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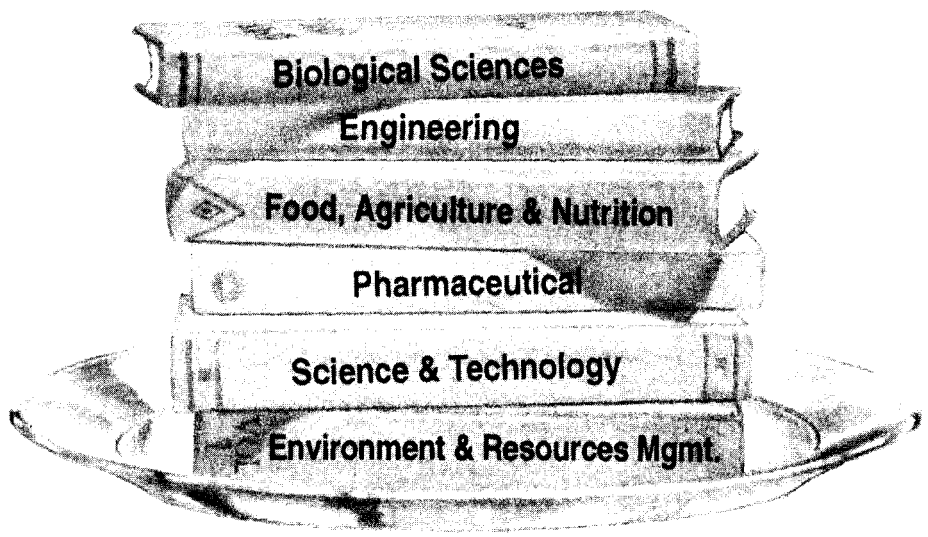

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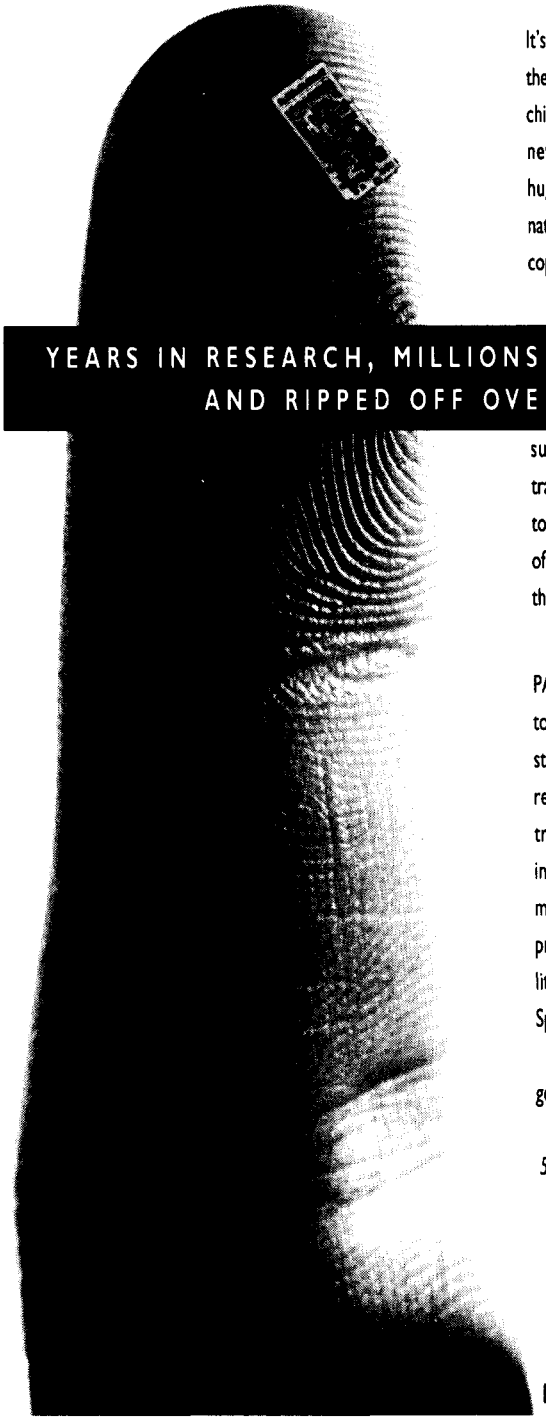

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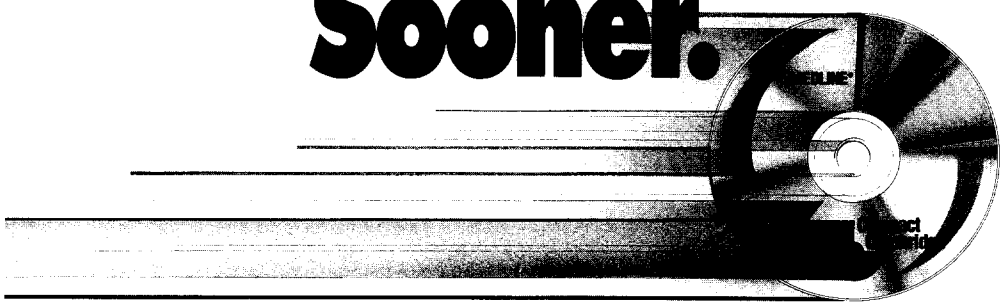

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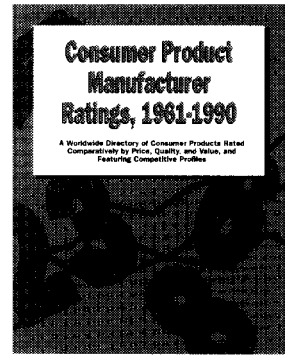

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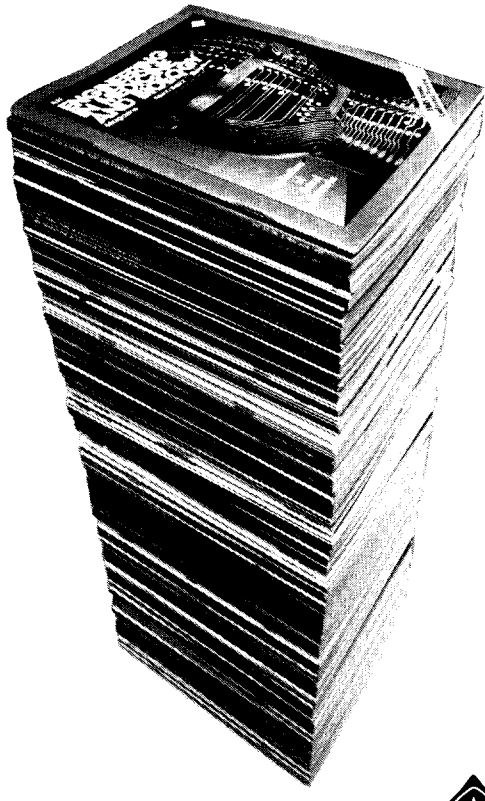

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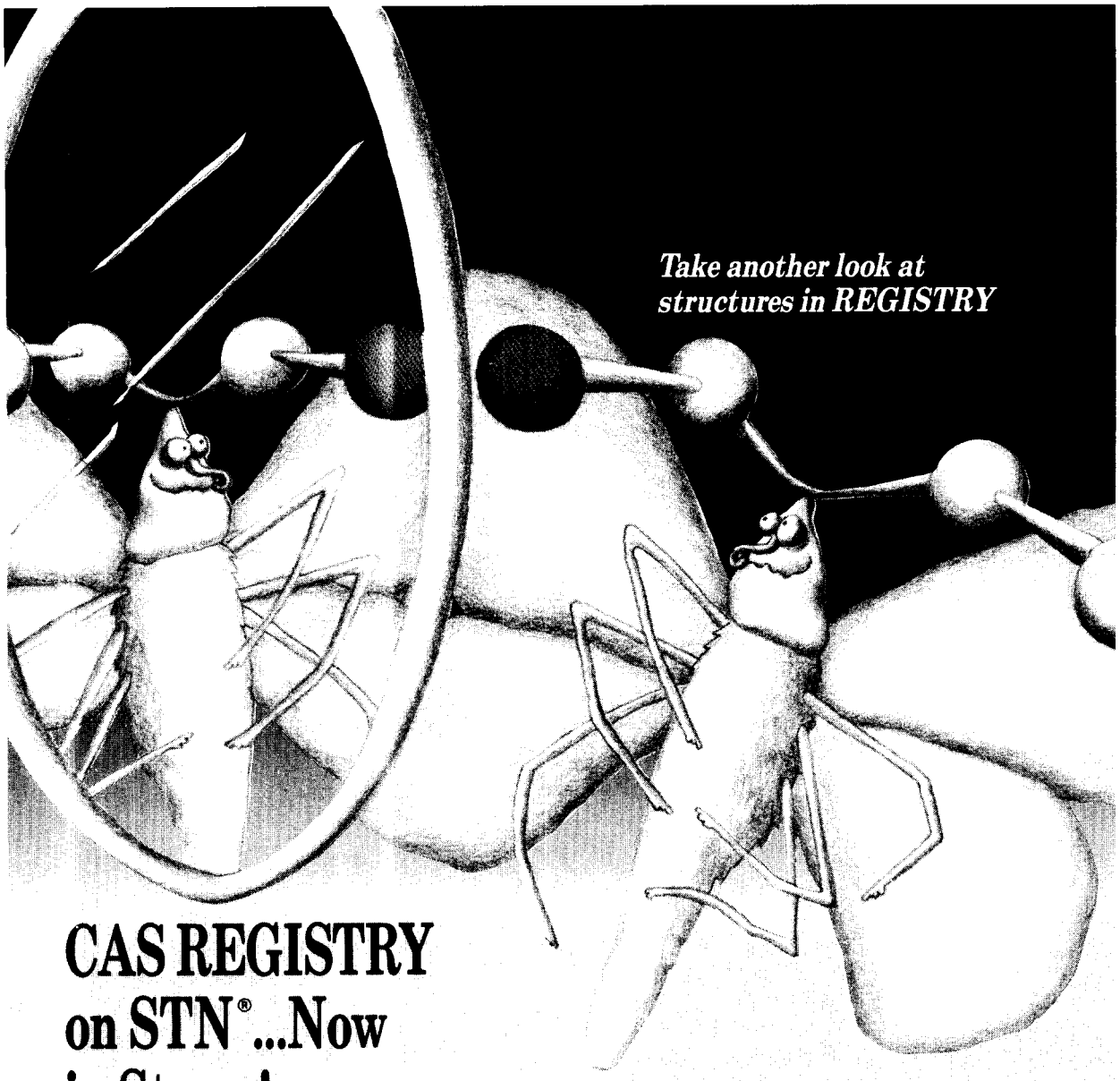

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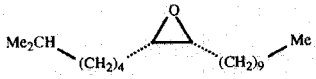

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Great Expectations: Satisfying Today's Patrons

by Amy Paster and Bonnie Osif

■ **Given the increased complexity and number of information sources available, how do we satisfy the growing needs and expectations of today's patrons? Increasing user expectations necessitates new and innovative resources to satisfy these demands. To satisfy these demands and achieve maximum benefits from these new resources, a library must design and implement a comprehensive integrated strategy. A clear idea of the librarian's role and administrative commitment is essential for success.**

LIBRARIES AND INFORMATION CENTERS OF TODAY are using new technologies at an ever increasing rate. Staff are often overwhelmed by the vast array of hardware, software, CD ROMs, etc., that the new technology employs. At the same time, library patrons are becoming knowledgeable about various sources of information. This was noted by John R. Sack in 1986 when he referred to scholars becoming "less 'patrons' of the library and more 'users' of electronic information services..."[1] Today's patrons are specialists, focusing on a small number of appropriate sources. Librarians, on the other hand, are generalists, and must be aware of and able to navigate through numerous sources. These new 'users' require assistance in locating and using the information sources and also in obtaining the actual materials. This patron need places additional demands on library personnel to know and understand a variety of resources, both print and electronic.

Libraries are responding to these changes by becoming a "gateway" to a much larger pool of new and valuable reference materials. As Dean Nancy Cline of The Pennsylvania State University Libraries has stated, "'The infrastructure is forming and the expectations of scholars are growing out of an existing complement of resources. How rapidly we capitalize upon these assets and build stronger, more robust and coordinated approaches is a key question."[2]

Scope of New Electronic Resources

Libraries are evolving in parallel with new information sources. The "virtual library" is a decentralized collection of resources, individuals, and systems, etc., that are accessed electronically; it is flexible with the capability of "moving at the margins."[3] No longer are libraries solely defined by their physical boundaries. Libraries and users can locally access international systems of numeric, bibliographic, and full-text databases that cover subjects ranging from medieval data to astrophysics to climatology.

The ability to access these systems can be viewed as both creating problems and providing solutions. The problems include increased demands for librarians' expertise in electronic retrieval systems and the need for materials that may not be readily available. At the same time these systems provide immediate information about materials that would otherwise be difficult to locate.

One source that illustrates the dual nature of the electronic sources of information is NASA

Spacelink, a free service covering a wide variety of topics dealing with the space program. Spacelink contains historical and current information on missions, listings of available materials, and a directory of NASA centers and services. This system can be a treasure of information for space scientists, science educators, and the general public only if the workstation can be made available with the expertise to use it.

The Genome Data Base (GDB), another new source, is a public database that was designed to collect, store, and distribute human gene mapping information generated by scientists from around the world. The GDB editorial staff extract information from the scientific literature and enter it into an interactive database. Major types of data found in this system include gene names and symbols, DNA probes, DNA polymorphisms, genetic disease information, and information on disease mutations. This is a unique experiment in which the library community is working in partnership with the scientific community to capture information about human genetics as soon as it is produced. Much of the database consists of unpublished findings. One challenge of the GDB is obtaining the original works cited.

A third resource is the Research Libraries Information Network (RLIN) which provides access to databases including Engineering Index Page One (Ei Page One). Ei Page One's strength is its access to very current citations as well as being more comprehensive than the print version. A vexation of this resource is the inability to match citation requests with library holdings. Another dilemma is acquainting the user with the unique search language used by RLIN.

Not all of the new electronic resources are in the sciences. The Dartmouth Dante Database contains the full text of the *Divine Comedy* with six hundred years of commentary. Dartmouth also has three additional full-text databases. These are the King James Version of the Bible, and Arthur Bullen's *Stratford Town Edition* of the Shakespeare Plays, and Sonnets. Rutgers University offers the Medieval and Early Modern Data Bank which features wages, prices, household size, mortality, property holdings, charity, and nutrition for the dates covering approximately A.D. 88–1800.

Regional information is also available via the Internet. The Cleveland Freenet is one example of this type of database. The Cleveland Freenet is set up like a little city. Users may choose the "Library" to gain access to various online catalogs or the "Arts Building" for reviews of local plays. Another feature is the National Public Telecomputing Network/USA Today Headline News which gives news summaries and weather reports. In addition to the Cleveland Freenet there is the Youngstown Freenet and Tri-State Online. Additional databases are constantly being created and added to the Internet.

Another capability of the Internet is access to archives of software programs and datasets. These can be transfered via the network for use by scholars at their own workstations. The Internet also serves as a gateway to online public access catalogs in the United States and abroad. Scholars can now access the holdings of libraries known to have superior collections in a given field. The "virtual library" and its holdings are just a keyboard away.

Responses of Libraries

Proliferation of electronic resources has increased patron demands for materials. The libraries have responded to these demands with a variety of solutions. One of these is enhanced Interlibrary Loan (ILL) services. Interlibrary loans are increasing both in number and complexity.

Penn State ILL operates under a centralized system for all the distributed campuses located throughout the Commonwealth. All requests are processed at the University Park ILL office. A case study of Penn State ILL has indicated a 61% increase for the years 1985–1990, which coincides with the introduction of new technologies.[4] Since the introduction of the Penn State version of CARL UnCover in February 1992, ILL has realized an additional increase in requests. As patrons go further afield in their research efforts, they discover materials that are more difficult to locate. To meet these needs libraries need to supplement ILL with on-demand services, increased ac-

cess to journal services, deposit accounts, and direct calls to research facilities.

An example of an enhanced ILL service is The National Agricultural Text Digitizing Project (NATDP). The final step of the project, started in early 1991, is an ILL module, in which interlibrary loan departments of participating institutions were linked by networked workstations. The workstations allow information, including text and graphics, to be electronically transmitted, received, and displayed over the Internet. The software being used for this workstation is the "Windows Personal Librarian" computer retrieval package developed by Personal Library Software, Inc., of Rockville, MD. It is hoped that this new technology will revolutionize the way agricultural information is made available throughout the world.[5] The PEN (Pennsylvania Extension Network) system at Penn State includes an ILL component. Through this system agents at the 67 extension offices have the capability to electronically request materials housed at Penn State.

Another method of obtaining materials is the use of for-profit companies and agencies. These groups will supply full-text articles, patents, technical reports, and standards from their comprehensive collections, which negates the need for libraries to purchase and house costly materials.

Several options exist for patrons who wish to obtain their materials directly. UnCover2, a component of the CARL system, requires only a major credit card and a fax number. Delivery of articles listed in UnCover is usually within 24 hours. Ordering of materials is as easy as following the system prompts. Another option is CitaDel a collection of databases and a document delivery system from the Research Libraries Group (RLG). Available over the Internet, direct dial, or dedicated lines, CitaDel includes Ei Page One, ABI Inform, Periodicals Abstracts, etc. Most pertinent citations can be ordered for delivery to the patron or to local ILL Additional services include Chemical Abstracts Services, Engineering Information, UMI, Dialorder via Dialog, and The Genuine Article from ISI.

Patron requests for materials often can be made online, resulting in a direct rapid request with fewer errors. While some requested materials may be available locally, patrons can check local systems before ordering. One positive result of this is that the patrons are responsible for their own ILL requests. Costs across the boards are competitive and average approximately $15 per request. "End-user ordering" may help alleviate some of the increased pressures felt by ILL offices.

The aforementioned problems and solutions clearly indicate the need for a comprehensive program, including training, documentation, financial, and personnel support. A major implication of expanding technologies and user expectations is training. Before a library gateway can provide access for its patrons, its staff must be both knowledgeable and comfortable with the technology. This entails not only good training, but good public relations. Staff needs to "buy into" a new system, accepting that the benefits outweigh the efforts to learn the system. Adequate preparation with proper background information results in more enthusiastic learners.

The training program needs to be a carefully planned, comprehensive series which prepares staff to use systems for their own purposes and to assist patrons. Training should include the framework on which the system is based, knowledge of operation, limits, and areas of difficulties with solutions. A well planned, concrete training program will result in staff that are not operating in a vacuum but understand the relevance and methods of the system.

Yet more fundamental is the need for a coordinator or coordinating group to provide staff support and a philosophical commitment to satisfy patrons' new and greater expectations. Such a philosophical commitment has to begin at the administrative level. This positive commitment can then be reinforced by the coordinator(s) with high quality guidelines, training, and documentation.

Issues of commitment and coordination have been successfully addressed at Penn State by the creation of the Computer Based Resources Services Team (CBRST). CBRST provides liaison with library and university computing services and coordinates library support for automation,

new technologies, staff training, and development. The program includes librarians and technical experts; it actively solicits participation from other divisions throughout the university. The creation of this program has facilitated the implementation of many of the solutions discussed, and has had a positive overall effect on staff acceptance of technology.

Conclusion

Our constituencies require and deserve access to all of the above-mentioned materials and services. Such service is not without problems and setbacks. However, the rewards far outweigh the negative aspects. Realistically we must respond to these expectations. There are three options available to the library profession, they are; to ignore these new resources, attempt to restrain the flow of these resources, or to proactively develop avenues to obtain these increasingly complex resources. At the same time librarians need to take an active role in creating and utilizing these resources and the new technologies. A coordinated, collegial participatory process will result in supportive and enthusiastic staff, well served patrons, and an open forward-moving library of the future. ■

References

1 John R. Sack. "Open Systems for Open Minds: Building the Library Without Walls," *College and Research Libraries* 47: 535 (November 1986).

2 Nancy Cline. "Information Resources and the National Network," *EDUCOM Review* 25 (2): 32–33 (Summer 1990).

3 Interview with Nancy Cline, Penn State University. June 21, 1991.

4 Interview with Ruth Senior. Penn State University. June 17, 1991.

5 Brian Norris. "NAL and NCSU Move Ahead on Electronic Image Transmission Project, NATDP," *Agricultural Libraries Information Notes* 17: 16 (February/March 1991).

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The Importance of Information Services for Productivity "Under-recognized" and Under-invested

by Michael Koenig

■ **The relationship between the provision of information services and the productivity of the organization is a topic of great importance. The reason organizations build and maintain information services is to enhance the effectiveness and productivity of people and units supported by those services. That relationship is a topic that has been relatively little researched, largely because of the difficulty of assessing the productivity of the information-intensive people, processes, and units supported by information services, much less the interrelationship itself. What research has been done, however, is remarkably uniform and consistent in pointing to the conclusion that information services are cost-effective investments, and that information-dependent organizations consistently under-invest in information services. This article analyzes and reports on the literature driving that conclusion, and is meant to enhance the ability of librarians and information officers in promoting their operations.**

Background

There is a significant amount of work addressing the relationship of library and information services to the productivity of the organizations they support. The impact of that work has been very modest, however. One reason for the lack of impact is that the work is very scattered, and has appeared, as a glance at the list of references to this article will indicate, in relatively obscure places. Much of the work has appeared in technical reports little noticed by the business and professional community, and a good chunk of it—some of the best—has appeared in proprietary consulting reports which are not in the public domain at all. The most thorough review of this literature is a recent chapter in *Annual Review of Information Science and Technology* by Koenig;[1] a previous chapter in 1982 by Griffiths[2] on the "Value of Information and Related Systems, Products, and Services," though now slightly dated, is also very relevant.

There are also three other reviews of interest. Two, by Bearman et. al.,[3,4] and by Cronin and Gudim, discuss the importance of the problem, but do not discuss specific results; one by Bawden[5] looks specifically at the topic of information systems and creativity, and pulls together a very disparate literature.

Studies Attempting to Calculate the Value of Information Services

One way of looking at the relationship of information services and productivity is to attempt to derive a value for the information services.

What is perhaps the seminal work on attempting to value and evaluate the effect of

providing information services was conducted by Margaret Graham and her colleagues at the Exxon Research Center in the mid-1970s. Not atypical for work in this field, it appeared first in an internal technical report, but was fortunately picked up by Eugene Jackson for his *Special Librarianship, A New Reader.*[6] However, the fact that it never appeared in the sort of venue, the journal literature, where one would expect to see important new findings, was a major missed opportunity.

The findings were new and dramatic. The study built on previous research in user studies but was novel in its attempt to extrapolate and quantify the effect the services provided. The study participants (Exxon researchers) logged information-impacted events on 20 randomly selected days. The participants reported that 62% of those events were beneficial, and in 2% of the cases they were able to estimate the value of the benefit quantitatively. By extrapolating from only that 2%, and assigning no value to the remaining 60% of the impacts that were beneficial but not quantifiable, and subtracting the cost of the researcher's time spent in gathering information from the benefits, the authors concluded that the observable benefits were 11 times greater than the cost of providing external literature information services to the Exxon research community. One can conclude this is a lower bound for the benefits, based as it is on only a small percentage of the beneficial outcomes.

A much larger study, using similar techniques, was conducted in the late 1970s on NASA's information services.[7] This study was conducted on a much broader scale than the one at Exxon. A stratified sampling procedure was used to elucidate data about the use and impact of seven different NASA information products and services. Respondents were asked three basic questions: 1) what was the nature of the consequent utility (termed "application mode") of the use of the information source? (Responses to question 1 were classified as: 0–not relevant or no application; 1–information use only; 2–improved products or processes; 3–new products or processes.); 2) (if the response was application mode 2 or 3) what were the estimated benefits likely to be achieved or costs to be saved?; and 3) what was the probability of accomplishing those benefits or cost savings? For each of the seven services the study reports: the probability for "application modes" 2 and 3, the unit cost (to NASA) for the information transaction, the cost to the user, and the expected net benefit (likely benefit X probability) per transaction.

Unfortunately, the study did not aggregate the data and failed to draw the salient conclusions that could and should have been drawn. Working from the published data, the aggregate data can be extrapolated as follows: The cost to NASA of providing the information service over the five-year period 1971-1976 was $14.3 million ($2.9 million per year) and the expected benefit was $191 million ($28 million per year), while the time expended by the user was valued at $82 million ($16.5 million per year). The ratio between expected benefits and NASA costs is 13:1. The author, Mogavero,[7] recommends that the user cost be subtracted from the expected benefit in calculating a cost-benefit ratio (the same technique as that used in the Exxon study). Thus,

$$\text{Cost-Benefit Ratio} = \frac{\text{Gross Estimated Benefit - Gross User Cost}}{\text{NASA Production Cost}}$$

Calculated this way, the cost-benefit ratio is 7.6 to 1.

While not quite so dramatic as the Exxon results, this result is still compelling. Note that the methodology which asks for both the anticipated benefit and the likelihood of achieving that benefit (in effect a deflator index), is a cautious and conservative one.

