CS181DT Class 18: Critical forms of design

Tree digester by Dunne & Raby as part of their Foragers speculative design project. 2009

Class 18 agenda

- Zipcrit

- Lecture: Waves of HCI & critical design

- Seminar: uncomfortable interactions & critical design

- Seminar: feminist design & more-than-human design

HCI history

First, historic context: waves of HCI

- First wave: 1970-1980s

- Influenced by cognitive science & human factors

- Model driven: Fitt's law, Model Human Processor

- Computers were relatively new things, so let's "scientifically" figure out how people can optimize using them
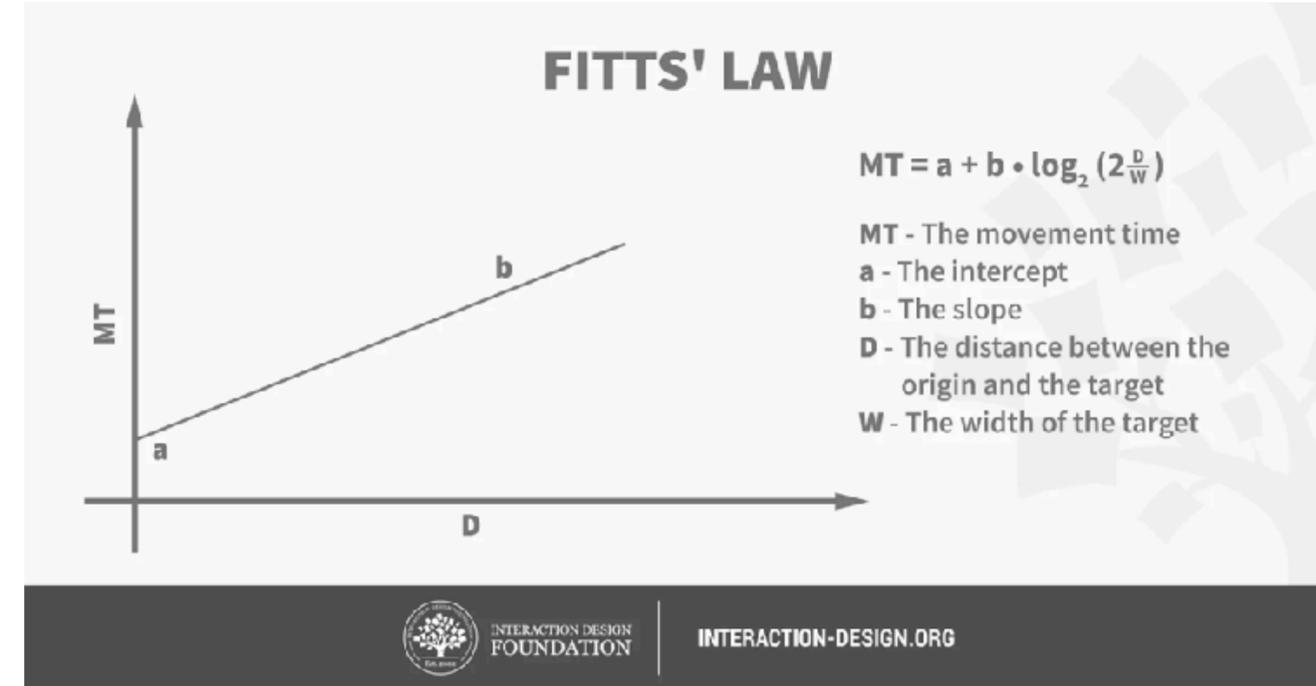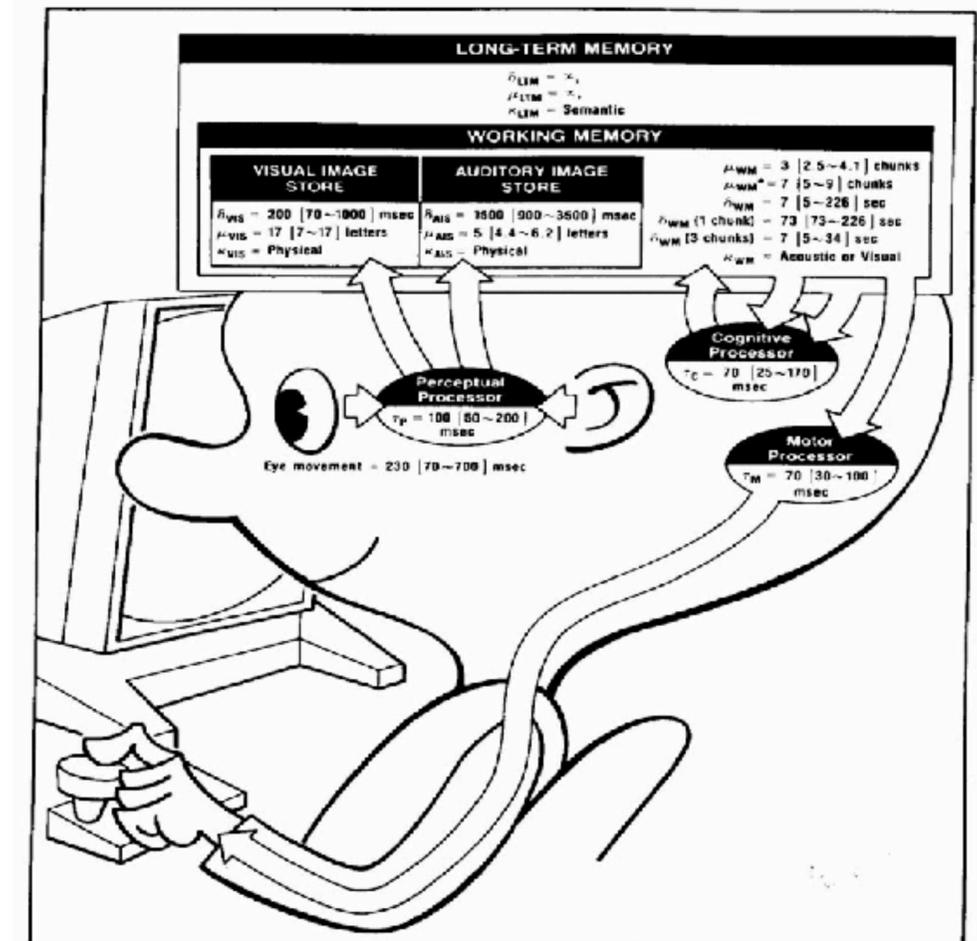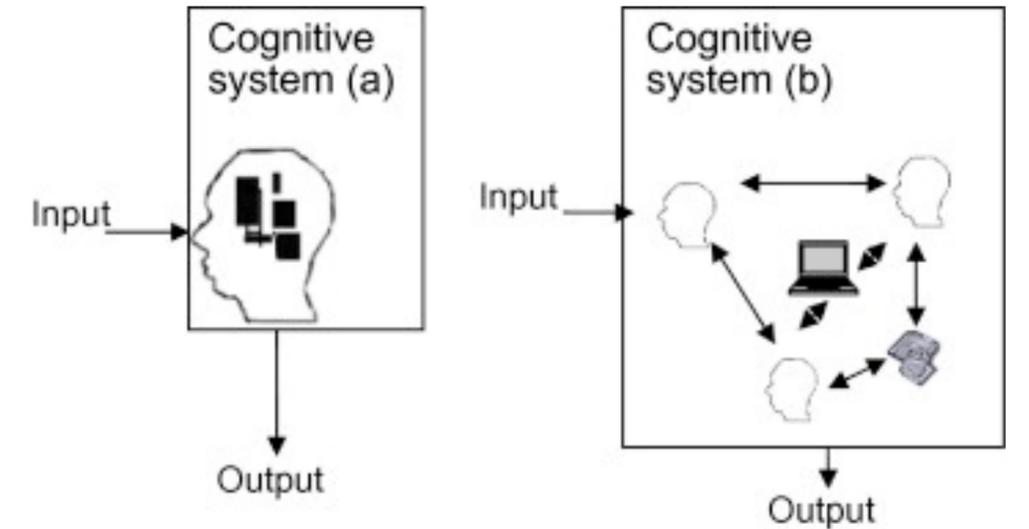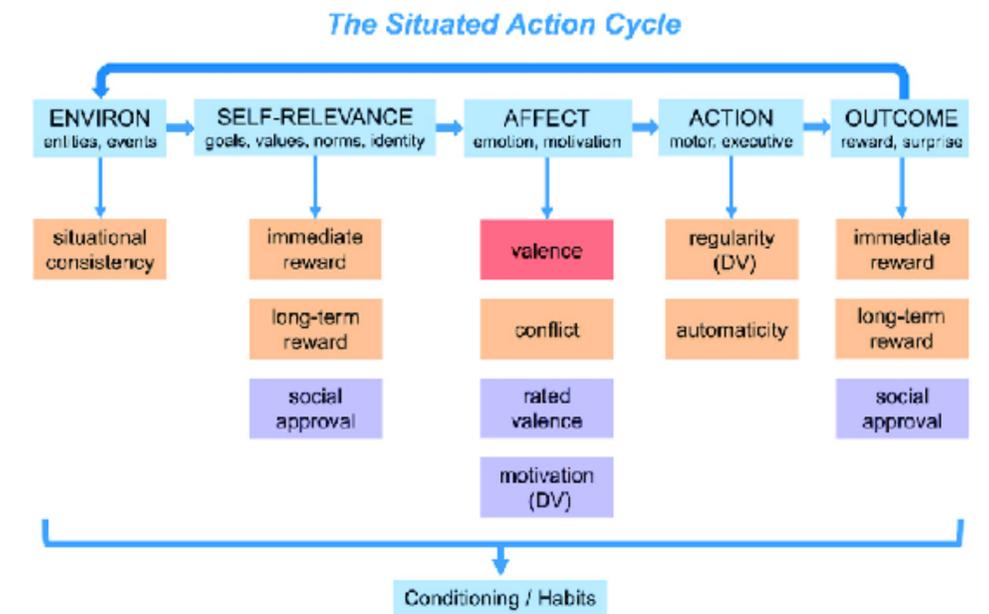

