REFERENCE THEORY AND THE FUTURE OF LEGAL REFERENCE SERVICE

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The literature of librarianship contains a number of attempts at developing a "theory" of reference service.1 Despite continuing interest in the problem of reference theory, however, librarians have been unable to reach a consensus either on a definition of library reference service or on a characterization of the activity. Consequently, an agreed-upon theoretical explanation of reference librarianship has yet to emerge.

As a member of a practice-oriented profession, the librarian's concern with theory development lies both in its intellectual interest and in its possible bearing on his or her daily activities. In a discussion of attempts to develop a theoretical structure to explain the entire phenomenon of librarianship, Lewis Stieg traced the librarian's interest in theory to the assumption that "there is usually a gap, and often a very considerable gap, between the theoretical description of what is being done and what is actually being done, and there is [a] widespread feeling that neither is very satisfactory."2

Some commentators who have written specifically on reference theory have provided similar justifications for their concern with the topic. James Rettig stated that a "theoretical understanding of the reference process" is necessary to judge the performance of reference librarians and to help them understand why they do what they do.3 Robert Wagers argued that reference work encompasses "an extremely complex range of experiences"; therefore, both fledgling and experienced reference librarians must understand the theoretical structure of reference work to practice their discipline.4

Other writers have suggested more urgent reasons why the profession needs a theory of reference service. In the mid-1970's, Frederick Holler saw a need for theory to assist reference librarians struggling with the ever-enlarging store of recorded information, its complexity, and the increased difficulties of retrieving it.5 At about the same time, Charles McClure cited the profession's failure to agree on a

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4. Wagers, supra note 1, at 265.
5. Holler, Toward a Reference Theory, 14 RQ 301, 301 (1975).
basic theory of reference as one reason behind the lack of community support for
and understanding of the role not only of reference librarians but of the library
itself.  

Holler’s and McClure’s concerns are no less real today. These concerns help
explain why developing a theory of reference service remains important and why
articulating that theory may be of crucial importance to the future of the profession.
In the 1980’s, not only does the body of recorded information continue to grow at
an exponential rate, but the forms and sources of this information seem to be chang-
ing equally rapidly. The increasing availability of both bibliographic and full-text in-
formation in electronically accessible formats and the growing possibilities for direct
end-user access have caused some commentators to question the future need for in-
termediaries in the information retrieval process.’ Unless the continuing significance
of the librarian’s role is clarified, future information seekers may bypass reference
librarians.

This article surveys past efforts to formulate a theory of reference service and
considers the relative utility of those endeavors in a period of rapid change.
Although there have been few efforts to develop a reference theory specifically ap-
licable to law librarians, the implications for law librarianship of various attempts
at general theory building are discussed as well. The final section considers the likely
effects of current trends in information technology on the future of the legal
reference librarian. The focus throughout the article is on reference service in the
law school library.

I. THE REFERENCE THEORISTS

Most writers on reference theory have approached the topic in terms of deter-
mining an appropriate “level” of reference service. Usually these writers consider
three possible levels of service. Although precise labels and nuances of definition
vary among the authors, this article refers to the three levels as “instructional,” “in-
formational,” and “situational.” John Mark Tucker has described the levels as
follows:

Instructional. The purpose of the reference librarian is to teach the user to help
himself.
Informational. The patron does not want instruction but information, and it is
the responsibility of the reference librarian to retrieve it.
Situational. . . . [T]he reference librarian cannot and should not provide complete
service but should exercise his professional judgment in providing information to
some and instruction to others. What he does in a given situation depends on his
particular library environment.

This approach to reference theory and the three-part classification originated in
a 1930 reference textbook by James Wyer, who called the three levels of service:
“conservative,” “liberal,” and “moderate.” Later, Samuel Rothstein would call
them “minimum,” “maximum,” and “middling.”

8. Tucker, User Education in Academic Libraries: A Century in Retrospect, 29 Libr. Trends 9,
19-20 (1980).
4-13 (1930).
Despite considerable agreement in the literature that level of service (however identified) is the way to develop reference theory, the approach has not led to consensus about which level is appropriate for a particular type of library. Continuing differences of opinion over the appropriate role of the reference librarian are found today in articles on what is known as the "information versus instruction debate" and also in professional concern over whether librarians should be considered teachers. For the reference librarian, the focus of the debate (and of the level-of-service approach to reference theory) is the question: Should I give the users answers, or should I educate the users to find their own answers?

Some writers have questioned whether level of service is an appropriate basis for meaningful reference theory. John Budd denied that the distinction between instruction and information is real. He argued that patrons frequently do not have specific questions in mind, that they often do not know how to ask for what they want, and that the distinction between providing information and providing instruction is not obvious. In his critical review of American reference theory, Robert Wagers argued that theories based on Wyer's service levels are mere assumptions and have created distinctions among reference activities where none existed previously.

