

## Information Science and the Information-Conscious Society

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"This year's Annual Convention will emphasize the unsatisfied needs for information of various segments of our society." Such was the key sentence of the call for papers issued by our Program Committee in February 1970. Unfortunately, only a few papers seem, in my opinion, to have been clearly focused on the problem we had hoped they would discuss. One that did was Dr. Ralph Lapp's paper on information gaps between the Congress and the military. I had not expected to hear Dr. Lapp talk about the methodologies that we, as specialists, could put at the disposal of the Congress, in bridging the terrifying information gap between two such paramount sectors of our society, but I had hoped that more of us would have suggested how we could apply the expertise we have developed during the last twenty years to perhaps less important, but nonetheless still serious problems now confronting an information-conscious but information-poor society—as you have heard Dr. Shera so eloquently describe it today.

I have searched for reasons why it is difficult for us to do what Dr. Lapp implies needs doing. It seems not to be that we are unable or unwilling to discover and examine everyday information problems of society. Rather, in thinking about means to correct such problems, we too often confuse complexity with erudition. Dr. Lapp has told us how technologists of the military-industrial complex overwhelm our elected representatives with floods of incomprehensibly complex jargon. In times when the cash boxes of grant-funding and contracting agencies were overflowing, it was as easy to accept such facile proposals as to produce them; but now that grants and contracts are no longer simply there for the asking, scientists must do something to which only a few in this audience are probably accustomed. They must *sell* an idea, and to sell one must usually be brief, simple, and to the point. With simplicity, brevity, and relevance I have sold more information services after one half-hour with the right man than ever I could have sold during a week's wide-ranging discussion of the information problem with every member of a university faculty or an industrial research department. But just as we cannot now forego simplicity in the presentation of a proposal, we can no longer afford to overlook it in formulating the substance of what we propose. There are too many problems in this information-poor society that may be susceptible to basically simple solutions. And those problems are too serious to allow us to

play the game summed up in the German maxim, "Warum so einfach, wenn es so schoen kompliziert geht?" Perhaps Martin Bloom may have had this fact in mind when he spoke of the huge gap between the characteristic sophistication of computer systems and the relative simplicity of the needs of users of social-service information centers. In this connection, I am glad to see that George Knight and others have begun to exploit the fundamental simplicity of the idea of Miniprint, which Ralph Shaw, I, and others put forward more than a decade ago. There are other examples of the type that I might cite from our proceedings volume.

I think we are moving into an era in which emphasis will be placed more upon quality and less upon quantity; certainly we hear a great deal about improving the quality of our lives. As information scientists, we must think in terms of the quality and efficiency of information systems available to us. It is quality which is the objective of the old theme of cost-effectiveness in information services. So often discussed by Mortimer Taube and others in the past, it is fortunately the subject now of renewed interest. It is my impression that cost-effectiveness of information systems has been largely ignored in the past. In their design we have been preoccupied and fascinated with sophistication and complexity for their own sake to achieve "perfect" systems, although repeated studies have shown that in working toward perfection, double and triple effort and expense are required as we move in ever smaller degrees toward its ultimately impossible realization. This kind of game has somehow separated us from everyday life—the everyday life in which all of us, though we may not realize it, are as dependent upon the free flow of information as upon the free flow of water and electricity. (By "free," as you will see, I mean "unimpeded.")

Our preoccupation with complex and sophisticated systems has prevented us from thinking about society's everyday information problems. The telephone information problem epitomizes the type of information problem I have in mind. What, for example, have we as information scientists, done to improve telephone books? How many papers have been published in *Journal of the American Society for Information Science* concerning methods of speeding up the use of an alphabetic phone book? Have we professional information scientists, supposedly experts in the art and science of indexing, ever concerned ourselves with the mundane problem of teaching children how to use an index, even that most used of all indexes, the telephone book? Are we really aware that many people are actually afraid to use any type of index, and that their fear cuts them off from one of the most important resources available to them—information. This fear is by no means confined to children. Any librarian should know how frequently even an educated user will leave the catalog and the library completely frustrated, and ashamed to ask for help.

It may be said that we have developed many methods that could be immediately applied to improve telephone books, but the fact is that they have

not been. Is it not perhaps part of our responsibility to make serious attempts to move the inevitable corporate conservatism of AT&T, and other organizations as well, to apply such methods? Natural corporate conservatism in any organization as large as AT&T is only part of the problem. Another part is the expectation that telephone information—and other types of information as well—should be “free.” It is my opinion, in this connection, that no more disastrous choice of name could have been made than that of “Free Public Library” for that institution in this city. Nothing is free, not even, as we have come to learn, the purity of the air we breathe. Its present quality stems in no small measure from the fact that we have so long regarded it as “free,” and the same may be said of so many public libraries and other information systems.

