Research and Librarianship: An Uneasy Connection

MARY JO LYNCH

In the first textbook written to provide An Introduction to Scientific Research in Librarianship, Herbert Goldhor identified one of the major difficulties involved in talking about research: the many denotations and connotations of the term. Goldhor wrote:

Research is a word which has such desirable overtones that people use it in ways which are quite dissimilar.... Everyone wants to share in the reflected glory of the term and no one can stop people from using the word in any way they wish.¹

Although Goldhor's book is devoted to a very specific meaning of the word, he begins with a broad definition: "research is any conscious premeditated inquiry—any investigation which seeks to increase one's knowledge of a given situation."² Given that definition, it is clear that people doing many different things are justified in calling their activity research.

At least four general categories can be used to describe those many different activities: practical research, bibliographical research, scholarly research, and scientific research. Those four categories have been created by this author and are not universally recognized. Many will disagree, at least to some extent, with the description of the categories which follows. However, this categorization is an attempt to separate the very different meanings of a term (research) frequently used without any modifier. This common practice leads to confusion, especially

Mary Jo Lynch is Director, Office for Research, American Library Association, Chicago, Illinois.

SPRING 1984 367
among librarians, who deal almost daily with research of all types. The following paragraphs explain how the categories differ and how each is related to librarianship.

Meanings of "Research"

Practical research includes activities of shoppers, stock brokers, investigative journalists, house hunters, entrepreneurs—anyone with a problem to be solved who sets out to gather information needed in the solution. The information they seek is sometimes in published documents that are easily available, but sometimes it is in official or private records that are hard to get or interpret. It may also be in the minds of people who may or may not be willing to reveal what they know. The work involved in doing this kind of research lies in ferreting out information wherever it is and applying it to the problem at hand. Libraries are sometimes a resource for the person doing this kind of research, but there are many other resources.

The second large category, bibliographical research, is much more closely related to libraries. This type of research is concerned with first identifying previous work related to the problem at hand and then submitting it to some form of analysis in order to arrive at a clearer understanding. Thus the investigator arrives at conclusions by reordering the thoughts of others. This is what high school seniors and college freshmen do when they write the required term (or research) paper. It also includes work done by more advanced investigators to find out what is already known about a topic—often in order to establish a base upon which to build a study which investigates the unknown.

Research in the bibliographical sense is the topic of numerous books and articles describing "how-to-do-it." Often this kind of work is called "library research," a practice which causes confusion between research done in libraries (bibliographical) and research about libraries which falls into our third category, scientific research.

Scientific Research

There are numerous scholarly books and articles on scientific research and almost as many definitions. Scientists and philosophers or historians of science, are fascinated with the problem of defining what scientists do to establish new knowledge. Jesse Shera's classic essay on "Darwin, Bacon, and Research in Librarianship" written for an earlier issue of Library Trends, describes it this way:
Shorn of its mysticism and its methodology, research since (at least) the time of Bacon has been an answering of questions by the accumulation and assimilation of facts which lead to the formulation of generalizations or universals that extend, correct, or verify knowledge. Described in terms of its sequential acts, research is an intellectual process whereby a problem is perceived, divided into its constituent elements, and analyzed in the light of certain basic assumptions; valid and relevant data are collected; hypotheses (if any) are through objective testing rejected, amended, or proved.

Implicit in this quotation but worthy of explicit statement is the understanding that scientific research discovers new knowledge. Practical research and bibliographical research, on the other hand, aim at finding and analyzing existing knowledge. Scientific research is the topic of this issue of Library Trends, but first we must consider a fourth type—scholarly research.

Scholarly Research

This research has characteristics of both bibliographical and scientific as those two were just defined. Scholarly research, typically done by humanists, is similar to bibliographical in that it is often based on previously published work related to the matter at hand. The analysis goes far beyond reordering the thoughts of others, however, and involves disciplined inquiry which enables the scholar to make an original contribution to the knowledge base of a field. Although data are not collected from nature, as is the norm in scientific research, data are collected and organized in an objective way and analyzed according to systematic principles, thus relating this work to that which is recognized as scientific.

