DOCUMENT RESUME

ED 075 051 LI 004 287

AUTHOR	Belzer, Jack, Comp.
TITLE	Bibliography of Basic Textbooks on Information Science.
INSTITUTION	ERIC Clearinghouse on Library and Information Sciences, Washington, D.C.
SPONS AGENCY	National Inst. of Education (DHEW), Washington, D.C.
PUB DATE	Dec 72
NOTE	12p.; (121 References)
AVAILABLE FROM	Science Associates/International, Inc., 23 East 26th Street, New York, N. Y. ($7.50)
JOURNAL CIT	Information Part 2; v1 n6 Nov-Dec 1972
EDRS PRICE	MF-$0.65 HC Not Available from EDRS.
DESCRIPTORS	Behavioral Sciences; Bibliographies; Information Retrieval; *Information Science; Information Storage; Information Systems; Information Theory; *Textbooks
IDENTIFIERS	*Information Science Education

ABSTRACT

Textbooks currently in use in courses on information science are listed in this bibliography under the following headings: Information storage and retrieval, Information Systems, Information theory, Behavioral sciences, and Basic books. Some of the entries in each category contain evaluative annotations by the author, while others have only the full bibliographic citation. (SJ)

BIBLIOGRAPHY OF BASIC TEXTBOOKS ON INFORMATION SCIENCE

by

Jack Belzer

Knowledge Availability Systems Center
University of Pittsburgh

Published in cooperation with the

ERIC Clearinghouse on Library and Information Sciences
1140 Connecticut Avenue, N.W., Suite 804
Washington, D. C. 20036

This publication was prepared pursuant to a contract with the National Institute of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under government sponsorship are encouraged to express freely their judgment in professional and technical matters. Points of view or opinions do not, therefore, necessarily represent official National Institute of Education position or polic

FOREWORD TO THE LIST OF TEXTBOOKS ON/OR RELATED TO INFORMATION SCIENCE

Having been involved during the last several years in curriculum studies in information science,[1,2,3,4] (references are listed at the end of the Foreword) a new intuitive feeling had been acquired by me about the kinds of tools which could best serve the educational process in the field. It must be made clear that these studies were concerned, in the main, with what was being taught in the schools where information science programs existed, rather than developing curricula in the abstract to dictate what should be taught. Although this in itself is a noble cause and can be very useful to those who wish to improve or modify their programs better to meet what they might consider to be societal needs, it is not enough. It is too easy to become enamored with one's self and to acquire self-esteem about one's programs courses, offerings, teaching methodologies, or what have you, and become blinded to the needs of our society. For this reason, we also have conducted a Delphi Study which provided us with new and most interesting insight into the direction in which education in information science must go.

The one thing that these studies provided for us, which we considered important in the production of the bibliography relating to information science, was the topic areas or disciplines to be included under the umbrella of information science. However, classical books in other disciplines belong in other disciplines and to include them in this report would be redundant. For example, a book on statistics or one on algebra is still a book on statistics or a book on algebra. We have therefore gone somewhat the other way, i.e., we have tried to look at books and decide what general areas must be created for optimum inclusion.

It is impossible to include every book published which rightfully belongs in this bibliography. For this reason the author would like to apologize for omissions, under each category, of many good books. The process for selection of the books, which were included in the bibliography, was a difficult one. At first, efforts were made to include those books which are currently used as textbooks in information science. As time went on our efforts shifted towards providing more heterogeneity and greater variety of points of view. An effort also was made to include books with various levels of difficulty. Much of the bias introduced was due mainly to the author's familiarity or unfamiliarity with books. Any omission of books rightfully belonging here and the annotations produced for the others, to which people may object, similarly are due to the shortcomings of the author. However, this textbook bibliography is being created as an initial effort at the request of ERIC Clearinghouse on Library and Information Sciences of the American Society for Information Science (ERIC/CLIC/ASIS), and they will publish updated versions as the needs arise. On this basis, the author will be happy to make amends as quickly as his attention is called either to an omission or to a desired revision on an annotation

The totality of the publications which, in our estimate, belong to information science lend themselves best to the following categories.

1. Information Storage & Retrieval
2. Information Systems
3. Information Theory
4. Behavioral Sciences

Other books which belong in the information science field, but are either of such an interdisciplinary nature that they could not be included in any of the above categories, or belong here but not in the topics enumerated above, are submitted under a separate category, namely

5. Basic Books

Two lists of books under each category are being provided here; one containing annotations, and another for which annotations do not exist at this time but would be provided at some later date.

