

Needle in a Haystack

BY NELSON W. HOPE

THOUGH REFERENCE LIBRARIANS in atomic energy plants are accustomed to unusual types of reference questions, even those who are hardened to the stimulation of reference work are sometimes surprised at the variety of questions that cross the reference desk in an average day.

An engineer recently called the reference librarian at an atomic energy laboratory and asked for census data on the number of cows, horses, sheep, and goats in the United States. After he had received this information, he asked for the number of acres of alfalfa grown in the United States annually, and the quantity of hay produced from these acres. This information was soon located, but when the engineer requested the number of square miles of land area on the earth's surface, the reference librarian, with tongue in cheek asked, "Do you intend to use this information in your work?"

"Certainly I am going to use it!" replied the engineer. "I develop electronic instruments for the health physics department. Some reporters are visiting my laboratory in a few days and I would like to demonstrate the effectiveness of our latest instruments for detecting radioactive particles. With the information you have supplied me, I can show the reporters that if we took an amount of radioactive iodine¹³¹ equivalent to the weight of an ordinary sewing needle, and mixed it uniformly in a haystack containing all the alfalfa produced in the United States in an entire year, we could detect the radioactive iodine from any sample of the hay. Even if this haystack were increased sevenfold, we could still detect the radioactive iodine from any ordinary sample."

Mr. Hope is with the John Jay Hopkins Laboratory for Pure and Applied Science, General Atomic Division of General Dynamics Corporation in San Diego, Calif.

The reference librarian replied, "I get it—a needle in a haystack!"

A foreman called to ask the correct spelling of "ooga"—the sound made by the auto horns of the Model-T days. He was writing a safety manual and wanted to describe the sound of the alarm klaxon which was located in one of the production buildings.

A construction engineer asked what time the moon would rise on a particular night. He was planning to test a new building for light leaks, and wanted to do his testing on a moonless evening.

Though it would be convenient for reference librarians to be spared the chore of answering their telephones, there might be unexpected consequences. Once a chemist called when the reference librarian was out and asked for the formula of cobalt amine compound. A substitute took down the information as it sounded over the phone—"cobalt, a mean compound!" A physicist called and asked for detailed information on the characteristics of bismuth²⁰³, or so it sounded to the assistant who took the information. This was apparently the new isotope of bismuth which had been discovered a few months previously, and an isotope for which all the properties were not known at that time. It finally occurred to the reference librarian, however, that the physicist might have meant not bismuth²⁰³, but Bi₂O₃, a compound

whose characteristics were well established. A recheck on the telephone proved that this was the case and the compound Bi_2O_3 was the one the physicist was actually interested in.

Many reference questions in an atomic energy plant have no direct bearing on nuclear physics. Many literature searches are made for supervisors interested in problems pertaining to supervision, management, or human relations. Other questions might include the location of gem stones in the immediate locality, airline schedules, or perhaps the location of an article previously read by some mathematician, such as "Lay That Slide Rule Down." An enterprising moonlighter who owns an acreage was interested in the culture of the opium poppy. He was not going into the narcotics business, but merely had a taste for poppy seed rolls and the price of poppy seeds had recently gone to an all-time high. He was asked to take his question to the federal authorities.

A scientist from Berlin asked for a document. His eligibility to receive the document depended upon whether he lived in free West Germany, or in East Germany, behind the Iron Curtain. From the postal zone number, the reference librarian was able to determine that the scientist lived in West Germany and was thus eligible to receive the document. Thus it is necessary for reference librarians to know something of geography, AEC regulations, foreign affairs, and international relations in addition to the many branches of science served by the technical library.

Though the local public library is often called upon to answer questions pertaining to fields definitely beyond the scope of the technical library, it is still necessary for reference people to know where the information can be found. One manager was interested in the growth of world population. Though the technical library had some material on

this subject, the public library was able to supplement this information and help the manager obtain the information he desired. A technical library is not expected to contain information pertaining to movie stars or others in the entertainment field, and such requests can be referred elsewhere. The reference librarian must be careful, however, in deciding which questions are legitimately within his jurisdiction. When a young man inquired about the "Lichtenberg figures," it required a double take on the part of the reference librarian before he realized that this was a question pertaining to electricity, and not to statistics of pulchritude and anatomical measurements.

Big business has discovered the industrial psychologist, and many of them are already making positive contributions to human relations in industry. Psychologists too use the technical library and call upon the reference staff for their services. Recently one psychologist asked for a brief annotated bibliography on the psychological aspects of asthma and hay fever. The reference librarian, though a technical man, tackled this request with even more than the usual enthusiasm, and soon compiled a detailed bibliography that indicated that asthma and hay fever are often the symptoms of psychosomatic influences. The psychologist recognized this bibliography as something exceptional and definitely beyond the call of duty as expressed in his original request. He congratulated the reference librarian and asked, "Why did you go to such detail in answering my request?"

The reference librarian replied, "I, too, suffer from asthma and hay fever, and I was doing some research on my own case."