One can argue that the formula used is not the appropriate one, that from the organization's perspective, the salient ratio is that between benefit and cost (benefit foregone). (See the article by Bickner[8] for further discussion of this point). That is, from the organization's perspective, the formula should be:

$$\text{Cost-Benefit Ratio} = \frac{\text{Gross Estimated Benefit}}{\text{NASA Production Cost + Gross User Cost}}$$

which yields:

$$\frac{\$191 \text{ million}}{\$14.3 \text{ million} + \$82 \text{ million}} \quad \text{or } 1.98$$

as the ratio (effectively two to one) of benefit to cost. Note the very dramatic internal ratio of user expended cost of accessing information to the cost of providing information services, a ratio of almost 6 to 1. This implies that there is substantial opportunity for systems or service enhancements that diminish user costs and thereby enhance the cost benefit ratio. It also points out that the nominal cost of providing information services is only the tip of the iceberg. In this case, for every dollar expended in providing information services, another six dollars are spent by the user in using those services.

Using a related methodology Mason & Sassone,[9] also in the late 1970s, analyzed the operations of an information analysis center (IAC). In this technique the investigators, working with the users, tried to estimate only the employee's time saved and then assigned value by calculating the burdened salary cost of the employee's time. This technique was applied to an unidentified IAC, and the net present value of the time saved exceeded the net present value of the invested resources and operating cost by 4%.

The costing techniques are more rigorous and sophisticated than most because the present value of invested resources is included as well as operating costs. Mason and Sassone call this technique a "lower bound cost benefit" because the calculations are based solely on the user's time and costs, and no attempt is made to estimate either any larger benefits to the organization or any societal benefits. If the transaction saves $500 of the researcher's time compared with getting the information in some other fashion, but also results in $50,000 worth of benefits or savings, then the utility of the transaction is calculated as merely $500, not $50,000. Even with such stringent limitations, looking only at the cost of alternative processes for gathering information, not at the benefit provided by the information, the center shows a positive net present value.

Valuation methodologies of this general type have been most fully developed and most widely applied by King Research, Inc.[10–18] Some of the studies involve government agencies and the reports are to some degree in the public domain and thus accessible though generally obscure; the bulk have been done for private corporations, are proprietary, and are accessible if at all only via personal contacts. Thus their work, though very important, is generally little known, particularly to the general business community outside of professional information circles.

First, the methodology[10, 12, 18] analyzes the value of the information services to the organization in terms of the value of the time (as measured by salary and overhead) that the users are willing to expend on those services. This is taken as an indication of the organization's willingness to pay for the services. With this methodology the cost to the user, as indicated by time the user spends in accessing information, is treated as an indicator of implicit value rather than as a debit to savings or value achieved as in the three studies above. To be sure, such a measure is an indicator of the motivation to seek information, but as King points out,[17] it seems to be fairly constant across organizations and therefore not likely to be very sensitive to the quality of service provided. In five different organizations studied, the following ratios were reported:

Ratios of Willingness to Pay (measured in terms of user professionals' time) to Nominal Cost of Providing Information Services:

Institution	Ratio
Major Diversified Chemicals Company A[19]	2.5 to 1
Major Diversified Chemicals Company B[10]	4.3 to 1
Major Electronics and Communications Company[20]	4.4 to 1
Major Public Utility[11]	19 to 1
U.S. Department of Energy[16]	26 to 1

The spread of ratios is very wide, an order of magnitude in fact, but in all cases the value of the service as measured by the time users were willing to spend using it was very substantial. If, as King point out, the time information workers spend seeking information is relatively constant across different organizations, then the numbers above may also serve as an indicator of the intensity of the information services provided, the lower the ratio the more intense the information services provided. Note that Poppel[21] in his study of managers in business organizations reports a very similar

(21% as opposed to 25%) proportion of time spent in information seeking.

Second, value is attached to the information services by calculating the additional cost that would be incurred if there were no in-house information service and the documents had to be obtained elsewhere. The values calculated for this approach were:

Ratio of Cost to Use Alternative Services to the Nominal Cost of Providing Information Services:

Institutions	Ratio
Major Diversified Chemicals Company A[19]	2.6 to 1
Major Diversified Chemicals Company B[10]	2.7 to 1
Major Electronics and Communications Company[20]	3.6 to 1
Major Public Utility[11]	8 to 1

Again, the ratios are all highly favorable.

Thirdly, based on the observations that professionals tend to spend a relatively fixed proportion of their time seeking information and reading (a homeostatic function?), the methodology calculates the number of readings that would have to be foregone by the requirement to spend more time seeking information if no inhouse information service were available. From this figure one can derive a value of the savings (or research cost avoidance) that would be lost or incurred if the library or information center did not exist. Knowledge workers surveyed at each institution estimate the savings (or benefit) achieved by reading. However, these estimates are applied only to the transactions foregone, not to all transactions.

The intermediary results from a number of studies are summarized by Griffiths & King[10] as:

Proportion of readings at which various levels of savings (benefit) are reported to be achieved:

Savings($)	Proportion(%)
0	73.9
1–11	12.5
11–100	3.9
101–1,000	4.2
1,001–10,000	3.4
>10,000	2.1

Calculated over the various studies, Griffiths & King[11] report the following data for the value of reading an item:

$385	for reading a journal article
$1,160	for reading a book
$706	for reading an internal technical document

The value calculated at specific institutions for this approach were:

Ratios of Research Cost Avoidance to the Nominal Cost of Providing Information Services:

Institutions	Ratio
Major Diversified Chemicals Company A[119]	4.8 to 1
Major Diversified Chemicals Company B[20]	14 to 1
Major Electronics and Communications Company[10]	16 to 1
Major Public Utility[11]	17 to 1
U.S. Department of Energy[16]	25 to 1

King Research also examined the value of the Energy Data Base (EDB) of the U.S. Department of Energy (DOE).[14, 16] The apparent value—the burdened salary cost of the time spent using the database—was approximately $500 million, out of a total research budget of $5.8 billion (including principal users of the database such as contractors, not just DOE). Estimated total savings attributed to those readings were approximately $13 billion. Thus:

Generation of Information	+	Information Processing and Use	=	Future Savings to DOE Scientists
$5.3 billion	+	$500 million		$13 billion

can be interpreted as an investment of $5.8 billion, yielding a return on investment of approximately 2.2 to 1.

Using the research-cost avoidance approach discussed above, assuming that there were to be no energy databases, there would be a loss of over 300,000 searches and almost 2.5 million readings (a value equivalent to $3 billion). If the current R&D budget is $5.8 billion, then without the EDB, an R&D budget of $8.8 billion would theoretically be required to maintain the same level of output. That is equiva-

lent to saying that the EDB increases organizational productivity by 52%.

Griffiths & King estimate that, if one extrapolates these techniques broadly, the readings by all scientists and engineers in the United States resulted in savings of about $300 billion for the year 1984 alone.[13] They admit this figure sounds enormous, but ask what could scientists and engineers accomplish without access to information? They calculate that the actual time value that scientists and engineers spend in reading exceeds $20 billion per year, based on an average burdened salary, which is in effect a ratio of 15 to 1 for benefit to cost invested in reading.

The calculation of cost-benefit figures is a complex and disputatious exercise, of rather more subtlety than is often realized. The article by Bickner on "Concepts of Economic Cost"[8] is an excellent analysis of the issues and of some of the fallacies to avoid. The calculation of cost benefit figures where a principal commodity is information, a commodity particularly ill addressed by conventional economies, is even more fraught with peril.

The caveat above notwithstanding, the magnitude of the effects reported in these studies is quite striking, as is the very high degree of their consistency, both across different techniques and across different cases. This creates a high degree of confidence that the findings are not mere artifacts, but that they reflect a genuine phenomenon.

Econometric Calculations

A few attempts have been made to calculate the overall effect of information as a factor in industrial productivity. Perhaps the first of these was the use by Hayes & Erickson[22] of the Cobb-Douglas production function to estimate the value added by information services. In the basic Cobb-Douglas formula, the value of goals and services sold is calculated to be the product of a constant times the values of different inputs, labor, capitol, etc., each raised to a different power (exponent). The exponents are solved for by seeing which exponents best fit a number of separate cases. In the Hayes and Erickson formulation, the value added (V) in manufacturing industries is a function of labor (L), capital (K), purchase of information services (I), and purchase of other intermediate goods and services (X), and takes the form:

$$V = AL^a K^b I^c X^d, \text{ or}$$

$$\log V = \text{Log } A + a \text{ Log } L + b \log K + c \log I + d \log X$$

(where A, a, b, c, d are constants). Braunstein[23] developed this approach further, arguing that the standard Cobb-Douglas production function is too specific, that it inappropriately requires that the substitutability between each pair of factors be constant and equal to 1. Braunstein substitutes the "constant elasticity of substitution" (CES) and the "translog" production functions, both of which permit elasticities other than 1. The marginal product of information estimated by the Cobb-Douglas function was 2.54, with Hayes and Erickson's 1972 data, and 2.50 as calculated by Braunstein with 1980 data. The CES function yielded a marginal product of information between 2.43 and 2.92, and the translog function yielded values between 2.34 to 3.67. There is striking consistency in these results, Braunstein argues, and they indicate substantial underinvestment in the purchase of information.

Also striking is the similarity of these numbers to the 2.2 to 1 value for the return on information investment calculated by King Research, Inc., in their analysis of the value of the Energy Data Base,[16] and the 1.98 to 1 reported by Mogavero in his analysis of NASA's information services,[7] values which were derived in an entirely independent fashion.

Characteristics of the Information Environment in Productive Organizations

While they do not directly address the question of value and degree of under-investment, there have been a number of studies of characteristics of productive companies. These studies shed a great deal of light on the relationship between information services and organizational productivity; a very consistent thread is the importance of information access and information services.

Orpen[24] examined productivity in R&D intensive electronics/instrumentation organizations and analyzed the behavior of research managers as perceived by the research staff. He found that in the more productive organizations (as defined by rates of growth and return on assets) the managers were perceived to be significantly more characterized by the following three behaviors: 1) they routed literature and references to scientific and technical staff; 2) they directed their staff to use scientific and technical information (STI) and to purchase STI services; and 3) they encouraged publication of results and supported professional visits and continuing education.

Equally striking was the finding that managerial behavior not directly concerned with information, such as planning future work changes, initiating personnel changes, hiring exemplars, or altering hiring and promotion policies, did not differentiate between the "high-performance" and the "low-performance" companies. In short, information-related behavior strongly tended to discriminate between "high-performance" and "low-performance" companies, while non information-related behavior did not—a distinction that, interestingly enough, Orpen did not make.

In reviewing the corpus of work on R&D innovation, Goldhar, et. al.[25] conclude that there are six characteristics of environments that are conducive to technological innovations. Of the six, four are clearly related to the information environment—specifically: 1) easy access to information by individuals; 2) free flow of information both into and out of the organizations; 3) rewards for sharing, seeking, and using "new" externally developed information sources; and 4) encouragement of mobility and interpersonal contacts. The other two characteristics are rewards for taking risks and for accepting and adapting to change. These findings and their implicit prioritization (in Goldhar's ordering, 1,2,3, & 6, that is the top three of Goldhar's six factors are all information related factors) are striking in that except for the work of Allen,[26-28] who found that more productive teams and individuals had more diverse information contacts outside the project team, none of the work reviewed by Goldhar comes from the traditional areas of information science, or communications; it comes almost entirely from the literature of economics and management. And like Orpen, Goldhar fails to make much of the predominance of information related factors.

A consistent macrotheme in this literature is that of the link between productivity and diversity of information contacts. Koenig[33-37] has studied the relationship between research productivity and the information environment, using the pharmaceutical industry as the setting. A gross measure of productivity can be calculated simply as the number of approved new drugs per research dollar expended. That output measure is refined further by weighting it in regard to: 1) whether the FDA regards the drug as an important therapeutic advance, 2) the drug's chemical novelty, and 3) the filing company's patent position with regard to the drug, and indication of where the bulk of the research was done. Research productivity, thus measured, differs greatly among large pharmaceutical companies.[35] In comparing the information environment of the more-productive companies with the less-productive, the former are characterized by:[37]

- Greater openness to outside information;
- Somewhat less concern with protecting proprietary information;
- Greater information systems development effort;
- Greater end-user use of information systems and more encouragement of browsing and serendipity;
- Greater technical and subject sophistication of the information services staff; and
- Relative unobtrusiveness of managerial structure and status indicators in the R&D environment.

To the degree that data were available, there did not seem to be any significant distinction between the more versus the less productive

companies in terms of the extent of resources expended on information services (as measured by the number of information center staff).

These findings (above) are a part of a larger body of literature that finds that contact with external information sources and diversity of information sources are key factors in successful innovation. Project Sappho (Scientific Activity Predictor from Patterns with Heuristic Origins) conducted by the University of Sussex[38] deliberately studied failures as well as successes. Twenty-nine "pairs" (one success and one failure) of innovation attempts in a similar industry segment were analyzed to determine what led to success. One of the five major conclusions was that "successful innovators make more effective use of outside technology and scientific advice, even though they perform more of the work in-house. They have better contacts with the scientific community, not necessarily in general, but in the specific areas concerned."

After reviewing a number of studies on innovation, principally from the management literature, Utterback[39, 40] concluded, "In general, it appears that the greater the degree of communications between the firm and its environment at each stage of the process of innovation, other factors being equal, the more effective the firm will be in generating, developing, and implementing new technology."[40] Wolek & Griffith[41] reviewed the sociologically-oriented literature on this topic and came to substantially the same conclusion. McConnell, writing on how to improve productivity from an operational standpoint, and reviewing the literature in a less formal fashion, remarks: "Information flow, through both formal and informal networks, should be full and free—up, down, and across the organization. This required continuous effort and attention. ...The more open and free communication is in the organization, the greater will be productivity."[42]

Kanter[43, 44] conducted an extension survey of innovations initiated by middle managers. From her findings, she made six major recommendations for structuring organizations to support creativity. The second recommendation was: "a free and somewhat random flow of information."[44] She further reports that to accomplish productive changes, a manager needs "information, resources, and support,"[44] in that order.

When examining the literature about what characterizes productive organizations it is clear that not only does a consistent theme emerge of greater openness toward and greater access to information, both internal and external, but that information access related factors emerge in positions of very high priority in comparison to other factors under management control. Also striking, and very corroboratory in its implications is the fact that these findings are consistent whether the investigator or the literature received is from the areas of library and information science, management science and economics, or sociology.

Characteristics of Productive Information Workers

There is also a large body of literature on the characteristics of productive information workers, and the findings are quite consistent with and complementary to those above. King Research,[10] in evaluating information use at Oak Ridge National Laboratories has documented a significant and positive relationship between the productivity of professionals and the amount of time spent in reading. Several indicators were used to measure productivity: number of formal records (i.e., of research, of project management), number of formal publications, number of proposals or research plans, number of formal oral presentations, and number of times the professionals were consulted for advice. All of these indicators were found to be positively correlated with the amount of reading done.

Mondschein[45] studied the productivity of researchers in several major corporations, as measured by publishing activity, vis-a-vis their use of automated current-awareness services (SDI or selective dissemination of information). He found that scientists who use SDI frequently appear to be more productive than their colleagues who either do not use such services or use them only infrequently. Further, the productive researchers were characterized by their use of a wider variety of information sources, particularly by the extent

of their efforts to stay current and by their use of patent information sources.

Ginman,[46] in studying the information use of CEOs, observes a very different information style for CEOs in companies in the revival phase as compared with those in the stagnation phase. The former are more extroverted in their information use style, and have an information culture that is characterized by greater width and depth, with greater use of external information sources and greater ability to pinpoint and recall specific items of information input, such as specific authors, articles, etc.

Chakrabarti & Rubenstein,[47] in studying NASA innovations adopted by industry, conclude that quality of information as perceived by the recipient is a major factor in the adoption of innovations. This is, of course, an extension to the high-tech environment of the classic work by Rogers[48] on innovation and change agentry (use of agents who deliberately introduce beneficial change), most of which was done in relatively low-tech situations, and is consistent with Rogers findings.

Johnston & Gibbons[49] examined the characteristics of information that contributed to the resolution of technical problems with some 30 ongoing innovations in British industry. They found that 1) information obtained from the literature contributed as much as information obtained from personal contact; 2) different sources were selectively used to acquire different types of information; and 3) a wide range of information sources is important.

The studies reported above are typical of the larger body of research finding. The consistent theme is that more productive individuals make greater access to and greater use of information services.

Conclusion

There is an extensive literature that indicates very strongly that access to information is a very critical component of the productivity of information workers and consequently the productivity of the information dependent organization employing those persons. This phenomenon is generally recognized, but its comparative importance is still "under-recognized," even ill-recognized in the very literature that reports the findings (see particularly the discussion above of the work by Orpen[24] and and Goldhar[25]). More importantly, there is an emerging body of research findings, emerging in very scattered locations, but perhaps now approaching some critical mass in size that quite consistently indicates that information-dependent organizations under-invest in information services and that to maximize their productivity, those organizations should substantially increase their investment in information services.

The agenda before the information profession is obvious:

- We need more research on the relationship between the information environment and organizational productivity.
- We need to integrate and disseminate the increasing body of knowledge we do have on the subject.

The importance of organizational productivity and productivity enhancement is well understood and almost totally accepted; the importance of the information environment and of information services to productivity is only beginning to be understood and is very much "under-recognized." Recent work by Matarazzo[50] documents the general lack of awareness of managers about the real contributions made by libraries and information centers. We need to change that state of affairs. ■

References

[1] Koenig, Michael E.D. "Information Services and Downstream Productivity," in: Williams, Martha E. ed. *Annual Review of Information Science and Technology: Volume 25* New York: Elsevier Science Publishers for the American Society for Information Science, 1990. 55–86.

[2] Griffiths, José-Marie. "The Value of Information and Related Systems, Products and Services," in: Williams, Martha E., ed. *Annual Review of Information Science and Technology: Volume 17* White Plains, NY: Knowledge Industry Publications, Inc. for the American Society for Information Science, 1982. 269–284.

[3] Bearman, Toni Carbo, Polly Guynup, and Sandra N. Milevski. "Information and Productivity," *Journal of the American Society for Information Science* 36 (6): 369–375 (November 1986).

[4] Cronin, Blaise and Mairi Gudim. "Information and Productivity: a Review of Research," *International Journal of Information Management* 6 (2); 85–101 (June 1986).

[5] Bawden, David. "Information Systems and the Stimulation of Creativity," *Journal of Information Science* 12 (5): 203–216 (1986).

[6] Weil, Ben H. "Benefits from Research Use of the Published Literature at the Exxon Research Center," in: Jackson, Eugene B., ed. *Special Librarianship: A New Reader* Metuchen, NJ: Scarecrow Press, 1980. 586–594.

[7] Mogavero, Louis N. "Transferring Technology to Industry Through Information," in: *Information and Industry: Proceedings of the North Atlantic Treaty Organization, Advisory Group for Aerospace Research and Development (AGARD), Technical Information Panel's Specialists' Meeting:* October 18–19 1978; Paris, France. Neuilly-sur-Seine, France: AGARD. January 1979. 14:1–14:6 (AGARD CP-246).

[8] Bickner, Robert E. "Concepts of Economic Cost," in King, Donald W., Nancy K. Roderer, and Harold A. Olsen, eds. *Key Papers in the Economics of Information Systems* White Plains, NY: Knowledge Industry Publications, Inc. for the American Society for Information Science, 1983. 107–146.

[9] Mason, Robert M. and Peter G. Sassone. "A Lower Bound Cost Benefit Model for Information Services," *Information Processing & Management* 14 (2): 71–83 (1978).

[10] Griffiths, José-Marie and Donald W. King. *A Manual on the Evaluation of Information Centers and Services* Oak Ridge, TN: King Research, 1990. 370p. Submitted to the North Atlantic Treaty Organization, Advisory Group for Aerospace Research and Development. Available by permission from King Research, Inc., PO Box 572, Oak Ridge, TN 37831.

[11] Griffiths, José-Marie and Donald W. King. *An Information Audit of Public Service Electric and Gas Company Libraries and Information Resources: Executive Summary and Conclusions* Rockville, MD: King Research, Inc., Spring 1988. 15p.

[12] King, Donald W. and José-Marie Griffiths. "Evaluating the Effectiveness of Information Use," in: *Evaluating the Effectiveness of Information Centres and Services* Material to Support a Lecture Series Presented Under the Sponsorship of the North Atlantic Treaty Organization, Advisory Group for Aerospace Research and Development (AGARD), Technical Information Panel and the Consultant and Exchange Programme; September 5–6, 8–9, 12–13 1988; Luxembourg; Athens, Greece; Lisbon, Portugal; Neuilly-sur-Seine, France: AGARD. 1988. 1:1–1:5.

[13] Griffiths, José-Marie and Donald W. King. *The Contribution Libraries Make to Organizational Productivity.* Rockville, MD: King Research, Inc., 1985. 12p. OCLC: 16389522. Available by permission from King Research, Inc., PO Box 572, Oak Ridge, TN 37831.

[14] King, Donald W., José-Marie Griffiths, Ellen A. Sweet, and Robert R.V. Wiederkehr. *A Study of*

the Value of Information and the Effect on Value of Intermediary Organizations, Timeliness of Services and Products, and Comprehensiveness of the EDB Rockville, MD: King Research, Inc., 1984. 3 volumes in 1. (Submitted to the U.S. Department of Energy, Office of Scientific and Technical Information). NTIS: DE85003670; OCLC: 11712088; DOE: NBM-1078. Available by permission from King Research, Inc., PO Box 572, Oak Ridge, TN 37831.

[15] Roderer, Nancy K., Donald W. King, and Sandra E. Brouard. *The Use and Value of Defense Technical Information Center Products and Services* Rockville, MD: King Research, Inc. June 1983. 115p. (Submitted to the Defense Technical Information Center). OCLC: 12987688, 11599947. Available by permission from King Research, Inc., PO Box 572, Oak Ridge, TN 37831.

[16] King, Donald W., José-Marie Griffiths, Nancy K. Roderer, and Robert R.V. Wiederkehr. *Value of the Energy Data Base* Rockville, MD: King Research, Inc., October 1982. 81p. Submitted to the U.S. Department of Energy, Technical Information Center. NTIS: DE82014250; OCLC: 9004666; DOE: OR11232-1. Available by permission from King Research, Inc., PO Box 572, Oak Ridge, TN 37831.

[17] King, Donald W., Dennis O. McDonald, and Nancy K. Roderer. *Scientific Journals in the United States: Their Production, Use, and Economics* Stroudsburg, PA: Hutchinson Ross Publishing Co., 1981. 319p.

[18] King, Donald W. and Nancy K. Roderer. "Information Transfer Cost/Benefit Analysis," in: *Information and Industry: Proceedings of the North Atlantic Treaty Organization, Advisory Group for Aerospace Research and Development (AGARD), Technical Information Panel's Specialists' Meeting;* October 18–19, 1978; Paris, France. Neuilly-sur-Seine, France: AGARD; January 1979. 8: 1–8: 10. (AGARD CP-246).

[19] Griffiths, José-Marie. Proprietary Report, presented at a research seminar, June 1987.

[20] King, Donald W., José-Marie Griffiths, Lawrence W. Lannow, and Helen M. Kurtz. "Study of the Use and Value of Library Network Services." Proprietary Report prepared by King Research.

[21] Poppel, Harvey L. "Who Needs the Office of the Future?" *Harvard Business Review* 60 (6): 146–155 (November/December 1982).

[22] Hayes, Robert M. and T. Erickson. "Added Value as a Function of Purchases of Information Services," *Information Society* 1 (4): 307–338 (1982).

[23] Braunstein, Yale M. "Information as a Factor of Production: Substitutability and Productivity," *Information Society* 3 (3): 261–273 (1985).

[24] Orpen, Christopher. "The Effect of Managerial Distribution of Scientific and Technical Information on Company Performance," *R&D Management* 15 (4): 305–308 (October 1985).

[25] Goldhar, Joel D., Louis K. Bragaw, and Jules J. Schwartz. "Information Flows, Management Styles, and Technological Innovation," *IEEE Transactions on Engineering Management* EM-23 (1): 51–61 (February).

[26] Allen, Thomas J. *Managing the Flow of Technology: Technology Transfer and the Dissemination of Technological Information Within the R&D Organization* Cambridge, MA: MIT Press, 1977. 320p.

[27] Allen, Thomas J. "Roles in Technical Communications Networks," in: Nelson, Carnot E. and Donald K. Pollock eds. *Communication Among Scientists and Engineers* Lexington, MA: Heath Lexington Books, 1970. 191–208.

[28] Allen, Thomas J. "The Utilization of Information Sources During R&D Proposal Preparation." Cambridge, MA: MIT Press, 1964. 31p. (MIT Alfred P. Sloan School of Management working paper no. 97–64).

[29] Albrecht, Terrance L. and Vickie A. Ropp. "Communicating About Innovation in Networks of

Three U.S. Organizations," *Journal of Communication* 34 (3): 78–91 (Summer 1984).

[30] Pelz, Donald C. and Frank M. Andrews. "Diversity in Research," in: Allison, David, ed. *The R&D Game: Technical Men, Technical Managers, and Research Productivity* Cambridge, MA: MIT Press. 1969. 73–89.

[31] Pelz, Donald C. and Frank M. Andrews. *Scientists in Organizations: Productive Climates for Research and Development* New York, NY: Wiley. 1966. 318p.

[32] Shilling, Charles W. and Jessie S. Bernard. *Informal Communications Among Bioscientists, Part II* Washington, DC: George Washington University, 1964. 1 Volume (discontinuous paging). (Biological Science Communications Project Report no. 16A)

[33] Koenig, Michael E.D. "The Information and Library Environment and the Productivity of Research," *Inspel* 24 (4): 157–167 (1990).