References

[1]Belzer, Jack, ed. "Information Science Education: Curriculum Development and Evaluation." AMERICAN DOCUMENTATION, XX, (October, 1969), 325-376.

[2]Rush, James E., ed. "Education and Information Science--A Symposium." JOURNAL OF THE AMERICAN SOCIETY FOR INFORMATION SCIENCE, XXI (July-August, 1970), 265-362.

[3]Belzer, Jack; et al. "Curricula in Information Science: Analysis and Development." JOURNAL OF THE AMERICAN SOCIETY FOR INFORMATION SCIENCE, XXII (May-June, 1971), 193-222.

[4]Belzer, Jack. "Study and Workshop on Curriculum Development in Information Science." National Science Foundation Grant #GZ-2525, Jan. 1, 1972--Feb. 28, 1974.

ACKNOWLEDGMENTS

I wish to express my thanks to Mary Chalmers for her initial efforts in developing the bibliography for textbooks in information science; to Dr. Anthony Debons for providing several of the annotations, especially those for the books relating to behavioral science, an area in which he is much more knowledgeable than I am. I wish to express my gratitude and special thanks to Delores Jean Kindlin, head librarian; M. Fasihudin, librarian; and the staff of the Graduate School of Library and Information Science Library for providing me with their expertise for the accuracy and consistency of the bibliographic citations of the report. The Turabean style used here for the presentation of the bibliographic citations, wherever possible, was prepared under their supervision.

J.B.

March 1973

INFORMATION STORAGE AND RETRIEVAL

Artandi, Susan. An Introduction to the Computer in Information Science, 2nd Edition. Metuchen, NJ: The Scarecrow Press, Inc., 1972.

The second edition is a substantial improvement over the first. Perhaps the title of the book is a misnomer. The book is more an introduction to information science where the logic and structure of computers are introduced. The book could be classified as a librarian's point of view of information science and its utilization of computers.

Becker, Joseph, and Hayes, Robert M. Information Storage and Retrieval: Tools, Elements, Theories. New York: Wiley, 1963.

One of the best written books on the subject of information retrieval. A little out of date but still recommended as a textbook. It is well suited especially for library schools.

Bourne, Charles P. Methods of Information Handling. New York: Wiley, 1963.

A reasonably good book on "how to do." Outdated (some of the previously tried techniques are being discarded and new ones, not included, are being adopted); and too many manual systems (edge-notched cards, etc.). It badly needs revision.

Fairthorne, Robert Arthur. Towards Information Retrieval. Hamden, CN: Archon Books, 1968.

This is a collection of papers by the author. Because he made important contributions to the field, reading these papers is important. He provides insight into information science problems which is different from the standard or classical approaches taken. Not a textbook but worth reading.

Kochen, Manfred. Some Problems in Information Science. New York: Scarecrow Press, 1965.

One of the fine reference books on the general subject of information retrieval. This book was not written as a textbook nor intended to be one. The print is rather difficult to read. It appears to be a photo-offset of a typed manuscript.

Lancaster, Frederick Wilfrid. Information Retrieval Systems; Characteristics, Testing, and Evaluation. New York: Wiley, 1968.

This is a book about information retrieval. Every author of a book injects of himself into his book--his background of evaluating a large information retrieval system shows up well. The major concern and/or emphasis is on retrieval languages and their influence on systems performance. It is indeed another point of view.

Meetham, Roger. Information Retrieval; The Essential Technology. Garden City, NY: Doubleday, 1970

A beautifully detailed book on information retrieval, well suited as a first exposure to the subject. The clarity of the language used to express the technology is commendable. Further, the way the material is presented provokes thought and discussion. A highly recommended book.

Salton, Gerard. Automatic Information Organization and Retrieval. New York: McGraw-Hill, 1968.

The book deals with the standard problems of automatic information storage and retrieval. In addition, it contains the description of SMART in greater depth than any other book. A better-than-average description of dictionaries and thesauri for information retrieval is given.

Schultz, Louise, ed. The Information Bazaar. Philadelphia: Medical Documentation Service, The College of Physicians, 1969.

This is proceedings of the 6th annual national colloquium on information retrieval. It contains some interesting papers and some that are rather dull, just like any other proceedings. A good reference book or outside reading.

Vickery, Brian Campbell. On Retrieval System Theory. London: Butterworth, 1961.

