
The Measurement and Evaluation of Reference Service

SAMUEL ROTHSTEIN

THE MEASUREMENT AND EVALUATION of reference service has been more often discussed than attempted. In fact, the literature of this subject has itself spawned a fair-sized literature of review,¹⁻⁹ of which the commentaries by Berelson, Rogers, Budington, Shores, and Wheeler and Goldhor are probably the most comprehensive and discriminating. The degree of attention is a little ironic, for the reviewers have reacted to their subject with more causticity than complaisance. Much of the literature they dismiss outright, and most of the rest they find repetitive, faltering, and inconclusive.¹⁰⁻¹¹

This criticism seems largely justified, for the characteristic tone of the literature is one of querulous diffidence. Although Carnovsky,¹²⁻¹³ Miles and Martin,¹⁴ and McDiarmid¹⁵ have pointed out the compelling need for quantitatively-based appraisals and offered sensible guidelines for their making, most reference librarians have remained unconvinced of the worth of such studies and uncertain in their methodology. The main incentive has seemingly come from outside the reference ranks in the form of administrators' pressure, and the mood of reluctance prevails. Certainly more time has been spent in hand-wringing over difficulties and in disparagement of results than in productive labor.

Admittedly, the task is formidable. As compared with other library activities such as circulation, acquisitions, and cataloging, reference service is ill-defined, with little agreement on its component parts. Is inter-library lending an integral part of reference work because many reference librarians are responsible for it? Formal instruction in the use of books and libraries? The supervision of reference reading rooms? The preparation of indexes? And having decided what the genus "reference librarian" does, how can one readily determine the

The author is Director, School of Librarianship, University of British Columbia.

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effectiveness of his work or its impact? Reference librarians may have acted rather blindly in approaching their elephant of a problem, but it is undeniably a big one.¹⁶

In point of fact, the problem in all its dimensions has not really been attempted at all. The great majority of such quantitative studies as have been made has been limited to a consideration of reference work in public libraries, and more particularly to the work of answering reference questions and giving informal guidance to readers in the use of libraries and the choice of books. A smaller but substantial group of studies has examined reference collections, the organization of reference departments, and the composition of the "reference audience"—the people served. The reference service of college and university, school, and special libraries has been subjected to very little quantitative analysis in any of its aspects other than inter-library loans, which matter is reviewed elsewhere in this issue. The topic of formal instruction in the use of the library *has* received considerable attention, but Bonn's recent and thorough study of the trends and literature in this field obviates the need for further discussion here.¹⁷ In all types of libraries and in all aspects of reference service, investigation has seldom gone beyond the first stage of "measurement"—description in quantitative terms—to the ultimate goal of full-fledged "evaluation"—rating or assessment of effectiveness and worth.

Against this background of general impressions, the trends in measurement and evaluation of reference service may now be considered in more detail. For convenience, they are grouped into the following categories:

1. Enumeration of reference questions answered is often attempted. The most common form of quantitative description is the simple tally of reference questions answered. This gross measure is conceded too crude to be meaningful and is almost certain to be incomplete, probably by a good 40 per cent.¹⁸ However, the sheer number, running in the case of major public libraries perhaps into the millions, may in itself be impressive and revealing. Gross count can at least show that the library's informational service may be a sizeable business.

2. Reference questions classified by type, subject, purpose, or effect have been used in many studies. Simple enumeration gives equal weight to the service rendered by, say, a nod of the head showing the location of the card catalog and to the compilation of a lengthy bibli-

ography, to the assistance given a schoolboy and an august scholar. To discriminate between such levels of service, reference investigators have devised a number of classifications, none of which, it may be noted, has been considered wholly satisfactory. Since Guerrier's pioneering effort,¹⁹ a number of investigators have used "time taken" as a basis of classification, tabulating the number of questions into anywhere from four to eight groups according to the number of minutes required by the reference staff to find the answer.²⁰ The method is admittedly deficient, since there is obviously no necessary relationship between effectiveness of performance and the time put into it. But the ease with which this form of analysis lends itself to accurate and consistent recording has attracted investigators anxious to find some way of eliminating guesswork.

A variant on this method, now more commonly employed than the original, is the grouping of questions by *type*. The favorite classification of this kind divides queries into: *directional* questions—calling merely for the location of a specific book or library facility; *ready reference* questions—calling for simple, factual answers readily ascertainable by the use of one or two standard reference books; *search* questions, sometimes more grandiosely called "research" questions—calling for more extended effort and the wider use of sources of information; and *readers' advisory* questions—assistance in the choice of books or the gathering of data. Many reference librarians, following the reasoning of Barton,²¹ prefer to omit the "directional" group as not really calling for any professional skill.