Other writers have moved away from the level-of-service approach and have examined the reference process from perspectives free of its considerable ideological baggage. In perhaps the most enlightening approach, the essential functions of the reference librarian are grounded in his or her role as a communicator. In a 1974 article, Bernard Vavrek initially presented a communication-based theory, and James Rettig elaborated on this theory in 1978. Vavrek took the position that reference service is based on interpersonal communication. For Vavrek, the significance of the approach lay in its attention to the human elements of reference librarianship (the interactions between patron and librarian, rather than the librarian's knowledge of information sources) and in its practical implication that reference service is the link between a library and its public. If communication between librarian and patron is the heart of reference activity, then even "ancillary activities" that facilitate that communication can be considered part of reference service. Consequently, the theory covers not only direct information provision but also such supporting activities as preparation of bibliographies and development of programs for library orientation.

Rettig developed Vavrek's simple model to include all three levels of reference service as well as the elements of feedback and noise.

11. Compare Holler, supra note 5, at 308 (The skills of information retrieval should be part of the education of academic library patrons.) with McClure, supra note 6, at 208 ("[T]he major theoretical basis of the library is the dissemination of specific information . . . .")
13. E.g., Budd, Librarians Are Teachers, 107 LIBR. J. 1944 (1982); Schiller, Reference Service: Instruction or Information, 35 LIBR. Q. 52 (1965); Wilson, Librarians as Teachers: The Study of an Organizational Fiction, 49 LIBR. Q. 146 (1979).
15. Budd, supra note 13, at 1944.
16. Wagers, supra note 1, at 272.
18. Rettig, supra note 3.
20. Id. at 216. See also Budd, supra note 13, for examples of activities making up reference service.
Under Rettig's analysis, the expanded model demonstrates that the basis of reference service is interpersonal communication. In the reference process, inquiries are made of reference librarians because inquirers need information. However, because "information has variable meanings," the needs may be stated imperfectly or at least in different ways. Consequently,

[the type of service a librarian gives an inquirer in response to a particular inquiry should be determined by the type of information the inquirer wants, not by the librarian's allegiance to a level of service. Thus, the librarian must determine if the information a particular inquirer wants to fulfill a particular need at a particular time is (1) an information source, (2) instruction in the use of an information source, or (3) messages culled from an information source. In different situations the same inquirer may want a different one of these.]

Therefore, reference service is appropriately defined as an interpersonal communication process, the purpose of which is to provide a person who needs information with that information, either directly by culling the needed information from an appropriate information source (or sources) or indirectly by (1) providing the person with the appropriate information source(s) or (2) teaching the person how to find the needed information in the appropriate information source(s).

A communication-based theory of reference service shifts concern away from whether instruction or information provision is the appropriate role of the reference librarian. The theory concentrates instead on the librarian's human skills as a communicator who facilitates a patron's search for information. Thus, the communication-based theory de-emphasizes the long-standing debate over whether librarians are teachers while acknowledging that the reference librarian's role includes more than the retrieval of information for patrons. Both activities are legitimized with an emphasis on the importance of the librarian's participation in meeting patrons' needs.

II. REFERENCE THEORY IN THE LAW SCHOOL LIBRARY

Although few commentators have attempted to describe the activities of the law school reference librarian or to develop a special theory of legal reference service, law librarians have benefited from Morris Cohen's elegant statements of philosophy and goals for the profession. In a 1971 statement of principles, Cohen emphasized the law librarian's role as teacher of legal bibliography and the methods of legal research, noting that the teaching obligation applies both to formal instruction and to instruction done outside the classroom, including reference service. However, in discussing another of his principles, assuring access to material, Cohen seemed to question whether the law librarian's traditional reliance on an instructional approach would suffice in the future. In light of the continuing explosion of published legal material, he asked whether the existing means of access were adequate and predicted that "effective access to the materials of law . . . may depend on our ability to devise or encourage new methods of retrieval and research in law."

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22. Id. at 26.
24. Cohen, Towards a Philosophy of Law Librarianship, 64 LAW LIBR. J. 1, 2 (1971).
25. Id. at 3 (emphasis in original).
In a recent statement of goals for law librarianship, Cohen noted the effects of tradition and change on professional philosophy and proposed a reader services goal that specifies not only instruction in effective use of library collections but also assistance "in obtaining any information which may be needed . . . regardless of whether such information is presently within the library's collections."

Other current writers have also advocated a broadening of the traditional realm of legal reference service beyond provision of materials and instruction in their use.

Despite increased awareness of the need to act as information providers, academic law librarians continue to emphasize their instructional role. There are a number of reasons why this emphasis continues and why the instructional component must remain a significant part of any modern theory of legal reference service.