Connections to Librarianship

People doing practical research often come to the library for help or call to ask questions. Most of the volumes in a typical reference collection are intended to aid such investigation and staff who perform it are sometimes called "research librarians."

Bibliographical research is done primarily in libraries and most often in libraries of colleges and universities. To assist students in performing it well, the service called Bibliographic Instruction (BI) has been developed within academic libraries during the last ten or fifteen years. Bibliographic instruction means conveying an understanding of how information is communicated through published sources found in
libraries. It is usually provided in connection with courses in specific disciplines and focuses on helping students to comprehend the uses of and relationships between certain kinds of information sources.

Since the winter of 1983, BI practitioners have had their own journal, entitled Research Strategies. The choice of that title is, perhaps, unfortunate. Although the editors specify in their first editorial that the focus will be on "the process of information seeking within the library context," many in the academic world think of "research strategies" in connection with research methodology in the scientific or scholarly sense—our third and fourth categories. An editorial in the second issue of Research Strategies indicates that others have questioned this use of the term although the editors insist it is not valid to object. The matter cannot be explored further here, but it is a good example of the confusion in the library world regarding the meaning of research.

The problem of multiple meanings intensifies when one moves to the third general category, scientific research. There are at least three links between this activity and librarianship. First of all, people doing research in the scientific sense of the term use the library to do the practical and bibliographical research which is often preliminary to it. Secondly, the library is a storehouse of the results of scientific research. Finally, the library is an object of study for scientific researchers.

Ray Carpenter's excellent volume on Statistical Methodology for Librarians explains that one reason why librarians should understand the scientific research process, of which statistical methodology is an important part, is that they work with the results of scientific research:

As mediators between recorded information and users, librarians must be able not only to locate information but also to interpret or evaluate this information for patrons. Much information is in the form of or is based on research monographs, articles, or reports which the librarian must first identify and select and then be able to disseminate. By understanding both the language and the general principles, as well as the methods that make up this literature, the librarian can fill his or her role intelligently.5

This is true for almost all libraries but especially true in research libraries, so called because they have collections of such breadth and depth that they can support the practical and bibliographical research which is a first step in much scientific research.

Carpenter goes on to speak of two additional reasons why librarians need to understand the research process, reasons connected with scientific research about libraries:
Research and Librarianship

First, the librarian is a consumer of various data and studies them in order to better his or her professional performance or the services of the organization....Second, although the number may now be modest, librarians will increasingly be expected to be participants in research projects.6

Carpenter is quite sanguine about the role of scientific research in librarianship, but his perspective is not shared by all who write about library research in our day and is at variance with many who have expressed opinions in the past about scientific research and librarianship.

The results of scholarly research are also found in libraries, and scholarly researchers typically use the library more intensively than scientific researchers. Because more librarians are trained in the humanities than in the sciences, it is easier for librarians to understand how scholarly research is done. Because scholarly researchers are more likely to need books and periodicals as sources for their work, they are more likely to be supportive of library needs. These factors probably influence librarians to be more sympathetic to scholarly research than to scientific and may be important reasons, though unrecognized, why the incorporation of scientific research into library education and practice has been such a difficult process.

Historical Perspectives

Until the founding of the Graduate Library School (GLS) at the University of Chicago, scientific research methodology was not applied to librarianship. Sidney Jackson, who surveyed "Research" in the ALA centennial volume on A Century of Service: Librarianship in the United States and Canada noted that the early years of that century were largely devoid of scientific activity.7 This was, perhaps, to be expected since the German model of academic training, which stressed scientific method, was just beginning to be adopted in the United States.