A great number of other groupings have been tried: classification by *subject*²²—inquiries arranged by the major D.C. classes; by *purpose served*—for business and industry, school assignments, personal use, etc.; by *source*—in person, by telephone, by mail; by *materials used*—reference books, the stack collection, pamphlets, government publications, the card catalog, etc.; by *effect*—the percentage of questions answered. None of these methods has been as yet sufficiently standardized to allow for reliable comparison of findings, but together they have yielded a body of useful data.²³

3. The reference clientele has been subjected to analysis in a number of ways:²⁴ most commonly by occupational classification—students, businessmen, housewives, etc.; by sex; by educational attainment; by age; in the case of university libraries, by academic standing. The degree of public awareness of reference service has

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been investigated,²⁵ as has the degree of satisfaction with the service received.²⁶

4. The reference collection has been the subject of surprisingly little quantitative study considering the traditional emphasis within the profession on the importance of reference books. The principal method employed has been the checking of library holdings against standard bibliographies such as those of Mudge-Winchell and Shores and then almost always only in respect of a single library.²⁷ More recently, attempts have been made both in the United States²⁸ and, more satisfactorily, in England,²⁹ to ascertain the state of reference stocks in public libraries as a whole.

5. Reference personnel and the organization of reference departments have also been rather infrequently studied, although here too the professional associations have belatedly set about gathering some basic facts.³⁰ The number of libraries with reference departments, the number of full-time reference librarians, the duties for which reference departments are responsible, the apportionment of time within libraries for reference work as compared to other library activities, and the policies of reference departments with respect to types and levels of reference assistance have all received sporadic attention. Phelps has done a unique, although limited-scale, study of the effects of subject departmentation on the dimensions and character of reference work in public libraries.³¹

6. Cost analyses have perforce been few, for refined measures of units of work accomplished must be available before the costs of such units can be computed. Roth³² and Budington³³ have offered useful suggestions on the methodology to be employed, and a number of surveys have indicated what it costs, in direct labor, to answer the "average reference question" in a given library.³⁴

7. The evaluation of reference service, whether within a single library or in respect to groups of libraries, is a rarity indeed in the reference literature. Evaluation presupposes measurement against a specific standard or yardstick or goal, and no area of library service has been more deficient in such standards than reference service. A review of official statements of standards³⁵ reveals that they usually say no more about specifications for reference service than that there should be enough available! Much the same bleak situation obtains for textbooks, "Wheeler and Goldhor" apart, and for the various surveys that have been conducted for individual li-

braries: almost never is a quantitative prescription set forth, almost never is the given library's service rated against such a yardstick.

A handful of useful exceptions may be cited. The *A.L.A. Post-War Standards* specified a standard for public libraries of one-half to one reference question to be answered per capita of community served.³⁶ *Public Library Service* suggests that libraries serving populations of between 25,000 and 49,999 should have "at least 1 professional staff member for each of the following aspects of library service: information and advisory service for adults; information and advisory service for young adults; information and advisory service for children." Larger communities should have proportionately more reference librarians, including some specialists.³⁷ The Massachusetts state standards offer exactly the same prescription.³⁸ Hutchins, citing a study by Joseph Wheeler, thought that a ratio of one reference question answered to every ten volumes circulated would be "high."³⁹ Baldwin and Marcus, who found that the average time taken to answer a reference question in the twenty-eight medium-sized public libraries that they investigated was 5.4 minutes, thought that this norm might also be considered a valid standard.⁴⁰ In Great Britain, the Library Association, seeking to establish a specification for the amount of reference service which should be available in public libraries, recommended a sliding-scale ratio of reference personnel to size of population served.⁴¹ Most recently, Wheeler and Goldhor, drawing on their extensive personal experience, have made a number of specific recommendations with respect to reference staffing:

. . . a library with 12 employees should have an organized reference department and service with at least 1½ trained librarians devoted to the reference function . . . for small libraries with less than five on the staff, one-eighth of the total staff time should be devoted to adult reference service . . . for staffs of ten to eighty, one-eighth of the total staff time should be assigned to reference. For staffs of eighty or more, one-seventh of the staff should be assigned to adult reference duty . . . in the informational services . . . at least 70 to 75 per cent should be professionals.⁴²

Thus far there appears to have been no attempt to apply the above yardsticks to the assessment of reference performance in actual libraries, at least in groups. Individual institutions may have attempted self-ratings along these lines, and a study of annual reports might reveal greater activity in assessment than is evident from the periodi-

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cal literature. However, a safe guess would be that up to this point such assessment as has been made of reference service has been based on wholly impressionistic judgments, not backed by quantitative data. Even judgments of this type are scarce indeed. Reference service, like any other aspect of library work, may be good or poor, but try to find someone who flatly says so! All in all, the evaluation of reference service thus far can best be depicted as a closed circle of futility: not enough quantitative data to support an accurate rating, an unwillingness to venture a judgment without such support, *ergo* nothing said at all!