As part of a professional school, the academic law library's mission encompasses more than acquiring legal information and assisting library patrons in its retrieval. Law librarians have long accepted responsibility for training law students in the acquisition of some manual library and research skills.

The importance of an adequate library not only to the aspiring but to the experienced attorney has long been recognized. The law library (perhaps to a greater degree than other subject collections) contains the primary data needed for research in the discipline and is not limited to reports of research and finding tools. A number of years ago, Colin Tapper noted that the lawyer is more dependent on information, particularly printed information, than any other professional because, unlike other professions, "law combines a high rate of output of new information with the need to preserve and accumulate it for an indefinite period of time." Because the answer to a current problem may be found in a case decided as recently as last week and as long ago as several hundred years, the legal profession has seen the development of sophisticated indexing, retrieval, and verification systems that are designed for direct use by attorneys. The gradual development of a thick layer of finding tools between the researcher and information has created the need for instruction in using the tools themselves and in choosing among them.

It is possible that similarities among types of legal materials—primary, secondary, and finding tools—have made both formal and informal bibliographic instruction somewhat more effective in the law library than in the general academic library. Despite the number of American legal jurisdictions and the resulting variety in sources of legal information, the material is similar in format among the jurisdictions. Consequently, legal bibliography instruction may be more likely to impart research principles that the student can carry from problem to problem than is

27. Badertscher, An Examination of the Dynamics of Change in Information Technology as Viewed from Law Libraries and Information Centers, 75 LAW LIBR. J. 198 (1982).
28. This conception of the mission of the professional school library can be compared with that of the special library, which places greater emphasis on analyzing information and providing exact answers to specific questions. See Gasaway, Nonprint Works and Copyright in Special Libraries, 74 SPECIAL LIBR. 156, 157 (1983).
29. "The library is to us what the laboratory is to the chemist or the physicist, and what a museum is to the naturalist." Statement of Christopher C. Langdell, Harvard Law School Annual Report (1873-74), quoted in 2 C. Warren, HISTORY OF THE HARVARD LAW SCHOOL AND OF EARLY LEGAL CONDITIONS IN AMERICA 488 (1908).
general bibliographic instruction, which covers a variety of subjects and sources of information. Because law students have a focus for their research, they may be more receptive to training in broadly applicable research techniques than are students whose courses and research problems change frequently.

The content of legal materials and the uses to which they are put also contribute to the law librarian's tendency to provide instruction rather than direct information, even when asked direct questions at the reference desk. The librarian's concern over unauthorized practice claims has been adequately discussed in the literature.\(^{31}\) In dealing with a member of the public, the law school reference librarian will provide distinctly different responses to the questions "Can you help me locate a copy of *Roe v. Wade*?" and "What has the Supreme Court said about the legality of abortion?" For questions requiring interpretation of primary source information, instruction in how to obtain an answer is as far as the librarian will go. In such instances, the library cannot provide services at the informational, question-answering level.

Consequently, both institutional goals and the nature of the research materials require that legal reference service include a strong instructional component as well as an information retrieval component. It is also likely that providing formal research training and being perceived as instructors carry status implications for law librarians as they do for other academic librarians.\(^{32}\)

Despite the strong orientation toward instruction, direct information provision always has played a significant role in law school library reference service, particularly for certain patrons. Members of the law faculty frequently require and receive service of the sort McClure calls "the dissemination of specific information."\(^{33}\) Few faculty members interested in reading a case too new to have appeared in paper advance sheets prefer on-the-spot LEXIS training to having a copy of the opinion searched, printed, and delivered to their offices. Even if a professor observes the information retrieval process, he or she is more likely to remember that the answer was located and that the librarian was able to locate it than to remember the precise steps or sources used or to analogize from them to locate other information in the future. For many requests, especially ready reference questions or requests for information outside the usual legal research sources, the reference librarian can locate the answer faster and more effectively than any patron.

Therefore, instruction and information provision are both appropriate approaches to reference service in the law library. Adherence to one or the other as a desirable "level of service" will not provide an adequate basis for a theory of legal reference service.

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33. McClure, *supra* note 6, at 208. ("When people come to the library they do not want to learn about the methods and mechanics of bibliographic control; they want information.")
The communication-based theories seem more directly applicable to legal reference work, because they focus on what actually happens in the reference process and because they emphasize the significance of the librarian's role in that process. As an active participant who communicates with the patron, the reference librarian uses his or her special skills to determine how best to meet the patron's information need. In some cases, with some patrons, instruction in the use of the library and in the bibliographic apparatus of law is appropriate; in other situations, direct provision of the answer to a question is more efficient. In either event, the effectiveness of the process depends on the quality of the communication, not the posture of the librarian. The reference librarian is responsible for maintaining the quality of the communication, thus ensuring that the patron's information need is satisfied.