[34] Koenig, Michael E.D. "Bibliometric Indicators Versus Expert Opinion in Assessing Research Performance," *Journal of the American Society for Information Science* 34 (2): 136–145 (March 1983).

[35] Koenig, Michael E.D. "A Bibliometric Analysis of Pharmaceutical Research," *Research Policy* 12 (1): 15–36 (February 1983).

[36] Koenig, Michael E.D. "Determinants of Expert Judgement of Research Performance," *Scientometrics* 4 (5): 361–378 (1982).

[37] Koenig, Michael E.D. and Daniel J. Gans. "The Productivity of Research Effort in the U.S. Pharmaceutical Industry," *Research Policy* 4 (4): 331–349 (October 1975).

[38] University of Sussex. Science Policy Research Unit. "Success and Failure in Industrial Innovation," report on Project Sappho. London, England: Center for the Study of Industrial Innovation. February 1972. 37p.

[39] Utterback, James Milo. "Innovation in Industry and the Diffusion of Technology," *Science* 15; 183 (4125): 620–626 (February 1974).

[40] Utterback, James Milo. "The Process of Technological Innovation Within the Firm," *Academy of Management Journal* 14: 75–88 (March 1971).

[41] Wolek, Francis W. and Belver C. Griffith. "Policy and Informal Communications in Applied Science and Technology," *Science Studies* 4 (4): 411–420 (July 1974).

[42] McConnell, J. Douglas. "Productivity Improvements in Research and Development and Engineering in the United States," *Society of Research Administrators Journal* 12 (2): 5–14 (Fall 1980).

[43] Kanter, Rosabeth Moss. *The Change Masters: Innovations for Productivity in the American Corporation*. New York, NY: Simon and Schuster. 1983. 432p.

[44] Kanter, Rosabeth Moss. "The Middle Manager as Innovator," *Harvard Business Review* 60 (4): 95–105 (July/August 1982).

[45] Mondschein, Lawrence G. "SDI Use and Productivity in the Corporate Research Environment," *Special Libraries* 81 (4): 265–279 (Fall 1990).

[46] Ginman, Mariam. "Information Culture and Business Performance," *IATUL Quarterly* 2 (2): 93–106 (1988).

[47] Chakrabarti, Alok K. and Albert H. Rubenstein. "Interorganization Transfer of Technology: A Study of Adoption of NASA Innovations," *IEEE Transactions on Engineering Management*. EM–23 (1): 20–34 (February 1976).

[48] Rogers, Everett M. *Diffusion of Innovations*. 3rd edition. New York, NY: Free Press 1983. 453p.

[49] Johnston, Ron and Michael Gibbons. "Characteristics of Information Usage in Technical Innovation," *IEEE Transactions on Engineering Management* EM–22 (1): 27–34 (February 1975).

[50] Matarazzo, James M., Laurence Prusak, and Michael R. Gauthier. *Valuing Corporate Libraries: A Survey of Senior Managers* Washington, DC: Special Libraries Association in cooperation with Temple, Barker & Sloane, Inc., 1990. 11p.

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Students: The Overlooked, Untapped Resource Within Nearly Every Chapter

by Larry L. Wright

■ **The Special Libraries Association (SLA) has experienced an unprecedented increase among student members. Nearly every Chapter has student members but little is known how these Chapters serve their student members to retain them as full members after they graduate. Data presented here offer a profile of activities SLA provides for students at the Chapter level. The data expose critical areas where Chapters are deficient in serving student members. Alternatively, this study reveals activities that are successful and may be emulated elsewhere to offset deficiencies. The study offers a standard by which Chapters can measure their progress with involving students in local SLA activities.**

Student membership in the Special Libraries Association (SLA) has increased by an unprecedented 14.3 percent within the last year and now represents nearly 12 percent of the total membership.[1] Such rapid growth signals a need for SLA organizations to re-evaluate goals directed to student-oriented programs in order to improve recruitment and retention of student members. Over 90 percent of SLA Chapters have five or more student members and in twelve Chapters at least 20 percent are students. Following graduation, most of these library students are immobile to career options and are potential full members of the Chapters in which they were originally members as students.[2] Recognizing this, some Chapters are highly motivated to recruit and involve students in Chapter activities, in an effort to retain them as active members after they graduate. While there are Chapters that have not addressed opportunities to welcome and include students in SLA-related activities, most can benefit from emulating programs that have proven successful elsewhere. Hence, a survey was conducted to explore how various SLA Chapters accommodate students into the ranks of professional special librarians. Results of the survey will permit Chapters to compare their present programs with those sponsored throughout SLA.

Background

A survey containing 20 statements was distributed on May 13, 1991, to 54 Chapter presidents in Canada and the United States. The cover letter indicated the intent of the survey was to "explore activities SLA provides at the Chapter level, for students [enrolled] in ALA-accredited Schools of Information and Library Sciences." Presidents were asked to indicate whether or not the statements applied to their Chapter during SLA fiscal year 1990–91.

Statements were organized within a single table. Respondents also were offered the opportunity to comment further or clarify answers as necessary.

Fifty-two of 54 (96 percent) surveys were completed and returned. The two nonresponding Chapters were identified and matched against a current list of ALA-accredited library schools. No accredited programs were located in proximity to either Chapter. While these two Chapters had seven and four

student members respectively, it was assumed the Chapters could not provide information pertinent to the survey.

Statements in this paper appear in their original order; however, they have been divided into (six) subject groups for ease of interpretation: ALA Accredited Schools Within The Chapters (Table 1); Chapter Presidents' Knowledge of SLA-Sponsored Student Groups (Table 2); Student Attendance at Chapter Meetings (Table 3); Chapters' Direct Involvement with Students (Table 4); Chapter-Sponsored Activities for Marketing SLA (Table 5); Chapter Involvement with Academic Programs (Table 6).

ALA-Accredited Schools Within the Chapter

At the time the survey was conducted, there were 59 ALA-accredited Schools of Library and information Sciences within 39 separate Chapters in Canada, Puerto Rico, and the United States. For the most part, presidents expressed a keen awareness and responsibility to academic programs offered at library schools located in their Chapters.

For example, consider the statement (Table 1, Statement 1): "An ALA-accredited School of Library and information Sciences is located within our Chapter. (if more than one, how many?)" Collectively, 58 ALA-accredited schools were mentioned; the presidents passed over the University of Puerto Rico. Ten Chapter presidents indicated no ALA-accredited schools were located in their Chapters. Although it was possible to assign ALA-accredited institutions to Chapter locations, it was not always easy to resolve Chapter affiliation with specific academic programs. Frequently Chapters affiliated with local "branch graduate programs" and not with distant central campuses. Results of the survey showed "branch graduate programs" were conducted often at great distance from the central campuses, frequently across Chapter borders. Some branch campuses were in urban settings. Chapters such as Central Ohio, Cincinnati, and New York affiliated closely with "branch" educational programs. Other Chapters embraced students enrolled in non-ALA-accredited, relevant, academic programs. For example, Minnesota reported: "we have a relationship with an 'information management program' at a liberal arts college... SLA members are on the school's advisory board and we provide many of the services you've listed [on the survey] like reduced meeting fees, internships." Comments on the survey disclosed that many Chapters formed relationships with students enrolled in various academic settings not necessarily found among ALA-accredited schools. Some of these institutions were located outside the Chapters.

Eight presidents indicated their Chapters strongly affiliated with academic communities located outside their "boundaries" (Table 1, Statement 2). Three Chapters did not have an ALA-accredited school; however, activities were extended beyond Chapter borders to interact with students. Often, two or more Chapters "claimed" the same ALA-accredited school. Five Chapters, mostly in dense metropolitan regions, had the best of both worlds: they embraced academic communities both within and outside their borders.

Five respondents not affiliating with library schools were not required to fill out the remaining survey (Table 1, Statement 2). Most Chapters, however, maintained some level of association with library schools; 47 surveys were completed, indicating further involvement with students.

When asked if "a library school within [your] Chapter has at least one course exclusively devoted to special libraries, 30 (64 percent) presidents were aware of 47 schools with special libraries courses (Table 1, Statement 3). However, 11 (23 percent) presidents "didn't know" if courses emphasizing special libraries were available to students in their Chapters.

When student registration is sufficient to justify teaching a course in special libraries, there should be an ample number of students enrolled to form an SLA student group. This can be expanded to identify potential areas for growth. Among the 47 schools with courses devoted to special libraries, SLA sponsors 42 student groups. The survey indicates SLA

Chapters have an opportunity to increase the total SLA-sponsored groups from 42 to 47, effecting a 10 percent increase.

One president commented that two Chapter officers identified a local library school that could support an SLA student group and upon conferring with the library school dean and the instructor for the special library class, found that there was sufficient interest to support an SLA student group. Within the year, an SLA student group was installed at the library school.

Chapter Presidents' Knowledge of SLA-Sponsored Student Groups

For the most part, Chapters could improve upon their contact with academic communities as they relate to special libraries and be more aware of SLA student group activities. Presidents were asked to respond to the following: "SLA sponsors a student group at a library school within our Chapter (if more than one, please indicate the number of SLA student groups) (Table 2, Statement 4). Twenty-eight Chapter presidents were aware of 38 of the 42 student groups SLA sponsors. One Chapter president claimed, three SLA student groups were located in the Chapter where SLA sponsors only one. After correcting for this single error, Chapter presidents were aware of only 86 percent (36 out of 42) of the student groups SLA sponsors. Three presidents acknowledged they "didn't know" if SLA sponsored a student group within their Chapters.

Considering the responses to Statement 4, SLA Chapters need to reexamine their positions relative to SLA student groups and investigate networking programs with student group organizations. Chapters may consider co-hosting activities with student groups, thus offering a direct line of SLA support through Chapters to members within student groups. As a result, Chapters may realize increased student attendance at Chapter meetings or other activities.

Student Attendance at Chapter Meetings

Some Chapters made efforts to market Chapter meetings to students. The North Carolina Chapter, coordinating with three SLA student groups, announced meetings through student electronic bulletin boards and flyers posted on campus. Car-pooling was encouraged and sign up sheets were posted two weeks prior to Chapter meetings. The Arizona Chapter devoted an entire program to students; the San Francisco Bay Region Chapter hosted late-afternoon "career panel programs" with refreshments. Many Chapters scheduled meetings on or near campuses to facilitate attendance of students at Chapter meetings.

In contrast, a number of Chapters expressed difficulty attracting students to Chapter meetings. Results from this survey confirm that overall student attendance was low at Chapter meetings (Table 3, Statement 5). Of the 39 Chapters indicating students attend their meetings, 26 (67 percent) Chapters reported student attendance ranged from one to five students per meeting; 10 (26 percent) reported 6–12 students attend each meeting; one (3 percent) reported as many as 13–20 attending each meeting. After pooling these data, it can be estimated that about only 11 percent of all student members of SLA regularly attend Chapter meetings. To increase membership and improve retention, Chapters need to inspire more students to be involved in local SLA-related activities.

Chapters need to identify, address, and eliminate barriers discouraging student attendance at Chapter meetings. Barriers arise as one or a combination of the following: aloofness, financial hardships, scheduling conflicts, inaccessibility, irrelevancy, or distance. Some Chapters span several provinces or states, requiring some students to invest in overnight trips to attend Chapter meetings; hence few, if any students attend. Some Chapters are small and students are attracted to neighboring Chapters where meetings are well attended. Some urban Chapters have large memberships and while attending meetings, students tend to be relegated to obscurity.

Alternatively, the same conditions may offer solutions. Often, small Chapters offer intimacy; large Chapters afford enormous resources and often conduct meetings with reduced or no registration fees. In 1988, Paskoff reported 40 percent of SLA Chapters provide free or re-

(Tables 1–3)

Table 1

ALA ACCREDITED LIBRARY SCHOOLS WITHIN CHAPTERS	YES		NO		DON'T KNOW	
	n	%	n	%	n	%
1. An ALA accredited School of Library and Information Sciences is located within our chapter. (If more than one, how many? ____[a]____)	42	78	10 +2[b]	22		
2. An ALA accredited School of Library and Information Sciences is located just outside our chapter. It is **strongly** affiliated with our chapter. (If you respond "yes", consider the school "within your chapter" for the remaining responses). **(Proceed to question 3 only if you responded "yes" to either of the questions above.)**	8	15	44	85		
3. A library school within our chapter has at least one course exclusively devoted to special libraries. (If more than one school applies here, please indicate the number of schools.(__[c]__)	30	64	6	13	11	23

[a] 58 Schools of Library and Information Sciences were reported by 42 chapter presidents
[b] Had the two (missing) chapters responded to the questionnaire, this value would be 12
[c] 47 schools were reported to offer courses exclusively devoted to special libraries

TABLE 2

CHAPTER PRESIDENTS' KNOWLEDGE OF SLA-SPONSORED STUDENT GROUPS	YES		NO		DON'T KNOW	
	n	%	n	%	n	%
4. SLA sponsors a student group at a library school within our chapter (If more than one, please indicate number of SLA student groups(__[a]__)	28	60	16	34	3	6

[a] 38 SLA sponsored student groups were reported by 28 chapter presidents

TABLE 3

STUDENT ATTENDANCE AT CHAPTER MEETINGS	YES		NO		DON'T KNOW	
	n	%	n	%	n	%
5. Library students regularly attend our chapter meetings. (Check approximate student attendance per meeting: 1-5__[a]__; 6-12__[b]__; 13-20__[c]__; +21__[d]__.	[e]39	83	6	13	2	4
6. Our chapter offers students reduced registration fees to attend chapter meetings.	33	70	13	28	1	2
7. Our chapter facilitates car-pooling for students to chapter meetings (i.e. distributing sign-up sheets).	9	19	38	81	0	0
8. Students receive "special notices" announcing chapter meetings.	31	66	15	32	1	2

[a] 25 chapters estimated student attendance at 1-5 per chapter meeting
[b] 10 chapters estimated student attendance at 6-12 per chapter meeting
[c] 1 chapter estimated student attendance at 13-20 per chapter meeting
[d] No chapters indicated more than 20 students attend chapter meetings
[e] 3 chapters mentioned students occasionally attend meetings

duced student registration fees for meetings.[3] Since then, more Chapters (70 percent) have elected to offer free or reduced registration fees for students (Table 3, Statement 6).

In regions where great distances pose problems for students to attend Chapter meetings, car-pooling could be integrated with overnight accommodations offered at members' houses. Car-pooling for students is facilitated by only nine percent of the Chapters (Table 3, Statement 7) and marketing Chapter meetings directly to students is common among only 66 percent of the Chapters (Table 3, Statement 8).

One president indicated the Chapter "holds one meeting per year on campus, at lower cost to students [and) it is publicized widely by professors in class...students don't attend." The president asked, "What works?"

Comments included with the surveys indicate that Chapters with popular programs among students market their programs directly to students. Often, coalitions are formed between the SLA student groups and Chapters. One respondent wrote: "Successful activities integrate practicing professionals with students, avoiding the 'oil and water' syndrome. Students are interested in forming professional relationships with practitioners."

Chapters' Direct Involvement with Students

Several Chapters capitalize on student talents for Chapter activities. The San Francisco Bay Region Chapter published a student column in their bulletin; the North Carolina Chapter invited the SLA Student Group presidents to serve on the Academic Relations Committee. The Mid-Missouri Chapter reserved a chair for the student group advisor at executive board sessions. Presidents from nine Chapters (19 percent) indicated students either visited or attended at least one Chapter executive board meeting (Table 4; Statement 9). Significantly more Chapters (34 percent) asked students to serve on committees (Table 4, Statement 10). This is encouraging, considering that in 1988, students were invited to serve on committees in only 15 percent of Chapters.[3]

The Southern Appalachian and San Francisco Bay Region chapters sponsored mentorship programs (see page 219 in this issue); the Cleveland Chapter encouraged student participation in the "Day at Work" program with a special librarian. Ten Chapters promoted "Lunch with a Special Librarian" programs (Table 4; Statement 11). Nearly half (49 percent) of the presidents reported their Chapters sponsored "Receptions for Students" at library schools (Table 4; Statement 12). The North Carolina Chapter and SLA student groups cohosted receptions, often corporate-sponsored, for students at the library schools. These events were popular among practitioners, faculty, and students with as many as 75 in attendance, causing a former ALA President to comment, "You special librarians really know how to do it, don't you?" Other programs popular among students were those extending financial assistance

The survey shows a substantial number of Chapters facilitated internship programs for students (Table 4, Statement 13). The Washington, DC Chapter conducted a student loan program. Scholarships were awarded by some chapters, usually based on the merit of essays directed to topics related to special libraries and submitted in the framework of a formal competition. Some large Chapters offered scholarships to offset Chapter meeting expenses or to attend the annual SLA meeting and "student workshops." Nine Chapters offered cash awards ranging from $25 to $200 often given in honor of members prominent in Chapter history. Although as many as 20 percent of Chapters sponsored their own academic scholarship program (Table 4, Statement 13), fewer Chapters (15 percent) promoted SLA Scholarships to students (Table 4, Statement 15).

Many Chapters (60 percent) assumed the role of conveying employment information to students (Table 6, Statement 16). For the most part, however, this responsibility was mediated through members employed by library schools. The North Carolina Chapter and student groups cosponsor weekly employment information updates, displayed on bulletin boards at library schools. Banners at the top of the flyer state job notices are displayed through

the courtesy of the SLA Chapter and the SLA Student Group.

Chapter-Sponsored SLA Marketing Activities

Although students are potential SLA members, few Chapters (16 percent) introduce students to SLA in "student orientation programs" (Table 5, Statement 17). Many Chapters do promote special libraries and SLA to students at other times (Table 7; Statement 18). While most Chapters rely on faculty-Chapter members to promote Chapter-student activities, several Chapters indicate practitioners are highly effective in marketing SLA. Practitioners offer a change of cadence within academic settings and effectively inspire interest in SLA among library school students. The Central Ohio Chapter affirms, "...the more personal contact with the students, the better."

Chapter Involvement with Academic Programs

Few Chapters have embraced the notion that they should market their resources as a supplement to academic programs (Table 6, Statements 19, 20). The San Francisco Bay Region Chapter is organizing a "Mentor Directory" to distribute to the academic community. North Carolina extends its resources to the academic community by surveying the members annually to determine those special libraries that are willing to accommodate tours, internships, research projects, field experiences, or demonstrations of special equipment. Also, the special librarians document their willingness to participate in classroom discussions, sponsor receptions for students, or forward extra educational materials to library schools. Copies of the completed forms are mailed to SLA Student Group presidents, for student use; to "special libraries" classroom instructors, for classroom use; and to deans of library schools for general faculty use. A Dean responded, "Thank you so much for the SLA packet. What a wealth of helpful information and such a worthwhile project for your committee to do for us. I assure you we will use it."

As a result, library schools in North Carolina have integrated special librarians into classroom presentations. North Carolina special librarians have participated in panel discussions to introduce first-year students to special libraries. Also, in classroom presentations, practitioners have represented special libraries as they relate to library management, specialized reference services, networking, automated technical services, and career alternatives. SLA Student Groups have utilized the surveys for library tours and field experiences. Projects, similar to the one in North Carolina, serve to bond SLA practitioners with students and faculty. These coalitions infuse vitality into the library community, building viable professional relationships centered around student populations.

Conclusion

Students get their introduction to SLA through Chapters and SLA-sponsored student groups and Chapters should integrate activities with student groups to carry members, through graduation to full membership. Chapters with strong networking programs offer opportunities for student members to express their concerns and work within the association to resolve them. It has been long known that the most successful way to attract members is the one-on-one meeting.[4] Students respond when practicing special librarians bring their profession to the academic community. Students are reluctant to set aside academic obligations and arrange transportation to participate in off-campus "out-reach" programs

Chapters must cautiously avoid initiating "out-reach" programs wherein Chapters, while remaining stationary, reach out to academic communities expecting students to be drawn to Chapter-related activities. Alternatively, Chapters must form partnerships within academic communities, involving students with numerous SLA-related activities on campus. Once students find SLA is responsive to their needs, they will be attracted to interests off-campus, such as Chapter and SLA division functions

Marketing must begin early in the academic

(Tables 4–6)

Table 4

	CHAPTERS' DIRECT INVOLVEMENT WITH STUDENTS	YES		NO		DON'T KNOW	
		n	%	n	%	n	%
9.	One (or more) library student(s) visited/attended at least one of our chapter executive board meetings.	9	19	38	81	0	0
10.	One (or more) library student(s) served on at least one committee within our chapter.	16	34	30	64	1	2
11.	Our chapter facilitates "Lunch with a Special Librarian.	10	21	36	77	1	2
12	Our chapter facilitates "Receptions for Students" at library schools.	23	48.9	23	48.9	1	2.2
13.	Our chapter facilitates ("paid or unpaid") Internships/work experiences/apprenticeships for students.	16	34	28	60	3	6
14.	Our chapter sponsors awards/scholarships for students. (Please indicate the name(s) of the award(s) and stipend(s) on referse side.)	20	43	25	53	2	4
15.	Our chapter markets SLA-sponsored scholarships to students.	15	32	28	60	4	8
16.	Our chapter networks employment information to students. (i.e. distribution of job notices)	28	60	19	40	0	0

Table 5

	CHAPTER-SPONSORED ACTIVITIES FOR MARKETING SLA	YES		NO		DON'T NOW	
		n	%	n	%	n	%
17.	Representatives from our chapter visit library schools to market special libraries and SLA as a part of the annual student orientation program.	16	34	30	64	1	2
18.	Representatives from our chapter visit library schools to market special libraries and SLA, but not necessarily as a part of the annual student orientation program.	33	70	14	30	0	0

Table 6

	CHAPTER INVOLVEMENT WITH ACADEMIC PROGRAMS	YES		NO		DON'T KNOW	
		n	%	n	%	n	%
19.	Our chapter provides faculty with information packets indicating resouces available within local special libraries (i.e. lists where tours are available, optical scanning demonstrations, etc.)	5	11	39	83	3	6
20.	Our chapter provides students with information packets indicating resources available within local special libraries (i.e. lists where tours are available)	3	6.4	41	87.2	3	6.4

program. Students should be aware special librarianship affords an interesting and challenging profession that is practiced in some unusual and unexpected settings.[5] Students want to hear about special libraries from practicing special librarians. SLA President Guy St. Clair challenges SLA organizations to initiate strong recruitment programs to attract the brightest, best, qualified people into special librarianship.[6] Mr. St. Clair's mission anticipates the crisis of our graying membership of special librarians.[7] As "grass roots level" organizations, Chapters are in the best position to address these realities. Local Chapters provide unique settings wherein bonds are formed, linking students to discover a sense of professional fulfillment within SLA

Nearly every Chapter has student members and these students look to Chapters to capture an image of their place within SLA. To offer space within SLA for students, Chapters should focus on the untapped contributions students offer. Chapters should be responsive to students and make them feel SLA addresses their concerns. Chapters should convince students that SLA is a forum wherein their contributions are recognized and make a difference. Each Chapter must seek imaginative ways to effect this challenge. The challenge will be best met utilizing the collective resources of students, practitioners, and faculty within the Chapter. ■

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References

1 Membership statistics are derived from the June 30, 1991 Membership Analysis prepared by Ruth D. Rodriguez, Supervisor, Membership Records, Special Libraries Association.

2 Moen, William E. "Library and Information Science Student Attitudes, Demographics and Aspirations Survey: Who We Are and Why Are We Here," in Moen, William E., and Heim Kathleen M. eds., *Librarians for the New Millennium* Chicago: American Library Association, Office for Library Personnel Resources. 1988. p. 104, 105.

3 Paskoff, Beth M. "Finding the Future: Recruiting and Retaining SLA Student Members," *Special Libraries* 79 (no. 3): 246–249 (Summer 1988).

4 St. Clair, Guy. "Interpersonal Networking: It is Who You Know," *Special Libraries* 80 (no. 2): 107–112 (Spring 1989).

5 Paskoff, Beth M. "Recruitment for Special Librarianship," in Moen, William E., and Heim Kathleen M. eds., *Librarians for the New Millennium* Chicago: American Library Association, Office for Library Personnel Resources, 1988. p. 57–64.

6 Quinn, Judy. "SLA Seeks New Paradigms," *Library Journal* 116 (no. 13) 61–63 (August 1991).

7 Quinn, Judy. "SLA Seeks New Paradigms: The Graying of SLA," *Ibid.* p. 63.

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Mentoring Library School Students—A Survey of Participants in the UCLA/GSLIS Mentor Program

by Joan Kaplowitz

■ **Mentoring has long been recognized as crucial to professional development in such fields as business and education. Librarianship is beginning to adopt this technique as a means to encourage and enhance an individual's movement into and through the profession. The Mentor Program at UCLA's Graduate School of Library and Information Science pairs information professionals with first-year library school students in a mentor-mentee relationship. The development, organization, and evolution of the program is the focus of this article. Practical suggestions, copies of the program's questionnaires and surveys, as well as extensive bibliography are included.**

Have You Ever Been a Mentor?

If you answer "no," think again. If you have ever supervised or trained a new professional, taught in a library school, or helped a colleague learn a new skill or develop a new program, you have been a mentor. Each of us acts as some kind of mentor many times in our professional lives. A mentor, therefore, is not just someone who is involved in some sort of formal, organized mentor program. A mentor is anyone who enhances, enriches, and encourages the professional development of another member of the profession.

