A Semiotic Analysis of Icons on the World Wide Web Library Homepages--An Analysis of Indexing and Use

Abstract: The World Wide Web (WWW) is a multimedia interface in which the graphics of an individual's or organization's homepage encourages non-linear searching and indexing of text, visuals, and sound materials. One of the keys to accessibility of WWW homepages are their icons, which are both indexing devices and signs. The wide variety of icons are designed, created, understood, interpreted, and used in multiple ways by people of different backgrounds.

This paper compares the indexing structure of icons with principles used for traditional indexing using theories from semiotics. It not only contributes to indexing theory and better understanding of how icons on the WWW library homepages are used and understood, but it also helps designers of library homepages employ icon features that communicate effectively to their users. In addition, the authors cover icon indexing techniques and principles used on the WWW.

A sample of forty library homepages is drawn from the total population of United States library homepages. Ten homepages from each of four groups (public libraries, academic libraries, research libraries, and special libraries) are selected. The investigators examined the structure of the selected homepages and non-icon information on the homepages. They examined icon indexing structure and features to determine how icons are representative of the information to which they are linked; if icon features are used consistently within and between home pages; and if icons point to important information. The concepts of representativeness, consistency, and importance are part of the collection of fourteen traditional indexing principles gathered by the investigators. The investigators assessed how the icons on each library homepage satisfy these principles.

Semiotics is the theory of signs. Icons are signs. The icons on the homepages of the WWW carry meaning dependent on the syntax of their use. They also carry paradigmatic meanings derived from other systems or domains. Codes and syntax are culturally constructed, which shape the meaning of messages conveyed in the icons. The investigators first identified the codes embedded in the icons on library homepages and then traced the meanings of the codes in their original domains or formats. How these icons on the WWW have played a role in users' information retrieval is the next step in research by the investigators.