This emphasis on the librarian and his or her skills in interpersonal communication will be increasingly important in the future as the formats of research materials and the means of access to them change from print to some variety of electronic format.

The real question may be whether a communication-based theory or any other theory will justify the continued existence of reference service in a future where the direct availability of information to its users is much increased.

III. THE LEGAL RESEARCH PROBLEM

Neither law librarians nor other members of the legal profession dispute that technological developments are having a significant and continuing impact on retrieval of legal information. In contrast to the "conservative" image law librarians have within librarianship generally is the fact that perhaps no other discipline has as much of its primary and secondary research material available in full-text machine-readable form as does law.

However, computer-assisted legal research (CALR) in American law libraries continues to be used to supplement printed material rather than to replace it. In a recent article Igor Kavass and Howard Hood outlined some reasons for this duplication. Kavass and Hood noted the problems of providing access to material in libraries serving a large clientele. While discrete volumes of a reporter series can be consulted by a large number of patrons simultaneously, access to electronically stored material is limited by the number of terminals available. Most law libraries have at present only a single LEXIS or WESTLAW terminal or one of each. Subscription and hardware costs have prevented multiple terminal installations.

Reliance on CALR is also limited by the shallow depth and extent of the available databases. Although both LEXIS and WESTLAW are rich in recent federal law and in state case law, neither system includes full-text coverage of all published American decisions. The online libraries of state statutory and administrative material also are far from complete, few treatises are available, and the


35. See generally Brock, Law Libraries and Librarians: A Revisionist History; or More Than You Ever Wanted to Know, 67 LAW LIBR. J. 325 (1974); Cohen, supra note 26, at 194.

addition of periodical literature is at an early stage. Consequently, despite extensive coverage of recent case material and of federal law of all types, much material of interest to the legal researcher remains unavailable through either service. 37

There is also the problem of comparative costs. CALR remains an expensive method of research, and in some circumstances, it may be considerably cheaper to acquire a heavily used book or set of books than to consult the contents frequently online. 38 As a result, in the United States CALR is most heavily used as a finding device rather than as a source of text (except for cases too recent to be published or otherwise unavailable in a hardcopy reporter).

As Kavass and Hood noted, however, the use of computers is “an increasingly pervading legal practice” at firms of all sizes, with economics being the primary factor in a firm’s decision to computerize its research. Because the costs are high, larger firms have taken the lead in adding LEXIS or WESTLAW. Firms also are more likely than academic libraries to reduce subscriptions to printed copy as reliance on computers grows. 39 If at some point CALR comes to be accepted as a substitute for hardcopy research, the process will accelerate.

The costs for acquisition and storage of printed material continue to increase for both academic and law firm libraries, not only because of the growing amount of primary source material, 40 but because that material is published in a variety of packages in order to improve access to it. Because the primary sources of the law normally are issued and published chronologically rather than in a subject arrangement, access to the current state of the law is difficult. Consequently, publishers have developed a sophisticated indexing, organizing, and validating literature to make access possible.

The twentieth century’s explosion of statutory, regulatory, and case law, and the variety of new topics with which lawmakers were forced to deal led to fundamental changes in the American legal system. 41 This explosion also helped to show the inadequacy of traditional publication forms such as jurisdictional reporters, which, for an attorney forced to be a specialist in the complex world of American law, might contain relatively few cases of interest. The topical looseleaf service was devised in response to this problem and also in response to the growing impact of federal statutory and administrative law. It has proved to be an excellent, although costly, means of gathering and keeping current subject material from several sources. 42

The continued success of the format dramatizes several things about legal research. First, only a selected few of the thousands of published cases filling a law

37. Id. at 128. Both LEXIS and WESTLAW expand their coverage regularly. The only way to obtain an up-to-date listing of material available on either system is to make an online check because published comparisons of coverage are soon out of date. E.g., Wells, LEXIS and WESTLAW: The Strengths and Weaknesses, LEGAL REFERENCE SERVICES Q., Summer 1982, 51, 52, 57-61. As of this writing, neither service goes back further than 1965 for the case law of most states, although for certain states and for federal cases the coverage is deeper.
38. Kavass & Hood, supra note 36, at 128.
41. See G. CALABRESI, A COMMON LAW FOR THE AGE OF STATUTES 5-7 (1982).
42. For a brief history of the development of looseleaf services, see Neal, Loose-Leaf Reporting Services, 62 LAW LIBR. J. 153, 153-56 (1969).
library's shelves are relevant to a given problem. Second, as law librarians are only
too aware, practicing attorneys, not libraries, make up the primary market for law
book publishers.43 The potential of this primary market contributes to the rising
costs of maintaining large libraries as publishers compete with new services and
looseleaf treatises aimed at practitioners in the same subject specialty. Many services
are duplicative,44 and nearly all services consist in part of material already available
in the library.