What Exactly is Mentoring and When Does it Occur?

When you read the literature on mentoring, you can't help but notice the type of words associated with the process. Words like assist, guide, advise, promote, counsel, sponsor, initiate, teach, coach, introduce, launch, develop, enhance, and shape, turn up over and over again. Mentors attempt to increase the actual competence and performance of their proteges (or "mentees" as we call them at UCLA) by teaching them useful technical skills. They serve as role models, and help their mentees learn about the political dynamics of the profession. The mentor introduces the idea of professional standards and through support, advice, and encouragement can assist their mentees in the development of their own sense of professionalism. Mentors provide encouragement and praise which bolsters their mentees' confidence. And sometimes, if the situation warrants it, the mentor can act as a supporter, recommending the mentee to others to serve on professional committees, to participate in special projects, or for a new and better job (Bogat and Bedner 1985, 851; Bova and Phillips 1984, 18–19; Cargill 1989, 12–13; Hunt and Michael 1983, 475; Lynch 1980, 45; McNeer 1988, 31; Rawlins and Rawlins 1984, 116; Schmidt and Wolfe 1980, 45–48; Zey 1984, 7).

Formal versus Informal Mentoring

Mentor programs range from the very structured, formalized ones typical of business and

educational situations to the very informal peer pal types where colleagues or friends participate in a mutually supportive relationship. In formal relationships a new employee's professional development is guided by a more senior employee. In some cases the company itself assigns a mentor to the new employee. In other cases senior employees are encouraged to seek out and mentor younger ones. In either case the mentor is formally responsible for promoting the mentee's growth in the company. Academe is also the site of formal mentoring as professors act as advisors and sponsors for their students, helping them develop expertise and directing the students' educational careers.

In both business and academe these formal relationships have pitfalls as well as advantages. Relationships of this kind can be extremely emotional and intense. Mentees can receive a lot of pressure from their mentors to perform at a high level. Since the relationship is formal and public, the mentor assumes a great deal of responsibility for the mentee's success or failure. How well the mentee does reflects directly on the mentor, and can enhance or deter the mentor's own career. Examples of formal mentor programs are described in Hennicke, 1983; Kram, 1985; Krupp, 1985; Lynch, 1980; Merriam, 1983; Phillip-Jones, 1982; and Serlen, 1989.

However, a broader definition of mentoring also exists in the literature and expands the definition of the term to include less formal situations. Mentoring in this context exists whenever one person takes an interest in the career development of another. These relationships tend to be voluntary. Mentors in these cases do not take formal responsibility for their mentees' advancement. The mentee's future performance does not necessarily reflect on the mentor, although mentees frequently acknowledge and thank these informal mentors in later stages of their own careers. Mentor relationships such as these develop every day between coworkers, professional colleagues, friends, and family members. See Anderson and Shannon, 1988; Clawson, 1985; Hill, Bahniuk and Dobos, 1989; Merriam, 1983; Rawlins and Rawlins, 1984; and Swoboda and Miller, 1986, for a variety of definitions of the mentor process.

So, Who Is a Mentor?

Most of us act as mentors consciously or unconsciously many times over in our professional lives. A mentor can be anyone who takes a personal interest in another person. Mentors offer advice and guidance to that person in an effort to enhance his or her professional development. And they sponsor a person's entry into and movement through the profession (Bolton 1980, 198; Levinson 1978, 98; Missirian 1982, 97; Phillips-Jones 1982, 21; Sheehy 1976, 131 & 151; Thompson 1976, 30; Woodlands Group 1980, 131).

How Important Is It to Have a Mentor?

Research indicates that successful people (especially in the areas of business and education) attribute at least some of what they have accomplished to the fact that they had a mentor sometime in their lives. This person could have been a teacher, a supervisor, a colleague, a family member, or a friend (Bogat and Bedner 1985, 854; Dodgson 1986, 31-32; Hill, Bahniuk and Dobos 1989, 15; Hunt and Michael 1983, 475; McNeer 1988, 23-24). But the common theme is that this mentor paved the way for them in some fashion and made it easier for them to move on in their chosen career.

How Do You Get a Mentor?

If you feel that you have never had a mentor and would like one, there are ways to actively search out and acquire one. Identify the professional areas that you want to enhance. Locate people with the skills you need and ask them for help. Show interest in their work. Most people are flattered by this interest and usually respond by sharing their expertise.

Network-mentoring

Another approach which is especially useful to those of us in the information industry (where we frequently work alone or with only one or two other professionals) is to participate in what is called network-mentoring. This type of mentoring is characterized by a series of

contacts between two or more people who act as mentors to each other. Each member of the network acts as mentor or mentee at different times and to different degrees. The goal of this type of mentoring is mutual enhancement of careers (Harding-Hidore 1987, 148; Swoboda and Miller 1986, 11).

People involved in network-mentoring are sometimes called "peer pals." Peer pals share information on specific topics, share strategies and give job-related feedback, and can provide emotional support and personal feedback as well. Network-mentoring has the advantage of being flexible and can include people from a variety of different backgrounds and from all levels of the power hierarchies. This provides a rare opportunity for members of the network. They get exposed to a wide variety of role models and different leadership styles.

Network-mentoring fosters self-reliance. There is a reciprocal relationship between all members of the network. Everyone relies on the expertise of everyone else at sometime or another. Members of the network are committed to helping each other and to sharing their skills and knowledge. Although they gain assistance from one another, each member must ultimately rely on his or her own self to apply what they learn from the network members.

Networks such as these build up relationships that can provide valuable experiences for the older professional and the newcomer alike. It is a way to continue to grow and learn at any stage of your career, to meet new people, to hear new ideas, and to discover new job opportunities. For younger professionals, it provides a way to ease into professional organizations, and it offers the older professional the opportunity to remain active and share what they have learned.

Why Be a Mentor?

First of all, it is always gratifying to pass on your experiences to someone else, and to see that person grow and develop based on what you have shared with them. But beyond that, bringing newcomers into the profession, and assisting them in their transition from student to professional should be viewed as part of our professional responsibility. Studies have also shown that people who have had a positive mentoring experience want to pass that experience on to others. One thing mentees seem to learn from the process is how to be a mentor. And they want to be one, perhaps as a way to "pay back" what they got from being involved in a mentoring relationship (Rawlins and Rawlins 1984, 117).

In the long run the mentor may benefit from the process every bit as much as the mentee. Being a mentor can enhance our own career experience. It can enrich our daily lives and can even be a means to prevent burnout. Much of our jobs can be routine and repetitive. Being involved with someone who is new and fresh can refresh us as well. We are forced to rethink why we do what we do because they will ask us why. The mentee can expose us to new ideas and technologies, especially if they are recently graduated from library school (Keele and DeLaMare-Schaefer 1984, 37–38; Roberts 1986, 117–119; Saint Clair 1989, 110).

Mentees gain insight and assistance from their mentors. But at the same time, the established professionals who serve as mentors gain the opportunity to re-affirm to themselves the significance of their lives and their professional contributions. In short, it's a good way to make them feel good about themselves and what they have contributed to the profession.

Mentoring is an important part of being a professional. As committed professionals we should be looking for mentoring opportunities in every professional activity that we become involved in. If you have any type of contact with students or new professionals, use those contacts as potential mentoring opportunities. If students work for you, if you teach courses in the library school, or if you are involved in any other program that brings you in contact with students or professional newcomers, use that relationship as a means of easing them into the profession. Answer their content-related questions about the profession. Encourage them to participate in professional organizations. Promote the idea of attending professional meetings and conferences on all levels—local, state, and national. In short, help them to get involved, to expand their horizons and to interact with

other professionals who may turn out to be potential mentors as well (Townley 1989, 18).

Mentoring: Pitfalls and Perils

Although the literature is heavily weighed toward the positive aspects of mentoring, the mentor process can have its drawbacks as well (Blotnick 1984, 42–50; Merriam, 1983, 169–171). This is especially true in formal programs where the mentor can exert some power over the mentee. During the initial stages of the process the mentor encourages and promotes the mentee's career. But eventually the relationship must come to an end and Levinson indicates that this end is often stormy, filled with bad feelings on both sides. The mentee may feel abandoned and bitter, and now views the mentor as overly critical and demanding. Instead of fostering independence, the mentor is seen as trying to make the mentee over in the mentor's own image. On the mentor's side, the mentee now seems unreceptive and hostile (Levinson 1978, 100–101).

Kram points out an additional hazard for the mentee. Mentors who are insecure about their own positions may actually thwart advancement of their mentees. When the time comes for the relationship to end mentors who feel their own personal advancement opportunities are limited may resent their mentee's potential for advancement and may prolong the relationship. On the other hand, ending the relationship prematurely can also have negative effects on the mentee, leaving the mentee feeling abandoned and unprepared to take on new responsibilities (Kram 1983, 619). So the correct timing of this separation is critical for the continued well-being of the mentee.

Underlying these mentor-mentee difficulties is the power-dyad nature of the relationship as described by Auster. Mentors, by nature of their positions, have greater control over valued resources and can exert a great deal of influence over mentees' behaviors. As the mentee advances, however, and becomes less and less dependent upon the mentor, a power struggle may ensue. An unsuccessful resolution of this struggle can result in the mentor appearing authoritarian and possessive, while the mentee seems to be ungrateful and disloyal (Auster 1984, 145–147).

Finally there is the problem of cross-gender mentoring as described by Fitt and Newton 1981; Halcomb 1980; Kram 1983; and Ragins and McFarlin 1990. In general, women are mentored less often than men and are less likely to find another woman to serve as their mentor. Men still outnumber women in the management levels from which mentors are usually drawn. Therefore, women, if they are to be mentored at all, must be mentored by a man. The typical mentor-mentee power struggle now includes the added component of sexual tension. The potential for sexual involvement or the mere appearance of that involvement can severely hamper the usefulness of the relationship. Cross-gender pairs seem less likely to engage in the often valuable after-hours social/work related events like meetings and dinners that can enhance a young person's career and enable her to make valuable contacts (Ragins and McFarlin 1990,332).

There is also some evidence that male mentors do not always believe that their female mentees have the proper commitment to their careers, place additional demands on their mentees in order to make sure the mentees' performance does not reflect negatively on the mentor, and may promote a much more dependent, paternal-like relationship than he would with a male mentee (Auster 1984, 149; Fitt and Newton 1981, 58; and Levinson 1978, 238).

Despite these potential problems, we at UCLA have felt that establishment of a student-librarian mentor program could prove to be beneficial. Many of the hazards of mentoring would be avoided by the informal nature of the program. Our students neither work for nor take classes from their mentors. So the power-dyad difficulties are minimized. Nor has cross-gender mentoring proven to be a problem for the UCLA program. The majority of both our students and librarians are women thus allowing us to assign same sex mentors to almost all of our students.

We feel that the voluntary and informal nature of the program has heavily contributed to its success. A complete description of the program and a discussion of a preliminary evaluation of it follows.

A Case Study: The GSLIS/UCLA Libraries Mentor Program

The Graduate School of Library and Information Science (GSLIS) and the UCLA Libraries have sponsored a highly successful mentor program for the last seven years. Initially only UCLA librarians served as mentors. However, as time went on and the program gained in popularity, this core of UCLA librarians were joined by information professionals from all over Southern California. They have been recruited from the ranks of GSLIS alumni, the Southern California Special Libraries Association membership, the Los Angeles Public Library librarians (both adult and children's), and from volunteers who have heard of the program from colleagues and want to be involved. The program now offers a wide variety of mentors from academic, business, law, medical, museum, public, school, and special libraries.

The program is coordinated by two UCLA librarians (Cathy Brown and the author) who are responsible for promotion, distributing interest forms to both students and librarians, and matching participants based on the information supplied on these forms. A GSLIS faculty member acts as a liaison between the librarians and the School, and the GSLIS graduate advisor reviews the matches for appropriateness based on what she knows about the students' professional goals.

The coordinators make an appearance at the GSLIS new students' orientation program in the fall to briefly introduce the idea of the program. This is followed-up by small presentations in the classrooms sometime toward the end of the fall quarter. During these follow-up presentations, mentor program interest forms are distributed to the students and questions about the program are answered. At about the same time, similar forms are sent to information professionals who are on the Mentor list. These two forms (mentors and mentees) are used as the basis of matching students to librarians. (See sample forms in appendix).

The program is well-organized, but basically low-key. There are only two scheduled events. The first occurs shortly after the mentor-mentee pairings are made. Each member of the pair receives information about their partner and is invited to a "Get Acquainted Reception." This reception offers the mentor-mentee pairs the opportunity to meet in a non-threatening, open situation. It helps to alleviate the awkwardness associated with having to meet a stranger for the first time by making it a group encounter.

The second scheduled event occurs toward the end of the academic year and consists of group dinners at a local restaurant. Two or three dates are chosen and the mentors (who will be asked to pay for their mentees' dinners) are informed that the event is happening. It is up to the mentors to invite their students and to let the mentor program coordinators know who is coming. The coordinators then make all the necessary arrangements with the restaurant. These dinners are quite well-attended. They offer the pairs an opportunity to get together not only with each other, but with other mentor-mentee pairs as well.

In addition to being responsible for setting up both the reception and the dinners, the coordinators serve as a resource for any participants who may have questions or concerns about the program throughout the year, or who are having difficulty making contact with their mentor or mentee. Occasionally a participant will inform the coordinators that the match has not worked out and will request a different mentor. The coordinators will review the list of remaining mentors and try to make an appropriate substitution.

Does The Program Work?

The program has had excellent word of mouth over the years. Students seem pleased with it, and more and more information professionals seem to want to get involved. Program coordinators, however, wished to find out more about how participants viewed the program. So, during the summer of 1990 questionnaires were sent out to all 68 librarians who had participated in the program during the 1989-90 academic year. The 75 students, who had participated in the program during that same time period, received similar questionnaires when they returned to UCLA for their second year at

GSLIS. These questionnaires were intended to solicit comments and suggestions about the program. This was in no way viewed as a formal or rigorous evaluation of the program. It was merely a method of soliciting feedback from our participants. Both the students and the librarians were asked to supply information about how much (and in what way) they had participated in the program, whether or not they felt the program was beneficial, and what, if anything, they would change about the program. (Samples of both questionnaires appear in the appendix).

Seventy percent of the mentors and 43% of the students returned the survey. We felt this was a reasonable response rate. It must be remembered that the program is entirely voluntary. Some of the students who signed up for the program may have, upon further reflection, decided they did not have time to participate and therefore had no reason to return the survey. In general, the students and mentors who returned our surveys had positive things to say about the program. Many offered constructive suggestions which have helped the coordinators modify the program and hopefully enhance its value to both mentors and mentees alike. A summary of the results is presented in Table 1.

Mentors and mentees spent most of their time meeting in informal situations such as lunch, coffee, or dinner. Many said they communicated with each other by phone or met for in-person chats about professional concerns. A large number of mentors invited their students to their workplace for a tour or invited them to a attend a professional workshop or meeting with them. Thirty-five percent of the mentors and 25% of the mentees who responded indicated that they had engaged in these types of activities with their counterparts.

Mentors came primarily from academic environments, with public and children's libraries also well represented. Other environments, represented by this group of mentors were law, business, special collections, art, medical, and information consulting. Most mentors listed reference as their primary work responsibility with administration and collection development coming in second and third. Other areas of responsibilities were instruction, cataloging, database searching, automation, and serials.

The mentees' interests closely paralleled those of the mentors. Mentees expressed the most interest in academic librarianship with public librarianship coming in a close second. Other areas of interest included special collections, art, children's, law, archives, commu-

Table1 Summary Results of UCLA Mentor Program Surveys

Mentors (n = 48)

Average number of years in the program	2.44
Average number of mentees during years of participation	2.54
Average number of times mentor met with mentee in past year	3.0
Percent of mentors who felt they were matched with a student whose interests were similar to theirs?	71%
Percent of mentors who attended "Get-Acquainted Reception"	60%
Percent of mentors who attended "Group Dinners"	25%
Percent of mentors that felt mentees benefitted from the program	58%
Percentage of mentors who gave a favorable overall opinion of the program	67%

Mentees (n= 32)

Percentage of mentees who felt they were matched with a mentor whose interests were similar to theirs	72%
Average number of times mentee met with mentor during the year	1.94
Percentage of mentees who attended the "Get-Acquainted Reception"	59%
Percentage of mentees who attended "Group Dinners"	31%
Percentage of mentees who felt they benefitted from the program	63%
Percentage of mentees who gave a favorable overall opinion of the program	75%

nity colleges, information brokerage, school, business, and media librarianship. Mentees listed reference work as their number one area of interest closely followed by database searching and automation. Other areas of interest included instruction, administration, collection development, cataloging, conservation, information science, and serials.

For the most part, both librarians and students felt the program was worthwhile. An examination of negative comments led the coordinators to believe that people who felt they did not get enough out of the program had entered it with some false assumptions. Although the coordinators had always presented the program as fairly casual and low key, many students expected it to be a more formal learning experience. There was also some complaint, from both sides, that the match was not good enough. That is, that the librarian and the student did not have enough interests in common.

These unfavorable comments prompted the coordinators to design and produce Mentor Program Fact Sheets, one for students and one for potential mentors. These sheets, which were used for the first time for the 1990-91 pairings, explained the goals of the program and tried to explain to participants what was expected of them. The sheets also encouraged an open-minded attitude on the part of the participants. The coordinators feel that every professional has something to offer every student even if the match isn't exactly on target. The program offers the student the opportunity to learn about the profession from someone who is actively involved in it. Mentors can share what they know and may even expose the student to new areas of librarianship previously unknown to them. Copies of these fact sheets also appear in the appendix.

The UCLA/GSLIS Mentor Program—Why Does It Work?

Although the program has never been formally evaluated, the coordinators always invited feedback from the participants and have continually tried to modify the program over the years in response to these comments and concerns. The program was expanded to librarians outside of UCLA when it became clear that both the quantity and variety of librarians represented needed to be increased. As interest in public, childrens', school, and special librarianship increased, so did the need for mentors in those areas.

The next change came when the program coordinators realized that students were attending UCLA from a remarkably wide geographic area. Los Angeles itself is a megalopolis which covers an enormous amount of territory. It became clear, however, that students were attending UCLA from all over Southern California, not just from the Los Angeles area. Some commute daily. Others spend part of their week in Los Angeles, and part of their week in their home towns. This geographic spread seemed to become even more pronounced when the other library school in the area (University of Southern California) closed. So, we began to ask students if they would prefer mentors near UCLA or near their home towns, and to actively recruit librarians from some non-Los Angeles areas. Consequently, the mentor pool expanded even more.

Most of the comments received about the program (both verbally and as a result of the survey) have been favorable. The few negative remarks centered around two areas: difficulty in making contact and dissatisfaction with the match. Both students and librarians are busy and find it difficult to make contact with each other. The addition of the students' telephone numbers to the form seems to have helped this issue. The wide spread use of answering machines has also proven to be a boon to the mentor program.

The Get-Acquainted Reception and the optional dinners have helped the pairs plan their first meeting, and the newly-devised fact sheets have offered suggestions about how best to take advantage of any pairing. Students are encouraged to be very careful about how they fill out their forms, since the matches are based on the interests expressed on the forms. A file of unmatched mentors is maintained and used to draw from when a student reports that the initial match has not worked out. This does not happen often, and usually is a result of a change in the librarian's work situation (change in job, for example).

We are pleased with the positive effect each of our innovations has had on the program. About 60% of all participants attend the Get-Acquainted Reception, and most report that they enjoy making their first contact in this manner. Fewer participants attend the optional dinners, but those that do seem to enjoy them. The decision of whether to attend this dinner has always been left up to the librarian, since the student attends at the librarian's expense. Many participants choose to meet in other ways or find it difficult to remain in the area at night. But as long as the dinners are well-attended, we expect to continue offering them as an option.

We plan to continue to monitor the progress of the program via informal conversations with participants and by responding actively to any complaints we receive. Periodic surveys of participants are also planned. The program's continued success results directly from the generosity of the members of the Southern California library community. The only criteria for becoming a mentor are that the librarian have an MLS and be willing to share their experiences and their expertise with the students. We have been overwhelmed by the number of our colleagues who offer their time and energy to this important task.

What Have We Learned?

Mentor-mentee pairings work for a variety of reasons. They work because both members of the pair are interested in similar areas of librarianship or because they both live and or work in the same geographic area. But most importantly they work because the participants are open-minded and willing to try and learn from each other in spite of what may appear to them to be a mismatch. Since common background or interests of any kind seem to contribute to the match, a line has been added to the interest form to solicit information on interests outside of librarianship.

The coordinators make every attempt to help the pairs get in contact with each other. Both members of the pair need to supply complete telephone numbers (and e-mail numbers if they have access to that). The more ways they have to reach each other the better.

Participants need to have very clear expectations of what the program has to offer before they decide to get involved. That way they won't be disappointed. The new fact sheets seem to be helping a great deal in clarifying the goals of the program.

Once contact has been established, most pairs become self-sustaining. The Get Acquainted Reception is probably the single most important factor in the success of this program. That initial meeting is crucial, and the event provides the pairs with an easy and pleasant way to accomplish that first contact.

Although many participants express the desire to have more formal events, an equal number seem to like the free-form approach of the program. A third yearly event, which was scheduled at the beginning of the students' second year at GSLIS, had been so poorly attended that it was dropped from the program.

Mentor-mentee pairs seem to prefer developing the types of meetings that are best suited to their own interests and time constraints. Different pairs meet in many different ways. A most successful approach is for librarians to invite the student to their places of work for a tour of a "real-life" work environment. Students report really enjoying the experience, and the librarians get to share their on-the-job accomplishments and demonstrate their particular expertise. Students also have the opportunity to meet other librarians and to widen their network of professional contacts.

The overall response to the program from both mentors and mentees has been gratifying. Mentors and mentees alike seem to enjoy the relationship. The mentees, of course, get the opportunity to meet someone who is actually working "out there." Mentors get the opportunity to become revitalized and to show the students that those of us who already work in the profession care about those who are about to join us. These contacts are of crucial importance to the future growth of the profession. If we are unwilling to offer our help, advice, encouragement, and support to these soon-to-be professionals, then who will?

■

Appendix A **UCLA GSLIS Mentor Program Questionnaire**

_____ Yes, I want to be a "mentor."

Name _____ Phone _____

Company or Library _____

Address _____

My work and interests include: (check all that apply)

Type of Work:

___Administration
___Automation
___Bibliographic Instruction
___Cataloging
___Collection Development
___Online Searching
___Reference
___Serials
___Other (specify): _____

_____

Type of Library or Department:

___Academic
___Archives
___Art
___Business
___Children's
___Community College
___Government Documents
___Law
___Medical
___Museum
___Music
___Public
___Rare Books/Special Collections
___School
___Sci/Tech
___Other (specify): _____

_____

Outside activities and interests: _____

_____

I am willing to have two mentees: _____yes _____no

Return by December 7, 1990 to: Cathy Brown, UCLA Education & Psychology Library, 390 Powell Library Bldg., Los Angeles, CA 90024-1516.

Appendix B

UCLA GSLIS Mentor Program Questionnaire

_____ Yes, I would like to participate in the Mentor Program.

Name _____

Home or Work Phone No. _____

Address _____

Rank up to three (1,2,3) types of work and types of libraries you would like your mentor to be involved in:

Type of Work:

___Administration

___Automation

___Bibliographic Instruction

___Cataloging

___Collection Development

___Online Searching

___Reference

___Serials

___Other (specify): _____

_____

Type of Library or Department:

___Academic

___Archives

___Art

___Business

___Children's

___Community College

___Government Documents

___Law

___Medical

___Museum

___Music

___Public

___Rare Books/Special Collections

___School

___Sci/Tech

___Other (specify): _____

_____

Outside activities and interests: _____

_____

Please drop this form in the box provided or hand in to Joan Kaplowitz or Cathy Brown at the Ed/Psych Library, 390 Powell. Questions? Call us at 825-4081.

Appendix C

UCLA GSLIS/LIBRARIAN MENTOR PROGRAM
Mentee Evaluation Form

Thank you for participating in this year's Mentor Program. We hope it was useful to you in your first year of library school. We would like to know what you think about the program and how it is organized. We are especially interested to know what, if anything, you think needs to be changed. Please take a few minutes to answer the following questions. A summary of the results will be incorporated in an article on mentoring in librarianship to be submitted for publication. Thank you for your help.

1. Did you feel that you were matched with a mentor whose interests were similar to yours? YES____ NO____

2. About how many times did you meet with your mentor? _____

3. What kinds of activities did you participate in with your mentor?

_____

4. Did you attend the Mentor-Mentee Reception in Winter Quarter, and if so did you find it useful?
YES ___ NO___ COMMENTS:_____

5. Did you attend one of the group dinners in Spring Quarter, and if so did you find it useful?
YES___ NO___ COMMENTS:_____

6. Did you feel that you benefited from the program? YES____ NO____

7. What, if anything, would you change about the program?

_____

8. What is your overall opinion of the program?

_____

What type of library are you interested in (Academic, Archives, Art, Business, Children's Community College, Government Documents, Law, Medical, Public, School, Special Collections, Sci/Tech. Theater Arts, other)?

