds which would be required to make it possible. From this it would then follow that something less than totality is all that can be hoped for. But thus to state the matter is again to give the case away, for if we have surrendered all hope of persuading the money-granting body of the benefits of totality, it seems to me very much in question whether we are really convinced of them ourselves.

Accordingly, at this very preliminary state of the discussion we can raise certain questions:

1. What is the gap between present appropriations and the cost of totality in acquisitions?
2. Have we really made an effort to close this gap by persuading the money-granting body that totality is as important as many serious persons (including the members of the ALA Survey) have felt it to be?

3. Should we consider any departure from totality as the objective until either (a) we have failed in an honest effort at persuasion, or (b) looked closely at the totality principle and found it unconvincing even to ourselves?

Now I suppose that the answer to the second question is that an all-out effort has not been made to convince the money-granting body of the virtues of totality and that the reason for this is at least in part a lack of complete conviction within ourselves. Consequently, we must now start on the lowest rung of the ladder, and give the principle a hard look. And this, I presume, is the real subject of the present discussion.

Should this library--should any library--collect everything in its field? The answer, I think, will hardly ever be in the affirmative. Yet it might conceivably be so for a very special library in a very special field. I can conceive a field so narrow, one of which the literature would be so small, so important and so unduplicative that a library with a mission for comprehensiveness in the field should actually collect everything in it. Greek epigraphy, perhaps, or a species of Echiuroids (ribbon worms) of the Arctic Ocean bottom. But, you have not failed to remark that I have smuggled several question-begging words into my hypothetical field of acquisition, notably the words "important" and "unduplicative". Suppose for instance--and this has actually happened--that even the Arctic Echiuroids should get into the news and become the subject of press dispatches. Should our imaginary library acquire a copy of each newspaper in which these dispatches were reproduced? Our answer would undoubtedly be in the negative unless it could be demonstrated that the purpose of the library would require for its fulfillment the acquisition of all those issues. It might be shown, for example, to be of actual or potential importance for some purpose to assemble the exact evidences of the manner in which information regarding Arctic ribbon worms is disseminated to the public; and this purpose might in turn be shown to be among the objectives of this particular library. And if this demonstration were convincing in the right quarter, money for the assemblage of all those issues of newspapers would be forthcoming.

We are driven, then, to the purpose of the library, and to the relevance--i.e., the importance--of prospective acquisitions in the light of the purpose. No library can be expected to be permitted to acquire at all, much less comprehensively, unless it can justify both the importance of its purpose and the relevance of its acquisitions to that purpose.

How is this demonstration to be performed? The answer is that there is no single answer. And it is exactly this that constitutes the excitement of building collections. If there were one answer, it would long ago have been reduced to an ALA or MLA code, would be taught in library schools and would in libraries be assigned to junior assistants to execute. But the fact being otherwise, directors of research libraries still have to give time and attention to acquisitions--that is to say collection-building; and for this they should be very grateful, for the library--that is to say the collection--has always been and must always to a greater or less degree be a reflection of the wisdom and foresight and breadth of interest and persuasiveness of the librarian. There is no cause for regret in this, but for gratification.

The persuasiveness that enables the execution of value-judgments must then in the long view rest on the value-judgments themselves. There is perhaps little to distinguish this situation from that of every other institutional enterprise, except the subject matter involved; and the problems pass over, in consequence, from library technology in the narrow sense to the field of public relations. Now the public relations of libraries have received much attention in recent years, and this is not the place to describe the various techniques in detail. One comment, however, may be fitting. This is that institutional heads are so likely to be preoccupied with details of internal administration and with the substance of the institutional purpose that they are likely to assign to only occasional or spasmodic consideration the matter of public relations. But the studies of the subject lead to the inescapable if obvious conclusion that these relations, upon which in the last analysis rests the ability of the institution to secure not only a "fair share" but any share at all with which to effect its purpose, must be continuous business.

Let us turn then instead to those value-judgments which must precede any search for support. In the case of a library these are all related to a user, actual or potential. As Colonel Rogers reminds us, the research library exists to serve scholars. It would seem then to be elementary that unless the acquisition of material can be demonstrated to be likely to serve actual or potential users, its acquisition remains unjustified.

Such a remark might seem to be supererogatory and even offensive, were it not for the fact that libraries are only too likely to establish a priori statements of acquisition policy, and that from these statements of policy consequences can too easily flow which were not contemplated at the time the policy was framed and which are not justified by the real purpose of the library or by potential use. Thus, in my hypothetical illustration, the library which had the a priori policy of collecting everything on a species of Arctic ribbon worms would probably be betrayed from its genuine purpose if it allowed that statement of policy to draw it into a wild-goose-chase after multitudinous and duplicative newspaper reproductions of a syndicated article.

Consequently, though statements of acquisition policy are very important it is equally important to test their application at each point against real purpose, relevance of the material, and potential use; for otherwise they may prove treacherous.

Colonel Rogers has listed for us the purposes of the AFML under the heading of its "outstanding objectives", and for the purposes of present discussion we can assume the authority of his statement. It seems to me at this point, in consequence, that the problem which he has placed before this panel is essentially a matter of submitting the question of acquisition of various kinds of material to the test of compliance with these purposes, plus the test of potential use. At this point too, it appears to me that the tests of purpose and use are entirely adequate, and that if there has been difficulty in reaching a decision, that difficulty probably derives from the fact that the statement of acquisition policy was not itself accurately attuned to the statement of purposes. Of course, even in statements of purpose there may be unguarded (or was it considered?) proposals like "furnish materials in legal disputes". If one were to attempt to fulfill that purpose in any comprehensive way, there would be absolutely nothing which might not conceivably be of use.

Now it is obvious that the usual techniques of book selection will not settle questions of the kind which Colonel Rogers poses. These questions lie outside the charted areas where reference to book-reviews or bibliographies or best-book-lists can help. Even literature studies, to ascertain what use has been made of this peripheral material in the past, will yield few clues and no final answers. About the only methods left are to study the material itself in the light of the library's purposes and potential use and to turn to informed persons for prognoses from the points of view of their several interests.

To be specific, let me take as an example one problem mentioned by Colonel Rogers, that "of which mimeographed annual reports of which of thousands of provincial hospitals the AFML is to acquire." (There are about 7,000 hospitals in the United States now; and if there were an equal ratio of hospitals to population on a world-wide basis--as possibly there may be some day--there might be something like 105,000 hospitals, all capable of issuing mimeographed annual reports.) Now I judge that these reports might potentially serve a number of the purposes for which the AFML exists: they provide data for research and regarding practice; they provide material for history. The question is, to what degree is a comprehensive collection of them important for these purposes? Or, contrariwise, to what degree will some kind of selection meet the requirement of purpose?

It can be argued, I should suppose, that much of the information contained in these reports which satisfies the purposes of the AFML is duplicated elsewhere, that the information bearing on research is largely represented in the journals, and the information regarding practice is summarized in the statistical compilations. (Both of these suppositions of course require confirmation.) Then, as sources of material for history of individual local institutions, they may be presumed to be very inadequate and a comprehensive collection of them quite unsuitable, since for inquiries of this kind resort must be had to local archives and non-medical sources. Meanwhile, for history on a regional or national scale they are still unsuitable as being too voluminous; and a selection, or that part of the record which is reproduced in the statistical compilations would be not only adequate but might perhaps serve even better for being already sifted and tabulated. For these reasons (if confirmed by inquiry) it might be argued that a comprehensive collection could not be expected to serve any purposes which a selection would not serve, and in the exceptional case in which the particular report of a particular institution, wanting in the national collection, were needed, it would be worth the gamble that it might be found in local files or archives. Thus might run the argument for selectivity.

On the other hand it might be argued that these reports contain important data not reproduced in the journals or the statistical compilations, and that a comprehensive assemblage of this data is needed, perhaps for the "intelligence" purposes which Colonel Rogers has mentioned or for use "in legal disputes." To enforce this argument upon a money-granting body would require, I should suppose, strong confirmation by representatives of the interests involved.

Finally it might be argued that we are unable to foresee the research needs of the future; that though these reports appear to add little to our stock of knowledge, yet a need may some day arise which will justify the expense of assembling, organizing and storing a comprehensive collection of them. This is a familiar argument, but it has a low degree of persuasiveness.

In the last analysis, although the decision with respect to material of this kind must rest on an exercise of judgment, yet it is to be noted that the more informed the judgment, the more persuasive it is likely to be, and vice versa.

But the librarian's conscience is not likely to be easily satisfied in balancing arguments pro and contra, and it is never easy to know when sufficient information is at hand to make a valid judgment, especially if the judgment is of the kind that can never be reversed, like a death sentence, and will cause the extinction, either by birth control or euthanasia, of a unique collection. The librarian's conscience is haunted

by the recollection of important collections (like the Thomason Collection of British Civil War pamphlets mentioned by Joseph Groesbeck in his 1950 article on the acquisition policy of the AFML) which owe their unique existence to the prescience of some bookseller or collector at a time when librarians one and all were failing of their responsibility; and he wonders if history may not be repeating itself. When all other values of the mimeographed hospital reports fall short of justifying their comprehensive acquisition, he remembers their possible biographical value. We would like to have, if only for their biographical relevance, the reports of the T. H. Gallaudets and the W. A. Whites of the future. But, since we cannot identify these men in advance, should we not collect the reports of all hospitals so that we may be sure of having those of the great hospital superintendents of the future? At this point library technology may suggest some expedients to save the day.

This is probably the point at which to mention some of these expedients. At the acquisition level they include such devices as encouraging other institutions to accept responsibility for collecting the material; or of encouraging a division of the responsibility among several institutions; or of pooling resources with other institutions to make a common collection. It may even be desirable to develop a reporting service of some kind -- a check list or union list -- to assure fulfillment of the responsibility.

Or, if these expedients fail or are not justified, there is the device of making an arbitrary selection, based upon such factors as size, geographical distribution, etc., or even of making a random sampling. Or the selection may be deferred, on the principle of "collect now, select later".

At the processing level there are various shortcuts, both in warehousing the material and in making the bibliographic record. One can microfilm in order to reduce bulk and at the same time consolidate the material, protect it from deterioration and save binding costs. One can catalog it by short-cut methods, including brief cataloging and group cataloging. One can catalog it without shelf-classifying it, or conversely one can shelf-classify it (e.g., in pamphlet boxes or vertical files) without cataloging it. One can send it to a storage warehouse, making as little record of it as possible. Or, finally, one can pile it up and leave it to one's successor, this being the ultimate of the "collect now, select later" technique.

It is apparent that the variables and imponderables involved in the various formulas of evaluation and treatment present the librarian with considerations of the greatest difficulty at the very point at which the material is of least obvious worth. This is the basic dilemma which faces the comprehensive library. It has already, in a sense, exhausted itself in its efforts to be comprehensive with

respect to materials of unchallenged and generally conceded importance, and finds itself facing the problems of the marginal material with reduced energy. It was in the light of some such consideration that Robert C. Binkley, some years ago, urged the then Librarian of Congress to cease attempting to secure so many important books, but, leaving their acquisition to other libraries, to concentrate on the marginal material which no other library would be acquiring.

Consequently, even though Colonel Rogers has told us that with respect to journals and monographs the problem of the AFML is not severe, I should like to close these remarks by some comments upon the general policy of totality in acquisition.

The literature of any well-developed subject -- and medicine is one of the best developed, most international of all -- manifests in the very nature of things an enormous amount of duplication and repetitiveness. A library which is concerned with research or teaching in the subject can secure most of the relevant information for a fraction of the cost which the comprehensive library must pay to close the gap between "most" and "all". The law of diminishing returns works greatly to the disadvantage of the comprehensive library.

In the case of the national library this additional cost for comprehensiveness is justified on the grounds (a) that the library serves not merely the special purposes of research and teaching which local institutions serve, but all possible purposes which the country as a whole can properly demand of the literature of the subject; (b) that the potential utility of the additional material, even if duplicative and repetitive, is no less in the light of nation-wide need than that of the more selective local collection in the light of the local need which it attempts to meet; (c) that the possession of the additional material at a single national center relieves local institutions of the obligation for acquiring for more than their immediate needs; and (d) that the national library can make its comprehensive collections the basis for bibliographic services of great utility.

The last item can be disposed of most easily. For, granted the utility and desirability of a comprehensive bibliographic record, it is nevertheless well known that the retention of the material, once the record has been made, is not always practiced and may not in consequence be a sine qua non. This consideration would tend to place the retention if not the acquisition of duplicative and repetitive material to a greater degree upon the merits of the material itself than would be the case if it were insisted that it should be retained merely because it had been entered in a published bibliographic record.

Now with regard to journals, the problem is more difficult than with respect to monographs because of the fact that journals are composite works wherein a single important article once in ten years may well justify the retention of the file for a whole decade. (Indeed, the retention of journals may be justified by their content of medical news and opinion quite apart from their articles on medical research and practice.) But were articles to be published separately (as has frequently been advocated and of which there are several harbingers), would there not be a problem of selection regarding these articles quite as acute as with respect to hospital reports? However, until separate publication becomes a reality, totality in acquisition of journals has much to commend it.

But the situation that may arise when journal articles are separately published may be suspected to exist now with respect to monographs and especially textbooks and manuals, and the situation will presumably intensify as more and more countries develop medical publishing facilities and produce textbooks and other monographs in their own languages for their own medical personnel. For example, in the five-year period covered by the recent Armed Forces Medical Library Catalog 1950-54, Subjects, the AFML cataloged 73 works for which the primary subject entry was "Surgery--operative" (this being just one of 49 headings used under the subject "Surgery", exclusive of cross-references). Among these 73 were 15 textbooks and manuals at several levels, including at least one translation, as well as other monographs; and they represented 10 languages and 18 countries of origin. The acquisition and retention of all of these books can, it seems to me, be justified by potential use only on very slender grounds, many of which would come under the objective of "intelligence". And if the difficulty of justification of the acquisition and retention of this material is not completely apparent now, it will probably become only too clear when the increasing self-sufficiency of the nations of the world increases the number of countries producing this kind of material to a figure in the order of 118, the number of languages to a figure in the order of 83 (these are the numbers of countries and languages which appear to be most likely in the near future to be producing this kind of literature) and the number of publications in a five-year period to a proportionate total in the order of 500.

For a closed subject the ideal of totality may still have validity, but for a live subject the modes of contemporary publication make this ideal a will o' the wisp which is both practically impossible and undesirable of complete realization. And once exceptions to the complete realization of the ideal have been admitted, it requires the

greatest of care to ascertain how far they should go. If mimeographed reports of provincial hospitals, popular pamphlets on tooth-brushing and local morbidity statistics offer present problems of selection, I am convinced that identical questions attach--or should attach--to the more venerable and unchallenged forms of publications--the journal and the monograph. If library technology teaches us anything, it is that the bibliographic record is more important than any centralized ownership, and that library work is too vast for any one institution to be able to perform even perhaps a major segment of it alone.

## THE PROBLEM FROM THE VIEWPOINT OF CLINICAL MEDICINE

BENJAMIN MANCHESTER, M. D.

I have been asked to present to you the clinician's point of view on what the Armed Forces Medical Library should collect. I am afraid I accepted this flattering invitation too eagerly, because of many years of interest in both libraries and the teaching of clinical medicine. At the outset, it should be stated that I do not pose either as an authority or a seer in any aspect of the problem, but merely as a representative of the physician-average-consumer of the wares of this Library. Perhaps from this vantage one can present a point of view to the Symposium that is different from those of the more scholarly and erudite members of the panel.

For the average clinician and medical teacher the collection already made by the Armed Forces Medical Library is more than adequate. If the collection were continued along the lines that have already been established, the AFML would certainly provide the average physician with the material he needs for his day-to-day work. If, however, one were to ask what should be collected were the Library to start anew, I should have to start by trying to define the term "clinical medicine". Clinical medicine can be viewed as the practical application of the theoretical portion of medicine, created by diligence and research. The clinician is, therefore, the intermediary between the pure scientist and the patient. He is privileged to translate the advances of medical knowledge made by the research worker, whether in the laboratory or in the clinic, into practice for the benefit of all society. For that reason, clinical medicine can only flourish if there is available knowledge of the scientific and technical advances as they are developed. Without the medical literature to which the clinician has recourse he would be unaware and uninformed of current medicine in his special field. As has been said many times already, the progress of medicine today is so rapid that unless an attempt is made by the clinician to keep pace he is certain to fall behind, and his work will reflect this lag by being mediocre or worse. In addition, there are the legal obligations in the interests of society that require that the physician practice at the level of his colleagues. For these reasons, if for no others, a practicing physician is motivated to search the literature, no matter how reluctant or how busy he may be.

