The purpose of this report was to formulate a definition of health science libraries which would allow them to be objects of study. Four general definitions of health science libraries are presented from the viewpoints of: (1) librarians and managers of libraries as institutions, (2) the institutions or administrative units supporting library operations and service, (3) users of library services, and (4) a suprainstitutional organization or concept, the library network or system. The hypothesis proposed is that a health science library can be identified as an object of study only through the institutional setting in which it operates. (CC)

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WAYNE STATE UNIVERSITY

School of Medicine

Library

Biomedical Information Service Center

Report

No. 47

The Health Science Library

as an

Object of Study*

by

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Detroit
January 1969

Library administrators and educators are emphasizing the need
for more facts and data about library operations and functions. More
research in librarianship is needed. This expressed need has arisen
because of the pressures placed on the nation's libraries. The response
to these pressures from society has been new legislation which has the
intention of improving the nation's library resources and services.
The inevitable, and certainly important, question arises; is the invest-
ment society makes in its library institutions a constructive one? The
need to justify libraries has focused attention on the library as an
object of study rather than just a necessary social institution. If
libraries are to be objects of study, two general conditions must be kept
in mind. First, although data and facts can be collected on libraries
which increases our knowledge about libraries, libraries as objects of
study are more than institutions which need better description and
identification. The tradition of Western scholarship has given us the
precept that knowledge of itself is always more important than the use
of knowledge. It is pointless to depreciate the importance to civili-
zation of increased knowledge and research. On the other hand, it must
also be appreciated that just because one engages in research and produces
more knowledge, it follows that benefits will automatically result.
Second, our society as it grows more complex creates new specialized
institutions as well as new specialties in knowledge. Are specialized
libraries proper objects of study distinct from libraries in general?
One could conclude that our society has recognized several variant
library institutions through such legislative actions as the Medical
Library Assistance Act of 1965. When is a specialized institution
sufficiently manifest to make it a proper object of study?

According to the metaphysics of Alfred Worth Whitehead, the
actuality of the universe is a constant becoming of events, actual
entities. Man, in his attempt to understand the becomingness, the
processes of the actual university, creates eternal objects which identify
the actual entities at a point in becoming. The eternal objects produce
reality that is removed from and different from actuality. Or, to state

in the words of an advertising agency -- since no one can keep up with
the events of the world minute by minute, the daily newspaper stops the
world for its readers to examine in their leisure. The separation of
the becomingness of nature, or social processes which are merely biologi-
cal responses in manipulating nature to produce specific biological
purposes, into discrete objects or into objects of study for different
"sciences" is a human conceit. Nature, and society within it, is a
whole. A nuclear test explosion is usually regarded as an experiment
in engineering and physics; but it is also a vast, if poorly controlled,
experiment in environmental biology; it is also an experiment in political
engineering and control. An intrusion of a single event into a balanced
system in one place may trigger a huge response elsewhere in the system.
The electric power failure in November 1965 is a dramatic example of the
effect one event, which by itself may appear insignificant, can have on
a complex interrelated system as the U.S.-Canadian power grid.

This introductory metaphysical discussion and argument by analogy
is used to emphasize that it is not possible to define a library as an
object of study without an appreciation that it is a social institution
which functions in an environment that goes beyond the physical space
which contains a collection of materials. A library, more specifically
a health science library, is part of a process that involves the communi-
cation mechanism that supports a human enterprise, the maintenance of
"health". The health science library is a tangible response to indi-
viduals and groups of individuals who are actively struggling to control
their own, and others, environmental life situations. Human behavior in
relation to health, or for that matter any other activity, is not fixed
and inflexible -- rather it is continuously changing in response to
environmental demands and challenges. A library is both a product of
human activity and at the same time affects behavior. For the librarian,
the library, as an object of study, is created from the activities of
others; to the users of libraries, it is an instrument for him to
manipulate to aid him in making his everyday circumstances more tolerable
and predictable.