_____

What type of library work are you interested in (Administration, Automation, Cataloging, Collection Development, Database Searching, Instruction, Reference, Serials, other? _____

(7/90)

Appendix D

GSLIS/UCLA LIBRARIES MENTOR PROGRAM
Mentor Evaluation Form

Thank you for participating in this year's Mentor Program. We would like to know what you think about the program and how it is organized. We are especially interested to know what, if anything, you think needs to be changed. Please take a few minutes to answer the following questions. A summary of the results will be incorporated in an article on mentoring in librarianship to be submitted for publication. Thank you for your help. Without you there would be no GSLIS/UCLA LIBRARIES MENTOR PROGRAM.

1. How many years have you been involved in the program? _____

2. How many mentees have you had over the years? _____

3. This past year, how many times did you meet with your mentee? _____

4. Do you feel that you were matched with a student whose interests where similar to yours? YES__ NO__

5. What kinds of activities did you participate in with your mentee?

_____

6. Did you attend the Mentor-Mentee Reception in Winter Quarter, and if so did you find it useful?
YES__ NO__ COMMENTS:_____

7. Did you attend one of the group dinners in Spring Quarter, and if so did you find it useful?
YES__ NO__ COMMENTS:_____

8. Do you feel that your mentee benefited from the program? YES__ NO__

9. What, if anything would you change about the program?

_____

10. What is your overall opinion of the program?

_____

What type of library do you work in (Academic, Archives, Art, Business, Children's, Community College, Government Documents, Law, Medical, Public, School, Special Collections, Sci/Tech, Theater Arts, other)? _____

What are you major work responsibilities (Administration, Automation, Cataloging, Collection Development, Database Searching, Instruction, Reference, Serials, other)? _____

(7/90)

Appendix E: Selected Readings

Alleman, Elizabeth, John Cochran, James Doyerspike, and Isadore Newman. "Enriching Mentoring Relationships," *Personnel and Guidance Journal* 62 329–332 (February 1984).

Anderson, Eugene M. and Anne Lucasse Shannon. "Toward a Conceptualization of Mentoring," *Journal of Teacher Education* 39 (1) 38–42 (January–February 1988).

Auster, Donald. "Mentors and Proteges: Power-Dependent Dyads," *Sociological Inquiry* 54 (2) 142–153 (Spring 1984).

Beck, Lynne. "Mentorships—Benefits and Effects on Career Development," *Gifted Child Quarterly* 33 (1) 22–28 (Winter 1989).

Blotnick, Srully R. "With Friends Like These," *Savvy* 5 42–52 (October 1984).

Bogat, G. Anne and Robin L. Bedner. "How Mentoring Affects the Professional Development of Women in Psychology," *Professional Psychology: Research and Practice* 16 851–859 (December 1985).

Bolton, Elizabeth. "A Conceptual Analysis of the Mentor Relationship in the Career Development of Women," *Adult Education* 30 (4) 195–207 (1980).

Bova, Breda Murphy and Rebecca R. Phillips. "Mentoring as a Learning Experience for Adults," *Journal of Teacher Education* 35 16–20 (May–June 1984).

Cameron, Susan W. and Robert T. Blackburn. "Sponsorship and Academic Career Success," *Journal of Higher Education* 52 369–377 (1981).

Carden, Ann D. "Mentoring and Adult Career Development: The Evolution of a Theory," *The Counseling Psychologist* 18 (2) 275–99 (April 1990).

Cargill, Jennifer. "Developing Library Leaders: The Role of Mentorship," *Library Administration & Management* 3 12–15 (Winter 1989).

Clawson, James G. "Is Mentoring Necessary?" *Training and Development Journal* 39 36–39 (April 1985).

Dalton, Gene W., Paul H. Thompson, and Raymond L. Price. "The Four Stages of Professional Careers—A New Look at Performance by Professionals," *Organizational Dynamics* 8 19–42 (Summer 1977).

Doloz, Laurent A. *Effective Teaching and Mentoring*. San Francisco: Jossey-Bass, 1986.

Dodgson, Judith. "Do Women in Education Need Mentors?" *Education Canada* 26 28–33 (Spring 1986).

Fitt, Lawton Wehle and Derek A. Newton. "When the Mentor is a Man and the Protege is a Women," *Harvard Business Review* 59 (2) 56–60 (March–April 1981).

Galvez-Hjornevik, Cleta. "Mentoring Among Teachers: A Review of the Literature," *Journal of Teacher Education* 37 6–11 (January–February 1986).

Gehrke, Nathalie. "Toward a Definition of Mentoring," *Theory into Practice* 27 190–194 (Summer 1988).

Genstein, M. "Mentoring: An Age-Old Practice in a Knowledge-based Society," *Journal of Counseling and Development* 64 156–157 (October 1985).

Graves, J. Peter, Gene W. Dalton, and Paul H. Thompson. "Career Stages: In Organizations," in *Work. Family and the Career*, pp. 18–37. Edited by C. Brooklyn Derr. New York: Praeger, 1980.

Halcomb, Ruth. "Mentors and the Successful Woman," *Across the Board* 13(2) 13–18 (February 1980) .

Hall, Roberta M. *Academic Mentoring for Women Students and Faculty: A New Look at an Old Idea to Get Ahead.* Washington, DC: Association of American Colleges, 1983.

Hardcastle, B. "Spiritual Connections: Proteges' Reflections on Significant Mentorships," *Theory into Practice* 27 201–208 (Summer, 1988).

Harding-Hidore, Marilyn. "Mentoring as a Career Enhancement Strategy for Women," *Journal of Counseling and Development* 64 147–149 (November 1987).

Hennecke, Matthew J. "Mentors and Proteges: How to Build Relationships that Work," *Training* 20 36–41 (July 1983).

Hill, Susan E. Kogler, Margaret Hilton Bahniuk, and Jean Dobos. "The Impact of Mentoring and Collegial Support on Faculty Success: An Analysis of Suppo Behavior, Information Adequacy, and Communication Apprehension," *Communication Education* 38 16–33 (January 1989).

Hunt, David Marshal and Carol Michael. "Mentorship: A Career Training and Development Tool," *Academy of Management Review* 8 475–485 (1983).

Jacoby, David. "Rewards Make the Mentor," *Personnel* 66 (2) 10–13 (December 1989).

Johnson, Mary C. "Mentors—The Key to Development and Growth," *Training and Development Journal* 34 55–57 (July 1980).

Keele, Reba L. and Mary DeLaMare-Schaefer. "So What Do You Do Now That You Didn't Have a Mentor?" *Journal of the National Association of Women Deans, Administrators, and Counselors* 47 36–40 (Spring 1984).

Kram, Kathy E. "Improving the Mentoring Process," *Training and Development Journal* 39 40–43 (April 1985).

Kram, Kathy E. "Phases of the Mentor Relationship," *Academy of Management Journal* 26(4) 608–625 (1983).

Krupp, Judy Arin. "Mentoring: A Means of Sparking School Personnel," *Journal of Counseling and Development* 64 154–155 (October 1985).

Levinson, Daniel J. *The Seasons of a Man's Life.* New York: Alfred A. Knopf, 1978.

Lynch, Susan M. "The Mentor Link: Bridging Education and Employment," *Journal of College Placement* 41 44–47 (Fall 1980).

McNeer, Elizabeth J. "The Mentoring Influence in the Careers of Women ARL Directors," *Journal of Library Administration* 9 23–33 (1988).

Merriam, Sharon. "Mentors and Proteges: A Critical Review of the Literature," *Adult Education Quarterly* 33 161–173 (Spring 1983).

Missirian, Agnes K. *The Corporate Connection.* New York: Prentice Hall, 1982.

Noe, Raymond A. "Women and Mentoring: A Review and Research Agenda," *Academy of Management Review* 13 65–78 (1988).

Parkay, Forrest W. "Reflections of a Protege," *Theory into Practice* 27 195–200 (Summer 1988).

Phillips. Jones, Linda. *Mentors and Proteges.* New York: Arbor, 1982.

Ragins, Belle Rose. "Barriers to Mentoring: The Female Manager's Dilemma," *Human Relations* 42 (1) 1–22 (January 1989).

Ragins, Belle Rose and Dean B. McFarlin. "Perceptions of Mentor Roles in Cross-Gender Mentoring Relationships," *Journal of Vocational Behavior* 37 (1) 321–339 (December 1990).

Rawlins, Melanie E.; and Larry Rawlins. "Mentoring and Networking for Helping Professionals," *The Personnel and Guidance Journal* 62 116–118 (February 1984).

Roberts, Deanna L. "Mentoring in the Academic Library," *College & Research Library News* 47 117–119 (February 1986).

Saint Clair, Guy. "Interpersonal Networking: It is Who You Know," *Special Libraries* 80 107–112 (Spring 1989).

Schein, Edgar. *Career Dynamics: Matching Individual and Organizational Needs.* Reading, MA: Addison-Wesley, 1978.

Schmidt, Janet A., and Janice Sutera Wolfe. "The Mentor Partnership: Discovery of Professionalism," *NASPA* (National Association of Student Personnel Administrators) *Journal* 17 45–51 (Winter 1980).

Serlen, Bruce. "How Mentoring Programs Work," *Journal of Career Planning and Employment* 49 54–56 (January 1989).

Sheehy, Gail. *Passages.* Dutton: New York, 1976.

Stamell, Marcia."50 Ways to Leave Your Mentor," *Savvy* 19 20–22 (September 1983).

Swoboda, Marian J. and Susan B. Miller. "Networking-Mentoring: Career Strategy of Women in Academic Administration," *Journal of the National Association of Women Deans. Administrators. and Counselors* 50 8–13 (Fall 1986).

Theis-Sprinthall, Lois, and Norman A. Sprinthall. "Experienced Teachers: Agents for Revitalization and Renewal as Mentors and Teacher Educators," *Journal of Education* 169 65–79 (1987).

Thompson, Jay."How to Find a Mentor," *MBA* 10 26–32 (February, 1976).

Townley, Charles T. "Nurturing Library Effectiveness: Leadership for Personnel Development," *Library Administration & Management* 3 16–20 (Winter 1989).

Weeks, Delois P. "Mentor-Protege Relationships—A Critical Element in Affirmative Action," *Nursing Outlook* 156–7 (July–August 1989).

Woodlands Group. "Management Development Roles: Coach, Sponsor and Mentor," *Personnel Journal* 59 (11) 918–921 (1980).

Zey, Michael G. *The Mentor Connection.* Homewood, IL: Dow Jones-Irwin, 1984.

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Research Activity

SLA Biennial Salary Survey Preliminary Report

by Kathy L. Warye

EVERY TWO YEARS THE ASSOCIATION CONDUCTS an in-depth salary survey of its members. In the intervening years, SLA uses an abbreviated questionnaire to survey a random sampling of 25% of the membership to obtain a brief update to the in-depth survey data.

The objective of the salary survey is to provide the most up-to-date salary figures to special librarians, their employers, students, and guidance counselors. It enables SLA members to compare their salaries with those of their peers. The survey results are applicable to special librarians and information specialists in a wide range of positions and work environments.

As in the past the 1992 survey report includes data on salaries by geographic region, industry type, educational level, length of experience, and library budget, to name just a portion of the results.

Questionnaires were mailed to members and associate members on March 31, 1992. Of the 10,439 questionnaires mailed, 4,649 surveys were returned yielding a response rate of 45%. The complete results of the 1992 survey will appear as a separate publication entitled, *SLA Biennial Salary Survey 1993*. This article presents preliminary data which should be useful to SLA members, their employers, and the library/information community.

The 1992 data indicate an overall median salary increase in the United States of $1,974 from $37,775 in 1991 to $39,749 in 1992. This represents a 5.2% increase over last year. The overall mean salary reflects a $1,361 increase from $40,312 in 1991 to $41,673 in 1992—a 3.4% increase.

In Canada, the median salary increased $2,450, or 5.7%, from $43,000 in 1991 to $45,450 in 1992. The overall mean salary increased $917 from $45,984 in 1991 to $46,901 in 1992. This reflects a 2% increase.

All United States Census Divisions, experienced median salary increases ranging from 9.3% to 3.7% The largest increase in median salary took place in the East South Central region.

Mean salaries increased in all U.S. Census divisions as well, ranging from 7.7% to 1.4% above 1991 figures. The New England region experienced the largest increase in mean salary.

Table 2 illustrates salary distribution in rank order of median salaries for Canada and the nine U.S. Census Divisions. In comparing the median rankings with the 1991 salary survey update, among the nine United States regions, the East South Central region once again experience the largest increase, the Middle Atlantic moved up from sixth position to second position, and New England moved up from eighth to third. The South Atlantic region moved down one position from third to fourth, West North Central moved down from second to fifth position, West South Central moved from fifth to sixth position, Pacific moved down fourth to seventh position, and East North Central moved down in the rankings from seventh to eighth position. The Mountain region maintained its 1991 ranking at ninth position.

Table 3 lists salary distribution in rank order

Table 1 1992 Median and Mean Salaries by Census Division in Rank Order or Percentage of Change in Median from 1991 to 1992, Including National Overall Figures

Census Division	1991	Median % increase	1992	1991	Mean % increase	1992
Canada*	43,000	5.7%	45,450	45,984	2.0%	46,901
Overall United States	37,775	5.2%	39,749	40,312	3.4%	41,673
East South Central	32,327	9.3%	35,000	34,317	1.4%	34,807
Middle Atlantic	40,000	6.8%	42,724	44,534	2.8%	45,801
New England	37,780	5.9%	40,000	39,421	7.7%	42,441
South Atlantic	37,500	5.6%	39,000	39,612	5.8%	41,923
West North Central	33,800	3.5%	34,980	36,029	2.7%	37,019
West South Central	34,000	3.0%	35,000	35,227	5.2%	37,069
Pacific	40,923	2.7%	42,000	42,588	2.5%	43,649
East North Central	37,000	2.7%	38,000	38,643	2.7%	39,668
Mountain	33,216	2.8%	34,155	34,993	2.3%	35,806

* Salaries reported in Canadian dollars. The exchange rate on April 1, 1992 was approximately Canadian $1.19=United States $1.00. On April 1, 1991 the exchange rate was approximately Canadian $1.15=United States $1.00.

Table 2 Salary Distribution by Census Division in Rank Order of 1992 Median

Census Division	Average Lowest 10%	25%	Median 50%	75%	Average Highest 10%	Number	Mean
Canada*	29,495	39,000	45,450	53,325	70,955	396	46,901
Middle Atlantic	24,986	35,000	42,724	53,000	78,222	770	45,801
Pacific	25,141	34,917	42,000	50,496	70,717	578	43,649
New England	24,546	33,000	40,000	48,000	72,128	275	42,441
South Atlantic	24,119	32,423	39,600	48,000	73,833	653	41,923
East North Central	23,406	30,875	38,000	45,200	66,246	628	39,668
West South Central	22,502	29,500	35,000	42,152	61,107	231	37,069
East South Central	21,776	29,410	35,000	38,800	50,400	77	34,807
West North Central	21,436	28,600	34,980	43,000	61,270	211	37,019
Mountain	22,896	29,500	34,155	42,000	54,188	140	35,806

* Salaries reported in Canadian dollars. The exchange rate on April 1, 1992 was approximately Canadian $1.19=United States $1.00. On April 1, 1991 the exchange rate was approximately Canadian $1.15=United States $1.00.

Table 3 Salary Distribution by Canadian Metropolitan Area in Rank Order of 1992 Median

Area	Median	Mean	No. of Respondents
Ottawa	50,000	50,224	35
Toronto	45,800	47,416	177
Victoria-Vancouver	45,368	47,010	36
Montreal	45,000	45,806	71
Calgary-Edmonton	42,952	44,350	55

* Salaries reported in Canadian dollars. The exchange rate on April 1, 1992 was approximately Canadian $1.19=United States $1.00. On April 1, 1991 the exchange rate was approximately Canadian $1.15=United States $1.00.

of median salaries for five Canadian metropolitan regions including Montreal, Ottawa, Toronto, Victoria-Vancouver, and Calgary-Edmonton. These data were last collected in 1990.

1992 median salaries were highest in Ottawa, followed by Toronto, Victoria-Vancouver, Montreal, and Calgary-Edmonton. Between 1990 and 1992 median salaries increased in Victoria-Vancouver by 13.4%, Montreal by 12.5%, Toronto by 11.8%, Ottawa by 9% and Calgary-Edmonton by 2.4%.

Toronto experienced the largest change in mean salary between 1990 and 1992 with an increase of 11.4%, followed closely by Montreal with a 10.6% increase. Mean salaries increased in Ottawa by 9.8%, Victoria-Vancouver by 7.3%, and Calgary-Edmonton by 4.9%.

The full survey report will include historical and comparative data for a broad range of variables. The 75-page full report will present separate tables for all U.S. and Canadian data. This publication will be available from the Special Libraries Association, Order Department. ■

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On the Scene

Closing the Corporate Library: Some Personal Reflections

by Philip Barnett

■ **A librarian facing the closing of his special library describes his reaction to the closing, changes in his workplace, the disruption of his professional life, adjustments he had to make, and his efforts in finding a new job.**

LIVING THROUGH THE CLOSING OF YOUR LIBRARY is a nasty ordeal. Today, where mergers, corporate shortsightedness, financial tightness, and lack of commitment by employers are so common, you may unexpectedly have to confront such a predicament.

There is advice on job hunting[1–3] and how to handle the mechanics of a library closing.[4, 5] The reasons why corporate libraries close has been documented.[6, 7] But there is a scant literature describing what it is like to actually endure a closing. Over 20 years ago Strain described her experience,[2] but the dearth of more recent literature on the personal involvement of librarians who have lived through a closing in current times leaves us with few places to turn for aid. I hope this case study of my own experience may be useful to other special librarians who encounter the closing of their library or information center.

The Announcement

The announcement came suddenly, three days after I returned from vacation. Because of public disclosure laws, the public and the staff heard the news at the same time. Some people heard the announcement on the radio before the employees were handed the official memo. The merger was irrevocable and final. Since this was simply a reorganization within a corporation, there was no possibility that government or stockholder action might reverse the decision.

No timetable for this merger was given. In fact, it soon became apparent that there had been no advance planning of the actual details. The only thing that was certain was that our location was closing completely and that an unknown number of employees would be retained, but would have to relocate to another division in a different state. Rumors circulating around the building suggested that this would occur in less than four months. There was no firm information.

As soon as the announcement was official, work came to a complete standstill. I remember going to the always-congested central processing area containing bins of computer printouts and finding only my own work. All long-range projects instantly evaporated. Except for the library, most people were left with nearly nothing to do as most of the everyday routines were simply no longer necessary.

The Beginning

I had worked at this headquarters of a large pharmaceutical division of a diversified corporation for more than five years. Our library

had three professionals and a support staff of four. I was the chief database searcher. I also had other duties such as indexing the research literature, current awareness, general reference services, and maintaining an in-house database. The company and the library had been in the same location such a long time that nobody was really sure when business had been established there. For many years the corporation had owned another pharmaceutical division of comparable size which operated independently of ours. This other division was treated essentially as a competitor. It was obvious to nearly everyone that the corporation could operate more efficiently if these two divisions were merged, yet for many years nothing was done. There had been hints that a total merger was being considered. Two small departments of our division had recently been merged into the competing division. There had been almost continuous rumors of moving some departments to other locations. The patents on both of the divisions' major products had expired and the new product pipeline was kind of bare. Business was suffering. But we either would not let ourselves believe or would not accept the possibility of a total merger.

The Paralysis

Nearly everyone in the company had the same reaction: a paralyzing kind of depression, physical and mental. Life moved in slow motion. Most of us found it difficult to concentrate on the little work we had. Even the simplest task required extreme mental and even physical effort. Soon after the merger announcement came, many people, either alone or in groups, seemed to be sitting around looking bewildered, in a state of apparent shock. I instantly identified with these people. I felt as they did, but I fought the trauma and the paralysis and forced myself to do the things that I had to do.

I had to literally blow the dust off my out-of-date resume, which was buried in my files. It was difficult in this state to work on it, but with much effort I forced myself to start updating the resume. At this point, I was motivated as much by pride as anything else. I had been through similar situations in the past where I faced the prospect of unemployment yet had never actually been jobless, even for a day, and did not want to be so now. Ideally, my resume should have been up to date and ready to use. In this age of word processors and laser printers, there is no excuse for not having a current and presentable resume at your fingertips.

I then had a private brainstorming session with myself where I listed all of my career and job options. On this list were all the possibilities I could think of, including the prospect of returning to jobs I had left in the past, or careers I had just toyed with in my thoughts. If you ever have to consider your job options, it is advantageous to have a friend or loved one with whom to share ideas. This list contained some unrealistic, even desperate, alternatives eliminated with the help of my wife.

The Librarian's Role

While most people had nearly nothing to do except face their own thoughts, for us in the library worked slowed down, but never really stopped. Being busy made it easier to face each day; this actually broke some of the paralysis. Journals, reprints, and the flood of information that constantly invade any organization had to be dealt with. There were still some routine literature searches to be done. The real advantage of being a librarian at this time was that we were in a position to help both ourselves and other employees. Many people wanted information on other companies, obviously their potential employers. Others used this opportunity to learn about topics and areas they felt they should know about. Here was my chance not only to help other people, but also to show my stuff and leave people with a lasting impression of my prowess in finding information. Perhaps there would be a payback in the future. Maybe one of these people would be a future employer. The world, especially in any specific field, is a small place. One never knows when contact will be made with someone again.

Before I became a librarian, I was in biochemical research. When it was time to write my thesis, I got a vivid reminder of how small the world really is. Dickensian-like coinci-

dences can really happen. My research topic was an old area that had first been investigated over 40 years earlier in Germany. I was sure that those original investigators were long since forgotten and dead. While those investigators meant well, there work was done before the age of vital newer techniques and was no longer very relevant. I briefly mentioned their work, and dismissed it as being insignificant. My thesis advisor said I should really be nicer to those long-gone people. To accommodate him I rewrote that section to put the 40-year old work in its best possible perspective. A few years later when I was looking for a job, I surprisingly learned that this venerable investigator later became famous in biochemistry, the same area in which I would now be working. In fact, although he was formally retired, he was an informal advisor, a sort of benevolent grandfather to the research group I would be joining. If the topic of my thesis came up, I could now willingly give him the thesis to read. This courtesy and foresight from a few years previously prevented me from being in a situation where I might face painful embarrassment.

I kept this incident in mind when one of the vice presidents came in with a search request. Considering the overall slowdown in the company, he gave me more work than I expected or was prepared to do. He wanted background and corporate intelligence on a rather long list of companies. Rumors were circulating that this vice president had already submitted his resignation, which would have meant that this information was for his personal use.

I resented having this large amount of work at a time when I needed so much time for my own job search. However, I decided to treat this request in the same way I had handled requests from any high corporate official in the past. A corporation is not a democracy. When a mid-level or lower-level person has a literature request, it is safe to assume that the information is not for that person's use, but it is for someone higher up the corporate ladder. In order to formulate the best search, I would often question the requester intensely on the ultimate application of the requested information, and ask him when the answer was really needed. But a vice-president cannot be treated that way. High corporate officials are often involved in sensitive or confidential projects, the details of which cannot be openly discussed. The top brass must never be embarrassed by scrutinizing questions. Instead, gentle probing is in order, using indirect ways such as hanging a menu of choices in front of them elucidating the various approaches and sources that may have relevant information. When you explain what type and how much data these sources may provide, you still may not receive a simple yes or no answer regarding what direction to take. You may have to look for subtle hints and body language signs, such as a quick nod of the head approving the particular approach to be followed. Unless they volunteer otherwise, you must assume that you are expected to drop everything else you are working on and answer their request as soon as possible. The vice president was grateful for the information that I provided. He then gave me some more companies to look up. I feel he was left with a favorable and lasting impression of me. This incident may help me in the future.

The Job Search

In my search for a new job, one activity I found quite helpful was the outplacement training offered to all terminated employees. This training consisted of sessions where small groups of us met over a few days with an instructor who was an experienced human resources professional. It was comforting being with a group of people in the same predicament as yours, knowing that you need not face the difficulties of a job search alone. These outplacement services have grown in recent years because of the wave of mergers and closings that are now commonplace.

At these sessions the various methods of job hunting were reviewed. A workbook provided excellent hints on how to make your resume appear more attractive. We gained insight into our individual traits by taking the Myers-Briggs Type Indicator. This test, which measures personality attributes, has been administered to a large sample of SLA members.[8] For me, the

most useful feature of these sessions was the videotaping of a mock job interview with the instructor taking the part of a personnel director. I found it fascinating and mind-opening when seeing myself as others see me. My strengths and weaknesses as a prospective employee instantly became apparent. When I saw myself, an obvious question instantly came to mind. Would I hire the person I was looking at? The outplacement training, especially the videotaping, was definitely worthwhile. If you are ever in a position to obtain such a service, do so. If you do not have access to professional outplacement services, I would recommend your obtaining a video camera and setting up a mock interview with a friend or colleague acting as an interviewer.

Legacy

Regardless of how much of your job is written in procedure manuals, kept in machine-readable form, or otherwise recorded, much of your expertise is only within you. Even though the company would no longer be the same and I would no longer be a part of it, I felt protective of my work and felt a need to preserve much of what I had accomplished. I intimately knew all of the company's major products and how to search on and collect the literature on each. I was frustrated when I looked at the file cabinets containing over 2,000 search strategies. Those files which represented so much of my labor, experience, inspiration, and perspiration, may never be looked at again. I recalled with nostalgia how much of myself lies in those cabinets. I remember during one particularly busy day the time I searched on two terminals simultaneously, and would have used a third if one was available. Would any of this ever be looked at again?