The introduction of scientific research into the field of librarianship was initiated in 1923 by Training for Librarianship, Charles C. Williamson's Carnegie-backed analysis of library education programs. That study led to the founding of the Graduate Library School at the University of Chicago with one million dollars of Carnegie endowment:

Within three years the research style customary in the academic and professional world was unveiled to those in librarianship unfamiliar
The road was not smooth for the incorporation of scientific research into education for librarianship. A large part of the problem, and one that persists in some degree until the present day, is the lack of understanding in the library field as to what is meant by “graduate work.” The first dean of the GLS, George Works, explained this issue well in a 1929 speech to the Chicago Library Club:

"The Board of Education for librarianship has applied the term "graduate school" to any library school requiring college graduation on the part of those seeking admission. From a certain viewpoint, this is undoubtedly a legitimate use of the term. It is, however, a connotation different from that which the word commonly has in university circles. Graduate work means research, and research means extension of the boundaries of knowledge.... Manifestly, this is a very different objective from those that actuated the existing graduate schools as defined by the Board of Education for librarianship. Those schools are primarily concerned with passing on to their students a body of principles and practices that have been found useful in the conduct of libraries. The authorities of the University of Chicago were not interested in the establishment of a school of that type. They were interested in a library school only if it were to be a graduate school in the sense that its primary objective was the extension of the boundaries of knowledge relating to libraries and librarianship."

George Works left the GLS in a few years, partly because it was very difficult to build a graduate school of the character just described in the face of continued opposition from the field. Other deans tried, some with more success, some with less, but ultimately the vision of the Carnegie Corporation remains unfulfilled—that there would be at least one library school where the focus was on discovery of new knowledge through scientific research. Richardson makes this point subtly and Houser and Schrader make it more harshly. Although some would argue that Houser and Schrader are much too severe in condemning librarianship as a profession entirely lacking a scientific base and laying the major blame on failures at the GLS, few could claim that, in 1984, librarianship does have a solid conceptual foundation established through scientific research and a tradition of respect for and interest in it.

Why not? Several reasons have been offered in the years since the idea of applying scientific research to librarianship first appeared. C.C. Williamson’s Founder’s Day address at the Western Reserve University School of Library Science in 1930 praises the results of research in other..."
fields, complains that librarians neither conduct nor support research as they should, and offers two cogent reasons:

To my mind the real reason that there is so little scientific study of the problems of library service is that practically no librarians have been trained in scientific methods....Moreover, there has been, and still is, I believe, a deep-rooted prejudice among library workers against subjecting their activities to scientific scrutiny.14

More than fifty years have passed, but those reasons still have some validity. Thomas Childers explores library education and research in another article of this issue, and considers training in scientific methods. As for prejudice against scientific scrutiny, it is a hard statement to prove, but the record of research activity and support for it in librarianship, in the face of different conditions in other disciplines and professions, would seem to support the claim.

Relatives of Research

One reason for the uneasy connection between scientific research and librarianship is the prominence of several activities that can be considered close relatives of scientific research. Each of these activities has made contributions to what librarians know about their work. Jackson noted that much early work of a research-like character was "largely confined to current fact-gathering."15 That activity has continued through the years with several agencies engaged in counting how many or how often or how much of something occurs in libraries.16 Although fact-gathering outside the framework of scientific research is of limited value in extending the boundaries of knowledge in a field, it is often of immediate practical value and can sometimes be used in scientific studies if it is done with the care which scientific method requires.

Another type of investigation related to scientific research is the "service study," a type of work done by students and faculty at the GLS in the early days. Richardson mentions the service study several times in his history of the GLS and implies that the term meant assistance provided by GLS faculty and students to practitioners who were trying to solve problems in their institutions.17

The modern counterpart to the service study is the consultant report. Although financial aspects are quite different, the contrast with research is similar. Joe Hewitt has analyzed the differences:

In consulting studies someone with the appropriate expertise is commissioned to gather information relevant to a specific problem and to present an expert opinion on the solution to that problem based on
Mary Jo Lynch

the consultant's general knowledge and the specific information gathered for the study. Consulting is the very useful process of applying independent judgement to a problem, but it is not research, which applies rigorous methods of observation and analysis in a manner that allows the data to speak for itself.