In addition to keeping abreast of current medical progress there is another reason that the clinician has for searching the literature. The enigma of vexing medical disorders confront the physician daily. The formation of these puzzling problems of medical practice can only be unravelled by a search of the medical literature. Rare and unusual as well as the common diseases with rare and unusual manifestations can be viewed in a less exotic light when medical publications are adequately studied and reviewed. The protean nature of disease is revealed and made more familiar by reading journals and by availing oneself of microfilm and photoprint services. A knowledge of the incidence, statistical analysis, comparison of results and historical background for the treatment of disease give perspective to a clinician's everyday work.

Although the clinician may at times need to study extensively the literature in his field of interest, more often he is concerned with only the newer advances and with the synthesis of what has already been established. The average physician, overwhelmed by the routine problems on his roster, with more calls on his time than he can devote comfortably to a problem, is perforce obliged to do less intensive investigation of the literature than his research colleague who is able to devote his entire time and attention to a particular problem. For that reason, the average physician reads only what is available in his native language, and without concern for chronology or geography. He may therefore read the pharmaceutical company's publications as well as the standard journals published in this or other countries.

Reviews of the literature are particularly valuable, and therefore the Bibliography of Medical Reviews, which the Armed Forces Medical Library expects to publish in May of this year, will be particularly valuable and welcome. Its use as a supplement to the Current List of Medical Literature will be very great. If one may parenthetically offer a criticism about the Current List, it is that the print is too small and the format difficult to use. If it were possible for the Bibliography of Medical Reviews to change the format, it would help greatly. It is my hope that extensive advertising of the contents of this Bibliography of Medical Reviews will be done, for I am certain that a knowledge of its existence will be a boon to all physicians. If this Review were available to all physicians, the use of the current literature would increase. One can hardly expect the general physician, who is caught in the current of routine, to pause, to reflect, and to search the voluminous literature of medicine.

There is still another aspect to the problem. It is the question of physicians far removed from centers of medical education who cannot avail themselves readily of the contents and services of large medical libraries. By collecting the medical literature, the Armed Forces Medical Library is doing a great service for the advancement of medicine. If, however, it

could establish a system whereby this literature is made more easily available to the isolated physician, by greater use of inter-library loans or photoduplication or by some other means, it would fulfill the task for which the collection of the literature is only the fundamental intent.

In summary, the problem of the extent of coverage of medical literature necessary for the clinician may be viewed as the immediate and the proximate objectives. It is important that our National Medical Library collect all the literature in all fields of medicine, in all languages and in all times. Such acquisition is essential for the researcher concerned with the advances of medicine and for the synthesizer to compile reviews and monographs, the secondary publications on the subject. The clinician, who is unable to read all the literature of all times and languages, will then benefit by the synthesis, reviews and monographs of medicine that are published as the result of examining this basic literature. Thus, even for the clinician, it is necessary that the Armed Forces Medical Library collect extensively both in the basic medical sciences and in paramedical fields.

The National Medical Library has the responsibility of informing physicians of its resources and facilities. If in addition a distribution of medical literature could be made possible from the National Medical Library through interlibrary loans and other means, clinical medicine (and therefore all of society) would be the beneficiary of the vast resources held here. Collections without use are exercises in intellectuality, and a symposium on acquisitions must take the next step and consider how its services can be improved.

It is apparent that a library cannot be all things to all people; it can hardly ever be the same thing to all people, but certainly it can be many things to many people. This is the goal that the National Medical Library should attain.



## THE PROBLEM FROM THE VIEWPOINT OF MEDICAL RESEARCH

HOMER W. SMITH, Sc. D.

Speaking as one occupied chiefly with medical research, I am not moved to any great sorrow by the plight of the librarian because all the librarian has to do is to collect publications, make out appropriate card indices, and then store his publications and indices some place between the cellar and the roof. Thereafter his task is over. He can go home at 5:00 o'clock with the conviction that his job is done and leave the investigator to read by the light of the midnight oil. Any good librarian can collect and catalog more books and journals in a day than an investigator can read in a year. No investigator can feel very sorry for a librarian, because he feels too sorry for himself.

Had some Euclid spelled out the self-evident axioms by which scientific research is profitably to explore the unknown, the investigator might also lay aside his labors at 5:00 o'clock, but unfortunately no such geometer has yet appeared. He who would venture into the unknown with the hope of returning with new knowledge must frequently set out with no weapons other than books that tell him where others have traveled, and what they found or failed to find. And even if he knew all the answers in all the books his chance of success, of translating some bit of unknown into the corpus of verifiable knowledge which will stand the test of, say, five decades, is probably not greater than one in ten. Yet without books his chances are practically nil. The question is then, how many books shall he read, and which ones?

The number of different ways in which a library is used is approximately equal to the number of investigators. Since we have no way of assessing the productivity of various approaches we cannot assert that one way is better than another; we must recognize all of them as valid. At one extreme we have the man who completes his laboratory or clinical investigation and only when it is time to write a paper is he moved to consult the library, in order to preface his conclusions with a 'survey of the pertinent literature'. To this end he may search a half dozen of his favorite journals and a couple of abstract organs, using at most three or four key words to get him through the indices and thus missing several important articles because the subject of his prime interest is not mentioned in the title of these works. Or he may even delegate this part of his research to a 'bibliographic specialist'. At the other extreme we may imagine a man who, before ever putting his idea to the

test of experiment, may make an 'exhaustive' examination of every publication that could conceivably bear upon his notion. I do not know what fraction of papers currently published in the medical literature represent the first approach, but I think that the fraction representing the 'exhaustive' method is the order of magnitude of absolute zero for the simple and sufficient reason that it is impossible. Most investigators use a method that lies somewhere in between.

If I may speak for myself, a few years ago I published a monograph on the structure and function of the kidney, which contained 1049 pages and 2300 references by title, and weighed 4 pounds. In only a trifling way did this monograph deal with the history of my subject, the earliest references dating from the early 1920's. Those papers cited by me were selected from a much larger list. Many factors entered into their selection, but every paper included or wittingly omitted had been read by me at least once. I was fully aware that the entire list fell substantially short of an 'exhaustive' survey of the world's literature pertinent to my subject, but my conscience did not keep me awake at nights. Since January 1, 1950, when that bibliography was closed, over 3000 new papers having some bearing on renal physiology have appeared. My index is still far from complete, nor has it ever been complete. Nor can I ever hope that it will be complete. Do you expect me to feel sorry for a librarian?

The material pertinent to normal and abnormal renal function is drawn from almost every discipline of medicine. How, then, do I keep track of it (in an approximate manner of speaking)? I read regularly a dozen-odd journals which I find most important and, at intervals (sometimes quite long), I systematically search the tables of contents of another hundred-odd journals, most of them in the English language, examining all promising articles. With some attention to bibliographies I believe that by this approach I am able to cover most of the world's literature (though just what the word 'most' means in this connection I admit I will never know).

Not every one, however, has the time to examine a hundred or even fifty journals systematically, and for many investigators who are capable of making first class contributions to medical science--who are in fact making such contributions--an abstract journal is an absolute necessity. I do not read abstract journals because to do so would almost double my load. I would find in them the papers which I have already seen, or papers that I will see in the due course of time, and only occasionally (though perhaps more frequently than I think) would I find a paper which I might otherwise miss entirely. And what would I get out of the abstract? The author's summary, which generally does too much or too little justice to his work, and this only after it has been filtered through the perhaps astigmatic interpretation of an abstractor who may have deleted important material or added some interesting implications of his own. Moreover, highly important information is

frequently contained in a paper which bears no clue to this fact in the title or summary, so in the end I would have to search the original literature anyway.<sup>1</sup> At its best an abstract journal cannot be used as an ultimate source of information because one can evaluate the conclusions of an investigator only in relation to the total context and numerous details of his work. Nevertheless, as I have emphasized, an adequate abstracting system is absolutely necessary, and one of the functions of a national medical library might be to aid in the establishment of such a system, functioning at an international rather than at a national level.

It will now be evident to you why I have a rather iconoclastic attitude with respect to what does and what does not constitute scientific literature, which I would define as any document that adds with reasonable reliability to the sum total of scientific knowledge.

To those who think that a library should be all things to all men, I can only say nonsense. In size and scope a library will exceed what any one man can achieve, but even after allowance for the multiplication of manpower and equipment, its efficiency still depends on the efficiency of one or the few men who are responsible for its operation. You cannot turn a librarian into Superman by multiplying the number of his assistants, by multiplying his library's cubic footage or by reducing its contents to microcards.

Opposed to these realities stands the terrifying fact that library literature has been growing by Malthusian progression. Rider<sup>2</sup> was of course including many areas of literature when he estimated that by the year 2040 the Yale Library will possess 200,000,000 volumes which will occupy 6,000 miles of shelves and require a staff of 6,000 persons to catalog its new additions at the rate of 12,000,000 volumes a year. We can let Yale have that headache while we take some prophylactic measures of our own against the all too familiar multiplication of medical literature.<sup>3</sup> Rider has shown that it is the rule for our university libraries to double their holdings every 16 years. A rough calculation indicates that in this library the reproductive interval is closer to 20 years, but no table of logarithms is required for us to foresee that the efficient collection, cataloging and, above all, the efficient use of primary material in medicine will soon present a truly formidable problem.

Perhaps the combined catalog-microcard will in part solve the space problem, and if it does not I can conceive that the 6 1/4 X 7 1/2 cm. microcard, holding on its back surface an entire book, may someday be reduced to a mere pinpoint, a dimensionless book, so that many books can be put on each microcard, but will this help the investigator? Is the librarian so concerned with the problems of acquisition, cataloging and storing that he has overlooked the basic and only ultimate function of a

library, usefulness? I will go so far as to suggest that someday someone may develop an ELICADUS (Electronic Library Instantaneous Catalog and Deliver Us Service) which will supply the answer to any question asked, but someone unfortunately will still have to ask the questions, nor am I optimistic about an electronic brain to read, learn and inwardly digest the answers when they come. Mere men and women must still do the job, and the process must be made as simple as is possible.

In respect to human population we may hope for something from birth control, but in respect to the population of the library I see no solution in the foreseeable future except to rely on the pruning shears of informed, careful selection.

We should start a discussion of the selective process by defining medicine but this is difficult to do. Webster's definition of medicine as 'the science and art dealing with the prevention, cure and alleviation of disease' is less a definition than a statement of one of its goals. I cannot supply a better definition unless it is to suggest that this goal is to be achieved by the study of the normal and abnormal physiology of living organisms.<sup>4</sup> In the light of this definition I will venture to outline a working philosophy for a national medical library, hoping that by its application the librarian can resolve some of his problems and keep his institution within practical physical limitations and at an efficient working level.

My philosophy may startle you, and at this point I can only remind you of the Quaker's remark that "all the world is queer 'cept thee and me, and sometimes I think that even thee is a little queer." This philosophy is, in brief, that much of what the librarian in the past has been saving as pertinent to medicine is not medicine, it is not scientific, it has no value whatever, it is utter trash. And in designing a library for the future I would built a capacious incinerator close to the receiving desk, not so close that its fires (which will have no interruption) will overheat the clerk but close enough so that its open door can be hit by any amateur pitcher with slight experience.

Into this incinerator the mail clerk should throw all advertisements and catalogs of drugs, prosthetic devices, scientific apparatus, and all so-called house-organs published by medical supply houses for promotion purposes, as soon as they are removed from the envelope. (If anyone wishes to argue about details I will discuss them separately.) Also all news letters from medical societies, local or national, all medical school annuals (e.g. the Caduceus of Switchit Medical College, Class 1956), all student and alumni publications; all pamphlets addressed either to the physician or layman on tooth-brushing, fly-killing, toilet-training, or the nutritional value of canned pineapple. Here goes your principle of an 'exhaustive' collection into

the flames. I call such materials 'fugitive' (from the Latin, *fugitivus*, meaning to flee, or derivatively to fly) because they should fly from the receiving desk into the incinerator door; they qualify neither as scientific publications nor as having potential interest to the history of science. They are a form of cultural measles introduced by the invention of printing. Also fugitive, but for another reason--and here is a rich supply for the polychromatic flames--are all reprints, separates, and republications of contemporary scientific literature. The amassing of large reprint collections is one of the most exaggerated perversions of the collecting instinct gone wild. What the individual scientist does with reprints is his personal, private affair.<sup>5</sup>

We now come to a second category, which I will call ephemera (from the Greek *ephemeron*, meaning to last but a day, as in the case of the May fly, or ephemerid) representing documents which may be admitted to the library's vestibule but not to the sacred shrine itself. Such ephemera consist of catalogs and advertisements of new textbooks and monographs, periodic catalogs of second-hand books, and other tabulations momentarily useful to the bibliographer. Also among the ephemera are the announcements of symposia, postgraduate assemblies, programs of future scientific meetings: valuable before the event, these are almost worthless afterwards. A more debatable category is represented by the catalogs of schools of medicine, dentistry, pharmacy, nursing, the annual reports of hospitals, fund-raising programs, foundations, and the like: these I would also class as ephemera but keep them for perhaps ten years and reduce them to microcards before incineration. Such ephemera could be made so readily accessible by open entry that they need not be catalogued at all.<sup>6</sup>

By the enthusiastic use of the incinerator for fugitives and ephemera, we approach the hard (or it may be soft) core of scientific medical publications. Here we encounter two obvious problems, the first of which is to distinguish the substance from the name. How many pages per 1000 must a publication give to original reporting or critical assessment of medical problems, as opposed to advertisements, abstracts, announcements before and after the event of medical meetings, letters to the editors, gossipy clinics, frequently inane question-and-answer hours, before it is to qualify as a scientific journal? The physician who 'once had a case' is no greater a plague on medical science than he who 'once wrote a paper' on that case. I have my secret list of what I call chit-chat journals, scientific gossip sheets, archives of stuff and nonsense, which carry only an occasional paper of merit. For obvious reasons the list can be made public only after my death, and then it will probably be ignored. But for some time to come the librarian will just have to be blind in one eye and not see too well out of the other, and take the name for substance.

A less difficult problem is that of distinguishing from amongst proper scientific and technological vehicles those journals, monographs, etc., which are pertinent to medicine. Returning to my definitional content of medicine as normal and abnormal physiology, times change, thanks be, and so does science, including physiology. Sciences that once were the almost exclusive prerogative of medicine have long since left home, married some brown-eyed technological lad and now are raising children of their own with new chromosomes. They have left home for good and they cannot come back into our library because there simply is no room. There are dozens of sciences and technological fields which exist of and for themselves, and which also merit clear-cut definition; and, when defined, it will be found that they have no direct bearing on normal or abnormal physiology. Few are the instances where ambiguity cannot be resolved by the touchstone of this definition: if noise abatement and therefore sound-proofing<sup>7</sup> claim admission to our stacks, then so do traffic congestion, highway engineering, train, automobile and airplane design, and architecture, ventilation and illumination of the home. The fact that a form of bursitis is known as housemaid's knee is no warrant for our inclusion of home economics and social security.

In my view a national medical library should have an exhaustive collection (and here only in a very qualified sense) of the primary, scientific literature of the world dealing with the preclinical sciences, general medicine and surgery, treatises on special systems, public health, the medical and surgical specialties including gerontology and nursing, dentistry, physical therapy and rehabilitation, medical technology, the medical aspects of industrial technology including atomic radiation and aviation medicine, and all medical aspects of military science. By 'primary' I mean original publications, plus review journals and monographs in which critical integration rather than mere encapsulation is the aim, and such abstract journals and other devices as may aid the reader to find his way through this literature. One qualification implied above is that, except in special instances, there is no need to acquire textbooks--i.e. volumes intended for didactic purposes rather than critical evaluation and integration--from foreign languages, nor is it necessary to procure copies of every undergraduate textbook published. Where a serious doubt can be raised as to whether a document does or does not have the status of a scientific medical contribution, burn it (or forbear to buy it).