Finally, the looseleaf service is designed to be used directly by the information
seeker—the attorney. Like most secondary source legal publications and other finding
tools, the services are intended to be “user-friendly.” Not surprisingly, both commer-
cial automated legal research systems were designed for direct use by attorneys. While
online searching of bibliographic databases typically requires a specially trained inter-
mediary, often a librarian, to perform searches, LEXIS and WESTLAW have en-
couraged lawyers to do their own searching. Not only is the software of both systems
extremely user-friendly, but both companies have promoted decentralized hardware
installation—LEXIS can be accessed through desktop UBIQ terminals and
WESTLAW through a variety of terminals and small computers. Current advertise-
ing for office microcomputers promotes the advantages of having a unit at each execu-
tive’s desk. Similarly, the CALR systems have been promoted as useful additions
to individual attorneys’ offices, thus lessening their dependence on a central library.

Although CALR continues to be viewed as a supplement to the traditional
means of researching the law, the mounting costs for maintaining both research
systems are a matter of growing concern in both firms and law schools.45 In an atmos-
phere of increasing automation in other areas of the legal profession,46 CALR,
with its user-friendly operations and expanding files of data, can be expected to
grow in importance outside the academic law library. If it does, a greater reliance on
electronically published legal information will develop in law school libraries as well.

IV. THE EFFECT OF ELECTRONIC PUBLISHING

The implications of expanded full-text electronic publication47 and distribution
of research results and of other new forms of scholarly communication are only
beginning to be explored.48 Despite the rapidly growing online availability of
material in full text,49 librarians have yet to resolve questions about the effects on

43. See Marke, The Gentle Art of Making Enemies or Law Book Publishing Revisited, 63 LAW
44. For lists of looseleaf services by subject, see M. COHEN & R. BERRING, HOW TO FIND THE LAW
45. Pye, Legal Education Past and Future: A Summer Carol, 32 J. LEGAL EDUC. 367, 373-75
(1982).
47. As used in this article, “electronic publication” of material refers to the materials’ availability
in full-text machine-readable form, stored locally or accessed from a remote location through a telecommunications network. For a description of the likely mixture of forms in an electronic publishing system, see I. POOL, TECHNOLOGIES OF FREEDOM 196-97 (1983).
48. See, e.g., Id. at 213; Haas, Computing in Documentation and Scholarly Research, 215 SCIENCE
how a switch to electronic publishing would affect the publishing industry, see Aveney, Electronic
Publishing and the Information Transfer Process, 74 SPECIAL LIBR. 338 (1983); Craig, The Decision to
Publish Electronically, 74 SPECIAL LIBR. 332 (1983).
the profession of end-user online bibliographic searching, let alone the potential effects of full-text searching and document delivery.

Brian Nielsen studied the development of online searching and argued that despite an initial enhancement of librarians' status, the long-range effects of technology may be "deprofessionalizing." Basing his argument on sociological research into the professions, Nielsen noted that one effect of the technology supporting online searching is to "systematize hitherto esoteric professional knowledge." As an example, he cited the "routinizing" effects of computer technology on such "high order" professional tasks as the preparation of subject bibliographies. The greater availability and flexibility of the databases minimizes the previous uncertainties of bibliography compilation. Not only is the process being routinized, but "a technological goal for online development is to create systems which substantially reduce the need for intermediaries." Present evidence of this tendency includes the database vendors' aggressive marketing to nonlibrarian researchers, publication of better documentation and thesauri, changes in online pricing policies, provision of online computer-assisted instruction, the development of common access languages, and the likely expansion of online initiated document delivery services.

In a later article, Nielsen examined the effects of technological developments on reference librarianship, focusing on the information versus instruction question. Again applying sociological concepts, he argued that reference service has been a "core professional task" for librarianship and thus plays a significant part in librarians' strivings for recognition as professionals. The question of professional status in turn has had what Nielsen called a "subtle but important influence" on the debate over whether information provision or instruction is the proper role for the reference librarian. The recent growth in online searching for information, with librarians as intermediaries, has enhanced the status value of the information-providing role at the expense of the instructional role. Instruction tends to blur the distinctions between librarian and patron because it allows patrons to answer their own questions.

As in his previous work, Nielsen stressed the likely obsolescence of the intermediary's role in online information retrieval. However, he also criticized the profession's reliance on the teaching role, and noted the need for an alternative model that is both "powerful and intellectually sound."