Just the same, there *is* a good deal to be said, if not with unsailable certainty, then at least with a modest degree of confidence; if not regarding the value and impact of reference service in all its aspects, then at least with respect to the dimensions and character of its chief element: the information service. Although Bundy's survey is the only one to encompass a sizeable group of American libraries, the findings reported in the small-scale studies are consistent enough to add together into a composite picture. Here then, in summary form, is what two generations of measurement can tell us about reference service in American public and university libraries:

1. Almost all American libraries do reference work, but from the purely quantitative point of view it is not a very important part of their operations. Only the larger public and academic libraries may be counted upon to have a full-time, trained, reference librarian; in the smaller libraries reference responsibilities are more likely to devolve upon the circulation staff as a subsidiary part of its duties.⁴³ Larger libraries also are apt to disperse reference responsibilities, notably among departmental libraries in universities and among subject departments in public libraries, but they will usually also have one division specifically designated as the reference department.

2. In either case, the proportion of total staff time given over to reference service is small: from 6 to 8 per cent in the three studies reporting such data.⁴⁴⁻⁴⁶ Technical service and circulation staffs are almost certain to be several times as large as reference staffs, and, in comparing the volume of transactions, the number of reference questions handled is likely to be far smaller than the figure for books loaned.⁴⁷

3. This relatively small work load probably stems from the fact that

the public library's public is by and large unaware of or uninterested in the availability of information service. Only a tiny minority of the people questioned in the Campbell and Metzner study apparently thought of turning to the public library for information,⁴⁸ and a Michigan library found that 50 per cent of the people using the library did not even know that they could get questions answered by telephoning the reference department.⁴⁹

4. The clientele that does make use of the public library's reference service is by no means representative of the community at large or even of the library's public. The reference clientele is younger, better educated, and has a much higher proportion of men.⁵⁰ In the branch libraries, the great majority of reference users are high school students doing school-related assignments. In the central libraries, college students, business firms, and men seeking information for occupational use predominate, although the demands of women's organizations seeking help with program planning may be a significant factor in the smaller libraries' reference load. The percentage of individuals seeking advisory service for personal reading programs is always very small.

5. What does this specialized clientele want from reference librarians? Most frequently—indeed, by an overwhelming majority—just two things: directions and the answers to factual questions. Many reference librarians no longer count directional queries on the logical ground that they do not represent professional accomplishment, but in the libraries that do count them they seemingly constitute a good half of the total number received.⁵¹ Which clear fact has led a number of librarians to recommend or actually institute the greater use of signs and clerks to economize the time of the professional staff.⁵²

Of the reference questions proper, the great majority, perhaps 90 to 95 per cent, are of the "ready reference" type, answerable in ten minutes or less. Most of them come across the reference desk, but an increasing proportion now are being received by telephone, and some of the largest public libraries have set up special telephone inquiry collections and service arrangements.⁵³ Public library reference departments are, at least occasionally, willing to give much more time—up to an hour or more—for individual inquiries, but the proportion of staff time devoted to such "search" or "extensive" service is still very small. Academic libraries are generally prepared to give extensive assistance to faculty members, but seldom to students;

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for the latter, "guidance" is considered more appropriate than direct information service.

6. The questions posed to reference librarians in public libraries are potentially of infinite variety, as any number of journal articles have reported. Nonetheless, in the various public libraries where they have been classified by subject, they are seen to concentrate heavily in the social sciences (D.C. 300's), history and biography (D.C. 900's) and the sciences, pure and applied (D.C. 500's and 600's), and for information relating to the present and near past at that. The traditional literary or liberal arts background of reference librarians may therefore be inappropriate to their tasks.

Similarly, the traditional emphasis on close knowledge of "reference books," as represented by the titles listed in Mudge-Winchell, is seen, from the data on sources consulted by reference librarians, to be questionable.⁵⁴ Reference librarians do answer a sizeable proportion—perhaps half—of the questions by means of reference books,⁵⁵ but most of these from a very small, inner group of "core" titles: the encyclopedias, dictionaries, and almanacs. For the other questions they range rather widely: periodicals, the "stack collection," government publications, vertical file materials, and special indexes compiled within the department.

