Meetings

Foundations of Access to Knowledge

A relatively unexplored problem in librarianship and the emerging discipline of information science is the nature of the relationship between the structure and transmission of knowledge, on one hand, and the array of bibliographic devices which have been developed to facilitate access to that knowledge, on the other. The exploration of this complex and many-sided problem was the purpose of a summer symposium organized by the School of Library Science at Syracuse University. Meeting from 28 to 30 July 1965 at Syracuse University, a group of scientists, social scientists, humanists, information scientists, and systems theorists discussed "The Foundation of Access to Knowledge."

The first paper of the symposium, entitled "An epistemological foundation for library science," was delivered by Jesse H. Shera (School of Library Science, Western Reserve University). Shera suggested that, if librarianship is to mediate effectively between the producers and consumers of knowledge, the profession must transcend the classical preoccupation of epistemology with how the individual acquires knowledge. Shera envisioned, as a basic foundation for librarianship, the emergence of a new basic discipline called "social epistemology," which would concern itself with precisely that which the epistemologists and social psychologists have neglected, namely, how knowledge is differentiated and integrated within complex social organizations. For Shera, social epistemology is the reverse of the sociology of knowledge in its concentration on the impact of knowledge on social organization and process.

Karl W. Deutsch (Yale), who has concerned himself with the application of the concepts of communication and control to the political process, presented an overview of the development of human thought. Viewing society as an information-processing system, Deutsch provided historical examples of how what he calls human thought models have aided societies in dissociating and recombining elements of knowledge. It was Deutsch's view that the restructuring of a domain of knowledge is analogous to the process of goal change in a cybernetic system. Just as the existing goals of a cybernetic system affect its response to an input of information from its environment, so the larger paradigms of science condition the scientist's organization of his empirical knowledge. In his presentation on "The conceptual foundations of information systems," Harold Borko (System Development Corporation, Santa Monica, California) defined an information system as that which consists of a collection of recorded information, custodians who organize and maintain the collection, retrieval procedures, and users. Borko then proceeded to examine the implications for information-system development of a series of normative propositions regarding the need for information systems, equipment, user responsiveness, automatic language processing, indexing, subject classification, and storage. These normative propositions were seen in operational context through Borko's description of the Bibliographic On-Line Display System (BOLD) which is being developed by the System Development Corporation.

In a jointly authored paper, "The disciplines as a differentiating force," Norman W. Storer and Talcott Parsons (Harvard) suggested that knowledge in a discipline may undergo cycles of organization and disorganization related to the integrative capacities of theory in that particular discipline. Storer and Parsons also hypotheszed a kind of equilibrium state for the structure of knowledge in disciplines in which the theoretical deductive component is outdistanced by the empirical inductive component for only a short time before the former catches up, and vice versa. As a consequence, the strain between the integrative and the disintegrative in the disciplines which have moved beyond the purely inductive, natural-history stage of inquiry has an ultimate propensity to remain constant or steady. Storer and Parsons believe that the bibliographic organization of knowledge in a discipline must, if it is to be effective, be sensitive to the relationship between the conceptual and the empirical progress in that discipline at any given point in time. In papers delivered in sequence, Herbert Menzel (Columbia) and William D. Garvey and Belver C. Griffith (American Psychological Association) discussed, respectively, formal and informal channels of communication in the sciences and the social sciences. Menzel, an early pioneer in studies of the diffusion of knowledge, described the interplay of formal and informal channels of information exchange in science as they complement one another. Garvey and Griffith indicated that they are testing ways of formalizing informal means of communication and informalizing formal channels of communication without at the same time destroying the essential or crucial elements of informality and formality which make these channels viable in their own distinct ways.

The developer of the Science Citation Index, Eugene Garfield (Institute for Scientific Information), discussed the role of citation networks in the development of bibliographic control and as an aid to the writing of the history of science. His paper, "World brain or Memex?—mechanical and intellectual requirements for universal bibliographic control," reflected the conviction that knowledge is basically indivisible and that the knowledge generated by scientists does not respect the tight boundaries within which bibliographers tend to organize it. Donald Barr (Dalton School, New York City) provided a fitting conclusion to the symposium program with some cautions regarding the application of scientific epistemology to the humanities and of basically humanistic epistemology to the sciences. As both scientist and humanist, Barr sought to stand astride the humanistic and scientific cultures as posited by Jacob Bronowski and C. P. Snow.

The symposium was characterized by its emphasis on theory, some of which, it is to be hoped, will prove operationally useful in librarianship and

information science. That it will take some time to link the theoretical with the practical seemed obvious to all of the participants, including the ten scholars who delivered imaginative and frequently entertaining critiques of the eight formal papers. It is presently anticipated the symposium papers will be published some time during the first half of 1966.