Hewitt goes on to explain why the two types of study must not be confused by funding agencies:

A research approach to a problem takes a great deal more time than a consulting approach. Much longer segments of time must be dedicated to the design phases and to gathering data. The researcher must have greater latitude than the consultant in defining relevant factors. In large-scale studies the research problem itself may dictate a sequence and a pace that draws out the study over an extended period of time and research is rarely a useful approach to problems perceived to be urgent. Tight scheduling and pressure by the funding agency do not create an atmosphere that is conducive to sound research, although all of these conditions may well be appropriate to consulting studies.

A third close relative of scientific research is demonstration and development. Research is linked with demonstration and development in the major federal legislation currently providing funds for either activity in librarianship, Title II-B of the Higher Education Act of 1965. Michael Buckland believes that the close identification of research with demonstration development is one of the factors undermining research efforts in librarianship: "There is a heavy emphasis...on demonstration and development (seeking how to get things done better) rather than on basic research (seeking to understand things better)." Shirley Fitzgibbons comments on this problem in her article on funding for research.

Three kinds of studies have just been described which are not scientific research but are closely related to it, thereby implying that it is a simple matter to separate one from the other. That is not really true and researchers often differ as to what a particular piece of work should be called. Haynes McMullen has suggested that there are several factors which affect that decision and has devised an ingenious solution to the problem:

Let us think of one of the types of clotheslines often found in American backyards, consisting of a group of parallel wires or cords stretched between a pair of horizontal bars, each bar at the top of a post. We shall let one post represent non-research and the second post, research; each line will stand for a characteristic of research. Then, instead of deciding whether a particular investigation is or is not research, we will decide to what extent it meets the criteria for research.

374

Library Trends
Research and Librarianship

by fastening a clothespin at the appropriate place on each line. For example, if one line represents the relationship of data to conclusions, and if the conclusions at the end of a study are appropriately related to the data, then we should clamp a pin to that line at a position near the "research" end; if the conclusions rest, instead, largely on widely held but unproved assumptions the pin should hang near the other end. It seems to me that only the general configuration of pins will indicate to what extent a study constitutes research. We must name the lines but we must not expect to place a pin on every line when considering each piece of work. And we must not expect all pins to dangle at the research end.  

The Uses of Research

McMullen's clothesline image may cause the reader to wonder why it matters whether or not a study qualifies as scientific research. Goldhor would reply:

There are undoubtedly many ways by which a problem can be explored and knowledge accumulated, including intuition or the flash of insight, and serendipity or the discovery of truth by accident. However, the method of scientific research is...the one most likely to be effective and successful on the average and in the long run.

Although most scholars in the library field would agree that research in the social sciences (of which library science is one) can never lead to the kind of firm knowledge about reality which the natural sciences have achieved, most would also agree that scientific research is essential to librarianship.

The major reason cited by those who consider the matter, is that scientific research can provide the knowledge base which is the hallmark of a profession. Librarianship lacked that base when the GLS was founded and lacks it still. Since the last Library Trends issue on research, Goldhor has said so, and Lancour, and Ennis. Carpenter said it very succinctly in 1978: "Librarianship, at this point in time, lacks a highly developed systematic conceptual framework for explaining its various purposes and functions." No one has tried to refute these critics.