The problems presented by the ancillary sciences are generally less difficult to resolve. The library should have only a research collection in normal and deviant psychology, veterinary medicine, dietetics, hospital administration, chiropractic, osteopathy, and chiropody, and perhaps in sanitary engineering especially as concerns the military establishments.

Only a reference collection is needed in anthropology, social sciences, political science and law, education, general science, mathematics, physics, chemistry, meteorology, biology, genetics (other than as applied to man), comparative anatomy and embryology, and sports.

On the matter of the history of medicine I will say little because Dr. Shryock will deal with it. However, I will confess that from time to time I engage in historical forays, and am now occupied with a history of renal physiology. I therefore speak from the heart rather than from the head when I call this absorption with the past a true neurosis, one appropriately to be considered by the student of deviant psychology or by the gerontologist. But I am sure that I have yet to meet a librarian who did not have a secret wish to possess a Rare Book Room, who would not sell his soul to the devil for a first edition of Averroës' Colliget in Arabic which no one can read except a student who has specialized both in medieval Arabic and in Averroës. The devil owns, I admit, some choice souls who are supremely happy with their lot, and every librarian must be allowed a budget with which to buy the devil off, as every child must have spending money for self-selected sweets. How big this budget should be in a national medical library will depend on long range policy, and I have no a priori answer.

But of this I am confident: textbooks, monographs, and the like are not the stuff of which the history of science will be made. No historian can tell the librarian of what stuff the history of science will be made, but do not jump to the conclusion that for this reason you should save everything--that way lies death while you are still alive. You are not called upon to save the history of science, but to help make the history of science by aiding initiative, imagination and integration in a generation of scientists who have yet to cross your doors. And if some day some curious soul requests a first edition of Howell's Textbook of Physiology (now in its 51st year and 17th edition) just tell him in kind words that when the useful life of textbooks and the like is over, such works, like all spent human effort, are consigned to the flames where their carbon will pass into the eternal cycle to become available for the sustenance of new trees and the manufacture of new paper. Let the librarian keep his library uncluttered, leaving plenty of room for journals not yet started, books undreamt of, trees ungrown.

And now that the fires in my incinerator are burning brightly, and in view of the substantial savings and enhanced efficiency accruing therefrom, I humbly petition for a small personal favor. What I want is a very little thing, it will not take up much room, or cost very much money. All I want is a tiny room where on a table fully exposed to hand and eye are a few books dealing with subjects as remote from medicine as one can imagine, such as the birth and death of the stars, the history of the earth, the evolution of man and his society and law and mores. Books wherein a man can learn whether the universe is or is not expanding, the why and wherefore of winds and rains and droughts, the origin of the

family, of government and taxes; where he can make contact with living philosophy, man's never-ending effort to understand himself, with living jurisprudence, his never-ending effort to live with himself, with history as a critical effort to 'study the day before yesterday, in order that yesterday may not paralyze today, and today may not paralyze tomorrow.'<sup>8</sup> And perhaps a few books that deal with the history of ideas, with poetry or music or semantics, or books that just raise questions without answering them.

This is not to be a 'rare book room,' nor, God help us, a room of the World's Hundred Best Books, but just an easy place to drop into where a few good books will lie always waiting to be picked up until they too go into the flames. Ephemera which will help the curious, the tired, the discouraged, to learn what is going on in the great big world outside medicine,<sup>9</sup> that the world may help medicine, as medicine has helped the world.

But I can see the powers-that-be shake their heads. I can hear the answer coming: "Dr. Smith," I will be told, "a great national medical library is concerned with medicine period. If it needs to buy books on the prowess of the medicine man in the Trobriand Islands, or the sex mores of adolescents in Kamchatka, good. But astronomy, paleontology, archeology, anthropology, jurisprudence, philosophy--why, Dr. Smith, it is thee who are queer! Remember, sir, we are spending the taxpayer's money and this is a library dedicated to the healing of the sick and the preservation of health and sanity. What you propose is not medicine for anyone, but only a supplement to the physician's general education which was presumably completed in a library arts college before he ever entered medical school. If he wants to keep abreast of what is going on in the world outside let him read the newspapers and popular magazines, or listen to the radio or TV. He will probably get around to reading some of those books some day anyhow, if and when he hears of them and has the time. Moreover, some of the topics you mention represent fallible human opinions and hence are controversial subjects. No, Dr. Smith, not in a national medical library!"

Please, just one hundred books to last for five years, after which you can burn them? Say, not more all together than \$750? Please, Mr. Director of the Budget?

## Notes

1. I regularly read the Proceedings of the Federation of American Biological Societies, etc., and make card references thereto, but I have almost decided that I will make no further bibliographic references to such preliminary notes, for reasons too numerous to mention here. I would put in a word of commendation for the Office of Naval Research's recently initiated 'European Scientific Notes', which are marked "This document is issued for information purposes. It is requested that it not be considered part of the scientific literature and not be cited, abstracted or reprinted as such."

2. 'But, if the Yale Library does continue to grow, and to grow at a rate no whit greater than it has been steadily growing through its more than two centuries of past existence, if it continues to grow at a rate no greater than the most conservative rate at which all our other American colleges and universities have grown ever since they started, and are now growing, then, by a series of further successive doublings, the Yale Library will, in 2040, have approximately 200,000,000 volumes, which will occupy over 6,000 miles of shelves. Its card catalog files--if it then has a card catalog--will consist of nearly three-quarters of a million catalog drawers, which will of themselves occupy not less than eight acres of floor space. New material will be coming in to it at the rate of 12,000,000 volumes a year; and the cataloging of this new material will require a cataloging staff of over six thousand persons.' Fremont Rider, The Scholar and the Future of the Research Library, New York, Hadham Press, 1944, pp. 11-12.

3. Billings (Literature and institutions. In E.H. Clarke, A century of American medicine, 1776-1876, Philadelphia, Henry C. Lea, 1876, pp. 291-366), reviewing our medical literature and institutions at the end of our first century as a nation, noted that 195 strictly medical journals had been started in this country between 1776 and 1876, but of these only 58 survived in 1875 (p. 294). Nevertheless, he says that it is a common complaint that there are too many. At that time the world literature comprised about 280 regular medical journals, of which 46 were published in the United States (p. 343). In 1876 Garland (see New England Journal of Medicine, 190:865, 1924) wrote that 'It is as useless to advise a man not to start a new journal as it is to advise him not to commit suicide.' As of 1900 the world list of journals had increased to about 800, and the estimated figure for true periodicals (exclusive of occasional pamphlets, government publications, etc.) for 1950 is about 4,000. (Miss Janet Doe, personal communication). In 1876, according to Billings, the National Medical Library contained 40,000 volumes and about the same number of pamphlets; the 1955 report enumerates 961,631 volumes, pamphlets, microfilms and other items, of which nearly half (462,474) are monographs or bound serials.

In 1876, the number of books including new editions and translations made available to the American physician did not exceed 35 per year. As between 1914 and 1955 the Armed Forces Medical Library acquired 110,952 monographs, a figure only slightly greater than the total number dated between 1801 and 1913. (Data from AFML Annual Report for the calendar year 1955). As of 1952 the number of such books appearing annually is estimated as between 6,000 and 7,000. (Miss Janet Doe, personal communication.)

4. Even here the words 'normal' and 'abnormal' are superfluous unless we distinguish the abnormal as that which carries the threat of pain, disability or death, or otherwise diminishes human happiness.

5. Personally, I keep such reprints as are of interest to me and are sent to me by the author(s), and for these I am grateful, but I would never think of inflicting them on a library. In any case, I suspect that the day of the reprint is drawing to its end because we are coming to the point where we are publishing reprints rather than scientific journals.

6. If it is argued that the catalog of Harvard Medical School for 1895 is an historically valuable document, then I must reply that so may be the 1956 catalog of Switchit Medical School, and if we multiply Harvard and Switchit by all the medical schools in the world and all the years gone by and yet to come, you will have sickened our potentially useful library by catalog constipation. When the dated, momentarily useful ephemera have served their purposes, to the flames!

7. Joseph Groesbeck. Some Problems of Scope and Coverage. Bulletin of the Medical Library Association, 39:97-101, 1951.

8. B.N. Cardozo. The Nature of the Judicial Process. Yale University Press, New Haven, 1921, p.54. Quoted from Maitland.

9. We have such a small room at New York University-Bellevue Medical Center which is in general concerned with anything of enduring human interest. We call it our Man's Place in Nature Library, indirectly honoring a great nineteenth century biologist whose perspectives encompassed almost the whole of science and philosophy of his time, and who sought to translate this into a better way of living. Not that we know very much about either man or nature, but Thomas Henry Huxley's vision that man had a place in nature gives our library meaning and integration.

## THE PROBLEM FROM THE VIEWPOINT OF MEDICAL HISTORY

RICHARD H. SHRYOCK, Ph. D.

I have been impressed, as no doubt we all have, by the continuing critical analysis which the staff of the Armed Forces Medical Library have given to problems of scope and coverage in the course of determining an acquisitions policy. Caught between what Colonel Rogers calls "two great polar forces" -- between the alternatives of acquiring too much or too little -- they are remaining upright "somewhere in the field of force which is generated between them." In maintaining this difficult balancing act, they have requested the suggestions of those concerned with special aspects or values in a great medical library and it is my lot to discuss acquisitions as these relate to medical history.

This Library has long possessed the greatest collections in medical history, in terms of both scope and coverage, which are available in the United States. In consequence, its Index Catalogue serves as the basic bibliographic tool of all serious medical historians. The services provided by the Library to medical history constitute one of its major traditions and I have no doubt that this tradition will be maintained. Let me add that in serving medical history, the Library has also provided materials for social history, but I must not poach upon Professor Bestor's discussion of this latter theme.

Colonel Rogers has indicated that he primarily desires to discuss coverage, though it is difficult for one concerned with a particular field to avoid comments on scope as well. Certainly, in regard to medical history, the scope of the collections in most respects has been all that could be desired. I take it for granted that nearly all books and pamphlets in all languages which relate primarily to the history of medicine (as that term is defined in the December statement on policy) will continue to be acquired. Incidentally, I assume that the definition of "medicine" here employed includes personal and public hygiene as well as "dental hygiene," though I do not recall that it is so stated.

The phrase "nearly all" is an inevitable qualification here as elsewhere, since some discretion must always be exercised in excluding trivia. This will not often be a problem in relation to books on medical history, and even old pamphlets on the subject would usually seem desirable. Collections should include even so-called "house organs," such as Ciba Symposium, when these contain considerable material pertinent to medical history.

In like manner, one hopes that nearly all journals in all languages devoted primarily to medical history will be secured. But I can think of one current, foreign journal, ostensibly devoted to the field, which is hardly worth ordering.

With regard to books and journals relating to the history of science in general, or to that of sciences closely related to medicine, I think the rules already suggested are acceptable. The criteria here are the extent to which materials on medical history appear or the degree of pertinence to medical history which may be exhibited.

One special question which arises in this area, however, is that concerning medical biographies. Should the Library acquire all such works? Here I am inclined to say yes in general, though I hasten to qualify. I would not limit works of this nature to those about "prominent" physicians or other workers in the designated fields, but I would limit them to those which really pertain to medical activities. There is no need for biographies of John Keats because he happened to have had medical training. Nor do I think that we need the biographies of scientists whose work touched on medicine in only minor degree.

Since most books about medical history do not antedate the eighteenth century, there will not be many problems in this area concerning depth of coverage. I am not much concerned here about first editions as such, about the inclusions of all editions just for the sake of completeness, or about typographical variants. In short, I do not share all the enthusiasms of bibliographers. Where two editions vary in content, both of course should be secured.

With regard to translations, the Library states that it secures those made into English or from an unfamiliar to a familiar language. I would suggest that it might also secure those translated from English, at least in the case of American publications, as a measure of the influence of our medical writings abroad.

So much for works about medical history -- what historians ordinarily call secondary writings. The sources for medical history are a more complex matter. These include manuscripts as well as publications in the ordinary sense. In general, one can divide this area between (1) sources for the past history, and (2) sources for the future history of medicine.

The sources for the past history include manuscripts antedating the invention of printing, subsequent printings of such manuscripts, later manuscripts, so-called "source books," and, last but not least, the whole corpus of medical publications which has appeared since the later fifteenth century.

In regard to manuscripts antedating the invention of printing, I suppose the Library tries to secure any of these which pertain primarily to medicine and which happen to come within reach. Manuscript treatises prepared after the invention of printing should be viewed with the cautiousness suggested by Dr. William J. Wilson in his 1951 article in the Library Quarterly. I also agree with the latter that all European books in this field published prior to 1501, and practically all those published before 1601, should be purchased as far as is feasible. The term "all" here covers different editions, including translations.

Such a policy, it is true, will result in the acquisition of items whose value derives -- like that of gems -- largely from their rarity. And one therefore may be accused here of expressing the enthusiasm of collectors rather than the needs of historians. Who will ever use these works, to say nothing of their various editions? On the other hand, they certainly should be preserved somewhere, and where better than in a national medical library? Meantime, if one scholar in each generation has such specialized interests as to desire a given book, he will certainly wish to see it in all its forms.

When one advances into the seventeenth and later centuries, all-inclusive policies are neither feasible nor desirable. As far as manuscripts are concerned, both general treatises and monographs become rare and are usually ones whose authors failed to find a publisher. Only occasionally are these desirable, but the exceptions may be important. An American example is Cotton Mather's "Angel of Bethesda." Although this is apparently the first general treatise on medicine prepared in this country, its author and his son were never able to get it into print.

In the later centuries, however, other types of manuscripts become more common and, at times, troublesome. There are, for example, the lecture notes of professors and of their students. Here the rule of prominence can be applied. One would like to secure all such notes by the outstanding medical men and a sampling of those by their students. Otherwise, one can be content with a few examples which reflect a particular place or time.

More significant than lecture notes, in many cases, is the correspondence of those active in medical and related fields. Medical historians, until recently, seemed to assume that printed sources were all that were needed for the modern period, and tended to overlook the insights provided in off-the-record correspondence. But such neglect of letters may have resulted also from the simple fact that these were rarely available. Families were more likely to preserve the papers of politicians or generals than those of physicians. Hence it would be especially valuable to historians of modern medicine if the private papers of physicians could be secured. This applies both to prominent men and also to those who may be viewed as typical of certain periods or places.

Subsequent printings of earlier manuscripts, particularly critical editions of classics, are usually considered "musts." Librarians desire all editions, including translations, of such standard items as Hippocrates, Galen, and of other notable classical and medieval figures. The same holds true for critical editions of early modern leaders, such as Paracelsus, even though their works may have appeared originally in printed form.

Publications of source collections are not numerous, but I assume that the Library secures those which do appear in the field; for example, such works as those by Major and by Glendening, or Kelly's series of Medical Classics.

A word might be added here about sources other than the written or printed word. In the first place, what about pictures? Most medical libraries "go in for" portraits of medical men and some provide catalogues of these items. Since many prize portraits highly and they are obviously needed in biographies, I have no objection to this; but, frankly, I do not think that such pictures -- except in the case of photographs -- have much value to the serious historian. More useful to him are pictures of old scenes, especially those which illustrate typical settings or activities. Even illustrations by contemporary artists are of value, and actual photographs more so. Yet these are harder to come by than are portraits, and I hope that the Library will seek and organize collections of this sort. No doubt it has done so in one degree or another -- I simply wish to emphasize the matter.

Other types of illustrative material are objects, such as pathological specimens and scientific instruments. Collections of such objects can probably be allocated to specialized institutions, such as the Army Medical Museum; though it would be logical enough to house a museum of medical technology in the Library itself.

Returning to the matter of photography, one need not labor the values of reproduction on film or microcard. Except for convenience, medical sources reproduced in this manner are usually as valuable to the historian as are the originals. The interests of book collectors and of bibliophiles are another matter; but the historian should acknowledge his debt to these gentlemen for having located and preserved originals so that they can, in this later day, be duplicated.

It is when one comes to the general corpus of medical literature in the modern centuries that problems of coverage become acute. I agree at once that there are many ephemera which the Library should ignore, keep temporarily, or preserve only in the form of typical examples -- for instance, school catalogues, promotional literature, and the like.