Other writers have considered in greater detail whether direct end-user bibliographic searching is likely to eclipse the librarian's role. The usual arguments against the likelihood of widespread end-user searching include: lack of motivation on the user's part, an individual's need to do too few searches to develop expertise in

51. Id.
52. Id. at 219.
53. Id. at 218-19.
54. Nielsen, supra note 12.
55. Core professional tasks are defined as "those tasks that are shared by large numbers of a particular occupation's membership and that serve to make the members distinctive as a group to the lay public." Id. at 184.
56. Id. at 185.
57. Id. at 186-87.
58. Id. at 188-89.
using the systems, and the comparative costliness and ineffectiveness of direct searching. Although the validity of these concerns has not been tested, they are worth bearing in mind while considering the future prospects for end-user searching of full-text as well as bibliographic databases.

The most significant technical factors discouraging end-user searching probably have been the complexities of dealing with multiple retrieval systems having different command languages, search structures, log-on and log-off procedures, and so forth. Although these problems, which multiply as the sources of online data proliferate, help create the need for intermediate searchers, they cannot be considered permanent obstacles to widespread end-user searching. Faibusoff and Hurych pointed out that only a decade ago computer programming was considered the province of a limited specialized group. This monopoly on programming skills is hardly the case today. If technological development does not overcome the complexities of the search process, greater levels of computer literacy within the end-user population may accomplish the same result.

Library futurist F.W. Lancaster predicts that within twenty years the spread of electronic delivery systems will transform research libraries. The research and development director for a leading supplier of services to libraries recently wrote: "Technology is moving at a sufficient pace to allow electronic newsletter distribution to be common in 5-10 years, journals in perhaps 10-15, and monographs last—in perhaps 15-20 years. When this comes to fruition, most print products will be seen as disposable." Predicting widespread distribution of home and office terminals, he able to provide direct access to electronic sources of information, Lancaster foresees an "inevitable decline" for the library as an institution. Because of direct access, he sees little future for such traditional library activities as the selection and acquisition of material or its control and organization. Lancaster acknowledges, however, a need for continued provi-
sion of information services to a user community. These services might include consulting on information needs, training users, searching information sources for users, synthesizing and evaluating the results of searches, and devising and performing selective dissemination of information (SDI) and current awareness services. Lancaster predicts that in order to perform such services, librarians will become de-institutionalized and move out of libraries, which will become museums or archives. However, librarians might remain attached to particular academic departments.

Lancaster’s scenario relies on two conditions: that there will be fundamental changes in the way information is published and distributed and that information users will take a greater role than heretofore in retrieving that information. The likelihood of the wholesale changes that he envisions has been challenged on a variety of grounds. Richard Boss has noted the difficulties of accurately predicting the diffusion rate of new technologies and has pointed out that the rate is generally much slower than forecasters are willing to admit. Boss identified the following constraints on widespread diffusion: (1) technical problems, in particular lack of standardization; (2) economic factors such as the costs of conversion to electronic publishing; (3) marketing priorities, including the lack of a large enough market to convert large quantities of existing information into machine-readable form; (4) copyright problems such as holders not allowing material to be reformatted for electronic distribution; (5) government regulation; and (6) personal attitudes, including resistance to the use of non-print material.

Even if home or office access to electronic information becomes widespread, it is not clear that the library’s traditional role will be as circumscribed as Lancaster suggests. John Rothman wrote that reliance on libraries will continue because: (1) many library resources will never be in machine-readable form; (2) direct access to machines will not help the many people who do not know or cannot precisely define what information they need; (3) due to the expense, vendors will create services to meet specialized needs only if they are sure of generating a profit; and (4) the simple machines and protocols necessary for widespread diffusion will be inadequate for complex searches.

V. THE FUTURE PROSPECTS FOR LEGAL REFERENCE SERVICE

Because the future extent of electronic publishing and its effects on libraries generally are uncertain, what can be said about the future of academic law libraries and the reference services they offer? Forecasts of extensive general electronic publication remind us that there is already the potential for significantly high levels of direct student and faculty access to electronic legal research material in the law library through LEXIS and WESTLAW. Both systems now include extensive libraries of case materials and expanding libraries of secondary source materials, have user-friendly software, and are accessible through equipment small and inexpensive enough for office and home use. In addition to providing legal material,
each system enables users to access bibliographic database services; LEXIS also provides full-text access to numerous nonlegal journals, newsletters, and other periodicals through its NEXIS libraries. Costs for using the systems remain high. However, as the acquisitions, maintenance, and storage costs of print libraries continue to rise and the number of computer-literate attorneys grows, law firms increasingly might choose to rely on electronic sources rather than expensive inhouse libraries. If the law firm book market declines, law school libraries can expect higher costs for maintaining their hardcopy collections and may face the gradual elimination of some hardcopy products that are accessible electronically.