Here we have a step-by-step description of information storage and retrieval systems and their usage. The book is geared to librarianship. The word "On" in the title is intended to indicate its incompleteness. In this respect it is correct, possibly because the date of publication is 1961.

Vickery, Brian Campbell. Techniques of Information Retrieval. Hamden, CT: Archon Books, 1970.

Another book on "how to do;" the library problem in an automated environment, or dealing with ephemeral materials.

Williams, William F. Principles of Automated Information Retrieval. Elmhurst, IL: The Business Press, 1965.

This represents a collection of much of the work that has been done in the field of information storage and retrieval. It includes all the trivia that went with it. Rather than providing basic principles or theory it gives step by step procedures of

how things are done. Nonetheless, librarians can learn a great deal about information storage and retrieval through this book.

Wilson, Thomas D., and Stephenson, James. Dissemination of Information. New York: Philosophical Library, 1966.

A very elementary introduction to the subject serving as a precursory introduction to dissemination. The entire field is covered in less than 80 pages.

Rees, Alan, and Saracevic, Tefko. Librarianship, Information Retrieval and Information Science. New York: Bowker, 1970.

INFORMATION SYSTEMS

Bennett, Edward M., ed. Military Information Systems; The Design of Computer Aided Systems for Command. New York: Praeger, 1964.

Although the treatment of the subject is directed towards the faculty, the book should have a more pervasive function, and does. Several papers, from leading individuals in the field of information, are presented which deal with the critical dimension of information both as a human experience and as part of environments.

Blumenthal, Sherman C. Management Information Systems; A Framework for Planning and Development. Englewood Cliffs, NJ: Prentice-Hall, 1969.

The text, which provides a straightforward approach towards the design, implementation, and utilization of the treatment, is clearly presented and presents a "PERT" orientation to the design of such systems.

Churchman, Charles West. The Systems Approach. New York: Dell Publishing Co., 1969.

This book reads like a novel--OK for reference or background reading--not a textbook.

Dearden, John, and McFarlan, F. Warren. Management Information Systems; Text and Cases. Homewood, IL: R.D. Irwin, 1966.

A book tailored for the manager or executive to show him how computers can be used to manage the organization. The text cites particular problems in data management within specific, realistic day-to-day situations.

Heany, Donald F. Development of Information Systems; What Management Needs to Know. New York: Ronald Press Co., 1968.

Design and implementation of computer-operated management information systems is the book's purpose. It discusses how to proceed in developing the information necessary for management information systems design.

Kent, Allen, et al, eds. Electronic Handling of Information; Testing and Evaluation. Washington, DC: Thompson Book Co., 1967.

This is the proceedings of a conference relating to evaluation of information handling systems. It is a collection of invited papers, each selected because of the individual, special, recent contributions (at that time) to the field of evaluation. The attempt was to bring together the state-of-the-art in the development of criteria and measures for evaluation, as well as the methodology for gathering data and evaluating performance of information systems.

Meadow, Charles T. The Analysis of Information Systems; A Programmer's Introduction to Information Retrieval. New York: Wiley, 1967.

The text complements the book by Rosove (see below) in outlining the character of information systems and the problems likely to be encountered in their design and operation. The book stresses the organization of records and files, and the economics of information systems.

Prince, Thomas R. Information Systems for Management Planning and Control. Rev. ed. Homewood, IL: R.D. Irwin, 1970.

Specific management information subsystems on such as inventory control and marketing management are dealt with in this book. It is a good second book for management information systems (MIS).

Rosove, Perry E. Developing Computer-Based Information Systems. New York: Wiley, 1967.

An excellent text to show how information systems are conceptualized, aligned, and implemented. Problems that are to be faced in the design of such systems are discussed in easily understood language.

Tou, J.T., ed. Advances in Information Systems Science. Vols. 1-2. New York: Plenum Press, 1969-70.

The aim of these two volumes is to describe the state of knowledge of information systems--the related theory and technology. The subjects range from artificial intelligence to biological information processing. Treatment is suited to advanced graduate students in either computer or

information science, with a somewhat stronger affinity to computer scientists.

Walker, Donald E., ed. Information System Science and Technology; Papers Prepared for the Third Congress on Information System Science and Technology. Washington, DC: Thompson Book Co., 1967.

These proceedings of a conference, sponsored by MITRE Corporation in 1966, which never took place, leave something to be desired. Although the report is somehow devoid of the spirit, it does, however, contain some good papers which can be used as reference materials.