One presumably desires all general texts on medicine from the eighteenth century onwards, but only in the case of the most famous would it seem necessary to secure more than one or two editions -- preferably the first and last. In the case of a few outstanding texts -- such as Osler's -- successive editions in sequence are desirable in order to illumine changing concepts and knowledge over a limited span of years.

All publications on specialized medical themes, whether in books or journals, are potential grist to the historian's mill. Hence the value of the Library's broad coverage of earlier books and journals. As is often pointed out, a book may lie ignored for a century and then suddenly be much desired by an individual scholar. Here again, however, I think that -- except in the case of famous items which are not likely to be ignored -- the single edition is usually adequate.

When one comes to the collection of sources for the future history of medicine, the acquisition of the usual current publications is obviously the major need. These are the raw materials for future historical study. I would like to emphasize, however, the pertinence for this theme of certain remarks already made in relation to older materials. The Library already may be securing, or planning to secure, much of the visual material which is now becoming so plentiful in the medical area; for example, still and moving pictures of medical procedures or personalities. When the papers of prominent physicians are assembled, these are usually presented to local institutions, but I trust that the Library would accept such as came its way and even seek them in certain cases.

A special category here is that of the papers of professional organizations, as distinct from those of individuals. Professional bodies, voluntary health societies, and the like, sometimes do not know what to do with accumulated records; yet these throw light upon professional and sometimes on technical history. Major societies might well give their collections to a Library which is certainly national in character and will be shortly, we hope, national in name as well. I realize that such materials are difficult to organize but some processing might be required in return for acceptance.

A special procedure aimed at collecting current data for future historical studies is that of interviewing elder statesmen for autobiographical information. This procedure has been developed on a considerable scale by Allan Nevins and other scholars at Columbia University, and seems calculated to preserve much that otherwise would be lost. One can hardly expect this Library to embark on a similar program for medical men alone. But it might be worth while to keep in touch with the Columbia group, in reference to such medical records as they may be persuaded to assemble.

I trust that what has been said here avoids both the counsels of perfection and those of indifference to serious scholarship. What the medical historian desires is what can be really used. The scope and coverage of such collections is broad enough, without burdening the librarians with endless requirements -- however decorative these may be.

The term librarians is used advisedly here. Most historians, as professors, are accustomed to university libraries in which they do most of the ordering. In national and public libraries, on the other hand, the ordering is entirely directed by librarians. In the case of national libraries, staff members are themselves specialized scholars and this has certain advantages. All that historians can do here is to offer such disinterested advice as they can. In the long run, future opportunities in medical history will turn on the acquisition decisions made by the staffs of this and of the other great medical libraries.

## THE PROBLEM FROM THE VIEWPOINT OF STRATEGIC INTELLIGENCE

FREDERICK G. KILGOUR

Intelligence is information. In its broadest sense, intelligence is information that constitutes part of a basis for action such as the determination of a foreign policy, a commercial policy of a private enterprise, or even a course of investigation in biological research. In its narrower sense, intelligence, often secret, is one of the ingredients of both domestic and foreign national policies.

This paper will discuss foreign medical publications in the light of their intelligence values for the national welfare and security. In general, the use of scientific and technical intelligence differs from that of most other intelligence because the national government does not have exclusive action in science, technology, and medicine. By and large, it is private individuals who produce the scientific and medical developments that contribute most greatly to national welfare and security. It was in recognition of this fact that the Alien Property Custodian arranged for the republication of enemy scientific and technical publications during the Second World War so that information on recent advances made in enemy areas would be available in libraries, laboratories, and industries throughout the country.

A bit of history will point up the difference between the use of foreign medical and foreign political intelligence. In 1798, Dr. George Logan of Pennsylvania, later a United States Senator, went to France on his own private initiative in an attempt to prevent the war threatening at the time, and indeed, Logan's efforts probably contributed in some degree to preserving the peace. His mission generated much hostile criticism, however, and on January 30, 1799, the Congress passed the "Logan Act" which is still on the statute books. The Logan Act makes it a high misdemeanor for a private American citizen to correspond without official sanction with a foreign government about a dispute or controversy between it and the United States. In effect, the Logan Act assigns the right of foreign political negotiations to the United States Government alone, and, therefore, foreign political intelligence is only of value to the government. Interestingly enough, Logan was also a physician, and neither in 1798 nor today would there occur a furor if an American physician corresponded with a foreign physician, be he a government official or otherwise, concerning a dispute over -- let us say -- a treatment of choice. In other words, to the extent -- and it is a very great extent -- that health contributes to the national welfare and security, all those associated with the fields of medicine have a national responsibility.

Conversely, a national medical library is responsible for making foreign medical information available to the medical professions at large.

The fundamental significance of national health is so great that it needs continuous re-emphasis. Health contributes more than any other factor to a national potential for welfare and security. A nation with a disease-ridden populace is a crippled state no matter how much wealth it may have in other resources.

Medical advances to improve our national health are not all made in the United States, however. Foreign discoveries are vital to us. An analysis of Nobel Prizes awarded in medicine and physiology indicates the extent of American dependence on foreign discoveries. Figure 1 is such an analysis that compares by decades the percentages of Prizes awarded for American discoveries with those for foreign. The dates of the Prize awards do not, of course, correspond with the dates when the discoveries were made but a chronological charting of the discoveries yields essentially the same pattern. It is clear from Figure 1 that there has been a significant increase in Prizes awarded for work done in the United States, but it is equally clear that the results of foreign investigations must be available if progress is to continue.

In the following discussion of the value of foreign medical publications as sources of foreign intelligence, the type of intelligence to be emphasized will be that which bears on the formulation and execution of national policies -- so-called "strategic intelligence"; in other words, counter-intelligence, counter-espionage, and intelligence associated with law enforcement will not be included. For instance, the possible use of medical publications in connection with eliminating illegal traffic in narcotics will be excluded although such intelligence is obviously of considerable consequence.

In an admirable clarification of intelligence terminology, Sherman Kent has called the three main forms of the strategic intelligence product "the basic-descriptive form, the current-reportorial form, and the speculative-evaluative form."<sup>1</sup> Basic-descriptive intelligence is an encyclopedic and detailed account of a country including its geography, government, people, economy, military establishment, etc. Current-reportorial intelligence deals with current changes taking place in a country, and speculative-evaluative intelligence predicts events which will probably occur in the future.

Most sources of data employed today in constructing these forms of intelligence are "open," despite the popular tradition that intelligence constitutes secret and undercover information obtained in exotic if not erotic circumstances. Historically, intelligence activities began under the best possible sponsorship, in the Judaic-Greco-Christian tradition at least, for the Bible (Num. 13) records that it was the Lord who said to Moses,

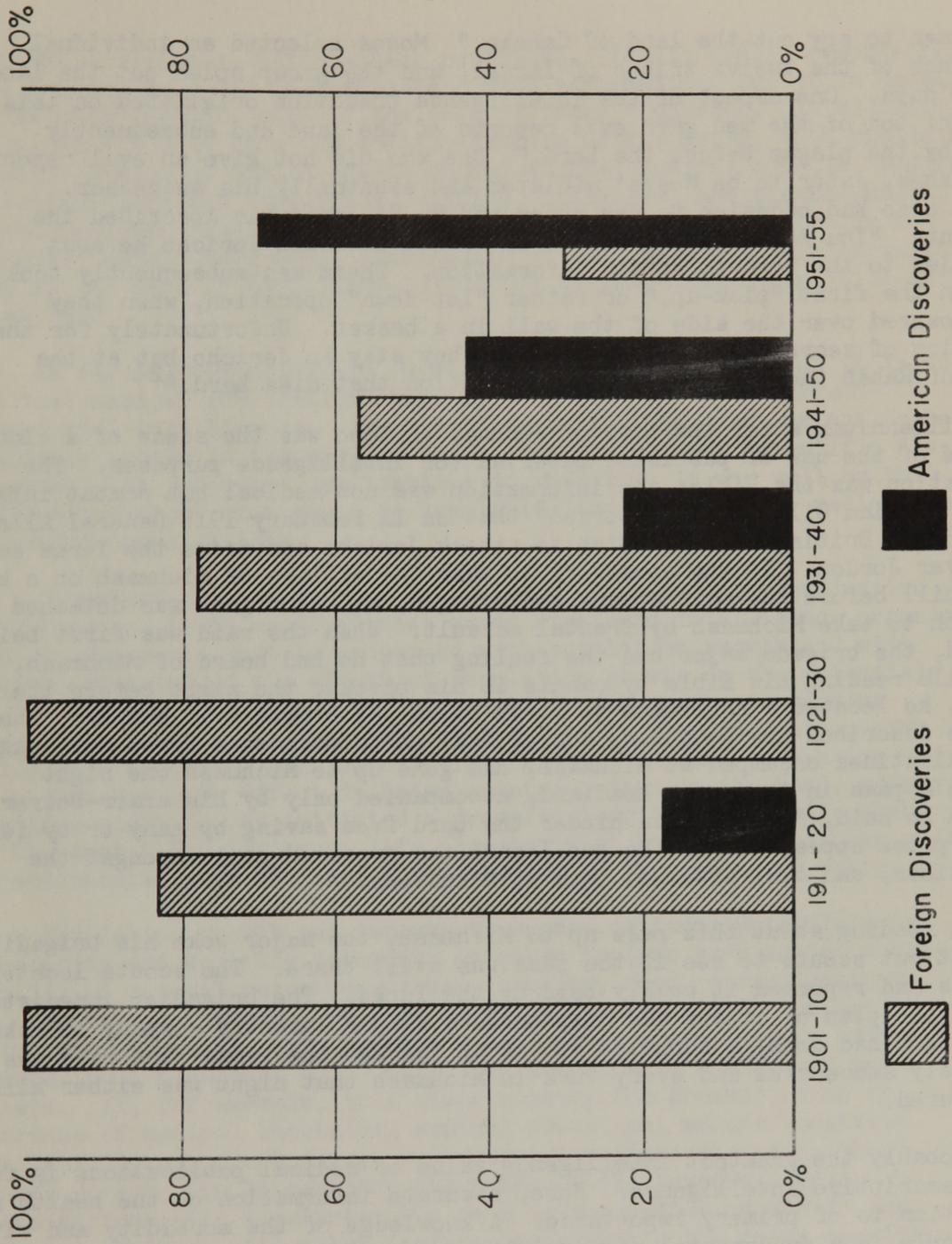


Figure 1: Percentages of Nobel Prizes in medicine and physiology awarded for discoveries made in the United States and for those made elsewhere.

"Send men to spy out the land of Canaan." Moses selected an individual from each of the twelve tribes of Israel, and the group spied out the land for 40 days. One aspect of the intelligence tradition originated on this mission: ten of the men gave evil reports of the land and subsequently "died by the plague before the Lord." One who did not give an evil report was Joshua, later to be Moses' minister and eventually his successor. Joshua also had occasion to use spies and R. V. Jones has described the incident: "You may remember that when Joshua attacked Jericho he sent two spies to the town to obtain information. These men subsequently took part in the first "pick-up," or rather "let-down" operation, when they were lowered over the side of the wall in a basket. Unfortunately for the tradition of secret services, where did they stay in Jericho but at the house of Rahab the harlot? It is a tradition that dies hard."<sup>2</sup>

Millenniums after the time of Joshua, Jericho was the scene of a classic example of the use of published material for intelligence purposes. The publication was the Bible; the information was not medical but combat intelligence. Vivian Gilbert has recorded<sup>3</sup> that on 14 February 1918 General Allenby ordered the British 60th Division to attack Jericho and drive the Turks across the River Jordan. It was necessary to take the village of Michmash on a high rocky hill before the main attack could begin, and a brigade was detached from the 60th to take Michmash by frontal assault. When the raid was first being planned, the brigade major had the feeling that he had heard of Michmash, and while reading his Bible by candle in his bivouac the night before the attack, he located a reference to it in Samuel I, chapters 13 and 14. The passage described how Jonathon, son of Saul who commanded a force opposing the Philistines encamped at Michmash, had gone up to Michmash one night through a pass in the rocky headland, accompanied only by his armor-bearer to whom he said, "nothing can hinder the Lord from saving by many or by few." The surprise appearance of the two Israelites produced panic amongst the Philistines, and Saul attacked them with success.

On reading about this pass up to Michmash, the major woke his brigadier who sent out scouts to see if the pass was still there. The scouts located the pass and reported it weakly held by the Turks. The brigadier immediately changed the plan of attack and dispatched a single infantry company to make, as Jonathon had done, a surprise attack up through the pass. The raid was completely successful and every Turk in Michmash that night was either killed or captured.

Probably the greatest intelligence value of medical publications is for basic-descriptive intelligence. Here, accurate information on the health status of a nation is of primary importance. A knowledge of the morbidity and vitality of a people is a fundamental prerequisite for an intelligence estimate of their

political, economic, and military potential. Public health reports from some countries go far in supplying such information, but it is necessary to use other medical data in the case of other countries. In addition, it is important to know the health agencies of a country, both public and private, including public health organizations, medical schools, medical societies, research institutes, clinics, hospitals, and pharmaceutical establishments. The quality of medical services, both preventive and curative, should be known. Information on the numbers of health workers and, in the case of physicians, directory biographical information should be at hand.

As far as preventive and curative medicine is concerned, it is doubtful that medical publications have much to contribute to current-reportorial intelligence. Important events in this area are apt to be available sooner in the popular press. In the case of scientific discoveries with important applications in medicine, it may well be that information about them would be available first in strictly medical and scientific publications.

To select but one example in the area of speculative-evaluative intelligence, it is manifest that every strategic intelligence organization in the world must be concerned with population growth and with making estimates of the effect of population growth on the potentials of the various countries. The principal factor in the tremendous population increase in the twentieth century is the application of scientific medicine, particularly in therapy. Whereas preventive medicine has had less effect in Asian countries than in the West, modern curative medicine has initiated a dramatic lengthening of life span in the East. For instance, life expectancy at birth in India has shot up spectacularly in the last three decades -- from 20 to 32 years.

Population growth can improve or worsen national potentials for prosperity and security depending on other factors such as the availability of natural resources, power, housing, food, communications, and the like. Nevertheless, the decisive factor in this complex is population increase, and to predict the amount of population in the future it is necessary to do more than extrapolate a curve of past growth. If, for example, in a given country the present rates of increase of medical knowledge, medical education, modern hospitals, availability of modern drugs, and numbers of physicians and other health workers are higher than the rates of the immediate past, these factors will accelerate the rate of population growth in the immediate future. All other factors being equal, the total population in a decade or two would be higher than that estimated from an extrapolated curve of past growth. Information in medical publications has much to contribute to such estimates, and the type of data required is probably more readily available from these publications than from other sources.

In time of war the value of medical information of the types described in the previous paragraphs is enhanced because of the imperative need for accurate and timely strategic intelligence on the military potential of enemy and enemy-occupied areas. Such information takes on an additional value insofar as it can also contribute to tactical intelligence, including, of course, intelligence on health conditions in friendly areas where one's own armed forces may be stationed. Commanders and medical officers must have continuous and accurate intelligence on indigenous health hazards in foreign areas to preserve the health of their forces; similarly, up-to-date knowledge of the treatment of indigenous diseases must be at hand. A disease-ridden military force is a liability, not an asset.

Information in medical publications has many possible incidental intelligence uses in connection with military operations. According to the rules of war, hospitals, as well as some other types of buildings, should be distinctively marked and all necessary steps should be taken to spare them from attack and bombardment. Because of the character of modern strategic aerial bombardment and because the use of aircraft in war is for practical purposes unregulated, little can be done to spare hospitals from aerial bombs or guided missiles. Tactical artillery bombardment is another matter, however, and hospital buildings can be spared destruction providing that they can be accurately identified and providing they have not been converted into military objectives by the enemy. Topographic information giving the location of hospitals is available from maps, but more detailed descriptions can be obtained from medical publications and guide books.

Examples of incidental intelligence information could be multiplied ad infinitum and, in the case of "black" psychological warfare, ad nauseum. In time of war, secret agents often have to penetrate areas where health conditions are such that individuals must carry an inoculation record to move about, and the regulations concerning these records change with disease incidence. A properly equipped agent has such documents, and official health publications often supply the information necessary for preparing them.

