

DATA BASE FUTURES: A COLLAGE OF RESPONSES

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Data base futures was the subject of a panel discussion of a series of questions developed by Karl Pearson, Associate Director of CLASS (California Library Authority for Systems and Services). This program, jointly sponsored by CLASS and the California Library Association's Library Development and Standards Committee, drew a standing-room only crowd. Despite the uncertainties of library funding in California and across the nation, we need to look to the "brighter day."

Having written a letter to CLASS expressing concern about the escalating costs for the microfiche edition of the California Finding List for Monographs, CATALIST, and serving as a member of the Library Development and Standards Committee, I was asked to serve on the panel to represent users of data bases. To more adequately represent the views of users, interviews were scheduled with public librarians at Butte County Library in Oroville, California, and academic librarians at California State University in Chico, California. In addition, several library system directors in California responded to a letter containing the questions on data base futures.

The resulting collage of conversations represents the thoughts of the following persons and credit is due each for the wide ranging responses to the questions posed by Karl Pearson:

Mrs. Brenda Crotts, Technical Services Librarian, Butte County Library, Oroville, California,

Mr. George Elser, Director, Inland Library Systems and SIRCULS, Redlands, California,

Mr. John Kallenberg, Fresno County Librarian and Fiscal Agent for the San Joaquin Valley Library System, Fresno, California,

Mr. Ross Olmsted, Adult Services Librarian, Butte County Library, Oroville, California,

Mr. William Post, Systems Analyst, California State University, Chico, California,

Mr. Frederick Ryan, Director of Systems and Technical Services, California State University, Chico, California, and

Mrs. Josephine Terry, Butte County Librarian, Oroville, California.

The responses to the questions will not be identified with specific persons at the request of the majority of the persons interviewed. In some ways, this helps to blend the responses into a more interesting pattern of questions and answers.

WHAT MIGHT BE THE ENVIRONMENT FOR LIBRARY COOPERATION IN 1986?

The environment is very good. We need data bases to facilitate cooperation, manage scarce resources, better serve rural areas, and better allocate resources. Politically, the environment will be positive because people will be screaming for resources.

Technically, there will be a lot more local systems and less reliance on OCLC and RLIN (nationwide online bibliographic data base utilities). There will be microprocessor based systems. Large university libraries will continue to use OCLC and RLIN because these data bases have much to offer. CLSI,

or an equivalent computerized circulation system will be a good system for medium sized university and college libraries. Smaller public libraries will find that microprocessor systems are more economically promising.

Local systems will need a tie-in. In regard to a unified national network, most libraries will not need to participate in one beyond their own utility such as OCLC. Academic research libraries with esoteric materials will need a national network. In 1986, there will be a greater definition of what is a good local data base, what is a good centralized data base, and there will be regional intersecting of data bases.

In the North State Cooperative Library Systems area (the inter-type library system serving California's 13 northern counties) the environment for cooperation is here now and will continue to be here because libraries in the northern quarter of the State have limited resources.

If we do not give the impression that libraries should be well funded, no one else will. We must have faith in our product. Automation and equipment will become less costly. Librarians have to be aggressive and get a piece of the pie. Librarians need to avoid fees as we will be in direct competition with private enterprise.

There is a tendency for librarians to fall back into a rut, a tendency toward conservatism. The money problem can be taken care of. Librarians need to adapt to technology or disappear. We need to reduce salary costs. Another example of the kinds of cooperation that might occur in the future is a cable television company putting the library catalog on line as part of the package for a franchise.

WHAT NEEDS TO BE DONE BY WHOM BETWEEN NOW AND THEN?

There is a need to develop a vision and then sell it. We need to develop an action plan to bring it about. Librarians have lacked vision in the past. There is a need to create vision again. There needs to be a great deal of talking and gaining commitment to cooperation.

Organizations such as the state library and CLASS should be involved in making people aware that an interconnection situation exists. The state library and CLASS need to bring people together such as interfacing OCLC and CLSI. The interfacing should not be done separately, CLASS could be involved.

If it is mostly a transmission and access need, everyone will be hooked into networks and like to be online rather than using computer outprint microform (COM). COM will be used for storage. The telephone companies may be putting terminals in private homes.

Libraries need to hook into state or national networks. California needs to decide if we want to build up a network like the State of Washington or go with OCLC or RLIN. The Southeastern Library Information Network (SOLINET), for example, bought Washington Library Network (WLN) software and is using OCLC data.