Reference work can be exciting at times. Perhaps a request for technical data on the welding of railroad rails indicates a broken crane rail in one of the processing buildings, or a request for in-

formation on the properties of some vapor might indicate a new era in the production of industrial power. A request for the toxicity of some chemical might be the means of preventing injury to some chemists who are developing a new chemical process. In one industrial plant, a request for analytical methods determining the presence of a certain chemical in human tissue meant that the relatives of a deceased worker suspected that death had been caused by some chemicals used on the job. Some tissue from the stomach of the deceased was frozen in dry ice to await a chemical analysis. Such an analysis was not routine at that time, thus the chemist in charge of the analysis asked the library reference staff to locate a standard method for such an analysis. If the analytical method had not been forthcoming in a short time, any possible chemicals in tissue would have been lost to evaporation and no conclusive results could have been reached. The reference staff succeeded in locating a reference to the desired analytical method, but it was in a foreign publication in a distant library. This periodical was borrowed by interlibrary loan and airmailed to the plant where the required reference was translated. The information was made available to the chemist, and the case was soon closed.

Library schools teach the science of reference, but they can hardly be expected to teach the art, since it may vary from institution to institution. Each reference librarian eventually develops his own best methods based upon his experience and preference. Some develop special abilities to locate information from strange places. Such abilities were useful for one of the staff members of the industrial medicine unit when he asked for information on old wives' tales (he was comparing them to current health fads) and for a safety engineer who wanted to know the address of some company that made plastic windshield scrapers with

safety messages printed on them. Some reference librarians become skilled with the "wet thumb technique" and use this methods to supplement the standard reference tools. This skill is especially useful when the material is too new to be indexed.

Reference work may be a humbling experience. After the reference librarian has spent years learning the standard procedures so successful in reference work, he may still fail to supply the exact type of information required by the client. To make matters worse, someone with no library affiliations may be able to find the information through some unorthodox method, or just blind luck. At other times, it seems that some clients just won't be pleased under any circumstances. One client asked for biographic information on a lady physician in England. She had a rather unusual name, and the reference librarian quickly checked the standard sources and located a reference to this physician. The client agreed that the names were identical, and that both women were physicians practicing in England, but he knew that the one he was looking for was much younger than the one located by the reference librarian. A second search located the second lady physician, who was no kin to the first one, and the client was satisfied.

Judgment must often be used in reference work, though it, too, may at times be incorrect. On one occasion a chemist asked for the recommended procedure for removing a fish from the cooling coils of some laboratory apparatus. The reference librarian supposed that a "fish" was probably some kind of obstruction—and this would have been correct in petroleum technology. When the reference librarian asked what kind of a fish was in the coil, the chemist was rather surprised at the question but suggested that it was probably a trout, though final classifica-

tion would have to await removal of the animal. The chemist was kind, however, and suggested that any general method for removing fish from coils would be sufficient for his needs.

Timing is often important in reference work. One engineer once asked for the address of a company manufacturing hydrophones, devices used when listening to faint underwater sounds. The current directories listed no manufacturers, but

two months later the new directories listed four manufacturers.

Reference work is educational, and those who pursue it will retain knowledge which may enable them to do a better and quicker job at some future day. Reference librarians are able to "nibble a bite here and there" as they wade through the vast fields of literature in print today. ■■

Trade Books for Teacher Education

THE BOARD OF DIRECTORS of the American Association of School Librarians at their Midwinter Meeting adopted a resolution submitted by Frances Henne, professor of the School of Library Service, Columbia University; Ruth Ersted, Minnesota state school library supervisor; Eleanor E. Ahlers, Washington state supervisor of school library services; Margaret I. Rufsvold, professor of library services and director of the library school, Indiana University; Naomi Hokanson, district librarian, Roseville, Minn., and Nancy Jane Day, South Carolina state supervisor of library service, Department of Education.

The resolution reads:

WHEREAS: The evergrowing need for more trade (library) books in elementary, junior, and senior high schools and in institutions with programs of teacher and library preparation has resulted in an increasing number of requests to the publishers for review copies of new books;

the desirability of having librarians and teachers examine trade books before purchasing them is recognized, but it is also acknowledged that it is not economically feasible for the trade book publishers to grant all the requests made of them from individual teachers and librarians in schools and colleges;

Be it resolved that:

1. Examination copies of trade books suitable for use in schools can justifiably be requested by large school systems with (a) a school library supervisor, (b) sufficient funds for the purchase of multiple copies, and (c) an active book evaluation and book selection program;
2. It is the responsibility of the school library supervisor to make examination copies as widely available as possible to all interested professional people—librarians, teachers, curriculum specialists, and others;
3. Since a collection of trade books suitable for library collections in elementary, junior, and senior high schools is an essential tool in any college or university with a program of teacher and/or librarian preparation, funds should be allocated by these institutions for the purchase of books required by the instructors for effective programs of teacher and/or librarian education. ■■