What would this systematic conceptual framework look like? Amusi Odi, in a recent critique of research in library and information science charged that "the sole purpose of research is the development of theory," which he then defined as "an internally connected and logically consistent proposition about relationship(s) between phenomena." Ben-Ami Lipetz criticized this view, citing his own study of
what *scientists* believe to be the important objectives of research. Lipetz examined writings of scientists about research and found they talked about six products: description, definition, hypothesis, explanation, prediction, and experimental technique. Odi’s response claims that he and Lipetz are talking about the same thing—that the functions of research are the functions of theory. The argument is mentioned here, not to settle it, but to suggest that although the phrase “knowledge base” may sound too theoretical for a practical field such as librarianship, it might actually be composed of elements which are much closer to reality: description, definition, hypothesis, explanation, prediction, and experimental technique.

The desired conceptual framework or knowledge base would help to justify the claims of librarianship for the status of a profession. What is more important, it could give practitioners a sense of what they are about “in cognitive rather than normative terms.” Finally, it would serve as a starting point for studies which would assist librarians in understanding their changing role in a changing world.

Such a knowledge base would have a powerful influence on the daily work of a librarian though it would probably be an indirect influence. Joe Hewitt, who spoke on “The Use of Research” in the 1982 conference-within-a-conference sponsored by the ALA’s Resources and Technical Services Division, explained why scientific research is often not of immediate assistance to the librarian in decision-making:

> Decision-making in libraries takes place within a complex environment of institutional traditions, practices, and policies. It takes into account the particular qualifications, attitudes, and opinions present among the staff who must carry through with decisions, and it is critically affected by organizational and resource constraints. In short, libraries are a severely restrictive environment for applying generalized research results in their pure form.

Hewitt goes on to suggest that this situation is regrettable for three cogent reasons and concludes that, “it would clearly be in the best interests of the users of libraries and of librarians if the findings of research could become a larger and more visible element in the decisions we make in managing libraries.” Finally, Hewitt describes five improvements which must be made before research can be of more practical value to practitioners. The last of these five is particularly appropriate for mention here: “The need to acquire a stronger empirical base for understanding the interaction of research and practice in librarianship.” Hewitt found little previous commentary, let alone research, on this topic.
A beginning might be made by exploring the extent to which attitudes and methods of scientific research have been used by practitioners in gathering and organizing data to solve practical problems, to conduct what has been called "in-house research." Hewitt specifically excluded this, what he calls "quasi-research," from consideration in his speech though he suggested that it "probably plays a greater role in our day-to-day work than published research," which is, presumably, generalizable.

Faculty Status

There is one aspect of practice where scientific research clearly is a major factor although in a very different way from the uses Hewitt was discussing. In some academic institutions librarians are expected to do research in order to gain or maintain faculty status. To succeed in this environment librarians need to understand scientific research and to appreciate the fact that many academics do not really accept any other meaning of the word. George Works was quoted earlier explaining that research means "extension of the boundaries of knowledge." Book reviews, literature surveys and annotated bibliographies, even if scholarly and published, may substitute for research on some campuses. But in many places they are not accepted.

There is no published evidence that academic librarians have failed to gain tenure or promotion because they did not conduct scientific research. However, there is some evidence that published studies conducted by academic librarians are increasingly following the scientific model. Soon Kim and Mary Kim analyzed articles published in College & Research Libraries from 1957 to 1976 for a paper at the Boston Conference sponsored by ALA's Association of College and Research Libraries (ACRL). In comparing the first decade to the second decade they found such changes as:

Only 15 percent of the articles of the first decade were quantitative in nature, while 43 percent of the second decade articles were classified as quantitative studies....Twenty-seven of the later studies specified the sampling strategy...while only 18 percent of the earlier studies described their sampling strategies.37

Statistical techniques such as analysis of variance, multiple regression and factor analysis did not appear at all in the first decade whereas they did appear, albeit rarely, in the second.

A study of all the papers presented at the Boston Conference is less optimistic about the research capabilities of academic librarians.
Coughlin and Snelson, using a technique developed by Atherton et al. to assess research in library and information science, analyzed the Boston Conference papers to answer this question:

Did the papers presented at the first ACRL conference follow the norms established for the scientific or scholarly papers in other disciplines? The use of the two adjectives, scientific and scholarly, is intentional. Scientific here means papers based on the scientific method and scholarly here will mean papers based on the research traditions of humanists.

