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## LOOKING AHEAD – AND AROUND

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*Introduction by Richard Palmer*

*Our next speaker, Michael K. Buckland, brings us experience from both England and the United States. He is, as your program shows, dean of the School of Library and Information Studies, University of California at Berkeley. Before that he was assistant director for technical services at Purdue University in Indiana and, while there, was chairman of Purdue's Management Review and Analysis Program. He also helped found the Indiana Cooperative Library Services Authority and also was vice president of this organization before going to California. He received his Ph. D. from Sheffield University and also his professional degree from Sheffield University a few years earlier. In the interim, he served as assistant librarian at the University of Lancaster Library. He had a number of bibliographical duties and was responsible for developing a Library Research Unit. He did studies on book availability, bibliometrics and library management gaming and, for that latter development, the unit was awarded the Robinson Medal by the British Library Association. He has also done work in the Bodleian Library, Oxford University, where he received his undergraduate degree in history. I am very happy to present Michael Buckland.*

It was only late last night at a party that I discovered why I had a special claim to honor and dignity at Albany in the context of library education. My connection with Albany is through Edith Coulter. I have the privilege of being dean of the library school at which the late Edith Coulter taught for many years. Miss Coulter not only went to library school here in Albany, but while doing so went sleighing with Melvil Dewey.

Back to information science in library schools. It is not a new observation that the term has been used carelessly in library schools and it has often saddened me that very often some pioneers, including most likely some people here, suffered from deans and administrators who had the habit of behaving as though information science included every combination of "information," "science," and "engineering." This meant that the pioneers would be liable to teach courses on the bibliography of science, on the use of computers in libraries, the operation of science information centers, and scientific management as applied to libraries. This indiscriminate use of the term information science persists. Even now, an operations research specialist whose interest is in library problems, is likely to be called an information scientist.

The situation has been exacerbated by a very simple human problem: it is not clear what one should call somebody with an expert interest in libraries who is not a librarian. Of course, during the 1950s and the 1960s, back in the days when science was fashionable it seemed only natural to call him or her an information "scientist." This appeared to some as

being more dignified and therefore superior to "librarian." The result of this combination of status-seeking and the "if it's not traditional librarianship it must be information science" has not helped the development of a coherent well-reasoned terminology or image in our field. It was someone who liked to infer definitions from observation rather than first principles who came up with my favorite definition of information science: "Information science comprises those topics taught in library schools that were not in the curriculum of the Graduate Library School in Chicago in 1950." Observation of library schools does permit one to be a little cynical.

I have come to believe that the semantics of our field is a more serious matter than is generally acknowledged. It is all very well for people to say that the theoretical – if not scientific – foundations of librarianship is information science. I am inclined to be tolerant of that statement, though not to the assertion that information science is the research component of librarianship. However, let us reflect a little on what that says to the world. It implies that the theoretical, if not scientific, foundation of librarianship is not librarianship. More seriously, it conveys the message that librarianship does not, could not, have a theoretical basis – and suggests that it does not have a part in anything that is conceptually innovative or technologically progressive. Meanwhile, we have *not* been very successful in replacing that loss of image by a coherent, recognized concept of information science in the public eye. I do wonder how much damage has been

done to the image and recognition of our field by such semantics.

I draw attention to all this because it is part of the inheritance that we as administrators and faculty must cope with in our strategies for change.

So far as more reasonable interpretations of information science are concerned, I will distinguish three.

■ There is the "all-embracing information science" in those heady, early days of Claude Shannon, Norbert Wiener, Vannevar Bush, and others. There was (I have it on hearsay only) a real excitement that just as the concept of "energy" provides a unifying factor in the physical sciences, and "life" in biological sciences so might "information" provide a unifying concept for the serious study of mind-like behavior, pulling together artificial intelligence, cognition, cybernetics, neurophysiology, and the emerging digital technology as a new field that could be called "information science." The problem is that information viewed this broadly is just too pervasive to be tractable. To the subjects already mentioned must be added many more. We must include decision-making and therefore all of management studies – also psychology, logic, statistics, linguistics, much of computer science, etc. Three decades after the "early days" it is perfectly possible to take a whole series of scholars and have them expatiate on "information science as I see it," and have hardly any overlap between the territories they choose to survey. This, all-embracing" interpretation of information science is probably the best one, even if unmanageable. It remains awe-inspiring, but it needn't detain us at this conference because library schools have contributed quite little at this amorphous level, and it is rather unlikely that they are going to contribute much to it in the foreseeable future.