Since the telephone companies provide “free” information service, they tend to underestimate its importance and its value, and so do the vast majority of telephone users, while the latter, in addition, think rarely of any justification to criticize this “free” service. Of course, AT&T wants people to use telephone books because it saves the company money. But what incentive do people have to use them efficiently, or to promote their improvement? Phone books, as we all must know, are always badly out-of-date, and should be issued monthly rather than annually or semi-annually. Have you ever, for example, tried to find an old friend who has moved somewhere in the vicinity of Los Angeles or Philadelphia? Have we perhaps in the audience any aspirant to the as yet unfilled job of a Ralph Nader of telephone information services? Has AT&T, or has ASIS, ever thought of establishing standards that could be applied to measurement of the cost-effectiveness of delivering telephone information?

I submit that our failure to help transfer the undoubted advances we have made in information handling to the solution of some of society’s everyday problems has not a little to do with the general chaos we are witnessing on campus and off. To accept the general misquotation, a little knowledge is indeed, in a sense Pope did not intend, a dangerous thing. The need for knowledge, like passion, grows by what it feeds on, and frustration can lead to violence in the one case as surely as in the other. Hollywood, television, satellite communication have all helped in the creation of our information-conscious society, but done very little to make it less information-poor. It is depressing to remember how very little of their marvelous technology is devoted to delivery of anything but trivial information, if indeed it can be called information at all. Any other-worldly monitor of our communication channels must be sorely perplexed by the apparently vital, even metaphysical importance which the strange human objects of his study seem to place in a necessary variety of cigarettes and soap. Much of the frustration of our students, of our oppressed minorities, of our poor, arises from their knowledge that, though useful information exists, society has done comparatively little to make it generally available, and thus useful to improvement of the quality of their and our lives—whether the problem is as important as legal aid or drug

abuse, or as trivial as just where to buy a tube of toothpaste in this Sheraton Hotel at 11:30 on a Sunday night.

To return to the humble phone book, let me quote from an article<sup>1</sup> which appeared recently in *The Legal Aid Briefcase*, publication of the National Legal Aid and Defender Association:

"My name is Mary Doe, and I am poor. I live in Johnstown, Pennsylvania. Sometimes people ask for the county. That's Cambria. My son is in trouble with the law, and this morning my landlord said he'd evict me, throw me out. I need a lawyer, but, like I told you, I don't have the money and can't afford a lawyer.

I kind of remember somebody saying to me once that if you need a lawyer and can't pay for one, you should go to legal aid or legal services—or maybe it was public defender. So I'm really desperate, see, and I want to try this out, so I go to the phone book, and I look for legal aid, and there's nothing in the yellow pages and it says 'See Attorneys,' and I look there but I can't see legal aid or public defender, and I'm stuck."

Poor Mary Doe! Maybe if she asks enough people somebody will be able to tell her what she's really looking for is the Cambria County Office of Legal Aid, listed under C."

Mary Doe's information need is only one of many kinds that every citizen faces every day. We grapple with the inadequacies of not only the phone book's White Pages, but with the more glaring ones of the Yellow Pages as well. We are beset with information problems whenever we walk into a department store or a supermarket in search of a specific item. We are beset with information problems in any hotel and in any public building, where the usual paucity or inadequacy or illegibility of signs adds to life's frustrations. While our Arrangements Committee has done much to ameliorate the usual situation this week in this hotel, it is exasperating to find it so difficult to locate a public toilet without tracking down a bellhop or some other hopefully knowledgeable individual for hurried consultation. An even more irritating, and potentially catastrophic, example of inadequate information systems is the number and quality of directional signs on public roads— federal and state alike. In traveling from Philadelphia to Long Island, I am every time shocked anew to find how few signs have been set up—and those few colored and placed almost to insure invisibility—even on the approaches to the Verrazano Bridge, much less on the highways one must travel to gain them.

The problem of telephone information is not as trivial as its use in example here may make it appear. Although much attention is being focused these days upon rights of privacy in regard to information systems, it seems to me that too little is being focused upon the vital role of information—even telephone information—in preservation and enhancement of freedom in a free society. Without information, there is freedom for neither scientist nor layman. Visit any East European country, where phone books are reserved for the elite, and you will begin to understand what I mean. Freedom of information, my friends, is a function not only of censorship and of the requirements of privacy where necessary, but also, as must be obvious, of simple availability and accessibility. It is our job, as information scientists, to see that the community knows not only what is available, but also how it can be efficiently delivered.

1. Lauritis E. *The Legal Aid Briefcase* 28(6):205, May 1970.