Paul Fitts   Stuart Card   Allen Newell

Second wave

- Second wave: 1990s-2000s

- Focused on computers being used collaboratively in the work place

- Used theories that emphasized *context*: situated action, distributed cognition, activity theory

- Adding design methods that also emphasized **context** like contextual inquiry, participatory design
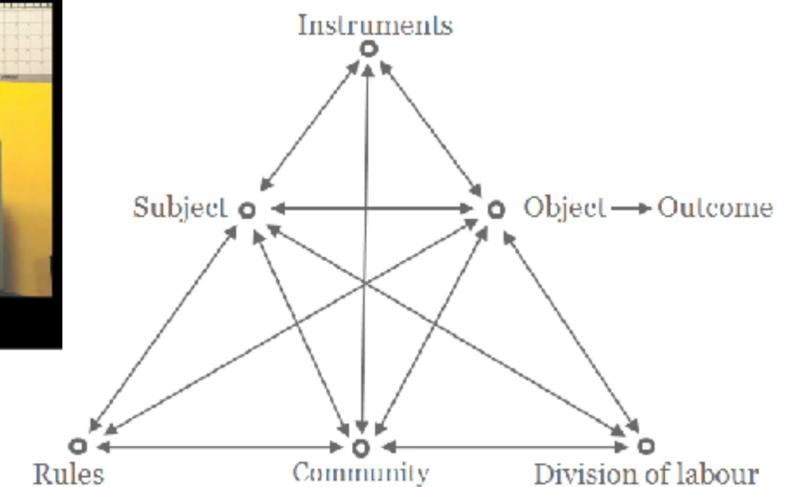
Edwin Hutchins   Susanne Bødker   Lucy Suchman

The Situated Action Cycle

Third wave

- Third wave: 2000s - Present?