The object of this paper is to present a frame of reference,
a general perspective, that has relevance to study, judge, evaluate,
and solve problems with respect to sociai objectives of health science
libraries. The general perspective must contain a paradox. On the one
hand the health science library must be identified as an object of study.
Without a "definition'of what it "is", no data can be collected to judge
its functional adequacy. On the other hand, the health science library
as a social institution is a process which must include an understanding
of the relationships that go beyond its definition as an object of study.
The paradox can be resolved logically by stating the latter as an
assumption: a health science library is a part of an ongoing communication
system. Any definition of a health science library must carry with it
the purposes or intentions of the person making the definition.

Four general perspectives, or "definitions" of health science
libraries are given here that can serve as a basis for collecting
quantitative data. These perspectives can be characterized as viewpoints
of (1) librarians and managers of libraries as institutions, (2) the
institutions or administrative units supporting library operations
and services, (3) users of library services, and (4) a suprainstitutional
organization or concept, the library network or system.

1. The librarians' viewpoint

Each profession gains an identity from the literature it
produces, but more directly by the rigor and the control of the train-
ing and education that is required to be identified by a peer group as
earning a professional status. All library schools, albeit in varying
degrees of emphasis, must provide its students with at least an opportunity
to learn about

      (i)   The value and importance of the scholarly record
           to civilization and more specifically, the
           function of "libraries" to preserve the scholarly
           record for the use of society,

     (ii) The techniques involved in collecting the scholarly
           record,

   (iii)   The techniques in organizing specific collections
           of the scholarly record for storage and retrieval,

     (iv) The techniques of retrieving specific documents
from organized collections,

     (v) The techniques and art of identifying and
retrieving information from the scholarly record.

The traditional library "statistics" have been and are collected to
demonstrate to librarians themselves, and they hope to the world,
that they are accomplishing what they have been taught to do pro-
fessionally. Translating this perspective into quantitative data has
resulted in compilations of an administrative unit under the direction
of a "head" librarian which includes

     (i) The number of titles and volumes added either
as a total "library" unit or in terms of the
kinds and the number of volumes of collections
within collections;

     (ii) The systems and techniques of organizing the
collections, and, more recently, the kinds and
to what extent electronic data processing and
computer equipment is used; in this kind of
compilation is also included specialized methods
or deviations from the universal systems for
organizing specialized collections;

     (iii) The quantity and methods of retrieving documents
from within and outside the administrative unit;

     (iv) The number of times citations and/or information
is retrieved rather than just documents;

     (v) The number and professional qualification of the
staff within the administrative unit;

     (vi) The amount of space available to carry out the
librarian's role, e.g., space allocated for
storage, retrieval functions, processing functions,
etc.;

     (vii) The amount and allocation of funds to carry out
the above functions; recent efforts have been made
to identify costs per unit of each of the above
operations, but this is yet an ill-defined and
undependable library statistic;

(viii) Finally, data is collected on the "efficiency" of performance, e.g., how rapid is a specific service provided.

There are three aspects that should be noted with respect to these compilations of "statistics" which attempt to define libraries. First, it is an administrative unit that is defined, not a library. In a very real sense, the health science library is defined by the status and responsibility given to the person identified as the health science librarian. Although the responsibilities are often given to the librarian by the institution supporting the library, the priorities of activity performed within the administrative unit are defined to a large extent by the librarian. Second, these compilations can only be applied to comparing one administrative unit to another and consequently a hierarchy of size is delineated. The resultant interpretation of these compilations is often that the larger the administrative unit, the better the library, the more competent the staff, and the greater the skill and wisdom of the administrative head. In my opinion, this veneration of size and equating professional competence, and hence quality of service, with the complexity of an administrative unit is a dangerous viewpoint for identifying a health science library. The use of the scholarly record to solve individual health problems is not an activity which takes place only in large administrative units. Third, these measures of administrative units are the only ones that have been consistently made in the past. As inadequate as they may be in defining a specific kind of library as a health science library, some of these measures must continue to be used. The very serious question must be asked, are all the measures or statistics that have been traditionally collected necessary? Could fewer be collected and still accomplish the same purpose?