One of the company's products had only a small amount of published literature, and I had taken on the challenge of trying to collect everything where its name had been mentioned in print. When I saw the entire file, including some very elaborate search strategies, being taken away, I wondered if all this material would ever be used or appreciated. Perhaps it would all disappear down some bibliographic black hole. Would the people who were going to be responsible for that project understand what I had done? Did they even know how to search?

The Final Days

It was hard to believe that such a busy environment could actually come to an end. But the signs started becoming agonizingly clear. Every day as more people left it became eerily quiet. We were never given an actual date by which we had to leave. Instead there was a vaguely worded memo that some people got which spoke of the "close of normal business" a few months in the future.

In an attempt to break the tension, people would sometimes sit around in small groups sharing gallows humor, nervous laughter punctuating their conversations. The office started to look different in other ways also. People who used to dress exquisitely started coming to work in jeans. There was no longer any apparent need to dress properly. I never went to that degree of informality, but my wife started commenting on my dress, or rather the lack of it, when I started wearing clothes she thought had been thrown out years before. If someone appeared in a suit you knew they were having a job interview that day, and you instinctively wished them good luck. The atmosphere in the office became so idle that it was hard to concentrate on the everyday routines of life. One day I looked in the mirror at work and realized I had forgotten to shave. I quickly left to buy a disposable razor before anyone else saw me unshaven. Even lack of morale has its limits.

The lack of advance planning by upper management even hurt some people who were not being let go. Many employees were first told they had jobs in the new location, then a few days later were told that those plans were being put on hold, apparently as upper management fought its political turf wars. Later they were suddenly told to report to the new location and start work in only two weeks. In one department, nearly everyone was offered a job in the other location, but if they accepted, they had to work knowing that the old employ-

ees already there at their own level had just been suddenly promoted and would have positions above them. Everyone who was offered a position and chose to accept it had an underlying fear that they would be uprooting their lives and then be let go. Nobody was sure that this was the last round of corporate cutbacks. With these kinds of insecurities maybe I was in a better position just being canned.

My last day was one I dreaded. People who I had grown quite close to were still there. The paralysis I had at the beginning returned when it came time for my final goodbyes. I found it so hard to face some of my co-workers that I wished they were not there when it was my time to leave. ■

References

1 Cupp, Bertha. "Fired," *Special Libraries* 61 (no. 7): 362, 364–367 (September 1970).

2 Strain, Paula M. "When a Library Job Ends...Find Another!" *Special Libraries* 61 (no. 7): 363, 368–373 (September 1970).

3 Smith, Rebecca A. and Susan F. Weiler. "Don't Let the Pink Slip Get You Down," *SpeciaList* 14 (No. 7): 3 (July 1991).

4 Sheridan, John. "Checklist for Closing a College Library," *College & Research Libraries News* 47 (no. 7): 452–454 (July/August 1986).

5 Griffin, Mary Ann. "When a Library Closes," *Journal of Academic Librarianship* 10 (no. 3): 141–145 (July 1984).

6 Matarazzo, James. "Lessons from the Past: Special Libraries in Times of Retrenchment," *Canadian Library Journal* 40 (no.4): 221–223 (August 1983).

7 Matarazzo, James. *Closing the Corporate Library: Case Studies on the Decision-Making Process*. New York, Special Libraries Association, 1981. 154p.

8 Brimsek, Tobi A. and Dolores Leach. "Special Librarians to the Core: Profiling with the MBTI," *Special Libraries* 81 (no. 4): 330–337 (Fall 1990).

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Recommendations of the PREPS Commission

As President of the Special Libraries Association in 1991/92, Guy St. Clair established as the presidential theme, "Special Librarians—Preparing for Tomorrow Today." President St. Clair's purpose was to focus on how the Association and its members could encourage the best, the brightest, and most qualified people to enter the field of special librarianship. Emphasis was to be given to the unique role that special librarians play in information management. The Study Commission was to concentrate on the issues of recruitment into special librarianship; ethics and the place of code of ethics for special librarianship; and standards and basic competencies for special librarianship.

This theme, "Special Librarians—Preparing for Tomorrow Today," embodied key elements of the Association's Strategic Plan and allowed for the exploration of related themes important to the membership, such as education for special librarianship, compensation, and the perceived value of the information professional.

Underlying the work of The PREPS Study Commission is the premise that special librarianship is a unique branch of the profession of librarianship; that despite the great diversity within special librarianship itself, special libraries nonetheless have different missions, focuses, and purposes than libraries in other branches of the profession.

The PREPS Study Commission makes the following recommendations, which were presented to the Special Libraries Association Board of Directors on Friday, June 12.

Ethics

Recommendation One: That the Board of Directors of the Special Libraries Association pursue adoption of an Association statement of professional conduct. The Commission envisions a statement which incorporates the issues outlined in the following draft statement:

Special Libraries Association Statement of Professional Conduct

Members of the Special Libraries Association are employed in libraries and information centers which are integral parts of other organizations. As such, they are bound by their parent organizations' codes of ethics or other such statements with regard to appropriate professional conduct.

Nevertheless, there are areas of conduct specific to the management of a special library or information center and the provision of information for that library/information center's defined user group which are appropriate for members as part of their affiliation with the Special Libraries Association. These areas require compliance with laws currently in force and include such professional components as competence, continuing education, confidentiality, self-protection, comprehensiveness, honesty, and reliability.

Therefore, members of the Special Libraries Association agree to be bound by the following obligations of professional conduct:

- To provide constituent users, as defined by the employer/organization, with the

most current, accurate, and relevant information, regardless of personal beliefs or the possible uses to which the information might be put.

- To protect the confidentiality and privacy of individuals requesting information.
- To select and organize information resources responsibly to support the highest quality information services for the organization, consistent with the mission of the organization.
- To avoid misrepresentation of the purpose for gathering information or the use to which it will be put, in order to gain information which might otherwise be withheld.
- To uphold and actively advise others to uphold all laws governing the creation, reproduction, and dissemination of information.
- To maintain high standards of personal professional competence in information services.
- To abide by the legalities governing the employing corporate structure.

Recommendation Two: That the Board of Directors constitute and authorize a standing committee of the Board, The Committee on Professional Conduct, to work with staff, members, and all Association units in matters relating to issues of professional conduct. The committee might be modeled on the Consultation Committee or the Copyright Law Implementation Committee.

Recommendation Three: That the Board of Directors authorize staff support (with appropriate resources for additional staff, if required) to establish an advisory program on matters of professional conduct, to work with the Committee on Professional Conduct, the Chapters, Divisions, and all other subunits of the Association (committees, caucuses, representatives, etc.) to ensure that special libraries and information services professionals understand the value of standards of professional conduct in their work.

Professional Standards

Recommendation One: That the Board of Directors of the Special Libraries Association revise the charge to the Standards Committee to reflect an emphasis on standards and competencies for special *librarians*.

Recommendation Two: That the Board of Directors of the Special Libraries Association charge the appropriate committee (or appoint an *ad hoc* committee) to investigate the issue of certification for special librarians.

Recommendation Three: That the Board of Directors of the Special Libraries Association charge the staff to present a discussion paper on the merits of developing a directory/database (or other appropriate mechanism) of continuing education opportunities of potential interest to Association members. We envision that this database would not be limited to library and information science courses, and could include appropriate subject areas as well.

Recommendation Four: Upon their creation and adoption by the Board of Directors, the "Standards for Special Libraries and Librarians" will be included in each edition of *Who's Who in Special Libraries*

Educational Concerns

Recommendation One: That the Special Libraries Association continue to keep its position statement on graduate library education revised and distribute it as appropriate.

Recommendation Two: That the Special Libraries Association continue to work in cooperation with the American Library Association on issues involving accreditation and graduate library education to make special library concerns known.

Recommendation Three: That the Special Libraries Association continue to work with those library schools already offering special library courses and/or sponsoring SLA student chapters. This cooperation can come in the form of advice/input to keep the special library curriculum current; distribution of complimentary publications and other information that will be useful in the teaching of special library courses; and other activities identified as useful.

Recommendation Four: That the Special Libraries Association work with those library schools not offering special library courses or sponsoring SLA student chapters to promote the adoption of both. This cooperation can come in the form of providing model syllabi for development of a special libraries course; helping to identify local SLA members who could provide guest lectures for courses or serve as adjunct faculty to teach special library courses; provide SLA officers as guest speakers; and other activities identified as useful.

Recommendation Five: That the Special Libraries Association publicly recognize the efforts of those library schools that are providing educational preparation for the special library environment. This recognition should come on an ongoing basis and could take the form of letters to the library school's university administration and to ALA's Committee on Accreditation, as well as other methods found to be appropriate.

Recommendation Six: That the Special Libraries Association investigate methods for better retention of student members after graduation.

Recommendation Seven: That the Special Libraries Association work cooperatively with other appropriate groups in the identification and delivery of continuing education opportunities for its members, while at the same time recognizing that the Association itself has the primary responsibility in this area.

Recommendation Eight: That the Association provide Chapters with current lists of contacts at colleges and universities providing library courses. These contacts should be approached by the Association to insure that they are willing and able to act as liaisons with local SLA Chapters.

Recommendation Nine: That the Association create and update on an ongoing basis a list of questions which potential students should ask potential schools to determine for themselves how strongly the school supports training for special librarianship.

Recruitment

Recommendation One: That the Board approve the creation of an *ad hoc* committee for the purpose of working with career and guidance counselors (through their professional associations) to insure an understanding among these professionals of the nature of special librarianship, and the type of person who should be guided toward such a career. In addition, the committee would oversee all efforts to insure the inclusion of special librarianship as a distinct branch of the profession in published sources of occupational information such as the *Dictionary of Occupational Titles*, as well as overseeing the publication by SLA of specific materials explaining special librarianship to students at all levels. At the discretion of Board, this may be a standing committee.

Recommendation Two: That Chapters and Divisions be encouraged to appoint a Speakers Bureau Chair. For the Divisions, this Chair would maintain a list of members willing to be trained in public speaking. After successfully completing this training these members would be available to address school and civic groups on the unique aspects of special librarianship in general as well as in their specific subject areas. Chapter Chairs would arrange for specific speaking opportunities within their geographic area. Training for speakers would be provided by the Association, perhaps as a supplement to the regular DACOLT training.

Recommendation Three: That the Board appoint a committee to develop recommenda-

tions for an Association recruitment program aimed at recruitment into the field of special librarianship. The recommendations would include specific proposals for various age groups from primary school to graduate school. It is expected that among younger students the effort would be one of introducing or increasing awareness of special libraries. At the college and graduate levels, however, efforts would be more directly aimed at recruitment. The Committee should be encouraged to work with the Medical Library Association, ANT, the American Association of Law Libraries, and other specialized library associations to create a program to promote an awareness of special librarianship/information management as a career possibility distinct from other branches of librarianship.

It should be noted that assuming the Committee's recommendations were accepted by the Board, it is likely that it would be necessary to create a staff position to manage a professional recruitment program, to work with the committee and other associations to carry out the plans, and which would complement the Association's existing Membership program.

Recommendation Four: That as soon as funds are available the Board reauthorize the implementation of the Media Plan which among other things will create an awareness of the unique nature and value of special librarianship.

Recommendation Five: That members of the Special Libraries Association be encouraged to make their libraries available for occasional visits by school groups. By doing so we can insure that students will be aware of the existence of libraries other than the school and public libraries with which they regularly have contact.

Recommendation Six: That the Special Libraries Association take further steps to try to improve the salaries of practitioners. Such efforts could include, but not be limited to: encouraging larger Chapters to undertake salary surveys; encouraging greater participation in SLA's salary survey, particularly among higher paid library managers; publishing salary minimums in SLA job advertising; encouraging comparable worth studies; encouraging additional research and publication concerning the value of the information profession.

Recommendation Seven: That the Special Libraries Association encourage research into the effects, if any, on special librarianship of the influx of mid or late career changers into the profession. In addition, research should be encouraged into the particular job satisfactions of special librarianship to provide concrete data for recruitment efforts. ■

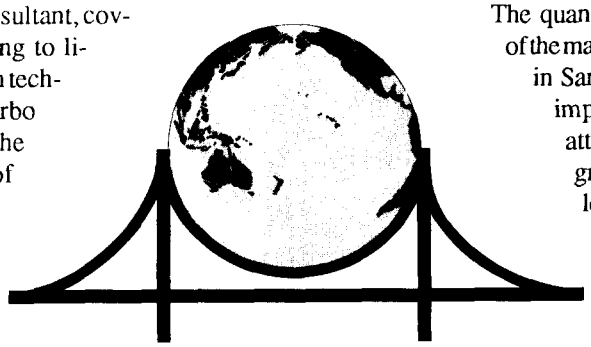
83rd Annual Conference Summary Program

by Frank H. Spaulding, Moderator
Ann W. Talcott, Speaker
Mary Ellen Jacob, Speaker
Toni Carbo Bearman, Speaker

Introduction

SLA's San Francisco Conference Summary Program attempted to encapsulate what the June 1992 Conference was all about. The objectives were to offer highlights of the numerous technical programs presented at the Conference on "Information Services: Gateway to Competitive Advantage," and to provide an evaluative commentary on the issues and trends which came to light during this meeting.

There were over 180 technical programs, 29 or more continuing education courses, and some 200 plus exhibits to attend. Participating in this wrap-up program were three eminently qualified information professionals who shared their insights, observations, and critiques of the Conference: Ann W. Talcott, Library Management Consultant, covered the management area; Mary Ellen Jacob (MEL), Library and Information Consultant, covered programs relating to library and information technology; and Toni Carbo Bearman, Dean of the Graduate School of Library and Information Science at the University of Pittsburgh, covered sessions devoted to education, international and other professional issues. This summary program represented a condensation of hundreds of hours of fine technical sessions—it is not a comprehensive review, but rather a condensation of a Conference that featured an abundance of valuable information programs.



INFORMATION SERVICES: GATEWAY TO COMPETITIVE ADVANTAGE
SPECIAL LIBRARIES ASSOCIATION
83rd ANNUAL CONFERENCE • SAN FRANCISCO
JUNE 6-11, 1992

Management Issues

by Ann W. Talcott

In her 1992 SLA Conference program, Hope Coffman defined management as "the ability to convert the ordinary into the extraordinary." Faced with the challenging, or some might say threatening, economic and competitive environment in which we work, we special librarians are seeking to convert *ourselves* from ordinary to extraordinary. The 1992 SLA Conference management programs improved our ability to do just that.

The quantity and scheduling of the management programs in San Francisco made it impossible for me to attend each one. I'm grateful to several colleagues who shared their notes with me: Sheila Cassels, Susan DiMattia, Georgia

Rodeffer, Susan Shepherd, and Frank Spaulding, as well as the Division planners who filled in forms on their programs.

Three themes dominated the management programs at the Conference: the business environment, customer service and quality, and doing more with less. The popularity of certain SLA professional development programs given at the Conference mirrored these themes, with the most popular workshops being those on quality, customer service, competing abroad, and adding value to corporate library services.

Several programs laid out the new economic and competitive playing field which has developed nationally and internationally. Peter Gourevitch, speaker at General Session II, noted the emergence of three international power centers: the Asian/Pacific Region, Europe, and North America. Comparing the U.S. and Japan, he described four interpretations of what shapes an effective national economy: (1) macro-economic policy; (2) micro-economic factors; (3) cultural models; and (4) the structural environment of human and physical infrastructure. He discussed each of these four interpretations and noted that each interpretation has different and increasingly complex information requirements. How people understand the differences between systems will determine future actions, policies, and relationships.

At the Standard and Poor's breakfast, Sam Stovall, editor of the *S&P Industry Reports*, focused on the U.S. economy, noting striking similarities between the economy of the 1930s and that of the present day, our longest postwar recession. He predicted that the 1990s will be the reverse image of the 1980s—low inflation, low interest rates, and a rejection of the perks and privileges which characterized the '80s. He forecasted a return to a back-to-basics approach to life, giving as examples the recent simplification of airline price structures and the Kellogg advertising theme "Taste corn flakes again for the first time."

Two speakers had contrasting views of the deregulation of U.S. industries since the '70s. Frank Wilner concentrated on the railroads. With deregulation, the industry has gone from one unable to meet customer needs to one of vibrant health. Ken McEldowney saw a strong movement to oligopoly in previously regulated industries. Deregulation has not created more competition. A few companies dominate an industry, such as the domination of the airline industry by United, Delta, American, and Southwest Airlines. He foresees a new trend toward the availability of services to high volume customers, those who are able to pay.

Lisa Solomon, a research analyst for the California State World Trade Commission, described some of the economic benefits of the North American Free Trade Agreement (NAFTA) for the United States in dealing with Mexico. Not unexpectedly, her emphasis was on the benefits for the state of California. An additional speaker with a Canadian focus would have balanced the program. During the question and answer session a Canadian librarian described the impact on his country—not a positive picture. Audience comments indicated that, unless librarians are in the insurance industry (which sees NAFTA as a positive investment and business growth opportunity) or in the textiles and apparel industry (which sees it as a threat), the demand for information is limited at this time. All participants were aware of the opportunity to play a major proactive role by anticipating information needs.

The business environment increasingly includes managing diverse groups of people. In the program "Managing Employee Diversity," Marilyn Loden defined diversity as the various subgroups to which individuals belong. The traditional way to manage diversity was to encourage employees to become assimilated by conforming to the model of those who had risen to the top. This model ensured the perpetuation of the dominant group's values and the alienation of "others." The new model deals with differences by valuing diversity and involving all groups in developing consensus values and goals. This necessitates a change in corporate values. It is a slow process, and Marilyn knows of no company which has successfully completed it.

The Conference keynote speaker combined two themes—the business environment and customer service and quality. In a distinctly dynamic and humorous style, Nancy Austin,

co-author of *A Passion For Excellence*, gave a great kick-off address for the Conference. It was a perfect fit for the Conference theme: "Information Services: Gateway to Competitive Advantage." After describing the changed world in which we live by using such examples as the "smart" toothbrush, she reiterated the theme that quality and customer service are key to business success in the new environment. Innovation, teamwork, differentiation of products, and creation of a brand loyalty are essential ingredients. Ideas, intelligence, and information are the source of added value. Since she predicted that all business will become driven by information during the next several decades, special librarians are uniquely positioned to assist their organizations to succeed. She calls us "revolutionaries," building connections, not collections.

The incoming Library Management Division Chair, Steve Abram, echoed Nancy Austin in his inaugural address at the Division business meeting. He said that librarians must move from the transactional to the transformational. We should become crossfunctional pinch-hitters, expert resources and players in a world where information is a strategic essential. In his remarks, Colin McQuillan of General Electric Investments' library, winner of the Library Management Division's Management Leadership Award, noted that special librarians must take risks and work in new directions, extending their influence beyond the library. By going to a higher level, we can discover new truths about ourselves.

Carrying these ideas further was a paper by Judith Levitt of Rockwell International's Cedar Rapids Information Center. It positioned the library as a team player in the research process. Quoting Julie Neway, she said, "Information needs will only be met if librarianship is willing to move into a new phase—that of playing an active part in the research team and of providing research colleagues with information relevant to their work."

By determining customer needs and addressing these needs by communicating with the customers, the Rockwell Information Center has increased usage significantly. Even more significantly, the library manager has become a member of a corporate committee which is studying compensation for engineers. Anyone familiar with a scientific or engineering company will recognize that having an information professional as part of that kind of team is a real accomplishment. An interesting technique which the library uses for gauging customer service attitudes is a semi-yearly report card sent to customers. It asks if the customer received the information in a timely manner, if the information service was cost effective, and if the staff who provided the service were friendly. Respondents grade each category with an A, B, C, or D. These report cards help the librarian to judge the customers' attitudes toward library services and work on quality service.

Speakers at the program "The Information Utility: Optimizing Institutional Information Sources"—Richard Kesner and Hope Tillman of Babson College and Gail Frazier of Home Oil Company—see the Information Utility as a one-stop shopping center for print, audio/visual materials, internal records, archives, software, network services, user training, and graphics services. Delivery of these services is driven by technological change and cost containment. Collaboration is now transforming these organizations. Integration is more than a reporting structure: it is a philosophy.

Advantages of the new Information Utility are better customer service, better use of resources, improved sharing of resources, delivery of services to customers, desktops, access to new information technology, greater recognition of library expertise, and more emphasis on the "big picture."

Probably the strongest example of customer service cited at the Conference was one of self-service: the famous Stephen Blumberg case. Blumberg helped himself to some 30,000 rare books and documents (estimated value of 20 million dollars) from some 400 libraries in 45 states over about 20 years. The program "Stop in the Name of the Law—Dealing with Library Thefts" featured the detective who was instrumental in solving the case, Sergeant J. Stephen Huntsberry. Library managers must decide the level of access versus the level of

security needed to fulfill their fiscal responsibility for safeguarding valuable materials.

Two programs focused on marketing library services. One was the Library Management Division's "Marketing Swap and Shop." This year 94 institutions sent marketing materials. Ten poster sessions were presented on marketing the information center and its services. Corporate libraries, public and university libraries, associations, government agencies, and information vendors shared their strategies for marketing services in their organizations. Brochures, newsletters, bookmarks, announcements, invitations, flyers, and a set of postcards were all formats which were displayed. Presenters of the poster sessions described how they handle marketing in their own organizations. Attendees at this program expressed concern over the number of vendors displaying materials, concerned that the "Swap and Shop" will become an extension of the exhibits.

In the program "Marketing Matters," Holly Bussey, Director of Fund Research at Abington Memorial Hospital, gave an outstanding how-to-do-it session on creating written vehicles for marketing. She stressed that each document must communicate a unified meaning. Match work priorities with the priorities of the parent organization and determine the desired impact on the organization. Do a survey, either formally or informally, to determine the views of the organization toward your responsibilities. Then compare it with your evaluation of your impact. Planning is very important.

She noted that the attention span of an executive is three and one-half minutes. Therefore you need to communicate quickly, simply, and assume that graphics are the best way to catch their attention.

In answer to a question, Holly addressed the issue of formatting marketing vehicles in the new electronic world where we are communicating with people via e-mail or electronic bulletin boards. She thought that future technology would permit transmission of logos electronically. She stressed making the message and the format interesting. Some word processing programs allow for bold face or italics, even for making words flash—study the manual to find out. Personalize the message in order to capture the reader's attention. Vary the format from time to time with a print message.

The Library Management Division sponsored a program on "The Consultant in the Special Library Community." Each speaker approached the topic from a different point of view. Alice Sizer Warner talked about her personal experiences and gave specific dos and don'ts. She reviewed her seven maxims for selling: (1) be clear as to what it is you are selling; (2) be clear about to whom you are selling; (3) be prepared to explain what you are selling in words that a 9-year-old would understand; (4) emphasize solutions and benefits, not the process; (5) go where the money is, and go often; (6) avoid crusading; and (7) package your product. Sue Savage gave some statistics and talked about consulting trends from a more general viewpoint. Sylvia James used her personal experiences to give an international perspective, since she is based in London and works in Europe. The program included too little about the relationship of the consultant with the special library.

The most valuable management program at the Conference, in my opinion, was entitled "The Impact of the Special Librarian on Corporate Decision-Making." Joanne Marshall, Associate Professor, Faculty of Library and Information Science, University of Toronto, presented the results of her research which was funded by an SLA research grant. She studied five financial institution libraries in Toronto. The library managers from each of these institutions participated in the program as well, giving the details of the research process at their organization.

Overall, 84 percent of the 299 participating managers and executives said that information provided by the institution's library contributed to better informed decision-making. As a result of the material provided by the library or information center, 54 percent of the employees said that they probably or definitely handled some aspect of their particular decision-making situation differently than they would have otherwise. Of these, nearly a third (32 percent) indicated that their decision was of consider-

able or great importance to their institution. In cases where a financial transaction was involved, 74 percent estimated the value of the transaction to be over $1 million.

Executives, senior managers, managers, and account managers in the study reported that the material obtained from the library or information center allowed them to do the following: (1) proceed to the next step on a project or task; (2) decide upon a course of action; (3) improve the image of the institution; (4) improve relations with a client; and (5) exploit a new business opportunity.

The information also assisted employees in avoiding the following: (1) loss of the employee's time; (2) a poor business decision; (3) waste of another employee's time; (4) loss of funds; and (5) waste of resources such as equipment or supplies. While employees use information from a variety of sources for decision-making, the library was considered just as important as other major sources such as the employee's own files and colleagues. This finding is somewhat different than has been found in studies of scientists and engineers.

Joanne will continue work on the study during the summer and will make further correlations of the data, looking at such things as the frequency of use of the library compared with the impact on decision-making. The report will be published in *Special Libraries*. With this project, SLA has again funded research which is enormously valuable to us as special librarians and corporate library managers. Along with the "Report of the Task Force on the Value of the Information Professional," the study shows how we can justify our worth to our management.

The stress of the current economic environment resulted in an overwhelming majority of management programs at the Conference which dwelt with the present, not the future. Special librarians seem to be in a survival mode. However, the program "The Information Audit: Getting to the Bottom Line on Customer's Needs," was an exception to the rule. Both speakers discussed customer service and quality issues with an eye to the future. Christopher Neep, Insurance Corporation of British Columbia, titled his talk "Information and Corporate Excellence." His main theme was continuous improvement, the key to success and prosperity. Information is fundamental to effective leadership. He quoted from the book *Corporate Transformations:* "It is not enough for managers to be skilled in conducting internal organizational change. Managers must also know what external events, trends, and dynamics are critical to the success of the organization and how they should respond to them." Critical factors are:

(1) **Anticipation of the future.** He quoted Peter Drucker as saying that this is one of the most critical skills of any manager.