Weisman, Herman M. Information Systems, Services, and Centers. New York: a Wiley, Becker & Hayes Publication, John Wiley & Sons, Inc., 1972.

This is a good introductory textbook on information storage and retrieval systems, especially for people from other fields. It establishes a firm base for information systems; treats the identification of information reasonably well; and examines critically information centers. The appendix provides examples for the material in the rest of the book. It quotes a little too much what others think.

Williams, Thomas H., comp. Management Information; A Quantitative Accent. Homewood, IL: R.D. Irwin, 1967.

With only peripheral relation to information, this book is concerned mainly with data. Its importance to the information scientist is that it makes clear the distinction between the problems of data and information management. It is particularly suited to accounting interests.

Wilson, Ira Gaulbert, and Wilson, Marthann E. Information, Computers, and System Design. New York: Wiley, 1965.

Information theory and systems theory are brought together in this book in a way as to make both more useful. Although the authors are rigorous in their approach, there is room for applying one's own thinking in the environment they provide. The book discusses man-machine trade-off. It provides enough mathematics to provide rigor and yet little mathematics is required to use the book. The lack of problems inhibits its use as a textbook.

Altman, J.W., ed. Handbook of Methods for Information Systems Analyst and Designers. New York: Rome Air Development Center, Air Force Systems Command, Griffiss Air Force Base, 1971.

Bertalanffy, Ludwig von. General System Theory: Foundations, Development, Applications. New York: G. Braziller, 1969.

Elliott, Clarence Orville, and Wasley, Robert S. Business Information Processing Systems. Rev. ed. Homewood, IL: R.D. Irwin, 1968.

Hare, Van Court, Jr. Systems Analysis; a Diagnostic Approach. New York: Harcourt, Brace and World, 1967.

Johnson, Richard Arvid, Kast, Fremont E., and Rosenzweig, James E. The Theory and Management of Systems. 2nd ed. New York: McGraw-Hill, 1967.

Kochen, Manfred. Information Retrieval Systems Theory. New York: Wiley, 1970.

McDonough, Adrian M. Information Economics and Management Systems. New York: McGraw-Hill, 1963.

Sackman, Harold. Mass Information, Utilities and Social Excellence. Princeton, NJ: Auerbach, 1971.

Toan, Arthur B. Using Information to Manage. New York: Ronald Press, 1968.

Tou, J.T., ed. Advances in Information Systems Science. New York: Plenum Press, 1969.

INFORMATION THEORY

Abramson, Norman. Information Theory and Coding. New York: McGraw-Hill, 1963.

An excellent first textbook on information theory sufficiently complete--can be understood with very little mathematics background.

Ash, Robert B. Information Theory. New York: Interscience, 1965.

This book is intended for graduate students in mathematics--an excellent textbook.

Bell, David Author. Information Theory and Its Engineering Applications. 4th ed. London: Pitman, 1968.

A very good treatise of information theory for engineers. It explains the processes of transmission including bandwidth implications and speeds of transmission for circuit design. It contains a good presentation of the coding theorems and their implications to transmission.

Its chapter on application is very useful but mostly to engineers.

Feinstein, Amiel. Foundations of Information Theory. New York: McGraw-Hill, 1958.

A mathematical treatise of the theory of communication and information, providing all the fundamentals, is presented here.

Gallager, Robert G. Information Theory and Reliable Communication. New York: Wiley, 1968.

This is a very good textbook intended for a graduate student in engineering. The student is expected to have a mature background in mathematics, including calculus, theory of probability, and random processes.

Goldman, Stanford. Information Theory. New York: Prentice-Hall, 1953.

A book rigorously detailing Shannon's notion of information. The treatment is highly technical. There are better books in the field which treat the subject more lucidly, although Goldman's treatment is quite comprehensible.

Harmuth, Henning F. Transmission of Information by Orthogonal Functions. New York: Springer, 1969.

This book is mathematical and deals with the entire transmission problem--mathematically. Not useful in any other way.

Jelinek, Frederick. Probabilistic Information Theory; Discrete and Memoryless Models. New York: McGraw-Hill, 1968.

One of the finest books on the subject, and requires an in-depth dedication to information theory. A good mathematical book and easy to follow.

Khinchin, Aleksandr I. Mathematical Foundations of Information Theory. Translated by R.A. Silverman and M.D. Friedman. New York: Dover, 1957.