2. The Institutions' viewpoint

Outside of a few notable exceptions, nearly all health science libraries are a department or division of an institution. As noted above, a library cannot be separated from the institution that supports it, no matter how much the head librarian may wish it otherwise. To

define a library in terms of its parent institution is, to say the least, not an easy task. The multiplicity of conflicting and over-lapping functions of our institutions make it difficult to define or to state legalistically which institutions carry on health related services. It is not clear from which set of functions one should judge whether an institution performs any health related activity and consequently whether any library it maintains is a health science library.

Simplistically, one could say any institution which maintains facilities to carry out research, to engage in educating, or to deliver health care to groups or to individuals and which supports a library, has a health science library. To those who wish to identify health sciences libraries as an object of study, this only compounds the problem of definition. Can the library of a large industrial organi-zation which has a contract to design or manufacture a small component of the Appolo 8 life system be a health science library? Can a large university which has only a small school of nursing say that its library is a health science library because it stores materials used by the students and faculty of the school of nursing? Does a public library which assists student nurses, physicians, municipal and voluntary health agencies in securing information to be considered to have a health science library? Although for many institutional environments, such as hospitals, medical schools, research agencies can be easily understood as contributing directly to health care, the definition of the purpose of an institution can be made to fit legal or socially accepted requirements. The administrators and governing boards of institutions make such definitions to gain an identity which for practical purposes is to aid them in obtaining financial support.

The library of any health related institution is a service organization for its own staff and students. As a service unit, it produces no direct income. The administrator, therefore, must find some means to justify the existence of this unit, and although the question may not often be phrased precisely as the following, it never-

theless is asked: "What effect will there be to the operation of the total institution if library services are reduced, or stopped?" Much of the data collected by librarians is related directly to this question. The librarian justifies his work to an administrator who in turn justifies the library unit as necessary or unnecessary, as the case may be, to his governing board. The administrator is therefore most interested in two aspects of the library.

      (i) Cost. How much does it cost the institution to maintain this service? Is the share of the total institution's budget provided for library service adequate; that is, is the institution getting a return on its investment?

      (ii) Need. Who are the users of library service and how important is it to their work?

Although the first of these two aspects might be defined by relating fiscal data according to some arbitrary standard, the second is much more difficult to identify. Similarly, a library can be judged to be efficient in relation to cost, but whether the efficiency is effective in producing better students or better health care has rarely been demonstrated. Solace for librarians might be found in the fact that measurements in the delivery of health care, the importance of research results, or the adequacy of an educational program have not been reduced to a tangible scale of performance, consequently the effectiveness of library service cannot be measured until these social enterprises can be measured. The one means the administrators have to judge the effectiveness of library service is a negative one: If the professional staff, who are recognized by their peers outside of their institution, have no complaints about the adequacy and efficiency of the library, then the administrator can, and most often does, assume the service meets the needs of the institution.

3. The users' viewpoint.

The library user approaches the library with a "selfish" attitude -- what can he get from the library for the least amount of

effort on his part. As every perceptive librarian knows, each new group of students, and each new professional person added to a library's primary clientele, test the services offered. A large share of the time spent on library public relations is explaining to users the limitations of services rather than the availability of services. The selfish attitude of users arises from the social organization of libraries. Librarians and administrators speak of library privileges, but in fact every library user knows that he has library rights. The library is maintained for him and is organized as a facility common to all, even though the access or the right to the common service may be defined in a limiting fashion and even though not all groups of users have equal rights. Scholarship has as one of its basic tenets that knowledge is to be shared and available for all who want to use it. Libraries are one of the means of institutional- izing the "freedom of access" to knowledge that is necessary to scholarship.

Libraries, as institutions, as administrative units, must be organized to deal with groups of people, yet nearly all user transactions of the clinician and researcher are unique; that which motivates him to use library services is unique to himself. Each clinician works with one patient at a time (group therapy notwithstand- ing); since his patients are individuals, the resultant health problems the clinician is to work with are also individual. Similarly, the researcher is always, at least from his viewpoint, dealing with unique situations. If the situations were not unique, they would not be recognized as research. The user, then, comes to a library to "solve" a unique problem, but the library is organized administratively and its content organized intellectually to provide the best services for the greatest number of users. Although librarians must speak of the general user, no individual user ever fits this generalization. The user, then, must adjust to the library organization that exists. As an individual he is powerless to change the library at the time he is using it. There are administrative recourses, through library committees, writing letters to administrators and policy makers, to alter the

priorities of service, but there are limits both technically and
socially to what can be done to design library service for the indi-
vidual user. Consequently, the user has the following possibilities
which he may use alternatively or simultaneously:

(i)   He learns the library organization and system,
      secures what he can and goes elsewhere for
      information and data he cannot get through the
      library.