(2) **Innovation.** This includes creating new products, as well as producing existing products more effectively.

(3) **Excellence or total quality.** This means anticipating customer needs, then meeting or exceeding them.

The critical information needs for the future are consumer expectations, foreign competition, domestic competition, environmentalism (with its impact on the cost structure becoming increasingly significant), legislative changes, economic trends, the impact of the North American Free Trade Agreement, the impact of the European community, and the impact of the fall of communism. Companies tend to base their planning on the past. They should identify the future first, develop scenarios for those impacts, plan, anticipate the opportunities, and then mobilize to exploit the opportunities. This process is applicable to information centers as well. Speaking about excellence, he said that quality requires change to the internal structure, to interpersonal relations, strategy and purpose, rewards, systems, policies and procedures, training and development, performance appraisal systems, quality infrastructures, measurement, benchmarking, and to surveying to determine customer needs. Like Nancy Austin, he felt that information centers were uniquely positioned to help their companies succeed in the world of the future.

At the same program Sharon LaRosa, Marketing Consultant, defined the information audit as a systematic and objective examination and appraisal of how an organization uses, needs, obtains, and manages information. The information audit is very future-oriented. It's less an assessment of services and more a look at the strategic needs of the information center in the future, using interviews and focus groups. The advantages of conducting an information audit are that: (1) it positions the library as being in line with the corporate strategy and goals; (2) it identifies areas of need for improved information access; (3) it generates and validates ideas for new products and services; (4) it helps customers articulate their information needs; and (5) it helps assess the effectiveness of the information center's promotional efforts.

She detailed how to plan and conduct an information audit. A handout gave sample questions for an information audit interview and a sample memo to information audit interviewees. It was a very useful session, giving special librarians a technique for examining and anticipating the future in managing their company's information center.

The third theme running through the management programs at the Conference was "doing more with less." Cost containment is an almost universal reality for special librarians these days. Several programs dealt with the issue in general and in particular. Hope Coffman gave one of the best, detailing her experience of almost five years of downsizing at the Charles Stark Draper Laboratory. She listed the perhaps all too familiar environmental effects of downsizing, but, uniquely, looked at the positive view as well. Frequently, we don't see anything positive about downsizing. Her positive view included the process of managing change and calls for a paradigm shift, an entirely new way of thinking about library resources and services. The goal is responding to change effectively and positioning within the organization.

She developed a model for the process of managing change: (1) analyze the situation; (2) listen and get input; (3) plan new goals for changed circumstances; (4) plan, determine strategy and action plans; (5) communicate new goals, tasks, schedules, and responsibilities; (6) manage individuals; (7) manage resistance; (8) implement plans; (9) get and give feedback; (10) evaluate; and (11) make adjustments. To take the positive approach one must think differently, manage library resources and services differently. Planning is essential, but effective people management is really what makes change happen.

In managing change, it is essential to be analytical, relating the library's goals to the goals of the organization. Change as necessary the library's goals to provide information that supports the company's research and new business development. Analyze all functions, services, personnel, and operating costs.

The second step is to develop a strategy. Hope recommended that managers cut deep and up front, eliminate management layers, reorganize by function, assume direct supervision, develop action plans, develop a business plan which includes a budget and operating plan, emphasize communication and human resource management, confront conflict, and stay in communication with senior management.

After developing a realistic action plan and business plan, the next steps in managing change are: to demonstrate financial responsibility, to keep and use statistics, to keep personnel motivated to evaluate results and make necessary changes, to communicate with management, and to demonstrate the value added to the corporation.

Following Hope's talk, Rich Willner of Lehman Brothers examined the financial management perspective of managing with reduced resources. His theme was that the management of corporate libraries has changed dramatically from 1980 to 1990. Corporate libraries have become financially driven. For example salary expense has become significantly less than resource costs, which have increased rapidly. Technical service jobs have expanded in scope and impact. Resource management work has become very sophisticated. We now have as many or more computers than people. And total library cost is a significant percentage of corporate revenue, sometimes as much as two-three percent.

What is the impact of this change on corporate library management? First, financial management has become a critical professional competency, because one can't conceptualize and implement the next step without it. Initially, many corporate library managers ignored this change, but the recession has made that position untenable. Still, many of us lack interest in the financial implications of our information services. Second, technical service jobs have become management tickets, as micros, third-party software, and LANs are used increasingly to reduce expense and improve the library's cost structure. Since corporate library managers have historically been drawn from reference service, this trend is significant.

The change in the driving force for corporate libraries has created three new sets of management issues. The first is professional potential. Library managers need to be interested in library/information science research and its application in the field. Applying it requires analytical ability and willingness to act on reasonable conclusions. Managers must also be aware of financial management basics and systems innovations. This adds to the challenge because many of us lack systems and financial skills. Professional awareness is also an expectation for staff.

The second issue is staff capability. Do staff have the skills, willingness, and drive to do those things which make sense for the organization? This implies recruitment of people with broad skills and a desire to innovate. Rewards must be structured to reward people who innovate and take risks better than those who do excellent work but tend to view the current situation as a permanent condition. Staff must balance a strong professional orientation with a business orientation.

Third, understanding management objectives is critical. Library managers must make the commitment to learn from management while educating them. Managers also need to evaluate how decisions are made in the company. How much control does your management actually have? Is your management stable? How, and how much, do your users influence management? Management has the right to expect the lowest reasonable cost of service. This means that services must be delivered by the lowest cost provider. Delivery methods must be flexible and analyzed from a cost and service perspective.

Rich presented one of the most thought-provoking sessions at the Conference, and I hope we will hear more about his ideas on financial management and the implications for corporate information centers.

Another program, "Lean Budgets: Staff Training for Doing More (Than You Thought You Could) with Less," disappointingly dwelt primarily with a case history and had very little to do with training.

The speakers at the session on "Managing Academic Business Library Collections" discussed specific trends in acquisitions and looked at the future. Whereas printed materials have been their libraries' chief assets, access to information is now the biggest asset. Judith Truelson of the University of Southern California said that, in the future, her library would be moving to full-text resources, developing back files on CD-ROM, and cancelling periodical subscriptions. I was surprised to hear that USC students are tolerant of system downtime.

Milt Ternberg, of the University of California at Berkeley, predicted an increase in cooperative collecting and resource sharing among business libraries. The lower cataloging, servicing, and storage costs make this option attractive. Sophisticated technologies such as fax, the accessibility of online catalogs, and the close geographical proximity to a cooperating library or libraries make this possible. Copyright issues impact cooperation. Will publishers raise prices if subscriptions cancellations increase? There are a number of questions which will go unresolved until we get farther into resource-sharing.

If special librarians were tired of doing more with less at work, the SLA Research Committee offered a solution by sponsoring a program on "Finding the Funds: Proposals that Work." Barbara Farah, University of New Hampshire, gave an excellent how-to-do-it session on proposal writing, including a hefty bibliography of sources on grants and grantsmanship. Although the presentation focused on writing

grant proposals, writers of any business proposal could have learned from her talk.

She discussed the importance of beginning early and told how to use a project approach, develop a mission statement, and identify and research possible donors. Building institutional support may help to convince an outside donor of your credibility.

Barbara covered all of the elements of a proposal from the cover letter and title page to the supporting materials and bibliography. She defined terms, talked about the details of creating a problem statement, hypotheses, and research design. Her list of common errors of proposal writers included the failure to follow instructions, weak problem statement, failure to review the literature, costs not fully defined or unrealistic, wrong sample population size, non-generalizable results, flawed methodology, too many assumptions, limited benefit of results, failure to contact people who will or could assist, bias of principal investigator, variables not clearly identified, lack of timely topic, ambiguous or absent definitions, topic not on the funder's agenda, and an obvious last-minute crash effort. By reversing each of these error possibilities, special librarians will have a head-start toward writing the perfect proposal.

And now some general Conference comments. Management programming at future SLA Conferences can be improved. Since doing more with less is a real-life work experience for special librarians, let's extend it to the Conference. Let's do fewer programs with more quality. Proliferation of programs on similar topics dilutes our ability to satisfy our customers, i.e., ourselves as attendees. I highly recommend that the Conference Planning Committee insist that divisions cosponsor more programs in order to combine resources and bring in top-notch speakers.

Secondly, program planners in the management area, and perhaps in other areas of wide interest (e.g., technology), should target programs for different levels of expertise in much the same way that our professional development programs are targeted. We need to continue basic level courses, because there will always be a segment of our attendees who are at the starting point. However, we lack programs for the more expert, for people knowledgeable in management. Several library managers have told me that if it weren't for their involvement in Association business, they wouldn't come to the Conference; the management programs are not at a high enough level for them. Implementing these two recommendations will build on an already strong foundation, so that all of us can convert ourselves from the ordinary to the extraordinary.

Technology Issues

by Mary Ellen Jacob

My commentary and critique of the 1992 Special Libraries Association Annual Meeting is divided into four parts: general comments on the structure and organization of the Conference, brief comments on the general sessions, specific comments on technology-related sessions and lastly, some observation of concerns and issues SLA and SLA members should address.

General Conference

General comments concern scheduling, overlapping topics and room allocations. The scheduling was a major problem. With no time between sessions, speakers and audiences from one session had to contend with those of the next as one tried to exit and the other enter. With some sessions scheduled in the Marriott and some in the Moscone Center, there was no time to get from one to another without being late. Planners should allow at least fifteen minutes between sessions and a half hour if transit between buildings is necessary.

Too many similar or related sessions were scheduled at the same time. While this may allow for popular topics to spread the audience out and reduce the need for larger rooms, it may mean that with more specialized topics, audience size will be reduced. Both effects occurred. Trying to cover all the technology-related sessions was impossible with over 47. Even skipping lunch and missing exhibits would only provide coverage of 15. Similar problems occurred in the areas of management, international relations, and education.

I also object to having Division sessions scheduled at the same time as the Plenary

sessions. It makes for difficult choices. SLA spends considerable money on Plenary speakers and most have been outstanding.

Room allocations seemed strange. Some sessions had small audiences in large rooms while others had large audiences in small rooms. One such session piped the sound into another room to accommodate the audience. Conference planners should be aware that "hot topics" will draw large crowds. Regardless of what the program planners estimate, the Conference planners should allocate large rooms to certain programs. These include most of the Information Technology Division programs because most of these appeal to a broad audience. If in doubt about "hot topics," take a look at current journals or computer bulletin boards.

Plenary Sessions

SLA has generally had excellent Plenary speakers. Considering the fees most of these people command, they should be outstanding. This year's Plenary speakers were disappointing. Nancy Austin is a consummate speaker, a wonderful role model and fun to watch. However, the information content of her talk was low.

Dr. Gourevitch was even more disappointing. His overheads, except for the titles, were impossible to read; he droned, and had nothing new to say. Considering the impact and growing importance of the Pacific Rim, this plenary program missed the mark. The adjustment of the sound system was also poor. Having revisited the same venue three weeks later, it could have been avoided.

Technology Sessions

As noted above there were some 47 technology related sessions. I attended 15 and received reports on another 25. Almost half of the sessions dealt with electronic services or networking. Another group dealt with general advances within special technical areas. A third area dealt with management issues of technology. Some were formal presentations by an invited speaker, some panels, some contributed papers, and a few were roundtables. Rather than try to list each session and every speaker, this review will focus on several personally attended and refer to several others of special importance to the profession.

Among electronic services, the panel on Electronic Data Interchange, including Sharon McKay, Charles Piazza, and Susan Malawski, provided a tutorial in the state-of-the-art of EDI. Many corporate and government bodies are using EDI and more will in the future. Primary impetus has been from financial transactions and ordering systems. Library vendors are also using the formats for transactions with publishers and with some libraries.

Of particular note was the indication that publishers are looking toward article delivery services via EDI, although it was unclear if this encompasses only the request and payment via EDI or whether it would also include the physical document. This could have major implications for both interlibrary loan services and for the future of marginal journals. No information was given on the possible cost of such services.

Publishers are pushing electronic services and electronic publishing more. Several sessions discussed aspects of this topic. Elsevier discussed its TULIP project to make the full-text file of selected journals available on tape to universities for mounting on local networks. Numerous CD-ROM products were demonstrated in the exhibit area.

The Information Technology Division panel on CD-ROM featured Carol Tenopir, John Barnes, and Reva Basch. Carol provided a state-of-the-art overview. By the end of 1992, CD-ROM use may surpass online. The future holds more graphics, more multimedia, cheaper scanning equipment, more LANs and more dial-up WANS, more consumer demand, and more products. Some suppliers will fail.

John talked about the differences between image (bit-mapped files) and text files (ASCII encoded) while Reva saw CD-ROM as a transitional medium. A strong advocate of online services, she deplored the lack of standardized user interfaces and slow-response times. She noted however that pricing will significantly influence which services librarians choose. If online services offer more flat pricing, they may keep more users.

Clifford Lynch, as always, gave an informa-

tive and interesting presentation on the Internet. Issues he identified included priority setting (should NREN focus on higher speed or extending use?), defining acceptable use, commercial use, globalization, security, access to government information, models of access, changes to scholarship and business, and free information and databases.

Harry Morris defined and discussed WAIS, Wide Area Information Servers. Some attendees felt this presentation was too technical, however, the concepts and developments in this area will be crucial to all libraries.

The Telecommunication Division sponsored a number of sessions including one on optical fiber and one on LANs and WANS. Both had a lot of information. This Division is faced with a difficult problem in offering programs. Half the attendees are bored because they know the basics already while the other half don't know what the speakers are talking about. Len Thomas, a last minute fill-in for another speaker, did an excellent job in providing a basic tutorial on optical fiber capacity, use, and deployment.

Mark Needleman and Roy Tennant discussed LANs and WANs. Needleman, one of the most knowledgeable people in the field, spoke too hurriedly and lost half his audience. He could easily have filled the session by himself. Tennant spoke primarily about Internet and the need for better interfaces. He also discussed WAIS and the need for better directories.

The Geography and Map Division Contributed Papers session featured Christopher Baruth, Carol Marley, and a paper by Helen Jones Armstrong read by Jim Dorsey. Baruth described the problems and challenges associated with converting maps to digital form, including the need to construct special platforms. His project was to create a teaching tool.

Carol provided an overview of Canadian applications on CD-ROM especially GeoScope, a global change CD-ROM encyclopedia. Part of an international project to create a digital map of the entire world, GeoScope provides digital maps that can be manipulated and used for simulations such as those proposed by John Scully in his video the Knowledge Navigator of the impact of deforestation in the Amazon on sub-Saharan rainfall. Unfortunately not all the maps reflect the same time period so results can only be illustrative not predictive. GeoScope is intended for use by high school and college students.

Dorsey described the process of adding catalog records for maps to an online catalog. By providing access through the online catalog reference use of maps quadrupled.

As might be expected, roundtables were a mixed bag. Some were well structured and excellent, others were free form and wandered about so much as to be repetitive and of little help. Organizers must tread a fine line between providing sufficient structure to focus a topic and yet let the participants have an opportunity to exchange experiences. The good ones were valuable and provided interesting insights into problems, state-of-the-art progress, and near-term trends. Two excellent ones involved CD-ROM training and Academic Sci-Tech Libraries. The CD-ROM session discussed training users and staff and the need for standards. The emphasis was on understanding user needs. As one participant observed, if users need to learn to use a tool to obtain information they believe they need, they will learn how to use it. Casual users will not waste the time.

The Academic Sci-Tech Librarians Roundtable used a facilitator and was highly structured. They began by listing issue areas and selecting the most popular ones to discuss further. They talked about many issues including budget problems, but also discussed electronic services and document delivery services. The Telecommunications Division Roundtable was less structured and focused primarily on the nitty-gritty of running telecommunications special libraries: which vendors to avoid, new publications of interest in the field, etc.

Sessions I could not attend but wanted to included the Transportation Division session on "Roads that Talk and Cars That Think," the News Division sessions on imaging, and the Biological Sciences Division "Human and Plant Genome Project."

The Human Genome Project is an outstanding example of the role librarians can play in

helping scientists and researchers manage and structure data. Information specialists and librarians have developed and maintain the Human Genome files providing worldwide access to this data.

General Observations

SLA members should educate themselves on the limits of technology and how to apply it effectively. There was a lack of critical evaluation of technology and its success or failure in aiding users. Few speakers talked about evaluation of services and technology. These techniques, along with a basic understanding of the limits of the technology, are crucial in justifying its application and adapting it for effective use.

I usually find the applications sessions among the more interesting at SLA. Unfortunately, this year, I managed to attend only a very few of these, focusing mainly on basic technology sessions. The basic technology sessions were adequate, but had little new information. As tutorials for those unfamiliar with the technology, they fulfill a function, but Conference and program planners need to do more in differentiating audience knowledge levels.

SLA members must never forget the needs and wants of the users nor assume they know what those needs are. Some users want only one or two references, others want everything and some want only the few best items. Most users are not really interested in information containers: articles, books, reports. They want the specific pieces of information that will solve or assist in solving their particular problem. One size does not fit all users. SLA members must make their needs and their users needs known to vendors and information systems developers.

SLA members should use their professional knowledge to help shape new products and services. They have major contributions to make in the application of indexing techniques to electronic and image media.

Standards are important to effective operation of libraries and information services and especially in the areas of information technology. SLA and SLA members should participate in standards development both as members of standards organizations and as active developers of standards. Too often this activity is left to other professional colleagues in academic and public libraries or to information technologists. Instead of complaining about the lack of standardization in information search interfaces and CD-ROM systems, SLA members should be participating in and supporting efforts such as the National Information Standards Organization's (NISO) work to develop a common command language and to encourage application and use of Z39.50, Information Retrieval Service Definition and Protocol Specification for Library Applications.

SLA members and SLA must participate in national information policy forums that shape the development of information services and its underlying infrastructure such as the NREN, transborder data services (almost everything is these days), image systems, and electronic archives. Our future services will be constrained or enhanced by the policies and services now being developed.

Like any Conference, this was a mixture of good and bad. Major disappointments were the plenary sessions and the mixed levels of some of the basic technology sessions. The pluses include the opportunity to meet colleagues, talk with expert speakers, and learn more about innovative applications of technology as well as trends in business, industry, and the sciences.

Education; International Professional Issues

by Toni Carbo Bearman

This was the 83rd Annual Conference of the Special Libraries Association and it's kind of a funny coincidence that my dear mother was with me. Both SLA's conferences and she are 83. And think of the differences that they have seen. She grew up in a small town south of Pittsburgh, and electricity was fairly new. The whole concept of universal access to telephone service was not all that common. Her brother was a pilot, open-air cockpit airplanes, and he used to come in with the hook where they'd reach out for the clotheslines and grab the mail bag. She probably got mail faster than we do today. Certainly the airline service has changed.

She's lived through a whole bunch of things—radio, television, computers, faxes—all of the ways that we now deliver information.

There have clearly been many changes since the first SLA Conference and one of them is the people who come to the conferences. I don't mean the individual human beings themselves, but the fact that it is a much different country in which we are living. First of all we have many more people coming from outside the U.S., which is terrific. The culture in this country has changed dramatically. A large portion of the population is older. By the year 2000, one-third of the people in our country will be people of color. The implications of the cultural and ethnic changes in our country, I think, are very significant. Some of those themes were raised throughout the Conference, such as the need to make sure we are recruiting to our profession and keeping people in our profession from the different cultures in this country. It was very disappointing as I looked around room after room to see predominantly white people, and very few people of color. We are really still pretty homogeneous here at SLA and we have a lot to do to correct that.

In addition we are looking at the kinds of services we need to provide to what has become our multi-cultural, global village. Among the special populations in the country is a group we hadn't thought about before—the homeless. And we certainly were reminded of that as we went outside anywhere in this city. There were some sessions which addressed the changing role of women in society as well and that was very encouraging to see. There was a session by the Social Sciences Division dealing with homelessness. One of the sessions presented by the Women's Issues Caucus was on women in the workplace and talked about diversity programming at Johnstown. It noted something very important that the title is changing from Managing Diversity to Valuing Diversity. This was begun because management saw fewer white males walking in the door, so they needed to discuss and discover what was needed by the new group (that is, woman employees). They found, for example, that some of the benefits of greatest interest were flex time, permanent part-time status with benefits, childcare, and greater acceptance of employee time off for family matters. These issues are not just women's issues. I was delighted when the new Chair of one of our departments at the University of Pittsburgh talked to me about the need to have flexible scheduling because he wanted to have some time at home with his two young children. That's exactly the way we should be going.

My assignment was to cover programs with issues on international, education, and anything else others didn't cover. There were 180 sessions plus a few other things going on at this Conference. During one time period I had six international sessions, four education, and a whole bunch of "other." There was no way, short of cloning all of us, that we could cover everything; many excellent sessions could not be covered, just because we could not be everywhere. And some of them fell outside our broad categories. For example, there was one on the future of Beilstein that dealt with the database that currently has 4.2 million compounds available on three networks. Exciting things are going on in many areas. Another session discussed seismic mapping and earthquake engineering. Another addressed the politics of city planning in San Francisco. Program diversity is a hallmark of SLA's excellent conferences. I will highlight a few of the sessions and then touch on four themes that I saw emerging.

Peter Gourevitch provided some very thought-provoking content for us, and I like the way he presented the four views, the macroeconomic, micro-economic, cultural, and structural environment as ways to look at the world. Of particular interest is that he noted the implications of these views for the information needed. If you are developing policies, programs, systems, etc., to use these views, there's a whole lot of information you need. He emphasized the very important role special librarians play in providing the information needed both for building these views and for decision making.

After that session there were several concurrent sessions following up on the Pacific Rim theme. Five of them! Now which one would I go

to? There were also several education sessions during that same period. Well, luckily, thanks to several colleagues including Frank, we received summaries of many sessions we could not attend. One was on the "Emergence of an Information Sector and the Future of Information Work in the Asian-Pacific Region." Several good points came out of that including the leap-frog tendency of some countries to go from an agricultural society right into the information society, instead of going through the manufacturing one. Leap-frogging is happening not only in the Pacific Rim countries but elsewhere around the world. They also noted that the wall of education does not really exist in many of the Pacific Rim countries, and that interestingly of all the Asian countries Korea stands number one with the most PhDs. They also have changing demographics affecting the information services including a large number of jobs and an increase of women in the work force. There are several reasons why people are interested in the information economy, including that it stimulates the country's gross national product and affects other economic sectors. The effect of that leap-frogging with technology accelerates the country towards the next economic level. Obviously the effect is on trade—for some it's 60 percent of the export of their goods—and on the growth of multi-nationals.

I was in Singapore last year and I was intrigued by what a wonderfully clever, smart country it is. They have no space and no natural resources so they sell value. They import water from one country, reprocess it, and sell it back to the customer country for three times as much. They have also developed excellent software. They add value to all kinds of products and services. Very, very clever. Their national plan provides a very structured society.

There were several other important, international events at this Conference. One was the "Open Forum on an International Information Exchange Caucus," which about 40 people attended; Donna Scheeder did a wonderful job in chairing. Several ideas emerged which we are going to follow through. One is to provide information on ongoing international information activities—sort of a clearing house—beginning with identifying who's doing what, publish it in *SpeciaList* for example, and eventually we hope to develop a directory. Also there will be a list of speakers who are interested in speaking in this area of international issues, and Kaycee Hale has agreed to take on that job. The International Relations Committee has done some foundation work this year, and we'll see even more coming out of this important committee, under the new leadership of Wilda Newman

As you know, SLA has long been active in IFLA and has recently rejoined FID (International Federation for Information and Documentation). There was also a session reporting on the recent IFLA Conference and the organization. Several topics emerged from that including the image and status of librarians, which will be the topic of a pre-Conference of the 1994 IFLA Conference. There are ongoing discussions concerning preservation and use of acid-free paper as well as indigenous publishing. IFLA is looking at developing libraries and library organizations. I think that with the strong role SLA will continue to play in both of these organizations, we'll see an even greater role in the international community in the future. A project that came out of the International Relations Committee, working with other information-like associations, will identify journals needed in some of the less developed countries around the world. Beginning with some of the schools of library and information science, the committee will ask SLA Divisions and Chapters to work with them to contribute journals to those countries.

There also was a session on international perspectives on information exchange with more than 60 international librarians describing a congressionally-funded project to assist parliamentary librarians in eastern Europe. That was very interesting. The European Chapter of SLA (which now has 116 members) presented a program at this Conference. They want to do a study to look at the growth of special libraries in Europe. They're also looking to address the varied educational programs of different countries, and the question of upgrading the undergraduate to graduate library education programs especially with the unified Europe. Speaking of

a unified Europe, there was also a session on labor issues. The Labor Issues Caucus is looking at E.C. '92 and what is happening with labor concerns in the European market.

In the area of education there were not many sessions focusing on how we're educating our colleagues for the future. Several education sessions dealt with different topics, including the issue of internships in specialized areas, such as health information. Overall the general impression is that education of special librarians is going quite well. It "ain't perfect," but it's going quite well, in spite of the news in the press that is blown way out of proportion, about the closing or potential closing of library schools (many of which, by the way, did not close). There is a lot of very good news concerning the education of our future colleagues including many successful stories of growing enrollments and fine educational programs.

