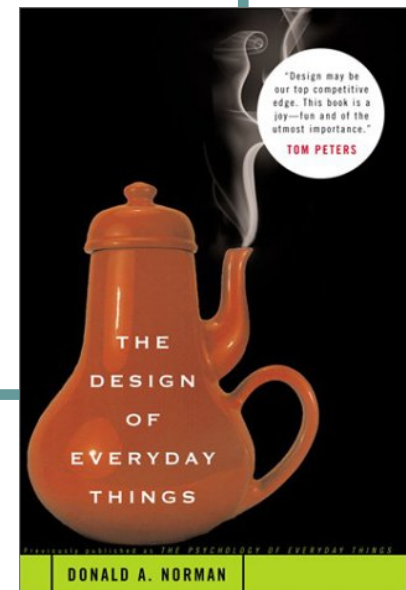


User Centered Design

The Design of Everyday Things

by: Donald Norman

presented by: Joe Novak

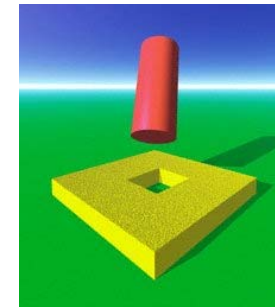


7 Principles of UCD

- Use both knowledge in the world and knowledge in the head
- Simplify the structure of tasks
- Make things visible
- Get the mappings right
- Exploit the power of constraints - natural and artificial
- Design for error
- When all else fails, standardize

7 Principles of UCD (2)

- Use both knowledge in the world and knowledge in the head
 - Information is in the world
 - keyboard
 - Natural constraints are present in the environment
 - round pegs and square holes
 - Great precision is not required
- Simplify the structure of tasks
 - Use technological aids to reduce the burden
 - engine crank on automobiles
 - Visual feedback or other memory cues
 - computer monitor



7 Principles of UCD (3)

- Make things visible
 - Make sure the set of available (relevant) actions are always clearly visible
 - Provide information regarding system state
- Get the mappings right
 - Minimize the ambiguity between controls and the objects they operate on
 - stove top controls and light switches
 - Eliminate ambiguous natural mappings
 - door handles that might be pushed or pulled
- Exploit the power of constraints
 - Use natural and artificial constraints to limit the number of perceived available actions
 - Control affordances
 - door handles that can only be pushed



7 Principles of UCD (4)

- Design for error
 - Design the system with the understanding that users will make any and all possible errors
 - `root$ cd /; rm -rf *` (doh!)
 - Make it easy for users to revise or correct actions
 - modern word processor 'undo'
 - Use forcing functions
 - ignition key \Rightarrow start car
- When all else fails, standardize
 - Arbitrary mappings need only be learned once
 - QWERTY keyboard
 - programming language syntax
 - 漢字、alphabet
 - analog clocks



Bad Examples, Good Examples

- コンビニ Sandwich Wrappers
 - Good



Bad Examples, Good Examples

- コンビニ Sandwich Wrappers
 - Bad



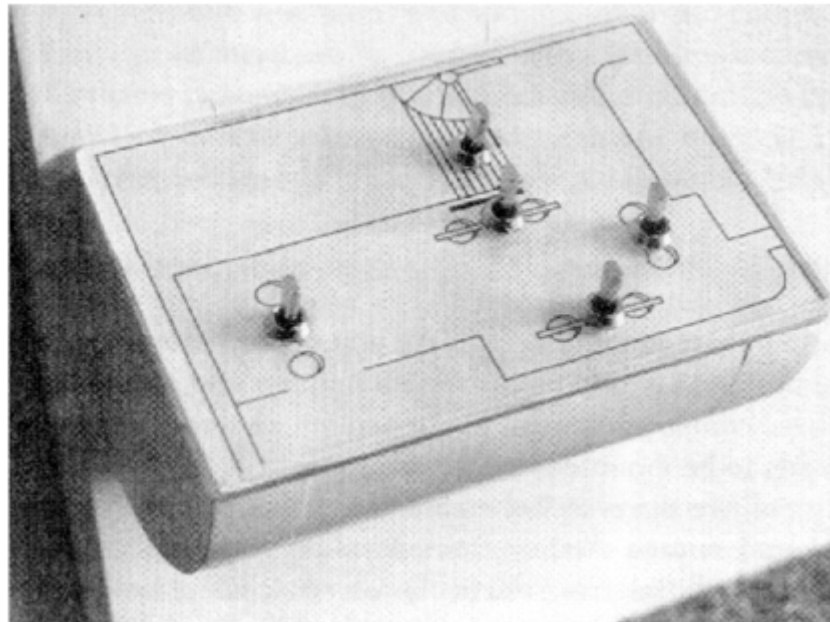
Bad Examples, Good Examples

- Light Switches
 - Bad (my house)



Good Examples, Bad Examples

- Light Switches
 - Good (from POET)



Bad Examples, Good Examples

- Water Faucet
 - Bad (my house)



The End

- Thanks