(ii) He ingratiates himself with the library staff to
      obtain services beyond and different from those
      given to the mythical general user.

(iii) Since the user knows he has rights, he asserts him-
      self and secures his full share of service that can
      be accorded to him: depending upon his personality
      and his status, he may succeed through an authori-
      tative demeanor to get services beyond those given to
      the general reader.

(iv) He can proceed through the bureaucratic channels to
      alter the library organization to fit his needs more
      precisely.

The user is not interested in the same aspects of library
operation as are librarians and institutional administrators. For
example, he is not concerned with fiscal matters or the cost of any
service except perhaps in the situations where he must make a direct
contribution to the support of the library. Certainly the user has
no particular desire to identify the professional functions of li-
brarians -- to him all those working in the library are librarians.
The usual quantitative measures applied to libraries have no meaning
to him: The user is unimpressed with circulation figures and volume
count; his interest is what he can get from the library, not what the
library may have done for its total primary clientele.

The user applies three measures to library service.

(i)   Is it easier to obtain documents, information,
      and data from the library or is an alternative
      source more convenient?

> (ii)   Is the amount of time required to utilize library
>   service worth it, or could the time be spent more
>   profitably elsewhere?
>
> (iii) How dependable is the library in providing the
>   documents, information, and data?

To those who wish to study libraries these user criteria are often
considered to be incommensurable. Statistically, it is difficult to
measure these incommensurables. Each user has his own criterion of
judgment and a system of weighting. Each user arrives at a compromise
on how to, and whether to, use a library which is achieved by the
weighting of the three variables.

The importance of the user viewpoint has been recognized in
making the library an object of study. So many "user studies" have
been made that reviews of reviews of these studies are now appearing
in the literature. The reality of the library as an object of study
cannot be ignored: the user cannot be separated from his intellectual
environment in measuring the utility of a library to him; the library
cannot be separated from the institutional complex in which it is placed.
A library as a social institution cannot be all things to all men. So
long as studies are confined to what existing individual libraries do,
or how individual users utilize libraries, no actual system of values
can be developed which will allow for socially accepted methods of
weighting so that the decisions on and about library service can be
made on a rational basis. Operationally, the nature and function of
libraries will continue to be defined through unexpressed decisions of
users and arbitrary decisions of librarians and administrators. This
method of laissez-faire natural selection by users will continue to
place the library as a social institution in a constant state of admini-
strative crisis.

4. The library system

If the general concept is acceded that a library is a part of
the social communication mechanism which aids in the access of knowledge,

then a library cannot be defined spatially; that is, a library is more than the transactions and events that occur in a building. Librarians in the 19th century began lending documents among themselves for their users. Other access services than interlibrary loan has also grown but less dependably. These services, once begun, have come to be recognized as useful and perhaps should be a necessary function of libraries. The administrative organizations to allow sharing of resources, facilities, and technical competences has prevaded all library operations. Interdependence always carries with it responsibilities and limitations which result in the need for value judgments to be made with respect to the placement of responsibilities to accomplish most effectively the advantages possible through inter-institutional cooperation.

In spite of the fact that "library systems" are a part of the scholarly communication mechanism, very little study has been devoted to make explicit the hidden assumptions and technical operations which cause it to function. Rapid progress ir promoting (or discouraging) the development of library systems can not occur until we exorcise the bureaucratic tendency to view the solutions of problems as merely either, or both, a matter of (i) the creation of new political agreements which only redistribute existing responsibilities and (ii) applying new technology which requires little or no change in human values or ideas. Because "library systems", although part of our culture for decades, have not been considered as objects of study, their definition is exceedingly vague. Many areas could be delineated which might aid in identifying library systems as objects of study, but only three will be discussed here.