■ A second definition concerns computers. There persists a widespread assumption that "data processing applied to libraries" and "information science" are largely synonymous. Now, to be sure, there are a few aspects, such as the application of the logic of inference to operational indexing systems by means of computers (and I would cite the sort of work that Gerard Salton does outside of a library school) but library automation, even at the OCLC level, is primarily a management problem in using well-established data-processing equipment. The field is important, it deserves respect, but it is not information science. Similarly with systems analysis. I had thought that the phlogiston theory of converting base metals into gold was a fantasy until it occurred to me that systems analysis when applied in other contexts is business administration, but systems analysis applied to libraries mysteriously becomes information science. This reminds me of Aesop's fable about the wolf in sheep's clothing. If you read it, you find that this ingenious, self-interested ploy turns out to be a big mistake. (I hope I don't cause offense to anybody, but if we are to move resolutely and conscientiously forward, we must be prepared not only to storm the bastions of traditional librarianship, but also to overrun the entrenchments of the information science establishment!)

■ There is a third area that can be called information science in that it involves the scholarly study of information; it is a relevant and distinctive aspect of library school activity, and yet it is not impossibly broad in scope. This concerns access to recorded information – the transmission of knowledge through records. I include in this the whole area of indexing and all that has been hypothesized about processes of information storage and retrieval, the meaning of indexing, and the interfaces between users and indexes and records. Being where I am, I cannot do better than to quote a former Albany instructor, Robert Fairthorne, and use his delightful phrases of "marking and parking and "documentary discourse."

We must include the explication of human behavior associated with all these activities. The field is clearly as much

a part of the social sciences as anything else. However, it is a reasonably coherent subfield and one in which research and even progress is being reported from at least some schools of "library and information studies," which is now the fashionable name.

I find it convenient to refer to this field as "library-and-information-science" (all one word). The advantage of the phrase "library-and-information-science" is that it helps us get away from the stultifying polarization of librarianship versus information science. I must say that even talk at this conference of interfaces and bridges worries me, because the very terminology and phrasing imply an acceptance of a separation that I reject as misleading. From my definition of "library-and-information-science" it is only to be expected that librarians have made contributions to the theoretical area that others would label information science. Is Brian Vickery an information scientist or a librarian? Which is Jesse Shera? Which was Ranganathan? Does it matter? My hero, the late great Dr. Bradford, described himself as a documentalist, and at Berkeley, just to be different, the term "bibliography" is used quite seriously in a very broad sense to cover most of this area. What is most important is that we do *not* maintain that librarianship and information science are separate, let alone mutually exclusive. Such counterproductive thinking can and should be abandoned.

Now if we adopt the "library-and-information-science" definition of our subset of "all-embracing" information science, and if we regard the information science component as primarily theoretical activity, then more needs to be said. A continuing problem in library school administration is achieving the proper interaction of theory and practice. Please note I didn't say theory *versus* practice. Theory of any kind is necessarily a sterile activity unless at some point it is related to and tested against reality. In other words, theory must be related to something. Economic theory must be related sooner or later to an economic system and to economic data. Even logic is theory about theory. It follows from this that information science must do more than be a theoretical activity. It must relate in some way to *activity* involving access to information. Library provision is an almost ideal area of activity for such study, but not the only one. What also follows from this is that any attempt to have a separate information science can be expected to turn into sterility or meaninglessness unless steps are taken to ensure the testing of theory against practice. Information scientists who are isolated within a library school or information scientists who are in a separate department run a serious risk of jeopardizing their own long-term progress as well as reducing the chances of contributing to the progress of others. In the same way, if we define information science as primarily a theoretical activity, we should expect negligible prospects for information scientists. Apart from generating faculty for other library schools, there appears to be little opportunity for society to absorb (theoretical) information scientists. If the graduates of information science departments get jobs, it is likely to be because they are *not* information scientists but practitioners of some information technology infused with some concepts of "library-and-information-science," e.g., librarians, data processing specialists, archivists, community information specialists, or whatever.

You may be thinking that I am wandering from my charge, which was to be concerned with administration. Where, you might ask, are the administrative details? There are some. There are administrative problems in incorporating information science into a library school – there are communication problems whenever a member of a previously homogeneous group comes from or moves into a different field with a different jargon; there are likely to be problems of identity and perceived legitimacy when someone comes into a professional school who is not identified as a member of that profession. I assume that this is the origin of the snide

definition of information science as librarianship taught by amateurs. There is always confusion over the proper role and the proper area of business of a school when one or more members have interests that extend to areas that are outside the sphere of interest of the rest of the group. It is difficult to evaluate such individuals for merit raises, promotion, tenure, and so on. It costs more money to introduce computer-based activities into the curriculum. One of the problems I have right now is that most of our students, in addition to their bibliography and reference courses, take a separate course in computer-based reference, using Lockheed and SDC — a full quarter course for three or four units — and we reckon to give them each about four hours of on-line, hands-on time. We list this course as "Special Topics in Reference and Bibliography." It costs money. It's not the sort of thing one inherits in the school budget as passed on from previous years.

