13.2 What is Design?

(2)

CS 5984 Design of Interactive Systems
April 20, 2005
What is design(ing)?

- Is designing a structure?
- Is designing improvisation?
- Should design be structured or improvisational?
- Is there a relationship between the thing being designed and the structure/improvisation of designing? Should there be?
- How could it be described?
Describe your project

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What is Design?

- Is/ought design improvisation or structure?
  - questions
  - reflections
- Revisit methods (12.2)
- Is/Ought x Improv/Struct x Content/Process
- Reflections revisited...
What is Design?

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methods revisited

Analysis:
- repeatability
- consistency
- rigor
- theoretical frame

Design:
- constant learning
- improvisation
- as needed
- utilitarian

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Single method in analysis:
- connects theory and practice
- provides means to distribute tasks
- necessary to validate results against others
### Analytic Methods / Design Methods

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- Single method in design:
  - limits allowable rhetoric, values, results
  - shuts down thinking about process
  - can give the impression of being the whole story
  - particularly problematic for the inexperienced (e.g. students)
  - and therefore sometimes produces incorrect results
In analysis multiple methods:
- mix possibly incompatible theories
- results are difficult to compare
- are difficult to explain to members of a discipline
analytic methods / design methods

In design multiple methods:

- each one powerful *but only in context*
- general means to understanding that designing is composed of different activities
- essential to reflecting on design
- facilitates collaborating
- allows designers to design designing

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13.2 What is Design? (2)

Design is optimization.
[engineering]

The OED defines design as:
• A plan or scheme conceived in the mind and intended for subsequent execution; the preliminary conception of an idea that is to be carried into effect by action; a project.
• To mark out; to designate; to name.
• To sketch.

Design is problem solving.
[cognitive science]

Design is an act of individual heroic creation.
[Howard Roarke in Ayn Rand’s The Fountainhead]

Design is form-giving.
[translation of “design” from Norwegian]

“Form follows function.”
[Louis Sullivan]

“Commodity, Firmness, Delight”
[Vitruvius]

Design is a social activity.

Design research is pattern-finding; designing is pattern-applying.
[Christopher Alexander]

“Design is a mode of action.”
[Charles Eames]

Design is just one of the four creative disciplines

Design is an act of individual heroic creation.
[Howard Roarke in Ayn Rand’s The Fountainhead]

“Good designers copy; great designers steal.”
[Steve Jobs, after Pablo Picasso]

Good design increases sales; great design creates market leaders.
[Raymond Loewy]

Design is the science of the imaginary.

“God is in the details.”
[Ludwig Mies van der Rohe]

Design addresses wicked problems.
[Horst Rittle]

Design process: Enumerate aspects of solution space, evaluate each one.

Design is the science of the imaginary.

“God is in the details.”
[Horst Rittle]

Debug this into reality.
Design is optimization.
[engineering]

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[Donald Schon]

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[Richard Rogers, in “Design is Form Giving”]

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morphological box

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9 designers

think-aloud protocol study

“co-evolution” model

Dorst & Cross, “Creativity in Design”

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Erickson, “Lingua Francas for Design”
- pattern language
- what patterns?
- how would you test them?
Fallman, “Design-Oriented Human-Computer Interaction”

- contrast with research
- tries to locate HCI
- conservative, romantic, pragmatic accounts
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Schraefel “Making Tea: iterative design through analogy”
- use of analogy
- bridging domain gaps
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For Friday: Business Plan due
For Monday: Read Digital Ground, Chapter 10
(Caleb): prepare summary+quote+questions