Medical publications also yield incidental data of value to economic intelligence; an example is information about pharmaceutical firms, which in some countries form a significant segment of the financial structure. According to Harry M. Berner, American hospitals constitute the fifth largest "industry" in the United States.<sup>3</sup> To the extent that hospitals occupy a like position in other countries, information about their valuation, operating costs, etc. is of use for economic intelligence.

Although the preceding description of the intelligence uses of medical publications has been very brief, it is adequate to suggest in a general way the scope and coverage of an acquisition program -- an intelligence acquisition program perhaps -- of a national medical library. It is assumed that because of the security problem involved intelligence agencies cannot give specific collection directives to the library; such directives would reveal the agency's interests which are, of course, confidential. The acquisition of foreign medical publications for the purposes outlined above must be highly selective. There is little to be gained and much to be lost by having the acquisitions department go through the sea of the world's published materials pulling out all the medical publications like a whalebone whale going through the ocean straining out plankton.

A national medical library must acquire all foreign monographs containing new information, foreign periodicals consistently reporting new information, and current abstracting and indexing journals to fulfill its function of making new advances available. Such publications are in the minority, there being a vast duplication of previously published information. It is, of course, well known that some medical journals contain much more new and useful information than others, and two recent studies have indicated the relative value and usage of journals quite sharply. In a study of the use of journals published in the previous five years, the Yale Medical Library found that, out of approximately 1,150 titles currently received (300 as gifts), it was only 40 titles that supplied nearly half the use of such current periodicals.<sup>4</sup>

In an unpublished study,<sup>5</sup> the Armed Forces Medical Library analyzed the periodical titles from which 12,726 articles were photocopied on request during two months of 1955. The total number of journals was 1,887 of which 125 supplied 51 per cent of the requests; 34 of these 125 titles were foreign periodicals. Some of the requests, of course, were for articles in periodicals no longer being published but at the time of the study, the Library was receiving about 5,000 titles. This study strongly suggests that the Armed Forces Medical Library is now receiving more than an adequate number of journals -- but not necessarily the right individual titles -- to fulfill the function of making foreign medical advances available which, it is recognized, is not its only function. Moreover, the quality and number of journals is continuously changing, and the acquisitions program should keep abreast of these changes.

For governmental intelligence purposes the library will, of course use the monographs, periodicals, and abstracting and indexing journals suggested above, but from most areas it will also need dictionaries, directories of institutions, societies, and physicians, loose-leaf systems, government documents particularly in public health, one or two

current texts in each subject, and institutional and school reports containing substantive and not just administrative information. This collection of materials should be viewed as an up-to-date reference collection; materials containing older information could be safely discarded when superseded by more recent information as far as intelligence requirements are concerned, but it will probably be desirable to retain them for other purposes, particularly as historical documents. It must be emphasized that the timeliness of these materials is of the essence, and the library should acquire them immediately upon publication.

A national medical library should continue to receive the recommended materials in time of war, and it is of the utmost importance to obtain them from enemy and enemy-controlled areas. War does not ordinarily come so swiftly that it is a complete surprise, and during any period of a possibility of war the library should lay specific plans for developing and maintaining channels through which publications can continue to be acquired. In any period of probability of war, as opposed to possibility, such channels should be actively developed so that they will be well established before an outbreak of war.

This paper has presented only a very few specific examples of the intelligence values of foreign medical publications. Many others could have been included also in specific detail, but they would not have added anything commensurate with the space taken up. But there are some intelligence problems about which it seems probable that the library could only know about or guess about in a most general way; intelligence concerning biological warfare is a representative specimen from this vague area, and there are others. Any plans of another government for prosecuting biological warfare will surely not appear in medical publications, but counter measures to such action will in part depend on the availability of a good collection of information in the biological sciences. Here, as in other areas, it will be necessary to depend on a solid base of scientific knowledge without knowing what knowledge is going to be needed.

It must be realized that a national medical library will be unable occasionally to fulfill requests for intelligence information because the information does not exist -- in medical publications or elsewhere. It must also be realized that occasional failure to supply data to intelligence requests will neither jeopardize the peace nor lose a war.

In conclusion it should be pointed out that this paper is based largely on wartime experience which is now much out of date as far as details are concerned. Intelligence activities are highly dynamic, and it will be necessary to revise continuously the details and perhaps the underlying principles of the acquisition of foreign medical publications for intelligence purposes as the information requirements change.

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## THE PROBLEM FROM THE VIEWPOINT OF GENERAL HISTORIOGRAPHY

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The historian is, of necessity, a parasite on other men's activities. He does not, qua historian, govern nations; he finds out how other men have governed them. He does not write poetry or dissect cadavers or till the soil; he analyzes the work of those who have done so. Hence he cannot gather his materials in the laboratory or the field, he can only use the records that other men have made or the documents they have accumulated-- for their own purposes, not his. He goes to the library not to prepare for his research, but to carry it out.

Though a parasite, the historian is a rather spectral one. He does not interfere in the everyday lives of men. If he affects them at all, he does so by haunting them. Like Dickens' Ghost of Christmas Yet To Come, the historian suddenly appears out of the void, uttering sepulchral warnings about the opinions of posterity. The apparition is particularly frightening to librarians and archivists, who, having done their jobs well, do not relish being remembered only for the records they may have inadvertently allowed to perish. When meeting in an ancient edifice like this, we are doubtless wise in attempting, as part of our proceedings, to exorcise whatever spooks may be wandering about the garrets--including the spook of General Historiography. I am here to offer my services as exorcist.

The question put to me I take to be this: After all the materials needed for current medical research have been provided by the national medical library, after even the needs of medical history have been met, is there something else which the future historian of things in general will expect the library to have preserved that it might, without his warning, have been tempted to discard? This is a fair question to ask of the historian. And it is fair also to remind him that he, in common with the rest of mankind, has no right to ask for the moon.

The question is not one the historian is accustomed to think about. He is obliged to use remains and records as he finds them. It is almost as strange for him to think of having a hand in determining how the deposits shall be laid down as it would be for a geologist to imagine himself controlling for his own convenience the forces that produce and uncover the strata he studies. The situation, it is true, is changing.

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In archival work, particularly, historians have been given an opportunity to engage in a certain amount of planned parenthood. Moreover, the enormous growth in bulk of contemporary documentation has forced historians--to the laceration of their deepest instincts--to face the awesome responsibility of sanctioning the destruction of superfluous and peripheral records.

Even so, the experience of historians with the selective preservation of records is so new that little has actually been written on the general issues involved. Manuals of historical method deal principally with the problem of extracting the last droplet of meaning from a scanty array of documents. The great tragedies of historiography revolve about the destruction of records. The historian's occupational hazard is normally the paucity of sources; only occasionally is he confronted with material so richly voluminous that he must apply sampling methods borrowed from workers in other fields of research. In general, the historian's first impulse is to say: Collect everything and preserve everything. If he were asked to nominate a sacred bird to perch upon the lintel of a library, he would probably choose not the owl but the magpie.

In point of fact, however, the historian is not really as interested in the indiscriminate preservation of materials as he is apt to imagine himself to be. To discuss intelligently the questions raised by the present symposium, it is desirable to look at the actual facts about how the historian normally gathers his material.

The first fact I would emphasize is that the historian does not in actuality work with isolated documents, he works with collections and with series. Every historian can remember coming unexpectedly upon some isolated document--a single letter that cleared up an important point, or an obscure pamphlet or newspaper that had hitherto eluded discovery. The excitement of such a find often leads him to exaggerate its importance in the total pattern of historical investigation. Research is actually more prosaic and more planned.

In embarking upon a new topic the historian engages in a series of acts of imaginative historical re-creation. He tries to imagine what records would have been produced in the course of the events he wishes to study. And he asks himself where these records are most likely to have been preserved. He is apt to make a number of lists, on paper or in his head: lists of persons who were participants in the events he plans to discuss, of agencies of government or private organizations that were involved, of localities in which important activities took place, of organs of news and opinion that were likely to have been used by or to have taken notice of the movement in question. Lists like these tell him where it will be worth his while to look for source materials. Accordingly he compiles bibliographies of writings by and about the persons on his list, and he attempts

to locate their private papers. He searches for reports, proceedings, and other publications of the agencies or institutions that were contemporaneously interested in the matters under investigation, and he takes note of the archival repositories in which their records might have been preserved. He gives close attention to the geographical locality where the events occurred, examining regional collections of manuscripts and printed materials, noting newspapers published there, and weighing the possible value of the legal records on file in county courthouses. Finally, he looks into the contemporary periodicals that were especially concerned with the matters at issue, and the metropolitan newspapers that might be expected to give them attention. It is in obvious and predictable places like these that the historian must, in general, expect to obtain the overwhelming bulk of his documentary evidence.

To verify what I have just said, I have found it instructive to analyze the documentation of one of my own monographs. In the footnotes of two selected chapters I counted a total of 581 direct references to original sources.<sup>1</sup> Approximately half the citations (276, or 48 per cent) were to works generally available in large libraries or (in the case of metropolitan newspapers) easily located through published union lists. The remaining 305 references were to sources of a more esoteric character, which had to be sought in specialized repositories. Some 158 citations (or 27 per cent of the whole) were to books, pamphlets, and periodicals directly connected with the movement about which I was writing, and these could be found (in anything other than scattered samples) only in certain specialized collections in the field. Another 105 citations (or 18 per cent of the whole) were to local newspapers and archives, to manuscripts preserved in the locality where the events took place, and to the private papers of the leader of the movement (a collection preserved intact, though at some distance from the scene). The remaining 42 citations (only 7 per cent of the whole) included all instances of documents that were located through persistent search of less likely locations and through occasional happy discoveries--some 29 references to local manuscripts scattered in other than local repositories, ten references to manuscripts that were found among the papers of persons connected in no special way with the movement or that stood in complete isolation, and three references to rare pamphlets that actually turned up in general collections. I am not concerned at this time with the difficulty of utilizing many of these materials, nor with the disproportionate pleasure that some of the discoveries gave me, nor even with the qualitative value of the various kinds of sources. I am simply offering a slight piece of quantitative evidence to buttress my statement that the historian usually knows--indeed, must know--where, in general he is likely to find the bulk of his evidence, if any evidence still exists. And I am illustrating the point that relatively little material does in fact turn up in places other than those where the historian would logically expect to find it.

The moral of all this, for the present symposium, can be simply put. The historian turns to any repository--library, manuscript collection, or archive--because of what he knows to have been its main interest and its main activity. He does not go to it--or very rarely does he do so--in the hope of discovering something that was quite unconnected with this main activity but that might, by some odd chance, happen to have been preserved there. By and large the historian cannot afford to work a vein of ore unless it has a high enough assay to promise at least some margin of profit. To be specific, the general historian is not likely to use the Armed Forces Medical Library unless his subject is in some way connected with medicine--either because physicians were involved in the events he is examining, or because some general idea in which he is interested had (or might have had) some impact on medical thinking, or because some other element in his problem would suggest that an outstanding medical library would be the logical place to look for substantial bodies of relevant evidence.

By and large, any library in a technical field is doing its full duty to general historiography by simply continuing to be a great, open-minded, imaginative library in its own field.

I hope these words of mine will lay the ghost that flitted through my opening remarks.

## II

The ephemeral material that comes into a great research library--publications related to the subject-matter of the library but of small use for current scientific research--poses certain problems which an historian may properly be asked to help solve, for he is the most likely potential user of the material. To this problem I should like to address myself for a few minutes.

Acquisitions policy, of course, is the subject of this symposium. So far as ephemera are concerned, however, the question of acquisition cannot be separated from the question of classification and cataloguing and from the question of the form of ultimate preservation. The mere acquisition of ephemeral publications involves relatively little expense; the heavy costs arise in processing and preserving them. These costs can be so large as to be prohibitive. On the other hand, ephemera if not collected as they appear are almost impossible to acquire later. For these reasons, policy with respect to the acquisition of ephemeral material is necessarily a function of policy with respect to classification, cataloguing, and preservation.

To begin with, let me remind you that the elaborate bibliographical procedures of a modern library--minute classification, preparation of subject-entries, indexing of periodicals, and the like--are designed to give control of the collection for the purposes of current research.

The historian makes full use of the resulting reference tools when he wishes to locate works about history. In his quest for source materials, however, this great apparatus is of very much less direct use to him. As I have said in an earlier paragraph, the historian commences his real research, not by consulting a subject-entry as one would normally do in a piece of scientific investigation, but by mapping out the whole terrain of possible sources. He thinks in terms of types of material, and he expects to page through each body of relevant documents looking for scattered clues, which he must recognize for himself with only very occasional aid from indexes.

Though the historian is grateful for every finding-aid that exists, he recognizes, as the very condition of his professional work, that no comprehensive and detailed bibliographical control of the source materials of history is even conceivable. For one thing, his potential sources do not constitute a limited class of materials; they are, in theory, coextensive with all man-made records: printed publications, manuscripts, inscriptions, even artifacts. For another thing, each topic of investigation is sui generis. In historical research a truly original contribution arises from the discovery of new implications in material that may or may not have been consulted before. The historian, in other words, is frequently looking for precisely the things that an indexer (if he worked on the materials at all) would not have been alerted to record.

As a consequence, materials preserved primarily as sources for historical investigation require quite different--that is to say, much simpler--handling than publications collected in aid of current research. The difference is reflected in the procedures employed by the custodians of material whose almost exclusive use is historical--namely, manuscript collections and archives. Let us note the salient differences.

In a library the unit is the book or, at the largest, the serial. In a manuscript repository or an archive, the unit is the collection, that is, the papers of so-and-so, or the records of such-and-such a governmental agency.

In a library it is assumed that each book or serial can be classified by subject (even though the subject, in some instances, must be a very inclusive one). In repositories of manuscript materials, subject-classification is virtually impossible and hence virtually unknown. Archival order follows the table of organization of the government or institution that produced the records. If this amounts to an ordering of materials by subject, it is simply and solely because particular agencies and offices happen to have been responsible for particular matters or subjects. In a manuscript repository, the collections, which are the units, assume an alphabetical order in most guides, and

their subjects are brought to attention, if at all, only in the descriptions (necessarily impressionistic) that may be given of individual collections.

If a collection of books is compared with a collection of manuscripts, striking differences in the method of internal arrangement are obvious. A collection of books is ordered according to the logic of the subject with which it deals, and chronology plays very little part in the arrangement. In manuscript collections (other than archives) chronology is the be-all and end-all of classification. Even in archives, once one reaches down to the level of a particular agency, chronology is likewise the controlling factor in arrangement.

The methods of handling manuscripts and archives are perhaps too well known to have required restatement here. These particular contrasts, however, need to be borne clearly in mind, because out of a consideration of them can come, I believe, a possible solution to the problem of dealing with ephemera. May I repeat my earlier definition of the latter term: "publications relating to the subject-matter of the library but of small use for current scientific research." Since these materials are to be preserved primarily as historical sources, why should they not be handled as much as possible like manuscripts and archives, which are likewise preserved mainly for historical purposes?

Allow me to describe a procedure that would appear to me both satisfactory and feasible. As current materials reach the library, a decision ought immediately to be made which would separate out those materials that are of small use for current scientific research but are yet clearly related to the subject-matter of the library. Some of these might be bound volumes, but most would be pamphlets, broadsides, and mimeographed documents--the materials suggested by Colonel Rogers' phrasing of the problem in the opening paper today: "which mimeographed annual reports of which of thousands of provincial hospitals...; which popular pamphlets on tooth-brushing, fly-killing, or toilet-training; which weekly sheet of morbidity statistics from which obscure counties."

Once these materials have been separated out, all thought of applying to them even a simplified form of cataloguing ought to be abandoned. They are thenceforth to be handled according to the procedures appropriate to manuscripts, where even an author list is ordinarily impracticable. They should, it seems to me, be sorted roughly by subject, employing, perhaps, the grand divisions of the library's classification scheme--that is, the divisions indicated simply by the two-letter element at the beginning of the class-mark. During the year, the materials in each broad class would accumulate in boxes, to be consulted in their unarranged state by readers who might need to do so, but who would have to be prepared to search out for themselves the particular items they desired.

