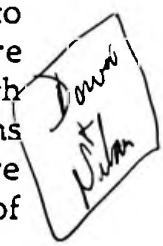
Information Science in the 1990's:
Directions for Theory and Practice

The history of science reveals an intriguing relationship between theoretical perspectives and the realities they are intended to capture. One important element of this relationship is reflexivity: it is conceivable that reality affects our formation of theory and theory affects our perception of reality. As a discipline, information science has, over the last decade, been experiencing a period during which the realities it has taken as its objects of reflection, study, and practice have been changing rapidly and can no longer be contained within the theories developed to understand them. The methodologies which have traditionally been used to analytically capture these realities have not provided adequate data for theories with which would allow them to conceptually accommodate the ways in which the realities are changing.

The information environment is changing, and a major challenge faced by information science in the 1990's is to respond with new theories and methodologies. There are several trends which have emerged in during the last decade which are subtly shifting the focus of the discipline to a different set of fundamental problems. In this paper, I propose to explore one such trend which is critical to the ability of information science to maintain its relationship with the changing environment it seeks to capture methodologically and explain theoretically. Rather than beginning with assumptions about the centrality of technology- or content-driven problems in information science, as has been done thus far, some thinkers are bringing the person back into the central position as the creator and user of information and of the processes of information transfer.



In the first section of the paper, several key developments are discussed which were instrumental in giving the trend towards the centrality of the person its distinctive shape. For example, an important work in the theoretical literature is Taylor's 1986 book Value-Added Processes in Information Systems. His user-driven model of the information environment is organized around the central concepts of the actor and of meaningful social interaction. Such a model allows him to argue that technology- and content-driven models are subsumed within the value-added model because they are elements in the mundane, social contexts of information production, transfer, and use. Taylor recognizes the reflexive links among human actors, information processes, and their social contexts, and acknowledges the difficulties of capturing these links theoretically and methodologically. He nonetheless argues that these reflexive links and conceptual difficulties must play a central role in the analysis and design of information systems.

In the methodological literature, a key work is Dervin's 1983 paper

"An Overview of Sense-making Research: Concepts, Methods and Results to Date". In this paper, Dervin explains the basic concepts and techniques of a research program which is based on the assumption that the person is a creative actor in a social environment. The fundamental human activity is the production of information, the major use of which is in sense-making. Her paper defends this research program and reviews studies which have successfully used the methodology. Recent studies which have used sense-making methodology in information science have explored ways in which people learn word processing programs and desktop publishing and the meaning of the concept of relevance for people making relevance judgments in their work.

The second section of the proposed paper explores some implications of this increased emphasis on the actor for information science theory and method in the 1990's. In general, the focus on the person raises the possibility that certain types of theoretical perspectives, which have long been concerned with the investigation of the mundane world of social interaction, may be able to contribute some of their hard-won insights to information science. For example, ethnomethodologists such as Garfinkel and Cicourel have analyzed the ways in which people interact with one another and, in the process of their interaction, negotiate the rules and meanings which constitute their ongoing social realities. Phenomenologists such as Schutz, Berger, and Luckmann have extensively analyzed the ways in which people make sense of their worlds in the process of the social construction of reality. Hermeneuticians such as Gadamer have concentrated on the fundamental problem of interpretation in social life.

These approaches will be evaluated in light of the following questions

- Can these perspectives offer a ground for information science?
- Can information science benefit from the integration of specific concepts from these perspectives?
- Can information science develop coherent and useful theories of the actor and of social interaction which will frame methodologies that focus on the person?

In the final section of the paper, some research and practical applications of this trend are developed. For example, information science has only a nascent understanding of the social contexts out of which information needs arise and within which information-related behavior takes place. The interface between the user and a system or a user and an information intermediary is more problematic because it is so dynamic.

Much theorizing and research is needed to begin to understand this information environment. Other research and practical applications include

- developing and refining methodological instruments and techniques which can accurately capture user perspectives and the performance of information systems;
- making user interfaces and information systems responsive to the user populations they are intended to serve;
- understanding the elements common to different information environments.

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