- Computers are not just in the office and used all throughout our homes and lives

- Challenged efficiency as a value, embraced instead **meaning making**

- Design—and research through design—really shone through as it was a method to engage with socioculturally significant topics (e.g., gender, accessibility, labor rights)
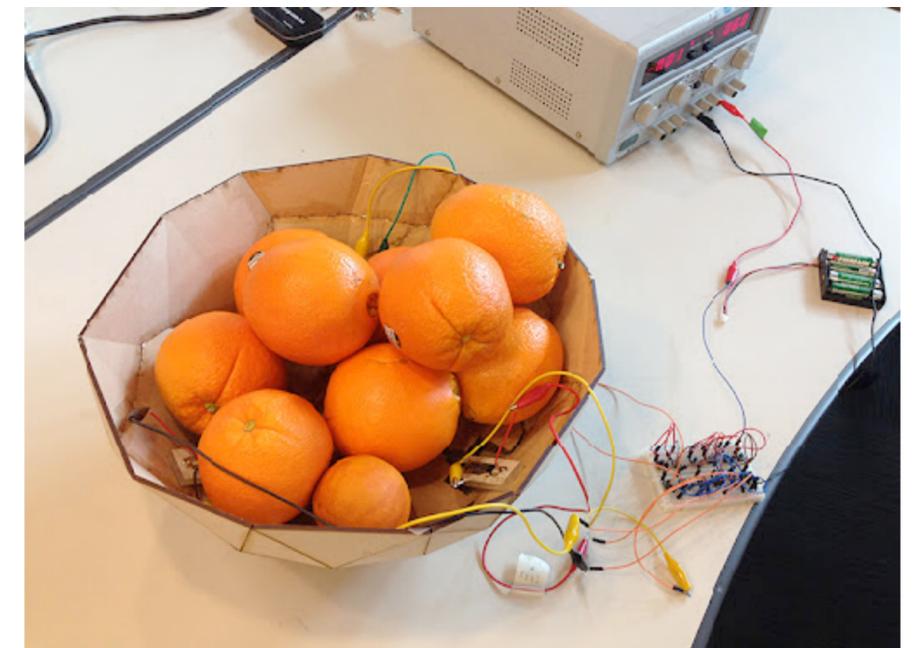

Jodi Forlizzi   Hiroshi Ishii   Shaowen Bardzell

What is research through design?

- Use design methods to produce research

- Lets you do "fun things" (like being creative, making crafts, making tools) to produce academic knowledge

- Usually results in detailed case studies of the object you designed, reflexive approach