Certain objections to Lancaster's "age of electronics" are as applicable to law libraries as to libraries generally. Some problems are particularly relevant to legal research. One is the legal researcher's need for an extensive database not only of current material from a variety of sources but of older, seldom-used material. As Colin Tapper put it, "In how many [other] professions can a practical problem of the present be solved by reference to a document drafted five hundred years ago?" Despite the potential usefulness of older material, such material is less likely to be useful than material from the years already available on LEXIS AND WESTLAW. Because both services need to add tremendous numbers of current documents to their databases, neither service is likely to find conversion of large volumes of decreasingly used older material economically advantageous. Consequently, older legal material will probably continue to be stored either in its original printed form or in microform and will not be directly available in machine-readable form.

The completeness of the holdings of the electronic law library is important in predicting its future. Equally important is whether automated systems can provide the researcher with the variety of approaches to information retrieval available in the present mixture of automated and manual tools. The question is not the level of skill needed to effectively operate a CALR system but whether the systems are inherently limited in their abilities to meet all the needs of legal researchers.

In his analysis of CALR and its relationship to legal research processes, Joseph Ebersole concluded that we know too little about how lawyers actually conduct research to be sure whether CALR should be viewed merely as a mechanization of existing approaches or as a new type of finding tool. Ebersole noted, however, that it may be a distortion of "the real nature of CALR capabilities" to treat it as the automated equivalent of a traditional finding tool.

James Sprowl has argued that, in addition to providing new retrieval mechanisms, the computer "can duplicate the performance of virtually all the manual research tools." Sprowl found that the computer's most serious limitation

74. Tapper, supra note 30, at 227.
75. MICROGRAPHICS INDUSTRY—Formatting the Future . . . and the Past, 6 PUBLICATIONS CLEARING HOUSE BULL. 36, 36 (1983)(summarizing remarks of Jerry DuPont, President, Law Library Microform Consortium). It is worth noting again that neither system has so far found it worthwhile to add significant libraries of state statutory material.
76. Ebersole, supra note 39, at 133, 143. Ebersole's examination of CALR's development identified its roots in computer technology and in the "explosive growth in the volume of information in general, especially in the sciences," Id. at 136. CALR was not developed specifically to meet defined, recognized needs of legal researchers.
is its inability to channel or expand a researcher's thinking in the ways a manual index can. In other words, the computer fails to "help the researcher to select index terms or to group them except to the extent that they are discovered by chance." Consequently, "[i]the manual tools excel over the computer in their ability to draw the researcher's attention to new issues and new ways of looking at a problem." 

Other commentators have criticized the present systems because they fail to eliminate irrelevant cases or to alert the researcher when a search might be overly exclusive, because they tend to discourage browsing, and because they pose difficulties for topical or conceptual research. 

Research based on legal concepts is probably easier on WESTLAW due to the inclusion of West's headnotes and key numbers in the database. 

Studies to date indicate that CALR improves the overall quality of legal research. CALR is fast and accurate, provides access to material unreported elsewhere, dramatically expands the resources available to researchers who do not have access to a large library, and eliminates the possibility that needed material is missing from the library. 

But can CALR systems replace existing manual tools? The current inability of CALR systems to suggest alternative research lines and their limited abilities in conceptual research are serious drawbacks. Ebersole, however, forecasts that future systems will have the sophistication to overcome the limitations of present versions. Relying on likely developments in computer technology, Ebersole predicts that future systems will be capable of detecting or recognizing concepts and ultimately will be able to deal with concepts that can be logically deduced from, although not explicitly stated in, the text of a document or opinion. 

In the future all material necessary for legal research may be available in machine-readable form and may be accessible through equipment and software capable of replicating or improving on all currently effective approaches to researching the law. Until this potential is realized and recognized, however, CALR will retain its place as one of what James Sprowl has called "tools in the researcher's tool kit." As long as not all material is available through the computer and alternatives to computer-assisted research remain available and are used by legal researchers, it is probably safe to assume the continued vitality of the large law library. The strength of the traditional law library is both in its holdings of the texts of the law and in the variety of approaches to finding the law that it makes available. Under such circumstances, the role of the legal reference librarian remains well defined. If anything, a researcher's need for the assistance of skilled intermediaries grows larger as the number of ways to access information increases.

What is the likely future of legal reference services should the electronic library

78. Id. at 152.
79. Id. at 154.
80. See Legal Services Corporation, Quality Improvement Project, Final Evaluation Report, Demonstration Project, Computer Assisted Legal Research and Technological Improvements 18-20 (1981). See also the comments reported by Ebersole, supra note 39, at 139.
81. See Burson, supra note 73, at 284; Sprowl, supra note 77, at 152.
83. Ebersole, supra note 39, at 143-44.
84. Sprowl, supra note 77, at 154.
85. See Marke, supra note 34, at 35, col. 2.
come into being as rapidly as Lancaster and others project? What happens to the legal reference librarian if at some point his or her traditional clientele—the law faculty, students, and other patrons—all have direct and economical access to legal and other information at terminals in their homes or offices? What will be the effect of widespread end-user searching on the law library and its reference staff?