Assuming, of course, that the libraries have such materials, which assumption is probably not justified except in the case of the larger libraries, Bundy has shown that in "over half of the [public] libraries, the library patron would have access to information in non-book form only through the *Reader's Guide*. . . . Only in the large public library can one expect to find ready access to publications of the United States government, to the extensive materials published in pamphlet form . . . to information in business and education journals or to periodicals issued abroad."⁵⁶ The college libraries, where reference collections were checked against Mudge-Winchell or Shores, generally made a better showing, but did not possess a majority of the titles checked. Even so large and esteemed an institution as the Los Angeles Public Library did not have strong holdings of foreign language reference books.⁵⁷

A most interesting problem with respect to reference librarians' use of sources in reference work is still unanswerable from the quantitative findings available thus far. In view of the resistance offered by reference librarians to proposals to limit the information to be fur-

nished on catalog cards, definite data on reference librarians' use of the card catalog would be most welcome. We do have some hints that reference librarians actually "find the answer" in the card catalog in only a very small minority of cases,⁵⁸ and probably more often than not do not even have to consult it in their searches. However, since no investigation seems to have centered on this specific point, the data are inconclusive.

7. While the work of answering questions has received the lion's share of attention in the studies under consideration, it does not, seemingly, account for the major share of the reference librarian's time. Budington found that only 37 per cent of the reference librarians' time at The John Crerar Library went into "direct public service," the remainder going to such duties as book selection and administration, photocopying and clerical operations.⁵⁹ The Los Angeles Public Library survey of 1949 found that 41 per cent of the eleven public service departments' time was spent on direct service to the public.⁶⁰ In an analysis conducted at the Montana State University Library, some 47 per cent of reference man hours were available for desk duties, and these probably included supervision of the reference reading room.⁶¹ It is perhaps no wonder that in a number of instances surveyors have specifically recommended that the time devoted to "behind-the-scenes" activities be reduced in favor of increasing the proportion of time devoted to direct service to the public.⁶²⁻⁶⁴ How "public," indeed, are public service departments?

8. A much more important question is: how effective are they? One clue to the answer comes from the several studies that have reported the percentage of questions to which reference librarians claim to have found satisfactory solutions. This figure is consistently very high: 99.71 per cent at the Los Angeles Public Library; ⁶⁵ in Cole's group of 13 libraries, 96 per cent, 91 per cent, and 88 per cent for public, college, and special libraries respectively; ⁶⁶ in the Evansville Public Library, 96 to 97 per cent.⁶⁷

The view from the other side of the desk is much the same. A number of studies have attempted to ascertain the opinion held by the reference clientele regarding the service received, and the results could hardly be bettered by paying for testimonials. At the University of Michigan Library, 54 per cent of the respondents rated the reference service as "excellent," 37 per cent as "good" and only 1 per cent as "poor." ⁶⁸ At the Los Angeles Public Library, only a very minute frac-

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tion found criticism with staff or its service.⁶⁹ Returns from a questionnaire to faculty members demonstrated “. . . a high regard for the effectiveness of the Reference Department” of the Columbia University Library.⁷⁰ The great majority (87.1 per cent) of students found the reference service “satisfactory” at the Indiana University Library.⁷¹ More people “got what they wanted” from the reference department of the Enoch Pratt Free Library than they did from any other department.⁷² Only 3 per cent of the New York Public Library patrons failed to receive the required information.⁷³ “As far as the service rendered by the librarian is concerned,” reported Campbell and Metzner on the basis of their national survey of public libraries, “the reaction is almost entirely favorable, and almost two-thirds are strongly favorable.”⁷⁴ Not an unwelcome record!

Taken together, the foregoing traits represent a kind of first sketch for the American reference portrait. Derived as they are from only a handful of observations, all of these features are still subject to change or erasure as further study brings closer knowledge. These characterizations might, in fact, be best considered as working hypotheses, and there is an ample field for further investigation simply in the work of substantiating these tentative conclusions.

A much larger field for quantitative study lies in the filling-in of additional features, and it is encouraging to report on some of the ventures currently in progress. Louis Shores, a veteran investigator in this field, is attempting to work out a statistical representation of reference work that would parallel the familiar and useful “service unit” concept used in the *A.L.A. Classification and Pay Plans for Libraries in Institutions of Higher Education*. His proposed “reference service unit” would, by means of weights assigned to the different reference activities, “. . . provide a common unit of measure for all reference services in every type of library”⁷⁵ and thereby facilitate comparison and evaluation.