(i) Redundancy

One of the arguments used for the promotion of library systems is the ability of individual libraries to reduce not only the duplication of documents, but also the duplication of effort in process-ing and storing. This argument is like a moral precept -- it is to be practiced only if there is a legal or fiscal sanction applied. Few health science libraries have in any systematic way reduced their storage

problems because they have "joined" a library system. The standard-
ization of cataloging rules and the availability of a national system
of utilizing the intellectual work of resource libraries has, for
health science libraries, hardly been exploited. If the argument is
a correct one, the need is apparent to examine the operation of li-
brary units to see what procedures and practices are required to be
duplicated for the maintenance of the system. To promote a library
system without altering the operation of individual library units merely
creates a new service unit at an added cost. Redundancy is a necessary
element in a library system,for without it, the function of libraries
as a group would disappear -- everything now supplied through library
units could be supplied from one mammoth world library. One can hope
that quantitative measures, or at least a method of evaluating dupli-
cation, could be devised for a library system. Undoubtedly, the
intellectual effort that will have to be invested is not insignificant,
but the problem (in principle, at least) is not insoluble.

(ii)   Institutionalization

If a spatially discrete library can be understood
functionally as a social institution, then a library system is a more
abstract, but, nevertheless, in the same sense, a social institution.
Irrespective of the abstractness of library service when stated in
words, the ultimate purpose for its existence is the individual user.
The user is unaware, and in nearly all instances, wishes to continue
to remain unaware, of the interrelatedness of library organization.
His search for assistance through a library, thus, ultimately will be
judged by the user at the place he enters the system -- his library.
The same user satisfaction incommensurables apply both to individual
library units and to library systems. One has to arrive at the same
conclusion as when one discusses the need for redundancy in library
systems: what are the administrative, fiscal, and technical compromises
that can be made to determine what should be performed as a library
system and what should be performed by individual library units.

(iii)   Responsibility

As society becomes more interdependent, more rules,
regulations, and laws are needed as well as a new organization to en-

force the rules, regulations, and laws. Every social system has a
limit to its resources. To allow individuals or small groups of
individuals to have complete freedom on the use or deployment of
these resources can result in a breakdown of the social system. Our
nation, our cities, face frequent crises because of individuals and
groups placing their benefits above those of our society, of which
he is a part, even if society as a whole suffers. Any system depends
upon all who are part of that system to work toward its maintenance.
One library unit, because of its unwillingness to maintain an adequate
collection of documents or because it fails to act intellectually
responsible, can falter and reduce the quality of service to the system
as a whole. Responsibility is ultimately attributable to individuals.
Responsibility cannot be given over to technology. Automobiles cannot
be blamed for traffic deaths. Responsibility cannot be given over to
an administrative organization. Bureaucracy is an abstraction and as
a human enterprise is corruptible. Whether one speaks of a unit of,
or the total system, neither is completely open-ended. There is a limit
to the resources and intellectual effort that can be put into the system.
Entropy prevades the universe, and library systems are not immune.
Responsibility, then, can be translated into fiscal values, spatial
units, and above all, into rules and specifications for input and
retrieval (the intellectual aspect) of the system.

SUMMARY

The above discussion has tried to place libraries into a per-
spective to allow them to be objects of study. Much of what was identi-
fied cannot be said to be confined to health science libraries. The
standard library statistics that have been gathered over the years for
health science libraries need to be analyzed and compared with a similar
analysis of other specialized libraries. If these statistics, thus
analyzed, do not reveal that health science libraries do differ, the
reason might be sought in that the measures that are at present used
have not been collected with the purpose of demonstrating such differences.
Certainly the health care and educational institutions do create demands

on library service simply because the priority of decisions and methods
of education which prompt people to use libraries are different, at
least in degree, from those commonly encountered in other specialized
academic science libraries. The hypothesis is proposed that a health
science library can be identified as an object of study only through the
institutional setting in which it operates. Whether a health science
library should become an increasingly specialized institution can be
determined only when sufficient information is available from different
perspectives to compare with library operations in other environments.