

## Chapter 13

# Information Architecture and the Comic Arts: Knowledge Structure and Access

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### ABSTRACT

*Information architecture is the structural design of shared information environments, optimizing users' interaction with that content and their context. Comic arts may be considered in light of information architecture in that it uses sequential frames, text, and their "containers," and design conventions as information architectural "tools" to represent information and engage the user in interacting with it. This chapter explains information architecture, focusing on comic arts' features for representing and structuring knowledge. Then it details information design theory and information behaviors relative to this format, also noting visual literacy. Next, applications of comic arts in education are listed. With this background, several research methods that combine information design and comic arts are explained, followed by a concrete research example. It also recommends strategies for addressing information architecture explicitly for knowledge acquisition and communication.*

### INTRODUCTION

Information architecture in its broadest sense is defined as "the structural design of shared information environments" (Information Architecture Institute, 2013, p. 1). To that end, it tries to optimize how content information is represented, users' interaction with that content, and their context. Comic arts may be considered in light of information architecture in that it uses sequential frames, text and their "containers," and design

conventions as information architectural "tools" to represent information and engage the user in interacting with it.

This chapter explains information architecture, focusing on comic arts' features for representing and structuring knowledge. Then it details information behaviors relative to this format, providing a concrete research example. Finally, it recommends strategies for addressing information architecture explicitly for knowledge acquisition and communication.

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## DEFINITIONS AND CONCEPTS

### Knowledge Representation

While textual information usually comprises a significant aspect of comic arts, in terms of knowledge representation, the main element is visual. Not only are active and inanimate figures represented visually, but their movements over time, and in relationship to each other, are also captured via the series of panels. These additional aspects of concepts enrich understanding.

In examining the symbolism of visual messages, Peirce (1883) categorized them into icons that resemble the actual thing (such as a realistic picture of a cat), indexes that point to another object's meaning (such as a frown to indicate displeasure), and a conventional symbol that has no visual counterpart, such as the word "cat" to mean that animal. Peirce also differentiated between unsystematic (i.e., novel and unique) and systematic (conventionalized) references; comic arts usually employ systematic references.

A representation can be a "close" representation in terms of verisimilitude or indexicality, or very abstract. For instance, a photo might be considered a relatively "close" representation because of its technical capturing of reflected light bouncing off the surface of the original item, but it might be considered a "poor" or inaccurate presentation because it is just a projection of a three-dimensional item and does not represent internal physical aspects, let alone psychological or cognitive aspects (say, the photo of a person). In contrast, a Dali painting represents a notion of time psychologically, or a Kathe Kollwitz charcoal drawing might be a more "accurate" representation of war-based suffering than a photo. Thus, physicality itself does not equate with the quality of representation; the audience's participation (McLuhan's "hot" medium), be it emotional or psychological, constitutes an essential element in determining/deeming the quality of the rep-

resentation. In that respect, the medium is NOT equal to the message.

### Information Architecture

The term "information architecture" has a fairly recent history, emerging in the last half of the twentieth century, largely out of the computer industry. Engineers were trying to organize data flow, control, and physical implementation (Amhahl et al., 1964). The Xerox Palo Alto Research Center (PARC) was also known for its innovation, and was given a charge to develop technology that would support the architecture of information, emphasizing human-computer interface (Pake, 1985). However, it was Richard Wurman, an architect turned designer, who popularized the term "information architecture" in 1976 as he saw a need for systematic design to structure the vast amount of data that was being generated.

In its simplest form, information architecture (IA) reflects the intersection of content, people, and context. "IA is the term used to describe the process of designing, implementing and evaluating information spaces that are humanly and socially acceptable to their intended stakeholders" (Dillon, 2002, p. 821). To facilitate access and comprehension, content needs to be represented effectively; the choice and use of format need to be consciously determined to best represent the information. Marshall McLuhan asserted that "the medium is the message," in that the "container" for the information shapes the message itself. For instance, movies are an effective medium to record communicate processes that involve motion over time. In contrast, radio captures sound, and its single sense communication channel focuses attention on listening skills. Some classic examples of information architecture include the London Underground map, IKEA stores, Macintosh's interface, and CNN's website.

Farnum (2002) and Rosenfeld and Morville (2002) identified the following components of IA:

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