A mathematical presentation of the fundamentals of information theory.

Kotz, Samuel. Recent Results in Information Theory. London: Methuen, 1967.

A mathematical treatise, pure and simple.

Kullback, Solomon. Information Theory and Statistics. New York: Dover, 1968.

This is a very advanced book for theoretical and applied mathematical statisticians--intended for Ph.D. students.

Raisbeck, Gordon. Information Theory; An Introduction for Scientists and Engineers. Cambridge, MA: M.I.T. Press, 1963.

The book explains some of the ideas of information theory and shows how they can be applied to certain problems in signal detection and transmission. Not a text or reference book, but interesting reading for a student in information theory.

Reza, Fazlollah M. An Introduction to Information Theory. New York: McGraw-Hill, 1961.

A very extensive book on information theory. Includes an excellent treatise of statistics and probability relating to the problems therein. Covers theory of transmission--with and without memories. Very sophisticated--graduate level.

Shannon, Claude E., and Weaver, Warren. The Mathematical Theory of Communication. Urbana: University of Illinois Press, 1949.

This book consists of two papers. "Recent Contributions to the Mathematical Theory of Communication" by Warren Weaver, and "The Mathematical Theory of Communication" by Claude E. Shannon. The first paper is an expository introduction to the general theory with broad application of the fundamental principles of communication theory. The second paper is Shannon's exposition of his theory originally published in the BELL SYSTEMS TECHNICAL JOURNAL in 1948. Although Shannon's paper is the basis for information theory, its broad applicability is due to others among whom Weaver is one.

Singh, Jagjit. Great Ideas in Information Theory, Language and Cybernetics. New York: Dover, 1966.

Information is considered synonymous to communications. Shannon's theory of information is the base upon which information transfer is considered and studied. The text combines psychological concepts with notions contained in automata theory. Although this book is not treated as a textbook, it should be recommended reading for any graduate student in information science.

Alam, Fazlul. Cybernetics: Automation, Computers, Control, Economics, Information Theory, and Machine Translation; A Subject Guide. Provisional ed. London: New Science Publications, 1968.

Attneave, Fred. Applications of Information Theory to Psychology: A Summary of Basic Concepts, Methods, and Results. New York: Holt, 1959.

Brillouin, Leon. Science and Information Theory. 2nd ed. New York: Academic Press, 1962.

Edwards, Elwyn. Information Transmission; An Introductory Guide to the Application of the Theory of Information to the Human Sciences. London: Chapman and Hall, 1964.

Katz, Amnon. Principles of Statistical Mechanics; The Information Theory Approach. San Francisco: W.H. Freeman, 1967.

Klemmer, Edmund Theophilus. A Further Study of Information Transmission and Matrix Patterns. Washington, DC: Air Force Cambridge Research Center, Balling Air Force Base, 1957.

Pierce, John Robinson. Symbols, Signals and Noise: The Nature and Process of Communication. New York: Harper, 1961.

Theil, Henri. Economics and Information Theory. Chicago: Rand-McNally, 1967.

Woodward, Phillip Mayne. Probability and Information Theory, With Applications to Radar. New York: Pergamon Press, 1964.

BEHAVIORAL SCIENCES

Cox, Donald F., ed. Risk Taking and Information Handling in Consumer Behavior. Boston: Graduate School of Business Administration, Harvard University, 1967.

This text is only tangentially related to the science of information. The book is social-psychologically oriented and stresses the dimension of personality and its influence on how information is handled. It is a book directed largely at consumer and marketing people.

Hunt, Earl B. Concept Learning; An Information Processing Problem. New York: Wiley, 1962.

The chief concern of this text is how individuals develop concepts. Classical learning theory is applied to the development of an information processing model which includes the dynamics of concept attainment. The text is important to the information scientist because it emphasizes several behavioral components of information which need to be understood in the development of a science in this area.

Laming, Donald Richard John. Information Theory of Choice-Reaction Times. New York: Academic Press, 1968.

This book is not for the first year graduate student in information science. It is suited only to those individuals who have coupled their interest in information with that of psychology. The discussion on communication theory, however, is excellent and, in general, is not difficult to understand compared to the rest of the subjects covered. The treatment is suited for advanced seminars in communication theory.

Leibovic, K.N., ed. Information Processing in the Nervous System; Proceedings of a Symposium Held at the State University of New York at Buffalo, 21st-24th October, 1968. New York: Springer-Verlag, 1969.