We have to see if electronic transmission will help abolish the penalty in cultural and information development for living in rural rather than metropolitan areas. Growth of individual or small regional access to news and current affairs data, as well as scholarly data, may come with the help of satellites. Earth station costs are decreasing.

OCLC is an example of what needs to be done--aggressive library people willing to experiment. Local library time is mostly spent on maintenance of

programs. There is a need for organizations such as CLASS, the California Library Services Board, and the state library to look toward the future. Technological developments must transcend society and not be available only to the educationally elite.

WHAT CAN WE EXPECT TO HAPPEN BETWEEN NOW AND THEN?

There will not be a great deal of change by 1986. A few places will have pilot programs of telefacsimile transmission of documents. Delivery systems using couriers and vehicles will continue. Bibliographic and reference services will be automated. Libraries may start to send images rather than physical book or document. Video disc could be a good foundation for image transmission. The video disc is likely to replace microfilm. By 1986 one should be able to have a television screen at a remote site, request a copy of something and receive the copy. Copyright may be a barrier to this development. Putting information about collections out to the general public is what we are doing now. We need to get the collection itself out to the general public.

WHERE WILL THE DATA BASES BE PHYSICALLY LOCATED?

Data bases are coming closer to home and away from centralized systems. Communication costs are not coming down, but other costs are. There is a question as to whether satellites will help rural libraries as costs are likely to be fairly high. There is a need for an interface or linkages for local libraries.

The location will depend on the data base. Bibliographic records of monographs will probably remain at OCLC or RLIN. Records of nonprint materials and media may be in minicomputers within library systems or individual libraries.

Many data bases will remain in large central stores such as Dialog which has grown from 1 to 120 data bases. Dialog added 21 new data bases in 1980. These are specialized data bases. A more generalized data base is "The Source," and there are attempts to link "The Source" to teletext displays.

Handbooks and directories are likely to be online. Librarians and users will access online data bases to quickly look up factual information. Librarians will help those who need assistance and train people to use search services. People already are dealing with home microcomputers. By 1990, one quarter of the homes in the United States will have microcomputers costing approximately \$250 each. Online access through telephones is likely and the user will obtain the information directly.

WHO WILL BE RESPONSIBLE?

Maintenance problems will depend on the data base; some will be local, some regional, some national. Who is responsible depends on the location of the data base. If it is local, then responsibility rests with the local jurisdiction.

The private sector has won and will write their own ticket. Government decisions will be based on what is good for private enterprise. The National Telecommunications Agency and the Federal Communications Commission are in the Department of Commerce, not the Department of Education. The federal govern-

ment will not be responsible for data bases. People will pay modest fees. Libraries will be in a client relationship. The National Library of Medicine's Medline is the first example of a reliable data base service.

WHAT WILL THE DATA BASES CONTAIN?

Data bases will contain everything eventually. They will start with bibliographic data in libraries. Data bases will contain all kinds of local system information, and some high interest indexes such as Readers' Guide and Magazine Index, for example.

It would be desirable for Magazine Index to provide unlimited access for a subscription fee, such as \$2,000, rather than on a transaction fee basis. Bibliographic information is in data bases now and directory information will be eventually. Patron access is limited by the cost structure. If the service were a monthly or annual subscription fee rather than a transaction charge this would be more workable for libraries since they are budgeting for subscriptions to periodicals and reference services now on an annual basis.

Data bases should contain everything one can get into them. There should be search programs to help the user identify and obtain materials at the user's reading and interest level and within the current time period. As the cost of computer storage capacity decreases, libraries will be able to include more information in the entries for their holdings.

HOW WILL LIBRARY USERS FIND OUT WHAT'S IN THE DATA BASES?

Some data bases will be interrogated directly by the patron without staff assistance. Some data bases will be searched by patrons along with staff, and

some will require the joint efforts of staff helping the patron to search for the information. Some will be searched solely by library staff.

The user will search the data base instead of a card catalog or printed index. There will be direct user access different from DIALOG and BRS where librarians search the file. People will search data bases from their home terminal rather than come to the library.

HOW WILL LIBRARY USERS FIND OUT WHAT'S IN THE DATA BASES?

The users will find out what's in the data bases by turning on their home television sets, by using the telephone, or by visiting the library.

They will find out about data bases through publicity and through manuals. Terminals will guide users in how to use data bases. We need smart terminals and smart machines. The data base should include instructions telling the user how to conduct a search.