The investigators found that of the 66 papers, only 33 percent were research and they concluded that, “instead of adopting the standards of scientific papers used by other disciplines, ACRL has used less stringent criteria for its conference papers.” They suggest ACRL take steps to increase the amount of research at future conferences, noting that, “if we do not...we handicap the ongoing task of putting teeth into our various status statements.”

Professional Organizations and Research

Although evidence has been cited that library practitioners have not always been enthusiastic about research, the current structure and programs of professional organizations in the field shows some evidence that research is considered important in 1984. The American Library Association (ALA), the Special Library Association, the Medical Library Association and the American Society for Information Science all have committees concerned with research. Within the American Library Association, the largest of these organizations, many of the eleven divisions mention responsibility for research in their constitution and bylaws and many also have research committees serving either the division as a whole or one of its sections. Several ALA divisions have columns about research in the division’s journal or newsletter. ALA has appointed a Committee on Research and also has a membership unit exclusively concerned with research, the Library Research Round Table (LRRT), and a unit which has research as a major interest, the Library History Round Table.

Annual conferences of the library organizations frequently feature research. At ALA's annual conferences, for example, LRRT traditionally sponsors a series of “research forums” where research results can be presented formally. LRRT’s information exchange suite provides a place for less formal discussion of research as do poster sessions sponsored by the general conference planning committee.
Association of School Librarians has sponsored its own research forum since 1974 and an annual research forum is often sponsored jointly by the Association for Library Services to Children and the Young Adult Services Division. All of these forums plus programs sponsored by other divisions for presentation of the results of research relevant to the division’s interests are included in a list of “Meetings Related to Research” prepared and distributed annually by the ALA’s Office for Research and the Library Research Round Table.

Despite the membership interest in research just described, ALA’s ambivalent attitude toward the role of research in the association is evident in the history of the association’s Office for Research (OFR). Established in 1972 following a recommendation of the “Policy Statement of the Role of Research in the American Library Association” adopted by the ALA Executive Board in 1970, OFR had a diffuse charge which included such phrases as “serves as a focal point for the many research interests...within ALA” and “translates unmet needs into active programs.” Closing OFR has been recommended by the Committee on Program Evaluation and Support (COPES) or the Executive Director at least three times since it was established. Budgetary constraints were the motivating factors. Because the Committee on Research sensed confusion among ALA leaders about OFR’s mission and nature, the Committee on Research drafted a new and much more practical charge to the office which was approved in January 1984 by the ALA Executive Board. The new charge reads as follows:

1. To collect, analyze and interpret data about the membership of ALA and users of ALA products and services on an ongoing basis for organizational decision making.

2. To collect and/or promote the collection of statistics about libraries and librarians so that ALA and other organizations will have pertinent and consistent data available to them.

3. To monitor research related to libraries and disseminate information about such studies to the profession.

In carrying out these functions the Office for Research will provide advice regarding research and statistics to the Executive Board, Council, and other units of ALA requesting such advice.

It remains to be seen whether or not the new charge will enable OFR to develop a program which ALA is willing to support, thereby institutionalizing research as a significant part of librarianship’s major organization.
Agencies Conducting Research on Libraries and Information Services

In another part of this issue, Thomas Childers describes the role of schools of library and information science in conducting research. But this work is also done in many other places. Guy Garrison provided a systematic analysis of research on public libraries conducted in the 1970s for a presentation to LRRT which was later published in *Public Libraries*. Garrison was interested in the "demographics" of the research which led him to explore such questions as "who did the work" and "where it was done."47 Unfortunately, this has not been done for other areas of research in library service. Clues are available, however, in two annual sources—the *ALA Yearbook* and the *Bowker Annual of Library and Book Trade Information*. Since 1976, an article on "Research" has been included in the *ALA Yearbook*. Written by a different expert each year, the article regularly includes tables showing grants for research made by the Department of Education, the National Library of Medicine, and the National Science Foundation. Usually tables are arranged by name of the institution conducting the award and include the name of the principle investigator, the topic and the amount awarded.