A compilation of papers presented at a symposium on the subject. Generally, the papers represent treatment of automata theory and linguistics from the bionic point of view; that is, what knowledge can we obtain from the function of the central nervous system that can be applied to the development of machines that process information? This is an advanced text suited for second-year graduate students.

Reitman, Walter Ralph. Cognition and Thought; An Information-Processing Approach. New York: Wiley, 1965.

This book presents an introduction to computer simulation and a critical analysis of information processing concepts and their psychological implications and requires no prior knowledge of computers or computer simulation. It features an integrated discussion of selected problems in cognition and thought, carefully organized to provide a coherent picture of information processing theories.

Sackman, Harold. Computers, System Science and Evolving Society; The Challenge of Man-Machine Digital Systems. New York: Wiley, 1967.

This is a book that gives emphasis to man-machine interaction in the computer-oriented developing society. One way of making an impact on its readers is to develop a man-machine environment. SAGE, in this book, makes that attempt. Finally, the author presents a philosophy and discusses, in general, the impact of automation on society. The book is more computer philosophy than behavioral science but it is the view of a behavioral scientist. The book should be used as outside reading in a graduate information science program.

Sackman, Harold, and Nie, Norman, eds. The Information Utility and Social Choice. Montvale, NJ: AFIPS Press, 1970.

The text is directed at the impact of information on man and social institutions. The book presents several papers dealing with problems which have emerged from the mechanical processing of data. It projects these problems to developments likely to be expected in the future.

Schroder, Harold M.; Driver, Michael J.; and Streufert, Siegfried. Human Information Processing; Individuals and Groups Functioning in Complex Social Situations. New York: Holt, Rinehart and Winston, 1967.

A critical text based on several experiments conducted on man's capability and limit in the processing of information. The psychological aspects of information processing are carefully and systematically assessed.

Davisson, William I. Information Processing: Applications in the Social and Behavioral Sciences. New York: Appleton-Century-Crofts, 1970.

Fogel, Lawrence J. Human Information Processing. Englewood Cliffs, NJ: Prentice-Hall, 1963.

Freeman, Robert R., Pietrzyk, Alfred, and Roberts, A. Hood, eds. Information in the Language Sciences. New York: American Elsevier, 1968.

Haber, Ralph Norman, comp. Information-Processing Approaches to Visual Perception. New York: Holt, Rinehart, and Winston, 1969.

Hollis, Joseph William, and Hollis, Lucile U. Personalizing Information Processes; Educational, Occupational, and Personal-Social. New York: Macmillan, 1969.

Kabrisky, Matthew. A Proposed Model for Visual Information Processing in the Human Brain. Urbana: University of Illinois Press, 1966.

Kleinmuntz, Benjamin. Clinical Information Processing by Computer; An Essay and Selected Readings. New York: Holt, Rinehart and Winston, 1969.

Larson, B. Bayes Strategies and Human Information Seeking. Lund: Gleerupska Universitetet, 1968.

Norman, Donald A. Memory and Attention; An Introduction to Human Information Processing. New York: Wiley, 1969.

BASIC BOOKS

Ashby, William Rose. Cybernetics. New York: Wiley, 1963.

An excellent book on the subject for the serious scholar. Ideas and concepts taken from biological sciences (physiology, psychology), sociology, mathematics, and theory of communication are welded together in a most interesting fashion.

Bagdikian, Ben H. The Information Machines; Their Impact on Men and the Media. New York: Harper and Row, 1971.

A very well-written and lucid presentation of the impact of information technology on man. The treatment stresses the influence of media on human enterprise. This is not a textbook but is worth reading.

Bar-Hillel, Yehoshua. Language and Information: Selected Essays on Their Theory and Application. Reading, MA: Addison-Wesley, 1964.

This is a compilation of separate papers by lecturers largely oriented towards language. Bar-Hillel attempts to focus on the philosophical basis of language and meaning. Emphasis is placed on the structure of language and logic. Interspersed is the treatment of language as a machine processable operation.

Hayes, Robert M., and Becker, Joseph. Handbook of Data Processing for Libraries. New York: Becker and Hayes, 1970.

One of the finest reference books on library data processing. It is concerned with management, cost accounting, systems planning and design, implementation, and evaluation. It covers such technical problems as computer hardware, software peripherals, magnetic and photographic methods of storage and machines to handle it. It treats communication problems and networks to some degree and looks at specific library problems.