- Beyond concerns about *usability* and *professional support tools*, supports third (fourth?) wave HCI goals of social justice, value-oriented design, etc.
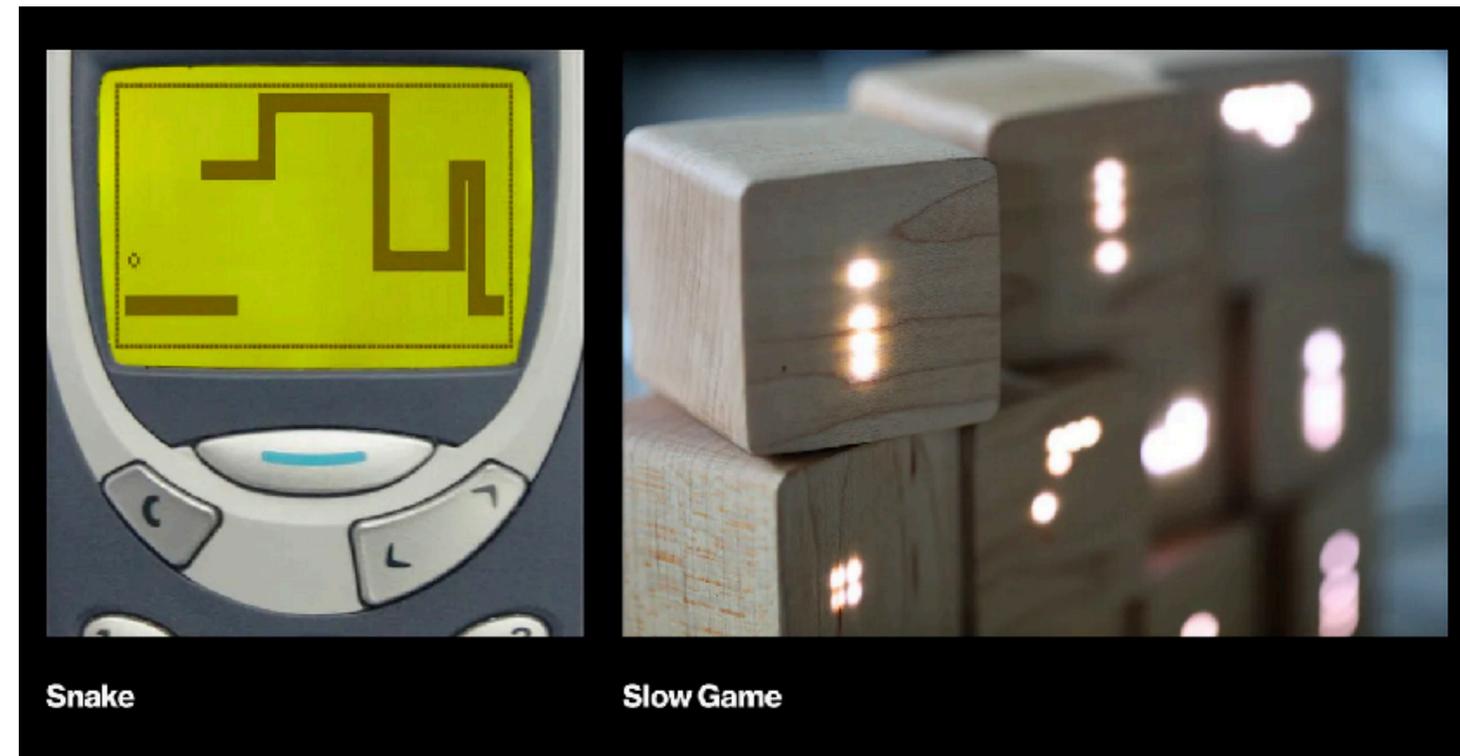
Snake   Slow Game

Example: Slow Game
(snake but the pixel moves once every 18h)

https://dl.acm.org/doi/10.1145/3173574.3173651

What is critical design?

- Critical design is a form of *research through design*

- Uses design methods to explore ethics, surface hidden agendas and values, and explores alternate design values

- "Make consumers more critical about their everyday lives, and in particular how their lives are mediated by assumptions, values, ideologies, and behavioral norms inscribed in designs." - founders Dunne & Raby, 2001

- Critical design "needs to be closer to the everyday, that's where the power to disturb comes from."

How is EyeCam a form of critical design? Compare with your 3D printing for protest object. How do the affordances of an object change its potential to be critical?

PM5: Design Noir

- The remaining 3 PM assignments will be shorter and more conceptual focused: less about making objects and more about applying critical theories and practicing different forms of design

- PM5: 3 ideas (title, 250 word description, storyboard or sketch) of a tool or object that...

  - Facilitates emotions of loss, abandonment, loneliness

  - Encourages users to be as wasteful as possible

  - Instills a sense of guilt in the user

What are related areas of knowledge?

- Feminist design

  - *Feminist HCI: taking stock and outlining an agenda for design* by Shaowen Bardzell

- Speculative design

  - *Speculative Everything: Design, Fiction, and Social Dreaming* by Dunne & Raby

- Design justice

  - *Design Justice Community-Led Practices to Build the Worlds We Need* by Sasha Costanza-Chock

- Postcolonial design

  - *Ubicomp's colonial impulse* by Dourish & Mainwaring

- Critical race theory + design

  - *Critical race theory for HCI* by Ogbonnaya-Ogburu et al.

Seminar: Uncomfortable & critical design

Seminar: Feminist & more-than-human design

Class 18 recap

- TODO

  - Weds: WoZ Figma prototype testing in class!

  - Next Monday: PM5 Design noir; reading responses

- Abrar's mentor hours this week will be going over how he implemented MusicMap (Fri 1:15-3:15)