Since 1980, Mary Jo Lynch has written an article for the *Bowker Annual* on "Research on Libraries and Librarianship" covering work done in the previous year. Examination of these two sources reveals that research in the field is conducted by at least four different agencies in addition to schools of library and information science: (1) other university departments or schools, (2) libraries of various types, (3) nonprofit organizations, and (4) commercial research firms.

The commercial firm which does much of the work in this field, King Research, Inc., was covered by a feature article in the September 1980 issue of *American Libraries*.48 Except for that article, there is little commentary in library literature about the various agencies conducting research in the field. There are probably two reasons for this: the volume of activity is not great enough to generate comment, and librarians in general are not very interested in where or how research is done.

The Future

What does the future hold for research in librarianship? Some would say "nothing" because libraries will disappear, as newer ways to communicate information supplant the recorded forms in use today. It seems more likely, however, that librarianship will continue its trans-
Research and Librarianship

formation into whatever name is given to the field for professionals who mediate between information in any form and the people who need to use it.

Because the environment out of which those needs will arise is becoming more and more complex and the forms of conveying information are becoming more diverse, it seems evident that librarianship, by whatever name it is called, will need the understanding of information and its uses which only scientific research can provide. Fortunately, there is a growing body of people concerned with libraries and information services who are educated to understand research and trained to conduct it. Fortunately, also, there is a growing appreciation among practitioners of the value of research. In the short term, none of what we have today is enough and leaders of the research community complain that improvements must be made. In the long term, however, the field is far advanced from where we were fifty years ago when the Graduate Library School was struggling to be born at the University of Chicago.

The November 1980 issue of the Journal of the American Society for Information Science featured Laurence Heilprin's article on "The Library Community at a Technological and Philosophical Crossroads: Necessary and Sufficient Conditions for Survival." Heilprin explained the two conditions for survival as follows: "In order to attain control over its own destiny the library community must keep its own members up to date educationally; and beyond this,...[must] perform the research that alone creates and keeps leadership in its field.49

Heilprin believes that unless appropriate and sufficient research is conducted, the library community will not be able to transform itself but will be absorbed by other groups that will take over the information function for society. The challenge is clear: the connection between research and librarianship must be changed from one that is uneasy to one that is firm. To do so, leaders in the field need to pay careful attention to several factors: to the numerous meanings of the word research and the different ways each kind of research affects librarianship; to educational programs that develop an ability to understand and conduct scientific research; to publications and programming that discuss work in progress and disseminate final results; to increasing the availability of funding; and, finally, to the incorporation of a research perspective into the way librarians think about what they do.
References

2. Ibid., p. 7.
6. Ibid., p. x.
8. Ibid., p. 345.
13. For a presentation of one conceptual foundation see, Buckland, Michael K. *Library Service in Theory and Context.* New York: Pergamon Press, 1983. (Buckland cites research as he constructs his theory, though he does not talk about the need for more research.)
19. Ibid.
23. Ibid., p. 2.
Research and Librariartship


33. Ibid., p. 131.

34. Ibid., p. 124.

35. Works, "The Graduate Library School."


40. Ibid., p. 23.

41. Ibid., p. 25.


43. Mary Jo Lynch, personal communication to the Steering Committee of the Library Research Round Table, 15 Aug. 1983 (she reported abstracts of poster sessions and estimated that 25 percent of the poster sessions at the Los Angeles Conference in 1983 reported on research).

44. See also, ALA Office for Research, Current Research Interests, p. 3; or American Libraries 3 (June 1972): 629-31.


This Page Intentionally Left Blank