The users will find out what's in the data bases through cable television access. There will be a need to have library staff available to assist the user in finding and understanding how materials are physically oriented in the library.

HOW WILL LIBRARIANS FIND OUT WHAT'S IN DATA BASES?

Librarians will use CRTs (Cathode Ray Tubes), microform copies, etc. Librarians will use manuals. The barriers for librarians are the price structure for use of data bases. Technology is not the problem.

Librarians will use data bases themselves to find out what's in them. Librarians will read journals to learn about data bases, and attend workshops to learn how to use data bases more effectively.

WHAT WILL BE THE MIX OF WAYS TO ACCESS THE INFORMATION IN THE DATA BASES?

The real question is not the mix of ways to access data bases as all will be online. There will be some kind of data base terminal even in small libraries. There may no longer be a shelf of books in a rural store or post office, but rather a terminal. A patron will search for what he wants and forward a request to the central library. The library will mail the item to the patron. Access may be through dial up or other means. It is an implementation question. Librarians should not accept anything less than online access. This may not be immediate; it may not occur by 1986. Small libraries may use electronic mail to access larger centers. A small library would have local bibliographic data in a data base.

There will be online access, but it will be too expensive for smaller libraries. COM or printout of data base information will be the smaller libraries' mode of access, most likely COM, due to costs. It depends on where the file is located. There will be a mix of ways to access data bases because many will not be able to afford online access.

California State University, Chico, access should be through one mode. There is no reason why everything should not be online. The more different types of access, the greater the cost for maintaining the data base, and this will cut down user access. Microforms will be used where communication costs are out of hand.

The ultimate objective may be a paperless society. Environmentally and economically this may be a sound idea. There will be microforms in branch libraries. Microforms are an intermediate data base format. The pocket calculator is an example of public acceptance of paperless microcomputer units.

HOW--AND BY WHOM--WILL INTERLIBRARY LOAN AND REFERENCE REQUESTS BE HANDLED?

The idea of the patron doing interlibrary loan him/herself is appealing and librarians should move more in that direction. There is a question as to whether the user has the authority to request items on interlibrary loan since the user would take over the screening process for requests. There is the problem of the non-resident or non-registered user. If library service is based more on a data base terminal, then librarians may need to perform more lower level tasks. It may be faster for librarians to search the terminals than to ask a clerical employee to do the search.

Requests will be processed by whoever will handle them. In France, the national postal, telephone, and telegraph service is offering five minutes for 15 cents for users to send electronic mail. The terminal will replace the phone directory. Interlibrary loan will be online by 1986. The question is whether the patron will send the interlibrary loan request. There will still be the problem of delivering the material to the patron.

Patrons will handle much interlibrary loan and interlibrary reference themselves. Users will have an identifying code much like the code that is used to access automated teller units at banks. We should strive to make searches as free as possible. People may still come to the public library. We don't require people to come to the library now to place requests, and telephone reference is an example of this.

WHAT STRUCTURES AND PROTOCOLS WILL BE NEEDED TO REGULATE AND COORDINATE RESOURCE SHARING?

The structure should be as simple as possible, and there should be as few protocols as possible. There should be a free flow of information and materials. At the same time individual and agency privacy should be protected.

Structures and protocols will be necessary to tie systems together. It is too broad an issue. It depends on who has the data base and where the data base is located. There is a need for structures to coordinate data base access and a definition of who can borrow from whom and what. OCLC displays information by network and by state, for example.

We will continue to have state laws on the returning of library materials and California Library Services Board regulations concerning sharing of resources. We need to facilitate rather than question the user's need to know and access information. At the same time librarians must protect the privacy of the user.

WILL ACCESS TO DATA BASES HAVE ANY SIGNIFICANT IMPACT ON COOPERATIVE COLLECTION DEVELOPMENT?

Access will have a significant impact on cooperative collection development. For example, libraries may end up with data bases rather than periodicals. Intersegmental marketplace mechanisms will be operative in cooperative development of collections with some planning. Some public libraries will not buy certain titles or services because university libraries have the title or service. Universities may choose not to purchase items because the data base shows that a medical or special library holds the title. Lack of access is

the barrier that produces duplication where it is unnecessary. However, duplication based on user demand for titles is justifiable.

Data bases should have an impact for libraries that are not research oriented in terms of cooperative collection development. Resource sharing is not the most important, as compared with interlibrary loan and circulation. In most libraries, materials are needed now and therefore purchased. However, if Stanford University knows another research library has a title, this may influence Stanford, but it is really an issue of budget and funds available for collection development.