All of these problems that I have just mentioned are general problems associated with change in academic departments. They are not unique to library schools nor found only in relation to information science. Why, then, have I devoted so much attention to semantics and human foibles? It is precisely because administration is a creative activity of trying to get things done — and in an academic department much depends on perceptions and attitudes. Berkeley may be an extreme case, but I don't think it is unique: the dean has responsibility, but very little authority; the faculty has authority and very little responsibility. It follows, therefore, that goodwill, understanding, and lucidity become very important. Sloppy thinking, arrogance, and polarization are *precisely* those things that impede strategies for change from the administrative viewpoint. What we need are vigor and honesty and humility (which ought to be characteristic of all faculty) and, most of all, an integrating drive to redress the damage done by the tendency to separate information science from librarianship.

#### DISCUSSION PERIOD

Palmer: Are there any questions?

Q. Allen Kent, in answer to a prior question, used team teaching as an illustrative example of how to achieve interface. Could you please provide at least one illustration of how you would achieve integration?

Buckland: I reject the notion that information science, as I define it, should be regarded as separate from librarianship. Therefore, the question of integration, as you phrase it, does not arise. It seems to me that this is very much at the root of our problem. Operations research as applied to libraries, surely that's needed. It's important. It should be. However, there is no point in trying to decide whether it is information science or librarianship. Many of our students take a course in policy analysis, the art of how to make undecidable decisions in the context of libraries and information services. It is pointless to try and distinguish whether that is librarianship or information science. What we need to do is what Allen has suggested, though I would phrase it differently. We should look at the problem of documentary discourse in the transmission of knowledge from person to person, and the inherent limitations of public knowledge. My predecessor, Patrick Wilson, has a book coming out with the title, *Public Knowledge, Private Ignorance*,<sup>1</sup> which is a rigorous philosophical analysis of the concept of public knowledge and the role that the reference librarian and others can have in relation to it. It is pointless to decide whether that volume represents librarianship or information science. Wilson himself regards himself as a bibliographer. In other words, I feel that the rhetoric of separation, of integration, of interface and bridging is in itself a part of the problem. It seems to me that

<sup>1</sup>The book has since been published by Greenwood Press, Westport, Conn., 1977. (ISBN 0-8371-9485-7)

if we can pull the strands together as a complex whole, including the logic of inference, the insights of policy analysis, the techniques of operations research, the problems that people have in getting access to the information that they need—and address these problems without worrying about the labels we assign to people, we would be a lot further ahead.

Kent: A two part question: What is the name of your school?

Buckland: Aha! I was wondering when I would be asked that question. When I inherited the deanship of the Berkeley library school that, like Albany, has just celebrated its 50th anniversary, the faculty had been bickering for some time about the name of the school. They put in effect an administrative strategy. They placed the question of the name of the school on the agenda of the third faculty meeting after the arrival of the new dean. The name of the school is, of course, a symbol. And because it is a symbol, we are dealing with a political process. The name had been the School of Librarianship. And so, the problem was that, although it was a symbol, it was causing terrible polarization. People felt that they weren't appreciated; people were arguing in terms of all kinds of straw figures of traditional librarianship versus information science. All this was almost totally unproductive. It was causing bad feelings, was cramping people's style, and so on. This was at the time when the Berkeley library school probably had more people regarded as information scientists per square foot than any other school. We have eleven fulltime faculty (including William Cooper, Michael Cooper, Charles Bourne, and Bill Maron) who have been teaching courses on automatic question-answering systems, the logic of indexing, data processing, and systems analysis for years. But there was always the big hand-up about the name of the school which was making people unhappy and less productive. In terms of administrative strategies for change, I will tell you what happened. We said, O.K. At this faculty meeting, we will talk about it. Everyone stand up and say what they want. Everybody did. There was a certain amount of circumspect fishing as to what the new dean thought. At the next meeting, we said we will decide—and not talk. At the next faculty meeting, we got a blackboard, went around the room and asked: If the president of the university were to go berserk and mandate that the name of the school be changed, what would you change it to? All the names went up. My favorite was the School of Bibliography and Printing History (laughter) but did not find much support. There were about eight names. The School of Information Science, School of Information Studies, School of Library and Information Services...you can imagine all the permutations. And then we took votes. All those in favor of a particular name, raise your hand. There were only three that had any significant support. We erased the others. Then we changed the rules. We said, O.K.! Of these three, you have one vote to cast, which would you prefer? We put the votes up and erased the one that got the least and were down to two. Now we vote again. And then there was one left. Then we asked: Do you prefer the name on the board or the new one we now have. We took a vote and changed the name of the school to the School of Library and Information Studies. The regents, of course, had to approve the change. Since that time, I'm not aware of anybody having spent five minutes being distracted or worried by the name of the school. The faculty can concentrate on the business at hand for which they are employed and dedicated to carry out, namely, teaching, research, and service. Even those who liked information science rather than information studies have rather mellowed their views. Some now think that perhaps "information *studies* is a little better than "information *science*" and you might be interested in some of the reasoning behind that preference.

