The Library and the User

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In order to continue to perform successfully, the library, as the center of information, must tailor its output to meet the needs of the User. Studies to date indicate this need is not fully met.

To put the Librarian's job in its proper perspective it is important to point out its primary functions: first, that of acquiring information which is appropriately stored in the library, and second, that of providing the right information to the right people in the right form at the right time.

Since the library is considered here from the standpoint of the User, it is easy to bypass the library acquisition and storage function in which we already have experts, and instead to concern ourselves only with the latter function, i.e., how the User can or should get from the library what he needs. The first steps toward achieving these goals are to determine the User's needs and the procedures which must be followed for acquiring that information.

To assist in determining User needs in both government and industry, the Director of Technical Information in the Office of the Secretary of Defense financed two studies: the Auerbach study[1], with which most Librarians are familiar, was conducted in 1964 and covered government laboratory engineers and scientists; the North American Aviation study[2] was conducted in 1966 and covered a similar group in industry. Those reports demonstrate the problem Librarians are facing in getting the right information to the right people. Following are a few of the findings of the first study:

1. Information centers are not widely used (only one-half of the sampled population of scientists and engineers use information centers, and those rarely as a first source).

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[1] L. H. Berul, M. E. Elling, A. Karson, A. B. Shafritz, and H. Sieber, *Final Technical Report, Phase I, Vols. I and II,* Auerbach Corp., Phila., Penna., May 14, 1965.

[2] Arnold F. Goodman, John D. Hodges, Jr., and Forrest G. Allen, *Final Report, DoD User-Needs Study, Phase II, Vols. I and II,* North American Aviation, Inc., Autonetics Div., Anaheim, Calif., November 30, 1966.

2. More than one-fourth of the population was not even aware that there was a Defense Documentation Center, or other specialized DoD information centers.

3. More than one-half of the population never used (and many didn't even know of) the Technical Abstract Bulletin.

4. More often than not, these potential Users relied heavily on the local work environment as their first source of information.

5. About one-half of the information required was in the engineering category, i.e., technical characteristics, research and development support material, specifications, test procedures, etc.

Finding it hard to believe that so few government engineers and scientists used the library and analysis centers available to them, DoD then initiated the second study covering the civilian engineering community. The results were not much different:

1. The local work environment, i.e., the man at the next desk, is still the most important first source of information.

2. Still only 45% of the industry sample used DoD information centers or services. One-third was unaware of DDC.

Most important, the Users are not completely satisfied with their ability to obtain information: 42% had problems in acquiring the information they needed; 20% found additional information pertinent to their task after that task was completed. These results should stir us to action to do something about the problem!

These so-called Users are outnumbered by non-Users, and even the Users, though in the minority, are finding it difficult, if not impossible, to obtain and sort out the information which they need to perform their jobs.

In this day of rapidly advancing technology, it is well known that the reporting on this advancement is difficult to keep up with. According to the Library of Congress there are several reasons:

1. An estimated 35,000 journals claim they owe their existence to reporting new technology. These journals do not report all, merely the best.

2. The Library of Congress received 70,000 technical reports last year.

3. One NASA project produces seven tons monthly.

4. In 1960, the United States produced 60 million pages of technical reports at a cost of $13 billion.

5. The rate of accumulating pages of technical reports doubles every 8 1/2 years. At this rate our country alone can be expected to produce 300 million pages a year by 1995.

In this fast, sophisticated, modern society everything has speeded up. So has obsolescence. To point up this fact consider the elapsed time between discovery and application of some of the major technologies of our time, as pointed out in an address by Mr. J. Heston Heald of the Department of Defense to the 8th Military Librarians' Workshop several years ago:[3]

Photography	112 years
Telephone	56 years
Radio	35 years
Radar	15 years
Television	12 years
Transistors	6 years
Lasers	2 years

Compare these short spans of years to the 500,000 year span for the Stone Age, the 50,000 year span for the Bronze Age, or the mere 5,000 year span for the Iron Age and it becomes evident that things are really happening during our lifetime.