Access to data bases should have an impact on cooperative collection development, but it is doubtful that such access will have an impact since librarians have shown little proclivity to engage in such activities up to now.

Collection development will be more cooperative in public libraries. In the universities, cooperative collection development is a political problem because of the professors.

If the State of California will continue financial support of systems, then data bases may have a significant impact on cooperative collection development. Cooperative collection development in systems is an area not resolved today, but librarians may develop new levels of cooperation. Machines won't do it. Selection is influenced by reviewing media. There may be a display of reviews on terminals. This might lead to conformity rather than diversity in selection of materials for collection development.

WHAT IS YOUR ORGANIZATION DOING TO GET FROM HERE TO 1986?

San Joaquin Valley Information Service is conducting a feasibility study of circulation/interlibrary loan message switching. The system is looking forward to adding this capability and they would like to see it as intersegmental.

California State University, Chico, finds that acquisitions, cataloging and circulation are the core of the operation and are being developed as a core system. We will hook in modules such as a serials system that would interface with the main file and be searched through the same terminal. CLSI touch terminals are important for public access. A keyboard terminal is more sophisticated and offers more search possibilities.

Inland Library System hopes to have all members' retrospective records in machine readable form by June 1983. North State Cooperative Library System is testing OCLC. California State University, Chico, is reaching out to regional centers. What we are doing is planning; there is a good library system structure. We are trying to estimate the cost of getting from here to 1986.

WHAT ELSE NEEDS TO BE DONE, BY WHAT ORGANIZATION(S) IN CALIFORNIA?

Coordination begins to occur with regional library system development of data bases and communication linkages. CLASS should look at interface and interconnection rather than the development of the California Data Base. The state library should be a leader in coordination efforts.

There is a need to determine whether CLASS will be an online regional center or an online switching center. North State Cooperative Library System

probably will build our own regional center. The next development will be to access CATALIST online.

The California Library Association, other professional associations, and the state library need to get their act together. There is a need to look at layers of administration and to work toward simplification. This is taxpayer mandated. The profession is waiting for leadership to rise to the challenges of the future. CLASS is perceived as not providing direction, but caught up in its own research and technology.

The first priority is keeping the store open. Librarians need to be on local data processing advisory committees to help plan with local government for data base development. Each organization needs someone who is visionary.

WHAT--IF ANYTHING--NEEDS TO BE DONE AT A LEVEL ABOVE THE STATE?

We will need a development touch point. Libraries have the most public service units of any governmental agency. Librarians are in a unique position to broker information from a multitude of data bases in all areas.

It is most logical to have these developments at the state level since the state library has paid professional staff to plan for the future of library development. Librarians do not prefer development or control on a higher level as there is a need to protect local autonomy.

CLASS should be comparable to SOLINET and similar regional networks. Networks should be staffed by salaried technical employees. The library associations should act as a buffer between the state library, networks, and local library jurisdictions. CLASS is not a broker for OCLC, and therefore it may not be feasible for CLASS to develop similarly to SOLINET and NELINET.

CONCLUSION

After concluding the interviews and participating in the conference program, a reading of the Techno/Peasant Survival Manual, a Print Project Book, published by Bantam in September 1980, this writer found that the ideas expressed concerning data bases may appear wild to librarians, but may be conservative projections of the future.

Librarians are in danger of remaining techno/peasants, because in the words of the manual, "You are overwhelmed by what's going on in the various new fields of technology, and overwhelmed, you remain ignorant - to uninformed to have any say in your own future. You are, therefore, a peasant. The nature and quality of your life is increasingly determined for you by others - those in the know: the technocrats."

It is hoped that this article can help librarians de-mystify technology and stimulate the dialogue and analysis necessary to survive in a world increasingly dominated by technology.

Local groups of libraries are tending to build local systems and data bases. Organizations such as CLASS at the state or regional level are working toward developing the linkages which will make it possible for the local systems to communication with each other. This conclusion matches the California Data Base Network concept.

A Library Services and Construction Act (LSCA) project has been approved by the California State Librarian, Gary E. Strong, to demonstrate the feasibility of dail-up access to link circulation system data bases. This project includes libraries with automated circulation systems in the North Bay Cooperative Library System based at the Sonoma County Library in Santa Rose.

Possibly linkages of circulation systems have been demonstrated elsewhere, but this type of linkage appears most likely in California.