In the area of continuing education, SLA once again did a super job. There were about 1,080 people at this Conference who attended continuing education programs. There were 29 continuing education programs. There was a whole range of courses from entry level through executive level, with one day courses primarily geared toward entry and mid-level professionals.

We asked for a very quick overview of the CE programs because, of course, they're still getting the evaluations and still taking a look at them. One of the more popular courses was "The Quality Imperative: An Introduction to Total Quality Management," which more than 90 people attended. Some of the quotes from the evaluations—"It was one of the most practical courses I've taken in years." One more, but not very, negative—"Too much material for one day." There was one on "Competing Abroad: Acquiring European Company Information," that drew about 50 people. Another course was "Adding Value to Corporate Library Services." I think it's clear there's a lot of interest in learning about quality management and getting access to global information.

One of the most significant events at this Conference I think, and kudos certainly go to Guy St. Clair for doing it, was the receipt of recommendations from the PREPS (professional recruitment ethics and professional standards) Commission. The draft copy of the Code of Ethics and Professional Conduct has been presented to the Board of Directors. The 38-page report with 23 recommendations includes background information and expected results of the recommendations. This is an extremely important area, and I'm delighted that SLA has come up with a statement of professional conduct. Their first recommendation is that the Board revise the charge to the Standards Committee to reflect an emphasis on personal standards and competencies for *special librarians* as well as industry standards. There are several other recommendations relating to educational concerns. Some very good recommendations concern recruitment into our field. Read the summary "Recommendations of the PREPS Commission" (reprinted in this issue of *Special Libraries* beginning on page 242) and make your views known to the Board.

Concerning internships, there was a fine session in which Beverly Lynch described the UCLA program, a full-fledged program, and reminded all of us that the term "internship" should be used for pre-masters, pre-professional internships that are done while people usually are enrolled in formal programs. A postmasters program should be referred to as a residency, rather like the medical equivalent. They will be asking SLA to adopt these definitions. A representative from Apple described their very exciting intern program.

Four additional themes seem to have emerged at this Conference. The first was change. Many things are changing: the population, the people coming into the field, the needs and demands of users, the way we deliver services and the technologies. As you walked through the exhibits you heard about changes, such as how we are improving services and new services added.

The second theme, the largest and most important I think, was access. That word came up everywhere. In the Internet session Cliff Lynch talked about something very important that's coming up in networking—the whole question of ubiquity versus performance. There are some people in the networking area who feel we should be focusing on how we can make the network better getting T3 or T4 lines (or whatever we're going to have in the future) for top

quality service. Others feel that the most important thing is the ubiquity of universal access. Think of the 1934 Telecommunications Act, the most current telecommunications act we have which really focused on universal access. That Act was passed so that you could actually pick up your phone and reach anybody else. We have redefined access for the telephone service, and I think we need to redefine what we mean by universal information access to networking services. He also reminded us of the Internet tradition of forgiveness rather than permission. It's very hard to know whom you should ask whether it's okay to do something on the Internet right now, so better just to do it and then later if you get your wrists slapped, get forgiveness. Don't try to get permission in advance.

He also said that he believes, and I concur, that information services five years from now are going to be radically different from today's information services and this will have a major impact on the role of libraries. There's no question that we're going to be providing access from the individual's home or workplace wherever that may be, and in some cases it will be the same, to multi-media information services no matter where they exist. He didn't say it but I think it came out in other ways—the distinctions among cultural institutions will be far less important. If a high school student is doing a paper on Abraham Lincoln, she or he may not care if the information is in a library, a historical society, a records management service, an archive, a museum, whatever. A lot of those lines are going to blur.

The question certainly will be access, including the whole area of globalization. Whose policies are going to prevail if different countries have different policies about what can go across their borders? What are the rules concerning privacy within that country, or for compensation for intellectual property? Transborder data flow issues will continue to be very important.

At the open meeting of the Copyright Committee, although there was a lively question and answer period, some people felt uncomfortable raising questions because there were publishers in the room. One of the attitudes we've got to lose is the "them and us." We've got to sit down at a table somewhere, probably a round one, and figure out how we are going to deliver information in the future. Libraries can't afford to continue to buy all the publications and put them on shelves and bind, store, and preserve them in printed form. We've got to find different mechanisms for delivery, and many people are working on those right now. But we also have to find some way to duly compensate the people who own the intellectual property. We have to sit down together and talk about this and explore different ways. There were also excellent sessions on international patents and on government information without borders addressing the dissemination of government information, especially electronic, via the depository library system. Some of the challenges here of course are going to be the need for simple, intuitive, and self-instructional software, and the availability of hardware and policies.

We need to be creators of information resources, including indexing, to help us navigate these seas of information and also user interfaces. I am not talking only about OPACs. I'm talking about something a lot more sophisticated that will be a lot easier to use. We did hear about WAIS (Wide Area Information Services). We heard about local area networks and wide area networks. We need to hear more about the means—money. A challenge we will continue to face is the problem of the information rich and the information poor; it is going to get worse. NREN and Freenet and other networks we hope will help us, but much more remains to be done to provide true access for all.

The third theme was people. We need to find the right people to come into our field. More than half the people working in colleges, universities, and schools are very likely to retire by the end of the century, which is coming soon. Where are we going to get these people not only to replace the retirees but to fill the many new jobs expected in the future? Finding the people, getting them educated properly, finding out what it is they need to know in the future, keeping them in our field so they don't go off and make $80 zillion running companies because they are already so well qualified, are some of the challenges.

The fourth theme that kept coming through was quality/value, quality in the management area—in value-added services. What does it mean? What does value-added mean? It means a lot of different things to a lot of people. I think that we as special librarians have a big opportunity to add value to information services and information delivery. Who's going to pay for these value-added services? This is an extremely important role for special librarians in the future.

It was great to see us get a little R-E-S-P-E-C-T, wasn't it? I loved that article in the *San Francisco Chronicle* about respect for corporate librarians. I was a little disappointed in Nancy Austin's content, although it was a great delivery. We read *Passion for Excellence* when it came out, Nancy. Tell us something new. I liked her examples and I think they were very helpful in reminding us of what makes companies and services excellent—the focus on quality. I also liked her statement that vehicles have to work, and we're preparing information vehicles, whether they're collections, services, or what we used to call bibliographic instruction—now mediacy. Mediacy denotes the need for teaching people how to use information no matter what medium it's in, but it also connotes that important sense of immediacy. This theme also brings in the important role of ethics and the question of satisfying our user's needs with quality services in the future. She also reminded us of the focus on customers—our users. We can't say that enough.

Our vehicles have to work. I loved the example Nancy Austin gave of doing a literature search, reading all of the things about the best car and the lowest maintenance and then driving one that has a little tray for your coffee cup. What she did was buy a movable coffee cup holder. We don't always make decisions based on intellectual reasons. We have all the facts and all the figures, and then there's human emotion. What is it that really makes you buy something? What is it that makes somebody use a library rather than another way of getting the same service? I think we need to look at those reasons. We don't want to just be movable coffee cup holders, but we do want to provide that kind of service. One of the quotes she used referred to the need to try things and be willing to take risks. She also said the ability to learn faster than your competition may be the only sustainable, competitive advantage. What she did was give all of us the mandate to learn, which is important.

It is time really to look at how we're educating our future colleagues. We haven't had a session like that for a couple of years at SLA conferences. I do not mean only in universities. It's life-long learning we're talking about. All of you are educators as much as I am in the university. Also we need to consider changing our formats. Almost every session, unless it happened to be a round table, was somebody standing up or on a panel, talking to us. There are better ways to convey information. I would like to see, for example, a really good plenary that's followed by small breakout discussions where we actually delve into the topic and then come together again to share our collective knowledge and opinions. I think such a format would be very helpful. That means more critical thinking, and I agree with MEL—we don't do much on evaluation. We need to have more critiques. I would also like to see some of the new products and services evaluated more by experts and their plans for improvement. For example, yes we need better user interfaces. Well what works? Maybe we need fewer of us talking to each other and more of the users talking to us.

Overall, on a scale of 1–10, I think this Conference program was about 8.5. Very good. Not great, but very, very good. I think we all learned from it, and I'm looking forward to next year's in Cincinnati.

Conclusion

We hope this report of the 1992 SLA Annual Conference helps convey the significance of the numerous technical presentations and reflects the outstanding work of Barbara Semonche and her Conference Program Committee and the Division and Caucus program planners. I thank Ann, MEL, and Toni for their superb coverage, enabling us to bring the essence of the Conference to those who were not able to attend. ■

Looking to the Year 2000: Information Professionals Chart the Course

The Special Libraries Association 84th Annual Conference Cincinnati, OH June 5–10, 1993

WHAT AMERICAN CITY HAS THE MOST EXTENsive skywalk system in the country? The "City of Seven Hills" or the "Queen City of the West"—take your pick—is many things to many people. It is paddle wheelers and riverboats, Procter & Gamble and the Kroger Co., Roy Rogers restaurants and Skyline chili, WLW and WKRP. It is famous for art deco buildings and Riverfront Stadium, Carew Tower, and Fountain Square. Visitors will find that it's for people with big-city tastes and hometown hearts. If you haven't been there, discover the way this intriguing city blends European appeal with American excitement. The city is culturally rich with a variety of museums, galleries, festivals, and special events. Visitors will find it equally as rich in fine dining as well as in sports and recreation.

In the past few years the explosively controversial exhibition of the late Robert Mapplethorpe's homoerotic photographs put Cincinnati on front pages—and many of its citizens on edge. Then the Reds made a clean sweep of the World Series, and Cincinnatians poured into downtown's Fountain Square to celebrate, red-painted brooms in hand. Clearly the early Nineties are a winning season for the Ohio River port that stern-wheelers and side-wheelers first put on the map. Now it is SLA's turn.

In preparation for the Special Libraries Association 84th Annual Conference, which will take place in Cincinnati in June 1993, Cincinnati Chapter members will be contributing a series of special interest articles of places in the

"Queen" city. In response to the many questions asked of the Chapter members during the San Francisco Conference, the first offering is about the Cincinnati Union Terminal (quoted in part from the *National Geographic Traveler* magazine's July-August 1992 issue; used with permission):

> In its pre-war heyday, Cincinnati's Union Terminal was a hub of midwestern travel and commerce, humming to the traffic of more than 200 trains a day. Today, the massive 1930s art deco landmark has taken on new life as the Museum Center, a 500,000 square-foot state-of-the-art exhibit space. Deep beneath the rotunda, now filled with restaurants and shops, is the new home of Cincinnati's Museum of Natural History, where visitors can step onto the glacial rocks of a Pleistocene plain or descend into a dark Kentucky limestone cavern. Just off the former south taxi ramp, the Cincinnati Historical Society welcomes you to a 19th-century sidewheeler and city street. At the opposite end of the station, on the north taxi ramp, is the hands-on Children's Discovery Center. A railway museum in the engineer's control tower, an Omnimax theater, and an African American exhibit hall are among the other attractions. In an echo of yesteryear, the terminal still welcomes a single train, the Amtrack Cardinal, six days a week. For information, phone (513)287-7000 or (800)733-2077.

Mark your calendars now for **June 5–10, 1993.** That's when you'll want to be in Cincinnati—to attend SLA's 84th Annual Conference.

The theme of next year's meeting is "Looking to the Year 2000: Information Professionals Chart the Course."

Looking ahead to the year 2000, the 1993 Conference will highlight the world of new and expanding technology, as well as greater cooperation between information professionals worldwide. Technical sessions, vendor exhibits, and other events combine to provide unique opportunities for professional growth. A special librarian today needs to be knowledgeable in such areas as marketing, strategic planning, financial management, and communication. As SLA members continue their quest for quality, the Conference programming will enhance participants' ability to chart their future course as they effectively satisfy the needs of their clientele.

Attend the 84th Annual Conference and develop the strategies needed for the challenges of tomorrow:

- **Professional Development Programs**—continuing education courses and workshops specifically developed to sharpen the skills of both new and experienced professionals;

- **General Sessions**—featuring keynote addresses by outstanding leaders in the world of information processing;

- **InfoExpo**—SLA's Conference Exhibits featuring the latest and most up-to-date resources available on the market today, over 300 exhibitors ready to provide you with the creative strategies you need to mastermind tomorrow's information;

- **Division Programs**—technical sessions, business meetings, as well as informal gatherings designed for individual input on decisions that will effect future growth of the profession; and

- **Structured Events and Informal Gatherings**—created to provide all attendees the opportunity to network with friends and colleagues from around the country and the world.

Full Conference information can be found in the *Preliminary Program* mailed to all SLA members in March 1993. Along with detailed session information, official housing and registration forms will be provided. While program planning is in the process of being finalized, the following information will be useful to all planning to join us in June:

- Reciprocal registration rates apply to members of AAL, ASIS, ARLIA/NA, and MLA.

- SLA Registration Fees: *

	Member	Nonmember
Advance (May 1)	$135	$220
Onsite	$175	$260
One Day	$100	$125

- A special registration rate of $75 will be applicable for students and retired individuals.

SLA wishes to stress that hotel accommodations in downtown Cincinnati are limited. All hotel reservations must be submitted by using the official housing form in the *Preliminary Program* available in March 1993. Currently, SLA has reserved accommodations at 10 properties—eight in Cincinnati and two in Covington, KY. Conference hotels are:

Hotel*	Single Rate	Double Rate
Cincinnatian	$118	$138
Clarion	$83	$93
Garfield House	$90	$110
Hilton	$89	$89
Holiday Inn Downtown	$65	$65
Holiday Inn Riverfront	$65	$65
Hyatt	$109	$128
Omni Netherland	$110	$130
Quality Hotel	$66	$73
Westin Hotel	$109	$109

* Please note that the Registration fees and the Hotel rates quoted above are subject to change. These costs are provided at this time to give you an idea of charges.

Future issues of *Special Libraries* and *SpecialList* will feature additional Conference information as it develops.

Join us! Attend the sessions, visit InfoExpo, explore Cincinnati, and have fun! ■

SPECIAL LIBRARIES INDEX
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Alphabetization is letter by letter. References to persons as subjects are indicated by "*about*" following the name.

The European Single Market

Implications for Information Managers

SLA's seventh State-of-the-Art Institute will bring together a diverse group of experts from the business, government, and information communities to present the following workshops and panel discussions:

★ **Opening Remarks and Welcome**
Program Moderator:
Nigel Oxbrow, Managing Director,
Task Force Pro Libra, Ltd.,
London, England

★ **Europe on the Move: The European Community in the '90s**
Peter Doyle, Director of Press and Public Affairs,
Delegation of the Commission of the European Community,
Washington, DC

★ **Information Policy: The Impact of European Unification on Member Nations**
Barry Mahon, Director General,
European Association on Information Services (EUSIDIC),
Luxembourg

★ **Data Protection and Privacy in the E.C.**
Francine Lamoriello, Senior Manager,
KPMG Peat Marwick,
Washington, DC

★ **Overcoming Barriers to Information Access**
Nigel Oxbrow, Managing Director,
Task Force Pro Libra, Ltd.,
London, England

★ **Europe Without Borders: The Role of New Technologies**
Speaker to be announced

★ **Information Networking Across Europe: Challenges and Opportunities**
Guy St. Clair, President,
OPL Resources,
Washington, DC

★ **European Information Sources Business and Finance**
Sylvia James, Information Consultant,
London, England

E.C. Information: Legal Documents and Databases
Barbara Sloan, Head of Public Inquiry,
Delegation of the Commission of the European Community,
Washington, DC

Scientific and Technical Information
Speaker to be announced

★ **Strategic Information Management: The Value and Use of International Information**
Peggy Slye, Senior Advisor to Senior Director INTELSAT Services and Marketing,
International Telecommunications Satellite Organization (INTELSAT),
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Other speakers to be announced

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  Smith, John and Virginia Dare. "Special Librarianship in Action." *Special Libraries* 59 (no. 10): 1241–1243 (December 1968).

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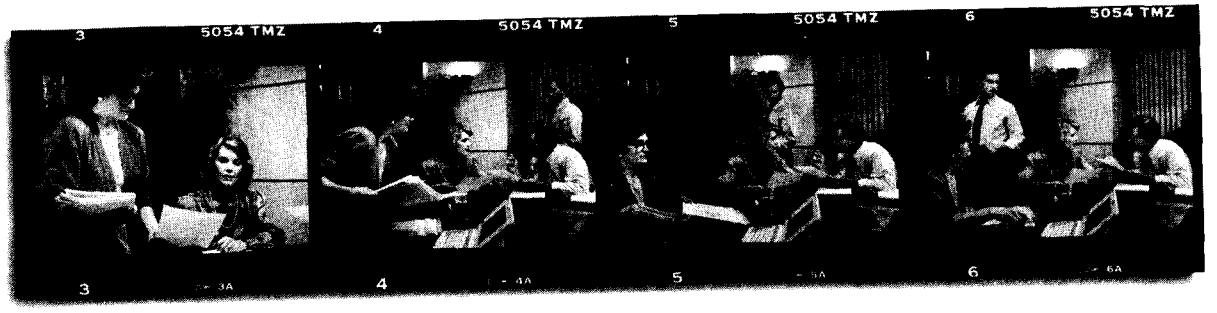

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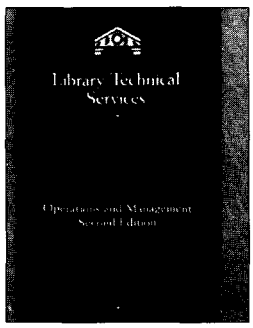

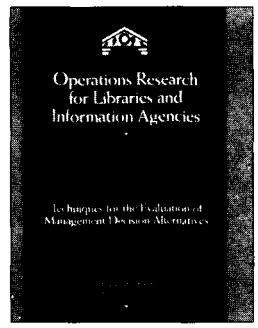

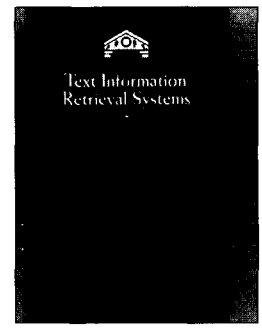

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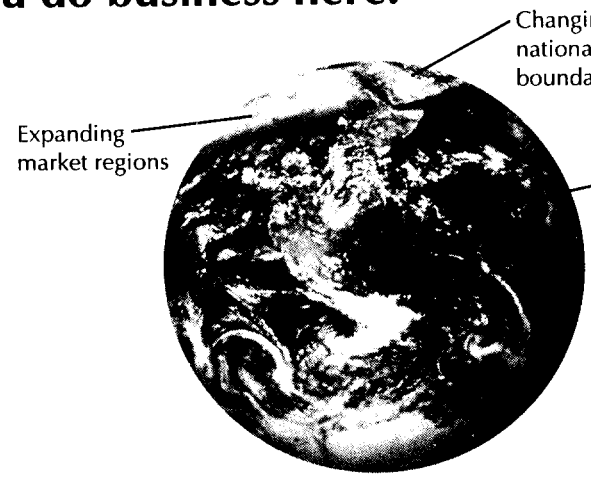

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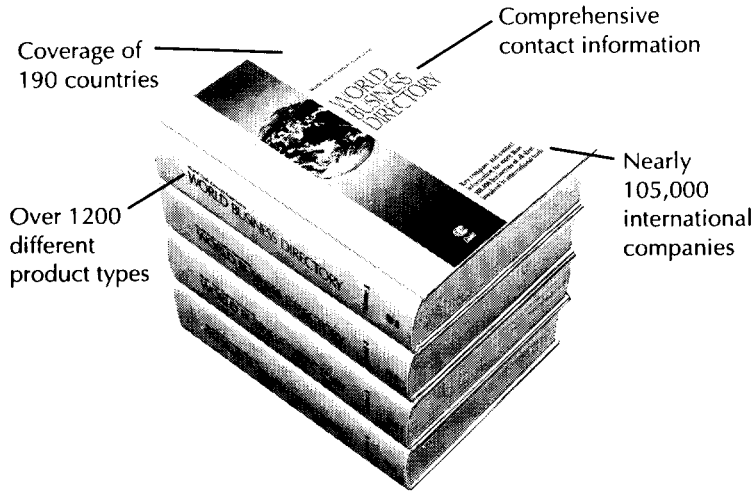

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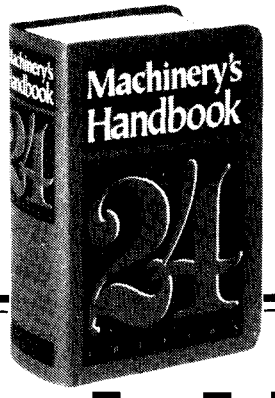

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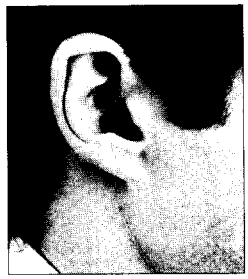

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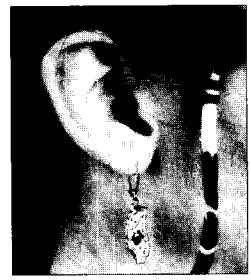

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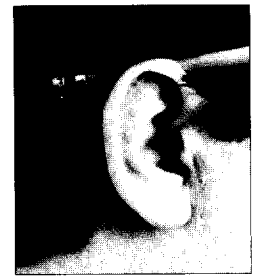

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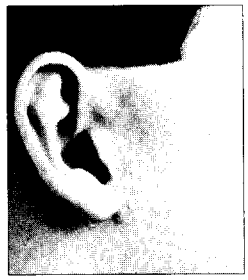

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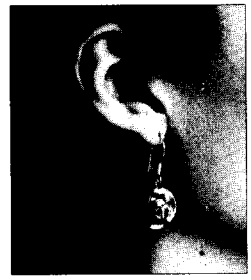

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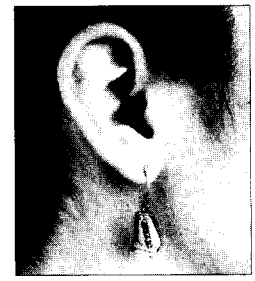

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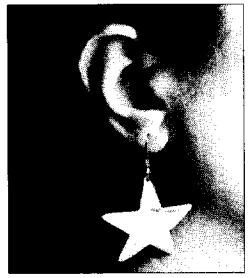

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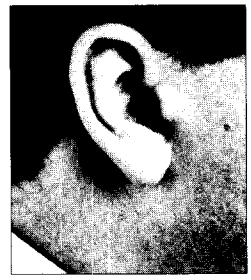

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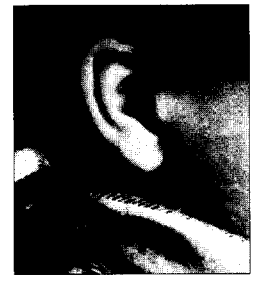

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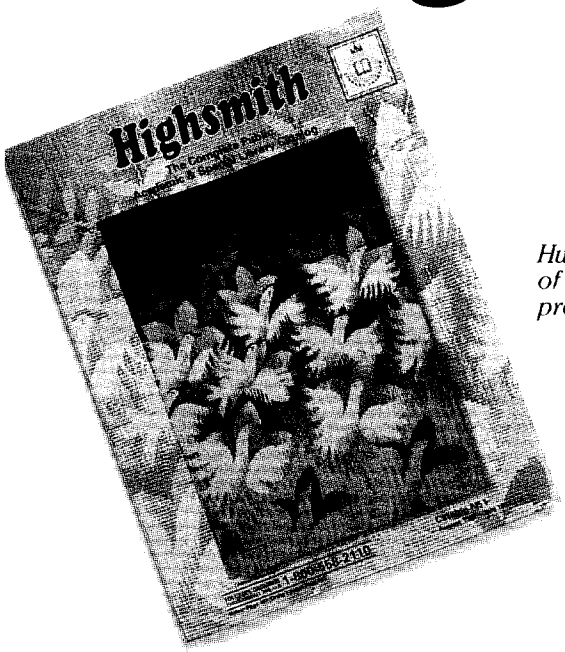

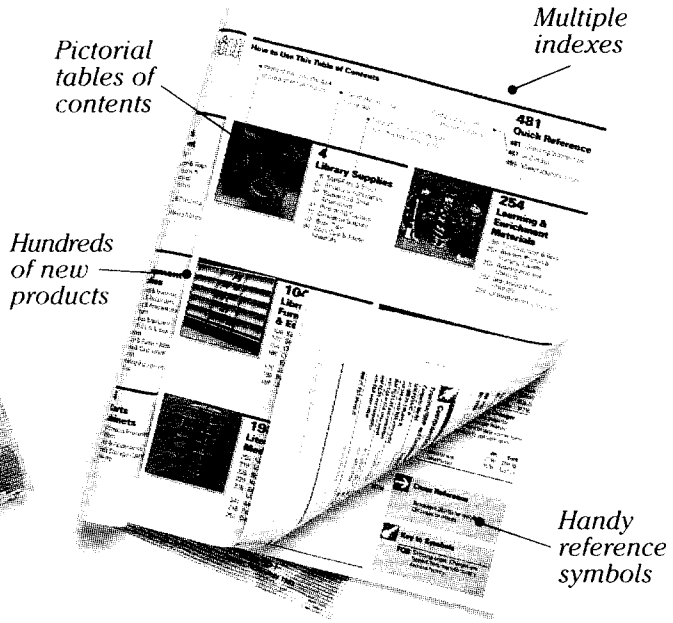

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