Chapter 31
Cyber Behaviors in Seeking Information

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ABSTRACT

The emergence of rapidly developing Information Technologies, particularly the Internet and digital systems, provide people access to an overwhelming abundance of online resources. This, in turn, makes their information seeking process even more challenging. As an important research area in the field of information science and human computer interaction, human information seeking behavior has been researched for decades. In this entry, the authors focus on human information seeking behaviors in terms of their definition, the interactive, cognitive, contextual, and task aspects, and the intellectual knowledge and history. Since information seeking behaviors are a facet of the relatively new field of cyber behaviors, the chapter also discusses cyber behaviors in information seeking and the future research directions.

INTRODUCTION

In this digital era, the rise of the World Wide Web and the availability of Internet search engines such as MSN Search, Yahoo! and Google have provided an abundant (perhaps, even overwhelming) amount of resources and has radically changed people's perceptions and expectations of seeking information. Online information seeking behavior has become a part of our daily life activity, and information systems are becoming a crucial element affecting the quality of our lives. More and more people are interested in learning how to find valuable and appropriate information effectively by taking advantage of the current available information technologies.

Imagine that we have an ideal information seeking scenario in which a normal or average user wants to find some financial information to help his or her decision regarding a stock investment.

First, the user creates some form of information request to reflect his or her information needs. Then, this request is put into an information system that retrieves a large number of information objects, or references to these objects. Next, the user evaluates the retrieved results and extracts the relevant information objects, thus completing the information seeking process. For simple and straightforward searches, the user may be able to get what he or she wants. However, realistically, in a majority of cases, the following issues exist in the above scenario: (1) From the system designer's perspective, how can the system facilitate high quality queries to better reflect the user's information needs or make it easier for the user to assess the retrieval results? (2) From the system implementer's perspective, how can the system produce better results more efficiently? (3) From the user's perspective, how can his or her perception of the system use during information search be improved and to what degree can task complexity and users' cognitive load be reduced?

In the previously mentioned scenario, some of the basic and important elements of information seeking were exposed. They include goals, tasks, information needs, user experience, interaction, and cognition. Since cyber behavior in information seeking falls into the general context of information seeking with more focus on Internet users, it is important for us to begin the entry with general information seeking behavior from the user's perspective, which includes interactive, cognitive and task-based aspects of information seeking behavior. Toward the end, we will focus on online information seeking behavior in more detail.

Throughout the decades, researchers have defined information seeking behavior in a variety of ways. Wilson (2000) proposed that Information Seeking Behavior "is the purposive seeking for information as a consequence of a need to satisfy some goal. In the course of seeking, the individual may interact with manual information systems such as a (newspaper or a library), or with computer-based systems (such as the World

Wide Web)*"* (p. 49). Belkin (1996) claimed that information seeking behaviors are "a sequence of different interactions of the user with information, of different kinds, each specific interaction dependent upon the user's overall situation, current task, goals, intentions, the history of the episode, and the kind of information objects" (p.6). Saracevic (2009) stated that "information seeking refers to a set of processes and strategies dynamically employed by people in their quest for and pursuit of information. Information seeking also refers to the progression of stages in those processes. In the majority of theories and investigations about information seeking, the processes are assumed to be goal directed" (p.9).

In a broader theoretical context, cyber behavior is a kind of human behavior. According to Yan and Zheng (2011), Cyber behavior "represents various activities that humans engage in while connected to the Internet" (p.1). Cyber behavior in seeking information is connected to human information seeking behavior that has been widely researched in the fields of psychology, information science, library science and human computer interaction.

In terms of the above mentioned definitions of information seeking behavior, cyber behaviors in seeking information can be coined as (1) online information seeking behavior, with the purpose of seeking information to satisfy information needs or goals. More specifically, (2) a sequence of user interactions with the Internet that involves using a range of information seeking strategies, and are related to a variety of contextual factors, including tasks, goals, seeking strategies and overall situation.

Research on information seeking has been presented in both Information Science (IS), Interactive Information Retrieval (IIR) and Human-Computer Interaction (HCI) related journals and conferences. The most prestigious information seeking behavior journals include *Journal of American Society for Information Science and Technology* (JASIST), *Annual Review of Information Science and Technology* (ARIST), *Journal of Documentation*

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