Bracken, Marilyn C., and Shilling, Charles W. Survey of Practical Training in Information Science. Washington, DC: The George Washington University, Biological Sciences Communication Project, 1967.

A survey of the practical training being conducted in the field of information science in the U.S. No attempt is made to make any qualitative evaluation.

Coombs, Clyde Hamilton. A Theory of Data. New York: Wiley, 1964.

Actually this book is on statistics. There are aspects, particularly in the introductory chapters, which are ideally

suited for the information scientist since a detailed discussion of data is presented. This treatment should make clear the distinction between data and information.

Dockx, Stanislas I., and Bernays, P., eds. Information and Prediction in Science. New York: Academic Press, 1965.

This is the proceedings of a symposium in Brussels 1962--a collection of papers on information theory, logic and information, interaction of theory and experiments in science, mathematics and information, physics and information, biology, information and human sciences.

Elias, Arthur W., ed. Key Papers in Information Science. Washington, DC: American Society for Information Science, 1971.

A collection of 19 authoritative information science related papers, reprinted in full text as originally published; designed for use in connection with the teaching of basic information science in college and universities. Topic areas: background and philosophy, information needs and information systems, organization and dissemination of information, and other areas of interest (copyright, equipment, machine translation, and systems analysis).

Holm, Bart E. How to Manage Your Information. New York: Reinhold Book Corp., 1968.

This is a "how-to-do-it" book on information storage and retrieval. It provides methodology for such systems, describes several of the existing systems, and provides some guidance as to the future. Could be used as a textbook for information systems, especially in an undergraduate curriculum.

Kent, Allen. Information Analysis and Retrieval. New York: Becker and Hayes, 1971.

This book intends to reach bedrock in fundamentals for information-retrieval systems. The approach is most elementary with nothing taken for granted. The book, in an attempt to teach students how to design retrieval systems, relies on marginal-hole punched cards. The use of computers for this project would have been more appropriate.

Kochen, Manfred, comp. The Growth of Knowledge; Readings on Organization and Retrieval of Information. New York: Wiley, 1967.

This book has brought together some of the best papers of the people who contributed to this volume. Each of the contributors is outstanding in his field of science and is known to the field of information retrieval. Although this is not a textbook, its reading is recommended to every scholar associated with the field of information science.

Machol, Robert E., ed. Information and Decision Processes. New York: McGraw-Hill, 1960.

This is the proceedings of a symposium on information and decision processes held at Purdue University in 1959--a collection of statistical papers.

MacKay, Donald MacCrimmon. Information, Mechanism and Meaning. Cambridge, MA: M.I.T. Press, 1969.

A very fundamental text for information scientists. The book represents a comprehensive treatment of the phenomena of information (its measurement and analysis), and an extensive treatment of its meaning and relationship to information. A must for the information science scholar.

Minor, Dale. The Information War. New York: Hawthorn Books, 1970.

An interesting novel whose concern is the relationship of the press to its government. Not directly related to the field.

Minsky, Marvin Lee, ed. Semantic Information Processing. Cambridge, MA: M.I.T. Press, 1968.

A compilation of papers detailing experiments conducted on machine language processing. The text provides a panoramic view of information processing from retrieval to utilization, stressing the language component. Probably more suited to the interests of computer scientists than to information specialists.

Moles, Abraham A. Information Theory and Esthetic Perception. Translated by Joel E. Cohen. Urbana: University of Illinois Press, 1968.

An exceptionally good book for information scientists because of its wide view of the information phenomena. Within its esoteric grasp information theory (with stress on communication) is clearly presented and discussed. This is an excellent text for students who come to the field with a good grasp of psychology and mathematics.

Pepinsky, Harold B., ed. People and Information. New York: Perhamon Press, 1970.

This is a collection of papers from individuals who are somehow involved with the general problem of information, each in his own way. This collection is concerned mainly with human involvement in the processing of information, thus many points of view are presented. It is not a textbook but makes for interesting reading.

Saracevic, Tefko, comp. Introduction to Information Science. New York: Bowker, 1970.

This is a conglomeration of 66 papers in the field which are remotely related to each other. Its only unifying force is the hard cover. The intention of the author appears to be to compile a one-volume library on information science; however, he has chosen papers that have only a tenuous connection with the field.

Schultz, Claire K., ed. H.P. Luhn: Pioneer of Information Science; Selected Works. New York: Spartan Books, 1968.