Among reasons for changing to the name of library and information studies, I would suggest the following. Firstly, it was clear that in the more traditional areas, we were

teaching things that were not librarianship, but could be called information studies, e. g., the history of printing, the history of publishing, the history of bookselling. We have had quite a number of doctoral dissertations in those areas and advanced seminars according to faculty inclination. We have been talking about archives although we haven't done too much about it. At the other end of the spectrum, those in the ASIS\* mold, even they conceded that information science is a rather dubious term because it isn't that scientific. They also felt that a compromise was in order, otherwise it was going to stay the School of Librarianship. That is the reasoning, exactly as I see it, why our school is now the School of Library and Information Studies. I think that it was mainly a symbolic and political activity and I don't see that it has changed either the curriculum or the attitudes one little bit.

Although I talk about a drive for integration being needed inside the school, that doesn't imply that in our focus and vision, looking out of the school, we should be focusing on traditional libraries. Far be it from that. I think we should be focusing on librarian-like activities in various places. I think that is a lot harder to do than to say.

Q. With the exception of a few details, you have almost told the story of what went on at our school two years ago — within the school. When we made our decision as to what we would like to change the name to, The School of Library and Information Sciences, that is just about where it stopped. As soon as the request was forwarded to the president's office, it was bounced back with the comment that there were too many other schools and departments within the campus that might feel that they had a possible claim to the word information. The administration did not want to raise a hornet's nest. Do you have any comments on that?

Buckland: We got away with it, I think, because we called it information *studies*. We were also able to cite doctoral dissertations that clearly weren't librarianship. The only static we got was from a professor in the electrical engineering and computer science department who sent a rather grumbly memo about title inflation (laughter).

Saracevic: I have two questions. I really mean them as questions and do not really want to get at you. You advocate abolishing "information science" in the process of integration. Why not abolish "librarianship"?

Buckland: Yeah — why not?

Saracevic: What is the justification for doing one rather than the other?

Buckland: I said I'd like to. I didn't say it was feasible. Abolishing the term librarianship is even less feasible. What I'm trying to get at is that I feel we have served ourselves badly through our use of the slogan "information science." We need to get away from it. I think that it is proper to label an area library-and-information-science which is broader than even a broad definition of librarianship — but it is pretty much overlapping....

Saracevic: That leads to my second question. Isn't all this just playing semantic games, as important as these games are, without addressing ourselves to the substance of the knowledge that is being accumulated either in librarianship or information science?

Buckland: In large measure, it is semantics. But, the topic of this conference is strategies for change — change in academic institutions where semantics, attitudes and views are very influential. And I think that we would be better off if we could undo some of the damage done by semantic problems of the past. That's what I'm saying.

Bose: I think that I can see now that it is not a question of integration, but a question of not-so-peaceful coexistence

(laughter). I come from New York City. In New York City they found a very interesting method. They kill one another. In library schools, I think, we do not like dead bodies. So it is a question of not-so-peaceful coexistence for a while.

Buckland: I don't think it's a question of not-so-peaceful coexistence. I think that the real problem — the root of it — is that there is a great and substantial *identity* between the two areas to which our rhetoric has blinded us.

Q. It seems to me important that, as we try to resolve this problem in the areas with which we are familiar, the rest of the world is discovering information.

Buckland: You bet!

Q. But they are not discovering it necessarily in a library context. So it seems to me that we ought to stay open-ended to whatever the rest of the world is doing.

Buckland: Yes, you have to be very careful whenever you're defining things. People like to define things because they don't like to be in an unstructured situation — in which, of course, we are. Also, every time we define things, we are liable to be defining things by delimiting them in an exclusive way, i.e., implying that things are more different or separate than they really are.

Price: I have been pondering this for a couple of years but I have not come up with an answer. What we need for our community is to find a simple term which says "library-and-information science" that is acceptable to the two semantic communities. We have to remember that wars have been fought and millions of people killed to settle semantic problems. They are real problems because people think in terms of symbols and the identity question which you raised. There is a need for structure. There is an old Chinese cure: "May you live in interesting times." With respect to our field, we are living in very interesting times.

Davis: I found that when I started writing my paper that there was a motif, if not a theme, that ran throughout it. And that motif is stereotyping, which, I submit, is quite different from classifying. I think what you are saying is that we have two groups which, in a sense, are not mutually exclusive, as this conference clearly shows, and there is a big difference between classifying and stereotyping them. I think this is what I heard this evening, and I am eager to present my paper tomorrow morning.

\* American Society for Information Science