Think of the fantastic change that has occurred during the 50 year span of the Atomic Age. For that matter, in only about 10 years of the Space Age plans to send a man to the moon are well underway.

During the past 50 years we were exposed to more technological change than occurred in the preceding millenium. Implicitly, we were also exposed to more obsolescence.

In testimony before the United States Senate Committee on Commerce in May 1967[4] Honorable Daniel B. Brewster said, on the subject of reference data, that we need to ". . . rescue our scientists and engineers from . . . wading through mounds of scientific papers in search of technical data they need . . ." to do their jobs. The enormity of the task is indicated when one faces another statistical figure, also stated at the hearing, ". . . 90% of all the scientists in the history of the world are alive and working today . . . ."

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[3]J. Heston Heald, DoD, *Technical Information Support of the Department of Defense Research and Development Program*, delivered during the 8th Military Librarians' Workshop, October 1964.

[4]Hearing on S. 998, *Standard Reference Data Act*, First Session, 90th Congress, May 15, 1967.

In this rapidly expanding technological era, the engineer or scientist does not have the time (and perhaps not even the inclination) to wade through masses and masses of information in order to sift out the specific answers he needs to do his job. The Auerbach and North American studies confirm the importance of information analysis prior to distribution to the User.

Government and industry needs involving detailed analysis represented 55% and 37%, respectively. Further, 27% and 56%, respectively, were searches for specific answers. From the way the questions were asked in the surveys, the percentages of the Users requesting detailed analysis and those asking for specific answers can be combined to show that about 80% of the population was not interested in a once-over-lightly treatment. "Once-over-lightly" refers to information in bibliographic or abstract form.

Since over 50% of the information required is in the research and development field, and since about 50% of that information falls in the engineering category, it would seem that greater emphasis on information analysis is indeed a requirement. It is unfortunate that, compared to the effort expended in collection of information, only a limited effort is devoted to its analysis. Far too much collected information is merely catalogued and neatly placed on the shelf; there it remains little used and unexploited.

TDCK, the Netherlands Armed Forces Technical Document Center in The Hague, operates somewhere between an intelligence agency, an analysis center, and a library. Its preferred output is evaluated engineering reports rather than bibliographies, and it devotes 40% of its manpower spaces to carrying out that function, with the balance given to the library function. [5]

In Bangalore, India there is a library which has found the solution to some of its manpower problems. When manpower billet cuts were threatened, the laboratory they serve, the Army Electronics Research and Development Establishment, said it could not afford to be without them and came up with the billets. What makes them so valuable? In the words of the Commanding General, they do "information engineering"—putting together the latest technical data from U. S. and Soviet journals as needed by the laboratory staff. There was no need for preoccupation with professional status; they already had it.

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[5] Harold Wooster, *The Zoo and the Jungle—A Comparison of the Information Practices of Intelligence Analysts and Scientists*, Air Force Office of Scientific Research/Office of Aerospace Research, Arlington, Va., November 1966.

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The North American study recommends that discovery and exploitation of the contents of information collected be the subject of additional study and analysis. It is a real challenge to give the User that information which he specifically needs. A flood of documents is not what he needs. Remember, 80% of the information required by laboratory engineers and scientists is for detailed analysis or specific answers.

One can argue that the engineer, when given a cartful of documents or publications, can best find for himself the specific answers he needs. The fact is that he won't do it. Yet he needs the information in order to keep his work, and that of his laboratory, moving and in step with the times. Herein lies the challenge to the Librarian (not the Librarian in the narrowest sense—but the Librarian who brings together information from varied sources and who believes that the most important aspect of his job is to provide the right information to the right people in the right form and at the right time).

This obvious void—this gap—between the library and the User is only partially filled by information analysis centers. This gap must be more completely bridged if we are to take advantage of the wealth of information already developed, and to utilize it in a timely fashion on current problems.

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