A major reference in the history and development of information science, the volume also contains four biographical sketches of Luhn (as an engineer, applied mathematician, information scientist, and an outstanding human being), a bibliography of his publications, a list of his U.S. patents, a partial citation index to his publications, and a comprehensive index to the contents of the volume.

Shera, Jesse H. The Foundations of Education of Librarianship. New York: a Wiley, Becker & Hayes Publication, John Wiley & Sons, Inc., 1972.

The book defines the environment in which information transfer takes place. The author first examines the individual, and then the society into which he fits and which he molds. The book describes the librarian's role in society and finally the librarian's education. He does well to show the contribution the educational program in librarianship makes, and he does equally as well to point to what it lacks. The book reads like a novel but it does not lack in depth. Everyone in the library and/or information science fields should read this book.

Taviss, Irene, comp. The Computer Impact. Englewood Cliffs, NJ: Prentice-Hall, 1970.

The intention of the editor is to deal with problems which bear on the social impacts of computer technology. It appears that he has invited approximately 30 individuals, indeed an impressive group, to contribute to the milieu. This collection of papers is covered under four general topics, as follows: The Computer Potential; The Economy; The Polity; and The Culture.

Taylor, Robert S. The Making of a Library. New York: a Wiley, Becker & Hayes Publication, John Wiley & Sons, Inc., 1972.

The author traces the developments in the creation of an information environment in a new college. The new college is dedicated to establishing an educational setting based on the prevailing philosophy of liberalism, namely, the right of the student to set his own course in achieving the training he desires. Taylor addresses the issues confronting the change agent as he moves in defining new arrangements for information-communications within a conservatively oriented community. The author postulates the library of the future outside of the context of prevailing architectural and administrative viewpoints and practices.

Watanabe, Satoshi. Knowing and Guessing; a Quantitative Study of Inference and Information. New York: Wiley, 1969.

This is a serious book on the subject of epistomology, information science, behavioral science, and related disciplines, all well knit together in a most admirable way. It is one of the important attempts of unifying information science as a rigorous science, quantitative in scope. A strong mathematics and science background is recommended to maximize learning from this book. Intended for advanced graduate scholars.

Annual Review of Information Science and Technology. New York: Interscience, 1966.

Proceedings from 1964-1967 issued under society's earlier name, American Documentation Institute.

Artandi, Susan. An Introduction to Computers in Information Science. Metuchen, NJ: Scarecrow Press, 1968.

American Society for Information Science. Proceedings of the Annual Meeting. Washington, DC, 1964 -

Berton, A.D., ed. The Social Impact of Information Retrieval. Philadelphia: Medical Documentation Service, 1970.

Elias, Arthur W., ed. Technical Information Center Administration; TICA. 3 Vols. Washington, DC: Spartan Books, 1964-1966.

Foskett, Antony Charles. The Subject Approach to Information. Hamden, CT: Archon Books, 1969.

Goldwyn, A.J. and Rees, Alan M., eds. The Education of Science Information Personnel - 1964; Proceedings of an Invitational Conference. Cleveland: Case Western Reserve University, 1965.

Heilprin, Lawrence B.; Markuson, Barbara E.; and Goodman, Frederick L., eds. Education for Information Science; Proceedings of the Symposium on Educa-

tion for Information Science, Airlie House, 1965. Washington, DC: Spartan Books, 1965.

Information Science Abstracts. Washington, DC: American Society for Information Science, 1966-.

Volumes for 1966-1968 issued under its earlier title, Documentation Abstracts.

Kent, Allen, and Lancour, Harold [illegible], eds. Encyclopedia of Library and Information Science. New York: Marcel Dekker, 1968-.

Kochen, Manfred. Some Problems in Information Science. Metuchen, NJ: Scarecrow Press, 1965.

Library and Information Science Abstracts. London: Library Association, 1950-.

Volumes for 1950-1968 issued under its earlier title, Library Science Abstracts.

Neeland, Frances. A Bibliography on Information Science and Technology. Santa Monica, CA: System Development Corp., 1967.

Wasserman, Paul, ed. LIST: Library and Information Science Today. New York: Science Associates/International, Inc. 1971-.

White, R.F. Education, Careers and Professionalization in Library and Information Science. Project No. 7-1084. College Park, MD: University of Maryland, School of Library and Information Services, 1969.

Wilkie, Lorna C., ed. Directory of Educational Programs in Information Science, 1971-1972. Washington, DC: American Society for Information Science, 1971.