At the end of the year, the accumulated material in each classification would be put in proper order. Misfilings would be corrected, duplicates and obviously worthless materials discarded, and a few important items withdrawn for regular cataloguing. The balance would then be sorted into three or four groups. Pamphlets published with the author's name would form one group, the items to be arranged in alphabetical order. Reports and other publications of institutions and minor governmental agencies would form a second group, to be given a geographical arrangement. Anonymous materials, forming the third group, would be arranged alphabetically by title. Certain special types of ephemera, such as commercial promotional literature, might constitute a fourth group, to be preserved only in a representative sample--say, the material received during one calendar month.

A standard form would be filled out for each collection so arranged, giving the classification name and number and the year, describing the quadripartite arrangement of the material, and if possible listing the names of the authors (but not the titles) of the publications included in the first of the four groups.

The whole collection would next be microfilmed, with the descriptive form at the beginning. The original materials could thereafter be discarded. Entries would be made, for the collection taken as a whole, in the dictionary catalogue (under appropriate subjects) and in the shelf-list. The descriptive forms would be placed in loose-leaf books, for eventual binding, to serve the convenience of persons consulting the microfilms. The job would then be done.

Under such a system, be it noted, the decision that a given document possesses little value for current research is not an irrevocable decision, for the text has not been lost. If need be, positive prints can always be made from the film and any given document, in photographic form, put through regular and complete cataloguing procedures. In the meantime neither the shelves nor the card catalogues are being cluttered up with masses of material of marginal value. As experience is gained, moreover, the library may discover that it is feasible and safe to treat an increasing number of minor publications in the way suggested.

The savings of expense in processing and of space in storage are so obvious that I need not dwell upon them. The fundamental question is whether such a handling of ephemeral materials can satisfy the legitimate demands of scholars. I believe that it can.

If a scientist engaged in current research has need of any of the materials preserved in this way he will, of course, lack the guidance of the normal apparatus of catalogue-entries, indexes, and abstracts. But he will find the material in excellent order, classified by large divisions of the subject, and arranged in such a way that authors and geographical areas can be quickly located. He will encounter no difficulties except those that must always be expected when one ventures among materials admittedly peripheral.

The historian, moreover, will find the materials in fully as usable a state as those he normally encounters in manuscript and archival collections. His sense of chronology is fully satisfied, since each film represents a single year. The inclusive classifications employed are more useful to him than detailed ones would be. If his approach is biographical, the checklist of authors provides the needed key. If he is interested in a geographical region, he can quickly turn to the official and quasi-official sources emanating therefrom. If he wishes to use a sampling technique, he has the whole to choose from. And if he must run down an isolated publication, he has a far better chance of succeeding because of the systematic way in which the material has been assembled and preserved.

### III

The third question which I wish to discuss is policy with respect to the acquisition of older publications in the field, materials primarily if not exclusively for the use of historians.

Here again it is impossible to separate acquisitions policy from policy with respect to classification and cataloguing. The reasons, however, are not those of expense, which arose in connection with ephemera. There are two deeper reasons why the policies of acquisition and of classification are inseparable in connection with older books. In the first place, unless it is perfectly clear how historic materials are to be arranged and used, it is impossible to state any criteria, short of absolute completeness, for deciding how extensive the collection in its various parts ought to be. In the second place, an inadequate scheme for classifying older works will put on the shelves, alongside and mingled with the works needed for current research, a vast quantity of books that are obsolete for the purpose. To the active scientist such acquisitions will appear nothing but a costly nuisance. Even the historian will be needlessly hampered in locating works of the period in which he is interested. In both instances, support for a thoughtful acquisitions policy will be lacking.

A somewhat extended discussion of the problem of classification is therefore necessary, distant though it may seem from the announced subject of the present symposium.

Library classification and cataloguing crystallized in modern form some seventy-five years ago, at the very time that modern research scholarship was developing its present institutional character and beginning its enormous expansion. The opening of the Johns Hopkins University in 1876, a landmark in the history of organized research, coincided with the first edition of Melvil Dewey's work on decimal classification and followed by a year Charles A. Cutter's Rules for a Printed Dictionary Catalogue.

The impressive thing, to that generation, was the cataclysmic change that was taking place in the nature of scholarly and scientific research. The older work in every field was being rapidly outmoded, not so much by the normal attrition of time as by the revolution in method, which was making research professional and highly specialized. The ambitious "general" works of the past-- wide-ranging and diffuse, presenting brilliant insights on some matters and covering others in woefully uncritical fashion-- stood in sharpest contrast with the new kind of monographs, which aimed to be precise and never to go beyond the limits of its explicit documentation. The gulf that separated the old and the new seemed so great that most schemes of classification made "Early works" a distinct category. The implication was that, though the products of the new scholarship might eventually grow out of date, they would differ, even in their obsolescence, from the works of all earlier generations. As a consequence, classification schemes made no real provision for the gradual outdating of modern works, except through wholesale reclassification at some future time.

It is no reflection on the founders of library science that they failed to foresee how much more rapid than before would be the processes of obsolescence. Experience has shown us (though we have hardly mastered the lesson) that "Early works" do not constitute a fixed classification but one that hungrily devours the books in every class in the schedule. It is amusing to note, for example, that in the 1910 edition of the Library of Congress classification for medicine, the class-mark RD30 denoted early works in surgery to 1800. In the 1952 revision, the same class-mark covered general works in surgery to 1900. The 1951 classification schedule of the Army Medical Library, pushed "Nineteenth Century Titles" on to include publications through 1913. And the Armed Forces Medical Library Catalog at present limits subject entries (with certain exceptions) to titles published since 1924.<sup>2</sup> These are not strictly comparable instances, of course, but they all point the same moral: Time marches on.

Speaking as an historian, I would say that libraries have never really reckoned with the significance of time in planning the classification of libraries. Books do not become out of date because of some

great cataclysm of scholarship; they grow old, as all things grow old, gradually, naturally, and in many instances gracefully. They cease from active striving with the oncoming generation of books, and retire to the companionships of history.

In less metaphorical language, books in every separate class in the library are being pushed aside, for the purposes of current research, by newer books. Eventually all the books we now possess will be of interest primarily, indeed exclusively, to the historian. Can we not find a way of embodying this inevitable fact in the very framework of our systems of classification, so that it can be dealt with in an orderly fashion? I believe that we can, and I should like to offer, with the diffidence proper to one who is not a librarian, a few observations on the matter.

The call-number of any book, according to present practice, consists of two parts: a class-mark that groups together the books dealing primarily with the same subject, and a book-number that determines the actual shelving of the various books belonging to a given class. The latter is usually an author-number, that is, a number which automatically arranges the books within a class alphabetically according to authorship. To distinguish between editions of the same work, the date is frequently given as a third element of the call-number. In certain libraries, notably the Armed Forces Medical Library, the date is an integral part of the call-number of every book, following the author number. The number of libraries that follow this practice uniformly is, however, exceedingly small.

The effect of the existing system, as I have described it, is, of course, to arrange the books on the shelves by classes, and within the classes to arrange them in strictly alphabetical order, regardless of date. The result, I maintain, is satisfactory neither to the research worker interested in the current literature of the subject, nor to the historian, nor even to the librarian. No matter where one looks--on the shelves themselves, or in the classified catalogue (that is, the shelf-list), or under a given subject-heading in the dictionary or subject catalogue--one encounters the same indiscriminate mixture of new and old books. Whether one is looking for the most recent works or for those belonging to a given period of time, one must follow the same laborious procedure of examining every title in the group, from A to Z. The only way obsolete books can be separated from current ones is by reclassifying them, that is, transferring them to an entirely different class consisting of "Early works."

To grasp what is wrong with this system, we must go back to first principles. Let us consider primarily the scientist or scholar who is advancing current knowledge, and who is therefore interested in the latest results in the various fields that can be expected to contribute to or impinge upon his own investigation. The research library ought to serve him in both a positive and negative way. It ought to put him in immediate touch with the latest publications on his particular topic and on related topics. On the other hand, it ought to save him, as much as possible, from the labor of examining masses

of irrelevant material. Classification is supposed to perform both functions, but the present system does so imperfectly. As material accumulates in a given class, the latter must ordinarily be subdivided. This increases both the difficulties of cross-reference and the risk that the research worker will overlook important publications related to his work but included in a different classification. Moreover, the saving of the research worker's time is largely illusory. If he conscientiously examines all the new subclasses, he goes through just as much material as if no subdivision had taken place.

The fact of the matter is that the scientist or scholar engaged in current research is swamped, not by the material that is slightly off his subject, but by the mass of material that is obsolete for his purposes. And the minute subdivision of classes does nothing to help him in this respect.

The solution is not continuous reclassification of older material into separate categories labelled "Early works." The cost alone would be prohibitive. Moreover, the decisions that would have to be made (except, perhaps, with regard to really ancient works) are ones that the librarian is not in a position to make and ought not to undertake. Only the actual investigator, after all, is capable of deciding, in any instance, how far back in time he ought to carry his examination or work previously done. In some investigations, the two or three preceding years may embrace all that is relevant. In other research, the work of a century ago may provide essential clues. No librarian can possibly make this decision for the scholar, nor should any rule of library classification be based on the assumption that he can or should do so even approximately.

The answer, as I see it, is not to be found in a further elaboration of subject classification, but in a full and frank recognition of time as an independent factor in classification itself. Classification, in other words, must be conceived of as a function of two variables: subject and date.

This can actually be done by a relatively simple alteration of current practice. The call-number need simply be thought of as comprising three distinct and equally important elements, instead of two. First would be the class-mark; second would be the date; third would be the author-number.<sup>3</sup> The date, in other words, would not be a mere subordinate modification of the author-number, but an independent classificatory element, universally employed, and taking precedence over the author-number.<sup>4</sup> Finally, dates should be handled, both in filing and shelving, in reverse chronological order.

The automatic result of such a system would be this: Within each class the latest books would be placed first on the shelves and would appear first in the classified catalogue or shelf-list. After them would come books of various degrees of obsolescence. And at the end of each class one would reach the very beginnings of the subject, where the books would be of interest only to historians. The research worker could examine the literature back as far as seemed relevant to the problem in hand without finding himself burdened with earlier titles. The historian could define his period and find together on the shelves the works appropriate to his investigation.

One other step should be taken to round out the plan. Subject-entries in the card-catalogue should also be arranged in reverse chronological order. If the date of publication were to be typed as the final element in the subject-heading of each subject-card and reverse-chronological filing prescribed, this desired result would automatically follow. A person consulting the subject-catalogue would then be confronted first with the latest works, instead of being required to thumb through what sometimes amounts to a trayful of cards. And the historical investigator could quickly turn to the works of the period with which he happens to be concerned.

Time is a continuity, and the proposal I have made treats it as such. Use of a category like "Early works" means dealing with time, unrealistically, as a succession of discontinuities. Actually the category "Early works" is an anomaly in any logical scheme of classification by subject. Chronological divisions are logical when one is dealing with books about a given period, for then the period is a subject. An early book on anatomy, however, is not a work on the history of medicine; it is, always and forever, a work on anatomy, even though it may be of interest only to an historian of medicine. Books about a specific subject do not logically belong to different classes simply because they were published at different times. As a practical matter, moreover, if one treats the classification of a book as something that automatically changes with age, one inevitably implies that all the older books in a library must be periodically reclassified-- a portentous prospect.

The proposed system could be introduced at any time, without disturbing the existing collection. One need only adopt the simple rule that books with a tripartite call-number (that is, a call-number including the date as its second element) should be arranged, in each class, ahead of those with bipartite call-numbers. Immediately the latest books would appear at the beginning of each class. With the passage of time, and without any renumbering of earlier acquisitions, the current literature would all become accessible according to the new plan. The renumbering of the older books would be relatively simple, for it would normally involve only the insertion of the date between the two elements of the existing call-number. And such renumbering might be postponed without causing the historian a whit more difficulty than he actually encounters at present.

The physical accessibility of the books might well be improved by a system like this. There would be nothing unfeasible about shelving all books since a certain date (varying, of course, with the class) in the most convenient part of the library (perhaps even on open shelves). This would bring current books in all classes much closer together, making consultation and cross-reference far easier. The older works could then occupy a predominantly historical section of the stacks, being brought there merely by periodic reshelving without reclassification. In general libraries (as distinguished from research collections), moreover, the withdrawal of obsolete books would be a much easier task than at present.

The matter of bringing the historical parts of the collection together in a special part of the stacks deserves a word or two of elaboration. Such stacks might adjoin a special historical reading room, where works on the history of medicine (a genuine subject-class) could occupy open shelves. At regular intervals, books before a certain date (recognizable from the call-number alone) would be moved from the stacks assigned to current and recent materials to the shelves of the historical stacks, without the necessity of calling upon professional cataloguers for additional services. Within the historical stacks, divisions could, if desired, be set up according to centuries, and the books would go to their proper places on the basis of the call-number alone. Within each century, moreover, the books would preserve their articulation into subject-classes.

Such a system as the one here proposed might also lighten the burden of preparing, revising, and using the classification schedules themselves. Obviously new subjects of investigation must be recognized by continuous interpolations in existing schedules. On the other hand, minute subdivision is often a response simply to the problem of quantity rather than **to the** necessities of logic. Materials accumulate to unmanageable proportions in certain inclusive classes, and subdivision of the latter seems the only answer. Actually minute subdivision has serious drawbacks, for it arbitrarily separates materials that are closely related to one another and thus hinders the cross-fertilization of ideas. If quantity could be kept manageable, most research workers, I believe, would prefer more inclusive classifications to narrower ones. A chronological arrangement within each class would keep quantity manageable, for it would automatically enable a research worker to eliminate from consideration a vast quantity of obsolescent material and thus to cope with current materials extending over a considerably broader field. Broad and inclusive classifications could thus be maintained in a research library, and the fragmentation of knowledge that results from minute subdivision could be healthfully checked.

How should old books newly acquired be classified? The existing practice of the Armed Forces Medical Library points the way. All books published between 1801 and 1913 are now classified according to subject, but the classification scheme is simplified. In the complete schedules for current books, the class-mark consists of two letters followed by numerals. In the simplified scheme for nineteenth century publications, only the letters are used (with certain exceptions and modifications).<sup>5</sup> The highly commendable result is that the same general outline of classification is used for both current books and older ones, but subclassification is dispensed with for the latter, as befits a period when specialization was less intense and publications less numerous. In my judgment the system should be pushed back to earlier centuries, with increasing simplification of schedules, instead of placing all books before 1800 in the classes WZ220, WZ230, etc., which consist of "Early printed books," arranged by centuries, forming subclasses under "History of Medicine."<sup>6</sup>

The question of the date to be used in classification would require some formulation in rules. Works published in modern times in the United States should undoubtedly be classified by copyright date, which is, of course, altered for each new edition. This would bring the latest revised edition to the forefront. For other countries, imprint date would have to be employed. For books before 1800 it might be desirable to use, not the date of the imprint, but the date of first publication of the work in question. This would bring the various editions of the work together, and would enable the student to find at least one edition under the date of the editio princeps. For books written before the beginning of printing, the date (or perhaps merely the century) of composition would obviously be more appropriate than the date of publication. The fact that the system would separate the successive editions of a given work, and a fortiori the different books on the same subject by the same author is, to my mind, a very minor disadvantage in all scientific fields-- perhaps in all fields except literature itself. One must remember that the author catalogue of the library already provides fundamental bibliographical control of the collection as a whole, and that all the works of a given author (including editions and translations) are grouped together there.

Needless to say, serial publications (including journals, proceedings of societies, and the like) would not include the element of date in their call-numbers, for continuous publication precludes the idea of assigning a single date (even the date of founding) to the series as a whole. Alphabetical or geographical arrangement is obviously called for in classes composed of serials.

I apologize for this long excursion into classification, in a paper that was supposed to discuss acquisition. In justification I would say only this. Books are acquired so that they may be used. One can hardly have a sound policy for acquiring them, without having also a sound plan for using, and hence for arranging, them. So long as time is treated as discontinuous, so long as "Early works" are relegated to a class by themselves, the acquisition of historic materials is bound to appear a kind of aberration. Acquisitions

policy can amount to little more than an attempt to answer the question: How far can we afford to indulge ourselves in the luxury of antiquarianism?