The capability for direct online searching probably will increase in all areas of research. However, the general availability of direct online searching will not necessarily make end-user searching an exclusive alternative for legal or other researchers. Access to a world of information through a desktop terminal does not ensure that a researcher has the skills or inclination to effectively retrieve the information that he or she needs.

Bonta has identified three areas of expertise necessary for effective online searching: (1) knowledge of the structure, coverage, approaches, and elements of the databases consulted; (2) knowledge of the search system; and (3) knowledge of the subject being researched. Even if technological developments or higher levels of computer literacy lessen the current complexities of online searching, the researcher's need for specialized intermediaries will not necessarily cease.

In the future we will doubtless see more direct searching of online files. Librarians encourage this trend through the installation of online catalogs. However, even with readily available user-friendly access to online information, the librarian's role is not likely to be eclipsed. More informed users, experienced in direct searching, may create a demand for skilled intermediaries able to do searches too difficult for the nonspecialist.

Despite the friendliness of the software, the accessibility of the hardware, and the lowered costs of searching, the problem facing tomorrow's researchers as well as today's is the amount of information to be searched and the wide array of published sources. Whether information is in print or electronic form, the material needed by legal researchers is unlikely to be better organized in the future than it is now. It has been suggested that greater accessibility of information increases the need for sophisticated retrieval skills.

Another reason there may be a demand for skilled intermediaries is that, as the full texts of some journals and newsletters go online, fewer and fewer published subject indexes and bibliographies might be available to assist researchers in locating information. In a research environment where information users are required to do their own indexing and to specify how the research is to be organized, the reference librarian will increasingly be called upon to help construct or to perform effective and efficient searches. To be effective, full-text searching demands precision. As we consider the potential of direct end-user searching, we need to remember that "there are as many differences in the research and searching habits of the public as there are in personalities."

Consequently, regardless of the ease or convenience of a search,

89. See generally 1. Pool, supra note 47, at 212.
91. Aveney, supra note 48, at 341.
92. Falabisoff & Hurvich, supra note 59, at 353.
some scholars will prefer to have literature searches done for them. Others will create their own areas of search competence but will look to specialists for searches in subject areas or databases beyond those with which they are familiar.

Moreover, despite the friendliness and accessibility of the current legal research systems, available studies indicate that the systems have been used more effectively when a designated CALR specialist was available to perform searches or to assist attorneys in conducting research.\textsuperscript{93} Knowing which buttons to press on a keyboard is different than knowing how to ask the right questions. The second ability may continue to be a function of experience.

If the mechanical barriers to accessing and searching databases are overcome, the future of the information intermediary may depend on the relative value a researcher places on information retrieval skills compared to substantive knowledge of the topic being researched. In the law library, the law training of most reference librarians should both facilitate communication between librarian and researcher and increase the researcher's confidence that the librarian understands what the researcher needs. Because of the law librarian's subject training, the researcher will place a higher premium on the librarian's special skills, and the subject knowledge advantages of direct searching may be less significant.

Twenty-five years ago, William R. Roalfe said that the same complexities that created specialization in law library services would in the future require even higher levels of service. Roalfe described the situation of the legal researcher in terms still applicable today and twenty years from now:

\begin{quote}
Even the specialist, let us say in antitrust law, or civil rights, or the person who must somehow locate particular items in that ever-expanding mass of documentary publications, is often baffled by the array of materials in his own field, although he is thoroughly familiar with the substantive considerations involved. He often needs the help of one who, although not a specialist in the field, is familiar with the bibliographical problems involved.\textsuperscript{94}
\end{quote}

Direct access may alter the forms of law library service, but it is unlikely to signal the end of the legal reference librarian. End-user searching may appear to eliminate the need for intermediaries but it in fact reinforces the intermediaries' importance and calls for new services at higher levels of skill and competence. The special role of the reference librarian is to communicate with the researcher to determine his or her needs and to efficiently locate the information sought. This role will not change, unless the librarian fails to make clear the importance of that role to those who use the library's services. If increased electronic publication and distribution of information signal the decline of the library as an institution, the threat to librarians comes not from technological change but from users who believe that the new technology will allow them to handle all their own information retrieval or that someone other than the librarian is better able to assist them. As always, the future of librarianship will depend on the profession's taking an active part in developing and using new forms of information technology. However, as we move into the remaining years of the twentieth century the most important tasks facing law librarians and other librarians will be to make clear the importance of communication in the research process and to articulate the central role of the reference librarian in carrying that process to a successful conclusion.

\textsuperscript{93} Ebersole, \textit{supra} note 39, at 142; \textit{Legal Services Corporation, supra} note 80, at 171-73.