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DAN BERGEN
Library School, University of Maryland, College Park

Iroquois Research

A tradition begun in 1945 when students of the various aspects of Iroquois culture, history, and prehistory first met was revived this year at the 1965 Conference on Iroquoian Research held at Glens Falls, New York, 15–17 October. Again, as in the past, the usefulness of an informal research conference at which ideas may be exchanged and results of recent research presented was affirmed.

The meeting opened with reports on the changes on the Allegany Reservation brought about by the imminent flooding of a substantial part of the reservation by the reservoir of the Kinzua Dam. William N. Fenton (New York State Museum) reported on the adjustments made by some 130 families when they moved from their old houses into new ranch-style houses in two relocation centers. He noted that this was not the first time the Senecas had radically and successfully adapted their housing to the changing times. George Abrams (State University of New York, Buffalo) reported on the moving of the fire from the old Coldspring Longhouse, now torn down, to the new Longhouse, an occasion on which Iroquois from the various reservations met to affirm their faith that the Longhouse rituals at Allegany will continue in the new setting.

Reports on Iroquois settlement patterns were made by William A. Ritchie (New York State Museum), James A. Tuck (Syracuse University), Robert Funk (New York State Museum), Marian E. White (State University of New York, Buffalo), and Charles F. Hayes, III (Rochester Museum).

The diversity and quality of the other reports indicated also the intensity with which studies on the Iroquois are still being carried on. James F. Pendergast indicated how recent archeological work in eastern Ontario may change certain older ideas of Iroquoian prehistory. Alan McPherron (University of Pittsburgh), using archeological data obtained in recent excavations at the Straits of Mackinac, suggested how any analysis of pottery might show not only changes in spheres of influence, but also changes in residence patterns. James V. Wright (National Museum of Canada) argued for the utility of analysis of pottery in terms of attributes for the understanding of Iroquois prehistory. Gordon N. Day (National Museum of Canada) presented materials indicating that the usually accepted etymology of the word "Iroquois" was probably in error and suggested a more plausible origin. Cara Richards (Ithaca College) presented evidence from historic documents indicating that the 17th century Iroquoians did not have a customary rule of matrilocal residence as has been generally assumed. Thomas Abler (University of Toronto) traced the history of the change from hereditary chiefs to elected councillors during the first 20 years after the establishment of the Seneca Nation, indicating that this change was not accomplished without considerable wavering between the two factions. Charles H. Torok (Northeastern University) discussed acculturation on the Tyendinaga Reserve, indicating that on this reserve the usual indices of Iroquois conservatism (use of an Iroquois language, participation in Longhouse, clan affiliation, support of hereditary chiefs) are not applicable and that one must speak of two polarities—middle class and rural ideals—rather than levels of acculturation. Barbara Graymont (Columbia University) spoke on the interest the Tuscaroras currently have in reviving the use of their language. Harold Blau (Brooklyn Community College) described the meetings of the moieties held to influence the outcome of the Bowl Game played during the midwinter ceremonies at the Onondaga Longhouse in New York State. His paper indicated that the Bowl Game is more important in the ritual of the Onondagas than it is among the Senecas.

ELISABETH J. TOOKER
Temple University, Philadelphia, Pennsylvania

Learning, Remembering, and Forgetting

The behavioral processes of learning, remembering, and forgetting were the topics of discussion at a conference held in Princeton, New Jersey, 3–6 October 1965.

W. Grey Walter (Burden Neurological Institute, Bristol) reported that in human subjects a specific electrical effect appears if, and only if, a significant degree of signal association has been established and the person feels involved in some way. This phenomenon has been called the contingent negative variation or expectancy wave; it reflects very accurately the degree of expectancy felt by a person that one event implies another to which he should respond in some way. The wave behaves as if it were the outward and visible sign of a short-term memory.

Donald B. Lindsley (University of California, Los Angeles) continued the discussion by questioning what fraction of a neural discharge, initiated by light stimulus bearing information, is required to transmit the information, commit it to temporary storage, and permit its recognition or recall. He illustrated the role of vigilance and selective attention (central factors), in addition to peripheral or stimulus factors, relative to reception, storage, and recall. Attention and inattention were differentiated by magnitude of average evoked potentials corresponding to behavioral indices of detection and reaction time. Additionally, averaged evoked potentials reflected expectancy or anticipation, a response like that to a visual flash was noted even when no such flash occurred. This phenomenon appears to be related to the data described by Walter.

Two non-neurological models of the memory mechanism were described in detail. Edward A. Feigenbaum (Stanford) described his work with computer stimulation, and Richard Atkinson (Stanford) presented a mathematical model. Feigenbaum presented an information processing theory of a three-level memory. The three levels were: immediate memory (a small capacity, buffer storage mechanism); acquisition memory (an intermediate size "working memory" in which discrimination, learning, and familiarization take place); and a long-term store (permanent storage by association of the internal representations of familiar-