Overview

Interaction Design

- Defining Interaction Design
- Practical Relevance
- Guidelines for Interaction Design

Design Activity
Defining Interaction Design:

“Interaction design [is] in essence, story creating and story telling” (Shedroff 1999, p. 269)

Interaction design is about “the art of facilitating interactions between humans through products and services...[and] to a lesser extent, about the interactions between humans and those products that have some kind of ‘awareness...’” (Saffer 2007, p. 4)
Defining Interactivity

- Popular Usage
- Defining examples
- Classifying interactivity
Interaction Design

Popular usage
“The much ballyhooed era of TV interactivity took a step closer to reality today.”

Robert Mankoff
The New Yorker 2/14/94
Use of “interactive” in The New York Times
October 1-October 24, 1988-2007
interactive outdoor sculpture • interactive performance • interactive storytelling • interactive literature • interactive division • interactive accessories for mobile phones • interactive program guide • interactive television • N.Y.U.'s interactive telecommunications program • interactive education • interactive contextual advertising •

A gooey, goofy dessert billed as "interactive" came with a chilled spray container of salted water, a transparent vial of golden liquid and another transparent vial • interactive tour of Dracula's castle • interactive play • a 12-minute interactive digital reconstruction •
What are some examples of interactivity?
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Defining Examples
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www.alaskabestfishing.com
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SquareWheels
Miami Science Museum
Guba
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Mousejam
University of Colorado physics education site
Interaction Design

BumpTop desktop
Pendulumeca
Interaction Design

Facebook
Defining Interactivity

- Reciprocally active; acting upon or influencing each other (Oxford English Dictionary)
- Interleaved
- Dialogic
Defining Interactivity

Question: is interactivity a meaningful concept in multimedia?

“Once an object is represented in a computer, it automatically becomes interactive. Therefore, to call computer media ‘interactive’ is meaningless—it simply means stating the most basic fact about computers” (Manovich, 2001, p. 55)
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Classifying Interactivity

- Physical
- Psychological
- Social
Classifying Interactivity

Physical: "Interactive technologies ... place other media under computer control. By adding computer control to audio-, video-, or slide-based instruction, new media capable of solving troublesome educational problems are created" (Hannafin & Peck, 1988, p. 356).
Classifying Interactivity

Psychological

cognitive and affective aspects

“the psychological processes of filling-in, hypothesis formation, recall, and identification…” (Manovich, 2001)
Classifying Interactivity

Social

- collaboration between users (synchronous and asynchronous)
- “invisible human interaction” between users of software and the designers of the software components in use (Pea, in Goldman-Segall & Maxwell, 2002, p. 418)
- looking beyond “individual mind” to “social mind” (Goldman-Segall & Maxwell, p. 395)
Example

Cliffhanger
Classifying Interactivity: Shedroff's Interactivity Spectra
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Practical Relevance

- History
- Theory
- Empirical Studies
Friedrich Fröbel, 1782-1852

“The first impressions of the soul—as it were, the first knowledge—come to the child in the first plays of the senses by its own activity” (Fröbel, 1894, p. 66)
“...receiving sensations from his environment, [the child] lays the foundations of his intelligence by a continual exercise of observation, comparison and judgment” (1914/1964, p. 6-7)

Maria Montessori, 1870-1952
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John Dewey, 1859-1952

The knowledge which comes first to persons, and that remains most deeply ingrained, is knowledge of how to do; how to walk, talk, read, write, skate ... initial subject matter always exists as matter of an active doing, involving the use of the body and the handling of material. (Dewey, 1916/1959, p. 217)
Practical Relevance: Some theoretical bases

- Dual coding (Clark & Paivio)
- Multimodal theory of memory (Engelkamp & Zimmer)
- Generative learning (Wittrock)
Design Activity

Instructional Information Design Task

New perspective: look at your blog environment with respect to its interaction design. Think about Shdorff’s Interactivity Spectra: do they encompass all the interactive features you have included?

Design an interface for a learning tool that:

- allows users to browse blogs of groups of people (e.g., students in a class),
- displays entries by topic, time uploaded, or popularity
- allows adding private or public notes for each entry
- allows adding pictures for each entry