If, however, we look upon time as continuous, if we think of the body of current knowledge as slowly receding into the past but preserving its own inherent structure, then we will think of historic materials not as scattered relics, but as parts of a living, articulated collection. Acquisitions policy then becomes something different from a mere policy toward rare books. Its criteria with respect to older works become essentially the same as for current publications. The ideal of the library will be to build up, for each period of time, a well-rounded collection, presenting the state of knowledge of the time. Because even the earliest books are being regularly classified by subject, gaps in the collection will be spotted, not in terms of rarities that are missing, but in terms of subjects that are poorly represented. The librarian should find it possible to work out, for past periods as well as for the present, definitions of "scope" and of "levels or degrees of coverage,"<sup>7</sup> and should be able to apply them to the various classes within the historical sections of the library.

The historian, after all, has no more use for disiecta membra than any other scholar. When, by mental effort, he translates himself into the past, he is not looking for curiosities and rarities, he is trying to comprehend the organized world in which the men of the period lived. He is interested in their knowledge as organized knowledge, their ideas as articulated ideas. A library which can provide him with a well-balanced collection of books of the period, chosen so as to be representative in range, and classified according to a logical scheme (even if not precisely the scheme that contemporaries would have used), is offering the historian everything he can properly wish for. If a library, in its historical acquisitions policy, is guided by such a concept of its purpose, then the requirements of general historiography can hardly fail to be met in abundant measure.

#### Notes

1. Arthur Bestor, Backwoods Utopias (Philadelphia, 1950), chapters 5 and 7. The 581 references included 120 to manuscripts, 219 to articles in contemporary newspapers and magazines, and 242 to books and pamphlets.

2. Compare Library of Congress, Subject Cataloging Division, Classification R, Medicine (Washington, 1910), p. 65; idem (3rd ed., Washington, 1952), p. 89; Army Medical Library, Classification, Medicine (Washington, 1951), pp. 9, 12; Armed Forces Medical Library, Catalog, 1953 (Washington, 1954), p. iii.

3. In an institution like the Armed Forces Medical Library, where the date is already an integral part of every call-number, the effect intended could be brought about, of course, by establishing the rule that in shelving and filing, the date is to take precedence over the author-number. The risk of accidental misshelving would be considerable, but if newly acquired books were to be regularly marked in the new way, the staff would habitually look for the date as a second element in shelving, and mistakes with older books would probably become few.

4. The principle is precisely the same as that embodied in the book-numbers devised by Andrew Keogh for the Yale University Library, and used since 1908 for certain classes for books there. "The Keogh number is ... composed of the last three digits of the date of publication of the book plus (usually) the initial letter of the author's surname. A typical call number is Ukul5 / 918B (in two lines). With this notation it is at once indicated that the book was published in 1918 and that the author's name begins with 'B.' ... If it is desirable to keep editions, translations, and related material together-- and this is the accepted practice in the social sciences and humanities-- then the imprint date of the first edition is used as the basic number and supplementary letters are added to the author's surname initial, as 'b' for second edition or 'h' for French translation. If a strict publication-date arrangement is more desirable -- as in the sciences and technology -- then the book number incorporates the imprint date of the particular book, irrespective of edition or translation." (Jennette E. Hitchcock, "The Yale Library Classification," Yale University Library Gazette, vol. 27, pp. 103-104; Jan. 1953.) This admirable system was in part a response to "an ever-present desire for a chronological arrangement" (*ibid.*, p. 99) expressed by many members of the faculty. This desire (as I am trying to make clear in the present paper) is a natural and logical one for research scholars to feel.

For another system of book-numbers based on date, see the description of Biscoe time-numbers in Melvil Dewey, Decimal Classification and Relativ Index (13th ed., Lake Placid Club, N.Y., 1932), II, 1643.

5. Armed Forces Medical Library, Army Medical Library Classification ... Additions and Changes, List No. 3, Sept. 1953 (mimeographed): "Special Scheme for Nineteenth Century Publications." The modifications are that a third letter is sometimes added, to subclassify works, but on a less elaborate scale than is done by the numbers of the complete schedule. The exceptions are the continued use of a few subclassifications denoted by both letters and numbers, especially for such types of materials as directories, periodicals, etc., which should obviously be kept together. This scheme represents a simplification of that of 1951, which prescribed that certain numbers only of the full schedule were to be applied to nineteenth century titles.

Under this previous plan, for example, current books about the "Ear" were to be subclassified in considerable detail, but only the two classes "General Works" (WV200) and "Deafness" (WV270) were to be used for works published between 1801 and 1913. Army Medical Library, Classification, Medicine (Washington, 1951), pp. 9, 12, 183-184.

6. Army Medical Library, Classification, Medicine (1951), pp. 12, 202.

7. See Armed Forces Medical Library, Library Manual B-5, Scope and Coverage of Collections (mimeographed, Washington, 20 December 1955), p.1, where levels or degrees of coverage are defined for "skeletal," "reference," "research," and "exhaustive" collections.



## DISCUSSION

Dr. Saul Jarcho. Dr. Homer Smith has proposed, albeit facetiously, a policy of what might be called limited incendiarism for library collections. Even as a jest or fantasy this suggestion is horrible to contemplate. We live in a century which more than once has witnessed the burning of books. Such methods, once introduced, could prove uncontrollable, and I fear that the idea is not merely iconoclastic but potentially anthropoclastic. Therefore I wish to record 100 percent disagreement with it.

Dr. Smith has moreover asserted that the practice of historical study is a neurosis. I do not know whether this diagnosis is correct but I would be willing to be neurotic in the company of Polybius, Gibbon, and Ranke.

My discussion this afternoon will deal with the question of what the clinician wants of the medical library and will be a vote for a policy of intensive coverage in the clinical field. The following comments are generalized impressions based on prolonged casual observation and not on systematic survey.

The general practitioner's ordinary medical reading consists of the J.A.M.A. and the drug companies' advertising squibs. The latter go on the Virgilian principle of TAM FICTI PRAVIQUE TENAX QUAM NUNTIUS VERI.

His non-medical reading in general consists of the Reader's Digest (and magazines of equivalent veracity and luminosity); of the newspapers or newspaper headlines; of detective stories and occasional random samples of biographies or novels. I need not mention the precedent of Western adventure stories read by persons in high office.

The specialist reads the J.A.M.A. and the Archives of this or that specialty. In the best-developed specialties the clinical journals include much information derived from basic sciences. In less advanced specialties the basic scientific materials are apt to be much less abundant.

We may hope that the specialist's non-medical reading is wider and deeper than that of the general practitioner, since his daily routine is apt to be less strenuous and his prestige and income are greater, but his informal conversation gives little evidence of wide reading or wide intellectual interest, although he is apt to utter conventional words of admiration about respectable classics.

This is a generalized description; there are of course occasional exceptions. The consideration of non-medical reading is relevant because it illustrates the fact that the practicing physician tends not to be a reader, just as he is not a scholar or a historian.

Of works in foreign languages-- modern, ancient, or medieval, medical or non-medical-- both the general practitioner and the specialist read less and less. Among today's interns, the flower of a somewhat infertile educational system, even the ability to read French is nowadays becoming uncommon (about as rare as gout is said to be in women).

Homes and offices are small and there is less space than there used to be for books and for back numbers of periodicals. The television apparatus has crowded out Galen and Trousseau and Graves.

This being the case, what do the practicing physician and practicing specialist want from a major medical library?

Their preponderant demand is for material which bears on current cases. The commonest situation takes the following form. Dr. X. notices that Mrs. Y. has pain over the xiphoid cartilage, plus a series of symptoms which are coincidental and hence possibly related thereto. The doctor wants reports of other cases of pain in the xiphoid cartilage. If he has never seen this condition before, he infers that it is uncommon or perhaps unreported. He wants reports of other cases, if such exist, and he needs these reports immediately. If he thinks the condition is rare he may want to report it. He may then want all published reports on the subject, as far back as Imhotep. Any report, however ancient, may prove useful in the care of the patient and in the analysis of the problem. The older reports are desired not because of their age but despite their age. There is no question here of constructing a historical sequence and examining it for intelligible patterns.

The physician may be able to disinter the necessary references himself but he is likely to expect the librarian to provide the references, to locate and borrow the less accessible books for him, and perhaps provide photostats or microfilm or translations.

An analogous condition obtains if the physician's starting point is not merely one case but a series of cases or an entire disease. The doctor who is interested in myasthenia gravis may need to know whether the disease occurs in children and, if so, whether cases occurring in children are in any way different from cases occurring in adults. To the librarian his needs are the same as those of the physician whose patient has a sore xiphoid.

In summary, the physician engaged in practice needs:

(a) reports of cases, or series of cases, as far back as the literature extends.

(b) he needs not only case reports but the references by which such reports can be found.

(c) he may need a wealth of basic scientific material bearing on his problem.

(d) he needs supplementary services such as photostats, microfilm, translations, and abstracts.

(e) he needs facilities which can transmit these materials to him and transmit them promptly and inexpensively.

(f) he needs not only these material things but also the services of intelligent, skilled, and devoted people who can plan, devise, and administer the mechanisms which will satisfy his needs.

All of this is entirely within the realm of the possible and it is a matter of observation that these extensive resources and great talents are daily placed at the physician's disposal in innumerable libraries throughout the United States.

Dr. Morris Saffron. I am Dr. Saffron of New Jersey. While I agree that there are many doctors who do not have the inclination or leisure for scholarly pursuits in libraries, still generalizations are always dangerous, and I believe that the medical profession may well be on the verge of a revival of interest in literary and historical work.

I have been greatly stimulated by the excellent discussion here today. The problem as I see it is whether we are to continue to collect in Collier brothers fashion all printed material relating to medicine, regardless of merit; or whether we ought to discard some of the apparently useless items already accumulated and use greater discrimination in the matter of future selections. This is a universal problem confronting large repository libraries.

While stationed in Washington during the last World War, I had ample opportunity to become familiar with the resources of this wonderful library. It was during the same period that I persuaded our kindly panelist Mr. Clapp to place my name on the list of those who receive the annual report of the Library of Congress. This publication I read each year with lively interest and amazement, having successfully resisted periodic attempts at my copy made under the guise of economy. There they are simply inundated by tidal waves of print pouring in from all over the globe, and in their capacity of national repository they are obligated to retain everything. The problem here is, of course, minute in comparison, and I feel that our basic philosophy should also be different. My term as library chairman of the Academy of Medicine of New Jersey made me realize that all medical libraries of stature, national or otherwise, must keep two essential objectives in view. The first is to acquire within budgetary limitations all available current publications which have the slightest pretense to

originality, and without regard to their ultimate usefulness. The second and more important from an historical viewpoint is to preserve for posterity the worth-while publications of the past. I emphasize the expression worth-while for we all know that the annual output of textbooks often produces little that is of enduring value. Many so-called revised editions contain minor changes which hardly justify their addition to the collection. I have been reviewing books on dermatology for many years, and I must confess that it is often difficult to discover the one or two original thoughts which distinguish an author from his predecessors.

I am convinced that what this library needs is not merely a definite policy of acquisition, but one of "de-acquisition" as well. Periodic and orderly reappraisal of the holdings should lead to the elimination from the shelves of ephemera, trivia, and above all outmoded textbooks. By such procedure, carefully controlled, we can avoid the Scylla of a chimerical all-inclusiveness and the Charybdis of Dr. Smith's fiery furnace. The return to the director and his associates of discretionary powers would remove them from the class of mechanical accumulators.

If we were still in the age of the cuneiform tablet our space requirement would be ten times as large as now. We can derive some consolation from the fact that we are today in the age of the printed word, and can anticipate relief in the prospect which lies before us. Mechanical processes or reproduction, including microfilm, and advances in the use of the "electronic brain" should eventually make possible the preservation of enormous quantities of printed records in some reasonable space. Although I am told that micro-filming is too costly a procedure to solve our problem at the present time, it seems reasonable to expect that human ingenuity will soon turn up an inexpensive method of preserving the contents of obsolescent works.

Finally I should like to offer a suggestion concerning the voluminous hospital reports mentioned by one of the earlier speakers. This would involve a cooperative effort on a national or even international basis. To shelve the annual reports of thousands of hospitals requires considerable space. On the other hand if these reports could be stripped down to essentials and consolidated each year by the American Hospital Association the resulting volume, massive though it might be, would prove a tremendous space-saver as well as a boon to the research worker. Another national organization could perform a similar task in the matter of state and municipal health reports.

In closing I wish to thank the speakers for their admirable presentations, and this audience for listening with patience to my unprepared remarks.

Mr. Kilgour. Continuing part of the last speakers thought, I would like to suggest to you that in thinking about problems of coverage in acquisition that you might also include the point of view of how little do you need, not just how much. I think this approach can be an additional and profitable basis on which to think about some of these problems, but I want to speak more specifically about one section of Dr. Bestor's superb paper.

Shortly after the turn of the century some genius whom I haven't been able to identify started to put books in the scientific classifications in the Yale University Library on the shelf arranged by date in precisely the manner that you suggested. And fortunately, this is the case in the Yale Medical Library. Of course, many medical libraries have a very large percentage of their volumes arranged by date anyway because the periodicals are automatically arranged that way, but everything you said about the advantages of the date arrangement of books is true and very much more is true too. I am not going to go into those details, but I am going to suggest that if any of you are interested in this type of arrangement, you can see it actually working at the Yale Medical Library, and you can see many of the advantages that Dr. Bestor described.

Dr. Shryock. My colleague here set the precedent for a speaker taking a little more time, so I just want to add a postscript to Dr. Bestor's emphasis upon time as a factor in the whole picture. This is not in relation to cataloging or assembling but again in relation to scope, because the time factor gradually transforms the areas or fields which are considered medical. We may therefore, with reference to one era, indicate the necessity of acquiring volumes in a certain subject; and yet we would not purchase in that subject for another period. For example, we recall that anatomy and physiology played a relatively small role in medical education or medical thought down to about the modern period. Certainly, these disciplines played a small role in the medieval era. Conversely, we think of anatomy and physiology as essential medical sciences when the modern period is reached.

There also was a time, prior to about 1800, when botany was an essential part of medicine. Presumably, we would wish to buy botanical treatises chiefly for that earlier period. In the 17th and 18th centuries chemistry was very much a medical science. And in some questioning of Dr. Smith's generalization, I think we are now approaching an age when social science also will enter into our medical tradition. To the extent that it does, the Library will have to keep its eyes open in this area in the future. This will involve more than collecting a few basic texts. There would then have to be a systematic collection of social science materials pertinent to medicine, just as we assume that we should secure all the materials in anatomy or physiology which are basic to medicine.



## SUMMARY

KEYES D. METCALF

Colonel Rogers has indicated in his too generous introduction at least one of the reasons why I am glad to be here today: the survey of the Army Medical Library for which I had some responsibility thirteen years ago made me very much interested in the problem that we have been discussing. In addition I have always been interested in acquisition programs because I believe that in the long run they are the most important task faced by librarians and in most cases are the task that librarians have done least well. I am also glad to be here because it is evident from what has been said that the proposal for an acquisition program made by the survey committee thirteen years ago did not work out entirely satisfactorily and being at least partly responsible, I am anxious to see that situation improved.

There can be no question of the importance of a good acquisition policy. Theoretically at least, it is simpler to prepare one for a library in a special field, such as medicine, and particularly for a library that expects to collect comprehensively, because less selection is required and part of the problem would seem to be solved automatically. Those of you who heard Colonel Rogers in his introductory paper soon realized that it was not as simple as that and to come closer to home it is not as simple as I thought it was thirteen years ago when I had something to do with writing the directive that he quoted. Colonel Rogers stated the problem and did it superbly. He did more than that, he persuaded six specialists from six different fields to prepare first class papers tackling the problem from different points of view. It might be worthwhile to reread Colonel Rogers' paper at this point; it might even make a good place to stop. I shall content myself, however, by quoting certain paragraphs which I think need emphasis.

Colonel Rogers, after stating briefly the effect of acquisition on the rest of library problems, admitted the important part that finances play in an acquisition program. But he suggested that as far as possible, finances be left out of consideration today, and except for Verner Clapp's statement that library technology can do almost anything in a library if money is provided, and his question as to whether everything possible had been done to provide the money required to do almost everything, the papers followed Colonel Rogers' admonition. Colonel Rogers then went on and asked us to remember that the Armed Forces Medical Library is also a national library, which has a special responsibility to the nation beyond the responsibilities of all other libraries in its field.