The A.L.A. Reference Service Division’s Committee on Standards has drafted a plan to evaluate reference services on a scale of “index numbers.”⁷⁶⁻⁷⁷ Under this plan, correlation would be sought between ranking of libraries in respect of a given measure or “indicator,” such as the number of reference questions answered per man hour of reference time, and the ranking of the same libraries on an overall reference rating derived from the pooled judgment of experts. If certain “indicators” are found to obtain a high degree of correlation, they may then provide a convenient “index” of reference performance.

The proposals of Shores and of the R.S.D. Standards Committee would, if successful, provide a kind of shortcut to the evaluation of reference service. They may not work at all or be generally applicable, of course. In any case, they would be no substitute for the knowledge and understanding that derive from detailed case studies. Reference librarians will therefore welcome the study, now under way by A. Venable Lawson, of the reference service operation of a small group of comparable Southern university libraries.⁷⁸

Such case studies would, in fact, seem to offer the most fruitful field for further investigation. Despite the existence of a voluminous literature on reference work, there are practically no studies offering full details in quantitative form on the reference operations of a library. Goldhor's brief "reference service analysis" of the Evansville, Indiana, Public Library might well prove a useful model for such studies, (20c) although they are even more urgently needed for university, school, and special libraries than they are for public libraries.

This is not to say that the search for convenient and reliable measures should not go on. Quite a number of these have, in fact, been adumbrated in the literature, and one wonders why they have not been taken up. Miles and Martin, for example, suggested the following: the ". . . number of persons instructed in the use of bibliographic aids per thousand patrons . . ." and ". . . reading courses started and completed per thousand patrons."⁷⁹ McDiarmid thought that detailed interviews with reference patrons regarding their use of the reference department would be useful.⁸⁰ Hutchins, pointing out that ". . . there has been too much groping in the dark because of impatience to gather statistics before deciding exactly what are the significant data," stressed the importance of clear statement of objectives or criteria as the necessary preliminary to the assessment of materials, personnel, and organization.⁸¹ It may be noted in passing that only the Enoch Pratt Free Library seems to have published such a statement of reference policy.⁸²

Still other potentially useful approaches come to mind. With respect, first of all, to the area of the *organization and performance of reference work*: reference librarians are as susceptible to rating as is any other professional group. Foreign language knowledge, advanced degrees in subject fields and in librarianship, and years of reference experience are all seemingly relevant to reference competence, and these qualifications could be expressed in quantitative form, preferably on a per capita basis. The number of reference man hours per capita of

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population served, and more particularly of "desk" man hours, would be revealing. The use made by reference librarians of the card catalog, e.g., in what percentage of searches and for what kinds of information, needs amplification, as does the reference librarian's use of foreign language materials in answering questions. Much more data on the apportionment of reference librarians' time to their various duties would be welcome. And standardized tests of reference knowledge, comparable to those used for appointment or promotion in many fields, are by no means out of the question.

With respect to *reference collections*: evaluative procedures in this field seem relatively straightforward. If libraries of a similar size and type would be willing to make known their percentage holdings of titles in appropriate bibliographies, norms could easily be established and standards would not be far behind. Perhaps more important might be the ascertainment of the percentage of titles acquired from appropriate (to the type of institution) selected lists of current reference publications, such as the *New Reference Books at U.C.L.A.* in the case of large university libraries. The percentage of abstracting and indexing services subscribed for might be still another useful indicator.

With respect to the *value of the reference service or its impact*: the worth of the reference service to its users is the most intangible of all aspects, as it is also the most important. Nonetheless, an approach can be made. Reference librarians have, in large part, their reason for being in the time they save their patrons in information searches or in the fact that they can furnish information which the unaided patron could not find at all. It should therefore be relevant to ascertain how the patrons fare, in time taken and in the accuracy of the information obtained, on actual questions, as compared with reference librarians' performance on the same questions. If "real" patrons of various kinds cannot be persuaded to take such a test, library school students at the beginning of their courses could constitute at least one test group.

No particular claim can or need be made on behalf of the above suggestions for further investigation. They serve merely to represent the kind of continued effort toward more revealing description and assessment of reference service which is sorely wanted. The firmest single conclusion that can be made with respect to the present situation is that reference librarians, in failing to provide the means for accurate judgment on their place and contribution in library service, run the serious risk of having their work undervalued or ignored. It is surely no coincidence that the reference service claims so small a

space, so vague a statement, in the reports of administrators and surveyors; that it is also largely glossed over in the national plans and standards. A harsh fact of library life seems to be that if it cannot be counted, it does not count. With all the difficulties in its realization, the measurement and evaluation of reference service will call for much ado, but it *is* about something.

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