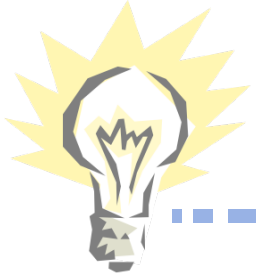


HCI Frameworks

How we conceptualize
humans who use computing
systems



Human Role

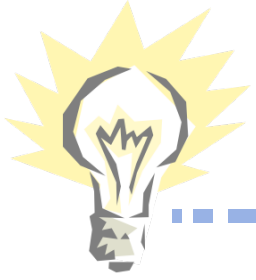
- What is the human's role (according to you)?
- Different roles → different design frameworks
- Different frameworks → different evaluation approaches
- Different frameworks → different interaction model



Human Roles

Human as...

- 1. Sensory processor
 - ❖ Experimental psych, sensory psych
 - ❖ e.g. Model-Human Processor (Card, Moran & Newell)
- 2. Interpreter/Predictor
 - ❖ Cognitive psych, AI
 - ❖ e.g. Distributed cognition (Hutchins)
- 3. Actor in environment
 - ❖ Activity theory, ethnography, ecol psych
 - ❖ e.g. Situated action (Suchman)
 - ❖ e.g. Activity theory (Vygotsky, Nardi)



What Makes a System Usable

Usability results when the system...

1. Sensory processor - *Fits within human limits*
2. Interpreter/Predictor - *Fits with knowledge*
3. Actor in environment - *Fits with task and social context*



Evaluation Methods

Evaluation methods...

1. Sensory processor - *Quantitative experiments*
2. Interpreter/Predictor - *Task analysis, cognitive walkthrough*
3. Actor in environment - *Ethnographic field work, participatory design*



Two Views of Interaction

➤ Interaction *with*

- ❖ Software system is a tool or machine
- ❖ Interface is a usability-engineered membrane
- ❖ Human-as-processor & -interpreter models

➤ Interaction *through*

- ❖ Software is a medium used to interact with task objects or other people
- ❖ Interface plays a role in social context
- ❖ Human-as-interpreter & -actor models



Upcoming

- Design Processes
- User Centered Design Process
- Usability Principles
- Bad Designs
- Human capabilities, universal design
- WIKI
- Project teams and ideas
- *TEAM CONTRACT*