He said that there were two major facets in an acquisition policy--scope and coverage--and that we were today interested chiefly in the problem of coverage. He quoted the survey recommendation that the Library should acquire all publications in all languages directly relating to the science of medicine. He then added, rather sorrowfully, that in the decade which has elapsed since the survey, the Library's yearly acquisitions have increased to the point where he had begun to wonder whether acquisitions are not now too inclusive where once they were not inclusive enough.

He went on to say that the acquisition objectives were these: To serve medical research and the work-a-day practice of medicine; to serve also as basic documents of intelligence studies, and as the basic records of the history of medicine, the history of science and the general history of civilization. He commented on the fact that he had found little outside opinion that was pertinent to the predicament in which the Library had found itself. He then said that even the "Farmington Plan" carries limiting language, such as "of research value" and that the Library of Congress in its third canon of selection introduces limiting phrases, such as "the material parts of the record". He then turned to the speakers and asked for guidance.

Verner Clapp of the Library of Congress came first and spoke from the point of view of Library Technology. (As a librarian I can say no better choice could have been made for a library representative.) Mr. Clapp raised questions dealing with the financial situation and made the cogent remark: Should this Library, should any library, collect everything in its field? He thought that the answer should hardly ever be in the affirmative. No library, he said, should be permitted to acquire at all, much less comprehensively, unless it can justify both the importance of its purpose and the relevance of its acquisitions to that purpose. A research library exists to serve scholars; unless the acquisition of material can be demonstrated to be likely to serve actual or potential users, its acquisition remains unjustified.

He brought up the question of marginal material, but admitted that we are unable to foresee the research needs of the future. He added that the decision with respect to material of this kind must rest on an exercise of judgment, and that the more informed the judgment, the more persuasive it is likely to be. He spoke of the possibility of arbitrary selection, of random sampling, and of deferred selection on the principle of collect now and select later; and added that imponderables present the librarian with considerations of the greatest difficulty at the very point at which the material is of the least obvious worth.

Mr. Clapp suggested that there were possible short cuts on the processing level, and mentioned the enormous amount of duplication in medical literature. A library which is concerned only with research or teaching the subject can secure most of the relevant information for a fraction of the cost which the comprehensive library must pay to close the gap between

most and all. The law of diminishing returns works to the disadvantage of the National Medical Library but the additional cost of comprehensiveness is justified because the Library serves all possible purposes which the country as a whole can properly demand of the literature of the subject. In addition its possession of the material relieves local institutions of the obligation for acquiring more than their immediate needs. He concluded by saying that the bibliographic record is more important than any centralized ownership.

The next paper was by Dr. Manchester, who spoke from the standpoint of the clinician. He said that it was impossible for physicians to practice without the aid of publications that record advances and experiences in medical and related sciences. He suggested that a bibliography of medical reviews would help the clinician greatly. He believed that the Library's coverage should be exhaustive in the medical sciences and related fields, and in all languages. He emphasized the desirability of abstracting and translating material in foreign languages. And he closed by saying that the best of medicine cannot be made available to society without the literature. He believed that the National Medical Library is an incalculable public health asset; it can be many things to many people. Dr. Manchester made it clear that a first class national medical library was necessary for the practicing physician as well as the researcher in the medical field.

Next came Dr. Smith. He began by saying, facetiously, something that I wish were true, that any good librarian can collect and catalogue more books and journals in a day than an investigator can read in a year. He made a statement frightening to the librarian that the number of ways in which a library is used is approximately equal to the number of investigators. He went on to say "nonsense" to those who think that the library should be all things to all men. He stated that you cannot turn a librarian into Superman by multiplying the number of his assistants, and you cannot improve the quality of a library simply by multiplying its cubic footage.

Dr. Smith believed that much of what the librarian has been saving as pertinent to medicine is not medicine, that it is not scientific, that it has no value and is utter trash. And he proposed a capacious incinerator for much of the fugitive and ephemeral material that is received. Dr. Smith admitted that to distinguish the substance from the name and to discover what is pertinent to medicine is a problem. He said a national medical library should have an exhaustive collection of the primary literature, dealing with the pre-clinical sciences, general medicine and surgery, but he proposed that in the ancillary sciences, a research or reference collection only was needed.

He was confident that textbooks, monographs and the like are not the stuff of which the history of science will be made, and proposed that the librarian keep his library uncluttered, leaving room for journals not yet started, and books undreamed of. Since I have worked in libraries for fifty-one years, and have yet to find an uncluttered one, I hope Dr. Smith will find one and tell me about it.

And then Dr. Smith closed by asking for a tiny room where on a table fully exposed to hand and eye were a few books dealing with subjects as remote to medicine as one can imagine. And he said, please, just a hundred books, to last for five years, after which you can burn them. Personally I sympathize with Dr. Smith, but he failed to state that the books that he wants will be the same ones that each of his colleagues will want. If the librarians will take Dr. Smith's paper with the grains of salt with which I am sure it was intended, and not too literally, it should go a long way toward simplifying their problems and making their life more bearable, and incidentally, more interesting. When Dr. Jarcho in the discussion period condemned the limited incendiaryism proposed by Dr. Smith, on the basis that it might get out of hand, he made an appeal for more rather than less extensive coverage and also for more general non-medical reading by the medical man, thereby agreeing with Dr. Smith's final suggestion.

Dr. Shryock, speaking from the point of view of medical history, began by saying that the scope of the collections has been in most respects all that could be desired. But he called attention to the difficulty of reaching agreement on the definition of such phrases as "nearly all", and other qualifying phrases used in the directives for acquisition. He mentioned that medical biographies should be acquired with some exceptions, and said he was interested in translations, including those from an unfamiliar to a familiar language and also those translated from English. He of course wanted works about medical history, books that historians ordinarily called secondary writings, as well as sources. He spoke of lecture notes, and recommended the correspondence of those active in medical and related fields. He mentioned the usefulness of portraits and photographs, particularly pictures of old scenes that illustrate typical settings and activities.

I admit that I was pleased to note that Dr. Shryock said that there were many ephemera he thought the library could ignore, or keep temporarily, or preserve only in the form of typical examples. But, he added, all publications on specialized medical themes whether in books or journals are potential grist to the historian's mill. He spoke of the papers of professional organizations, as distinct from those of individuals; and concluded by stating that both the counsels of perfection and those of indifference to serious scholarship could be avoided. Dr. Shryock, as has been the case with the others, sympathized with the Library in its struggle to keep its head above the waters, and if he and his colleagues will forgive the librarians when from time to time they fall down on their assignments, they can look forward to the future with only a reasonable amount of trepidation.

## SUMMARY

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Mr. Kilgour then talked on the intelligence values of foreign medical publications. He discussed them in the light of the national welfare and security. He said that the National Library is responsible for making foreign medical information available to the medical profession at large. He reminded us that medical advances are not all made in the United States, and he reported, to the surprise of many of us, that while secret agents do produce useful information, the bulk of intelligence information and probably the most valuable is freely available from open sources. He described the types of information that are important as intelligence. He said that as far as medicine is concerned, it is doubtful that medical publications have much to contribute to current reportorial intelligence. He added that commanders and medical officers must have continuous and accurate intelligence on local health hazards in order to preserve the health of their forces.

Mr. Kilgour told us that medical publications yield incidental data of value to economic intelligence. He said that the acquisition of foreign medical publications can and should be selective, and that while a national medical library should acquire all foreign monographs and periodicals consistently reporting new information, such publications are in the minority. A national medical library, he said, should continue to receive these materials in time of war, and it is of the utmost importance to obtain them from enemy and enemy-controlled areas. It is evident to this listener at least that his knowledge of what is important in intelligence has been almost negligible.

Dr. Bestor presented the final paper. He began by saying that the historian is a parasite on other men's activities. He uses the records that other men have made or accumulated for their own purposes, not his. The question, he said, is this: After all the materials needed for current medical research have been provided, after the needs of medical history have been met, is there something else which the future historian of things in general will expect the Library to have preserved? He said that this question was not one that the historian was accustomed to think about; that he is obliged ordinarily to use records as he finds them. And he added that the historian is not really as interested in indiscriminate preservation of materials as he is apt to imagine himself to be. He said that relatively little material turns up in places other than those where the historian would logically expect to find it, and that by and large the historian cannot afford to work a vein of ore unless it has a high enough assay to promise at least some margin of profit; the general historian is not likely to use the Armed Forces Medical Library unless his subject is in some way connected with medicine.

Speaking of the ephemeral material that comes into a great research library, Dr. Bestor thought that while it may be of small use for current scientific research, it may be very valuable for historical research, and poses certain problems which an historian may properly be asked to help solve, for he is its most likely potential user. Dr. Bestor then

proposed that this material should not receive regular library classification and cataloging but should be treated as archival material which would cost a great deal less than adding it to the library in the regular fashion. He also suggested that the classification for older publications should be primarily a chronological one; that libraries have never really reckoned with the significance of time in planning their classifications. Let me unofficially in the name of the library profession thank Dr. Bestor for his two suggestions dealing with library technology and assure him that they will not be forgotten. But I should add that various attempts have been made along these lines, sometimes with fair success and sometimes with lack of it. The third proposal that he made, that for filing a card for the latest books first, followed by those for the earlier ones, was proposed at Harvard recently and rejected.

In the discussion that followed the papers, Dr. Jarcho brought out the need of reports of cases, of scientific reports, of the availability of photoduplication, and of good general library services. Dr. Saffron spoke of the problem of the elimination of some of the redundancy of material. He said that we should learn to use discrimination in selection, so as to preserve the worthwhile without being overwhelmed with the bulk of useless material. Acquisition and de-acquisition, he said, was required, and he proposed the use of microfilm and the destruction of the original and later perhaps the destruction of the microfilm. I am not sure that he realizes that up to this time at least the cost of microfilming is greater than the cost of keeping the original. That may not continue to be the case. The cost of discarding is not as great as keeping the original. Dr. Saffron also suggested that the American Hospital Association should summarize hospital reports so as to make unnecessary their preservation.

Mr. Kilgour spoke of the desirability of considering not only how much should the Library acquire, but how little it could get by with. Dr. Shryock said that changes in what is considered medical science at different times are bound to have effect on collecting policies.

I had expected simply to try to summarize the papers. This I have done very inadequately. Colonel Rogers has asked me however to say something on my own.

As for scope, a subject in which we were not supposed to become involved today, let me say that since I feel that so much of the salvation of our libraries depends on cooperation I don't much care about the scope of the National Library of Medicine; I shall not worry about the marginal or peripheral material so long as one of the three national libraries collects it. Whether veterinary medicine comes here, or goes to the Department of Agriculture, and whether medical fiction comes here or to the Library of Congress doesn't make much difference so long as one of the libraries includes it persistently.

And now let me take advantage of my position as the last speaker by telling three stories which seem to me to be pertinent to our Symposium.

In 1897 the New York Public Library received by gift the Gordon Lester Ford collection of material relating to this country. It was one of the greatest collections ever gathered together. The task of going through the tremendous collection of pamphlets included in it was given to Harry Miller Lydenberg, who later became the Director of the Library and the greatest all-around librarian that this country has produced. He selected the items that he thought worthy of cataloguing and arranged to have the remainder stored in great bundles in the basement. Twenty-five years later as a young librarian I went through these pamphlets and found a considerable number that by that time seemed valuable enough to add to the Library and part of them went to the Rare Book Division. Some were discarded and the remainder were again stored in the basement until twenty-five years later when another young librarian, E.G. Freehafer, who by the way is now the Director of the New York Public Library, examined the collection and once more turned up considerable material worthy of inclusion in the Rare Book Room to say nothing of more for the regular collections. He also stored some of the left-overs in the basement and some of us here may live long enough to see those remainders worked over by some brash young librarian with profitable results for the fourth time. This story might be summed up by saying that time as well as other things affects values.

Also illuminating is this story. In my duties at the New York Public Library I had the task for fifteen years of selecting, from the 150,000 gifts received by that institution annually, those worthy of being added to the Library. With chagrin I have to admit that after fifteen years I found myself less confident about what should be kept and what discarded than was the case when I began 2,000,000 decisions earlier.

And finally let me tell the story that I found current at Harvard when I went there in 1937. A group of senior faculty members discussing the overgrowth of the University Library agreed that perhaps half of its millions of volumes were useless and should be discarded. Then Alfred North Whitehead is said to have spoken up somewhat as follows: Of course, gentlemen, much of the contents of the Library is not worth keeping. I suggest that we arrange to have the whole collection examined by experts and divided into two approximately equal parts, one for discard and one to be kept. I shall then suggest that the half selected for discard should be kept as the more valuable part, as much of it will represent the only copies available in any library and will be more valuable to future scholarship than the half selected for retention, which will be made up of volumes that can readily be found elsewhere.

With these stories in mind, I suggest that when it comes to coverage I am inclined to report, judging from my experience during fifty-one years as a librarian, that no completely satisfactory directive will ever be written. This should not deter us from trying to write one. But it's an art, not an exact science, and works of art never satisfy everyone. I can think of no brief description better than the one proposed for the Farmington Plan: "Everything conceivably of research importance should be acquired." But that statement has to be interpreted, and no two persons, at least no two librarians, will interpret it in the same way. But as time goes on we should find some more definitions on which we can agree. We shall, I am confident, be able to move forward.

One final warning if we are to make mistakes, as we are bound to do. Let us try to make them, in the case of most libraries, by not getting enough, because the law of diminishing returns will come to our aid. But, and this is a large but, let us make the mistake on the side of getting too much in the National Libraries. The total cost to the library world of this method will be less, and nationally only a drop in the bucket.

And now to summarize the summary. As was to be expected, each speaker wanted something at least a little different from each of the others. All made good points; the Library obviously cannot follow all, all the way through. But the National Medical Library should do what it can within the limits of the funds that it can obtain; and all of us should pitch in and help the Library to obtain the funds it requires.

I do not consider this Symposium a failure because we have failed to reach definite conclusions. I am sure that we have helped the Library to help itself, and we can count on its continuing to struggle and to make progress. When I compare the present situation with that which prevailed thirteen years ago, I am optimistic. At the same time, I am holding my breath until Congress decides what to do with Senator Hill's bill for a National Medical Library.

## THE PARTICIPANTS

LT. COL. FRANK B. ROGERS has been Director of the National Library of Medicine since 1949. He holds the degree of Doctor of Medicine from Ohio State University and the professional degree in library science from Columbia University.

MR. VERNER W. CLAPP came to the Library of Congress in 1922, and served that Library in progressively more responsible positions until his retirement in October 1956 as Chief Assistant Librarian. He is the author of many papers in the field of librarianship, several of them relating to the problem of scope and coverage of library collections. Mr. Clapp is now President of the Council on Library Resources, Washington, D. C., established in 1956 through a grant from the Ford Foundation.

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DR. RICHARD H. SHRYOCK is Director of the Institute of the History of Medicine of the Johns Hopkins University. Previously he was Professor of History at Duke University and Professor of American History at the University of Pennsylvania. Dr. Shryock is the author of several well-known treatises in the history of science and medicine.

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## PARTICIPANTS

DR. ARTHUR E. BESTOR is Professor of History at the University of Illinois; during the current academic year he is serving as Harmsworth Professor of American History at Oxford University. Dr. Bestor's special interests lie in the fields of education and general historiography. He is the author of the widely-heralded The Restoration of Learning: A Program for Redeeming the Unfulfilled Promise of American Education, published in 1955.

MR. KEYES D. METCALF retired in 1955 as Director of the Harvard University Libraries, Librarian of Harvard College and Professor of Bibliography. Before that time he served the New York Public Library as chief of three divisions, as Executive Assistant and finally from 1928 to 1937 as Chief of the Reference Department. Mr. Metcalf has been a leading figure in many professional associations and was active in the organization of the Farmington Plan, the objective of which is to make sure that at least one copy of every new foreign work of research value is acquired by an American library. Since his retirement from Harvard University, Mr. Metcalf has been Professor of Library Science at the Graduate Library School of Rutgers University.



