



CS 4249 - Phenomena and Theories of Human Computer Interaction

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Foundations: phenomena and theories

- HCI design requires understanding both computers and humans
- Student presentations have and will present the basic component theories in HCI
- This week and Week 10 will bring these theories together so that we'll better understand ourselves

Human Factors

Phenomena

- How do people ...?
- What observations can we make about people?

Leads us to:

- Guidelines, frameworks and heuristics for usability

Theories

- Our explanations for the phenomena
- Surprisingly, less agreement than we might expect
- Ties into psychology, cognitive sciences, ergonomics

Outline

- Human Information Processing
 - Memory and Attention
 - Human Abilities
- Cognitive Models
- Social, Emotional and Affective Factors
- Navigation and Wayfinding



Last Words

"Any sufficiently advanced technology is indistinguishable from magic." - Arthur C. Clarke

Technology will continue to shrink, to the point it becomes invisible and ubiquitous.

Human Computer Interaction =>
Human Human Interaction



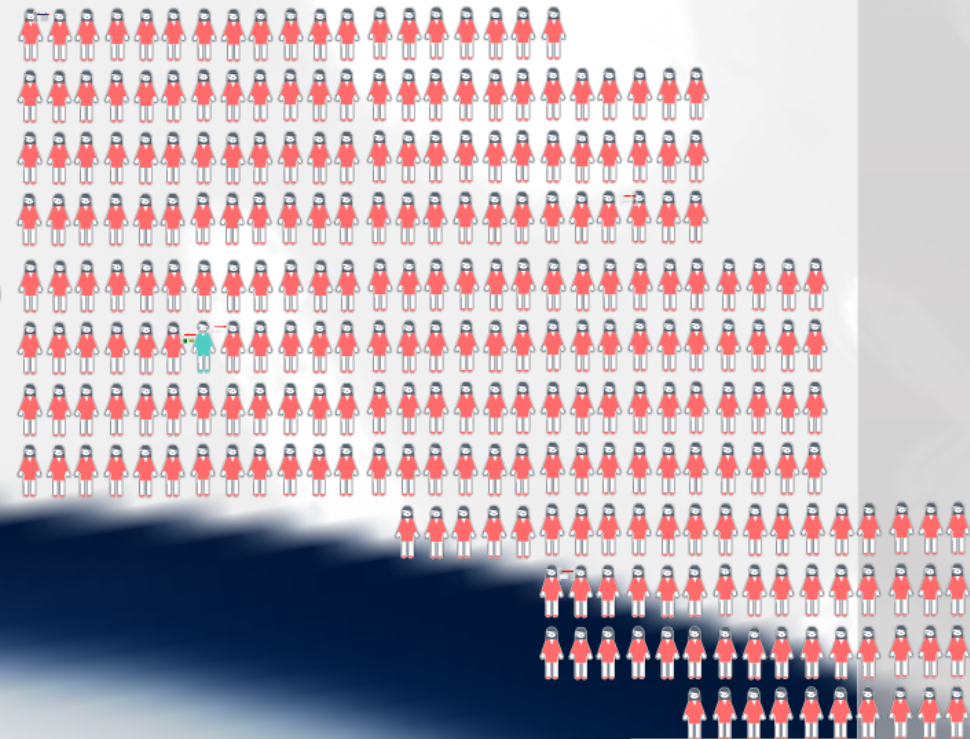
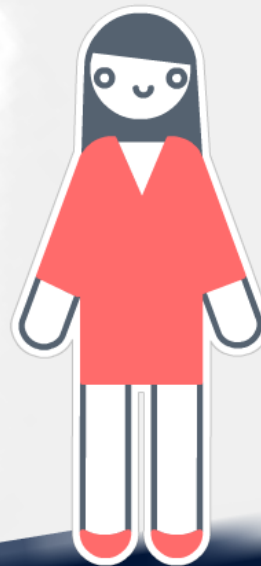
Eric Whitacre: A virtual choir 2,000 voices strong

Crowdsourcing

Asking the general public to do work.
Related to human-based computation.

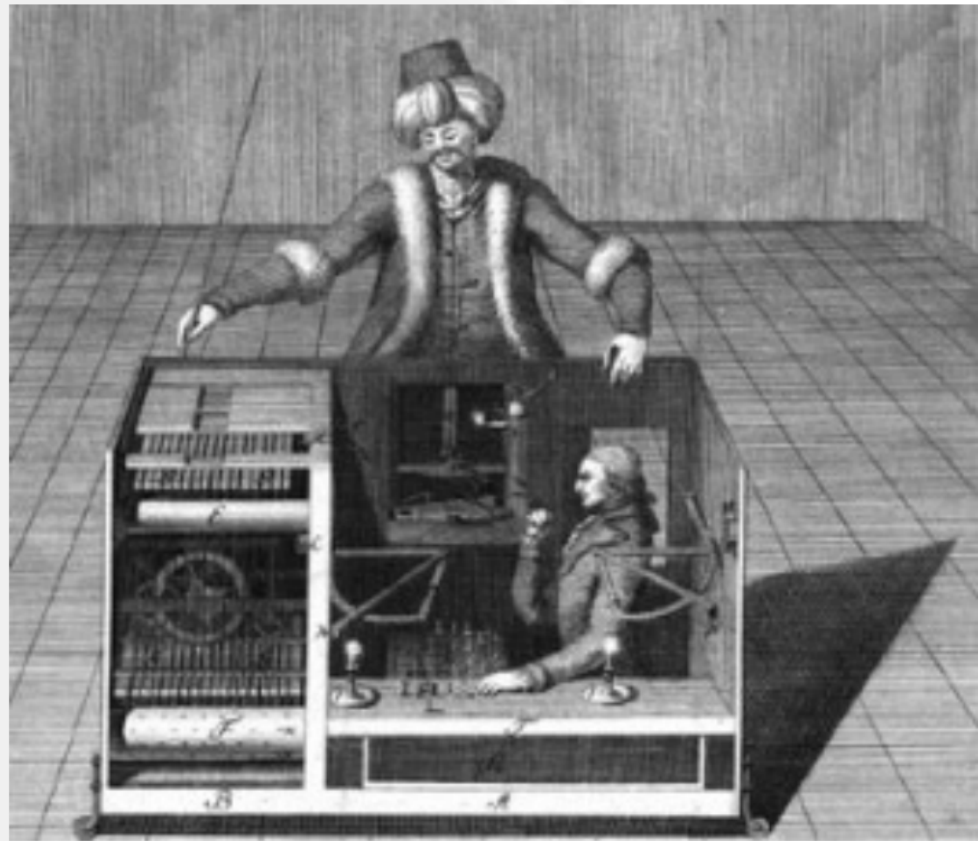


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http://en.wikipedia.org/wiki/The_Turk



Alan Turing!

Origins: Captcha + Distributed Proofreading

Completely Automated Public Turing test to tell
Computers and Humans Apart

+

Distributed Proofreading: Scholars wanted to
proofread the scanned and recognized output of
classic, out of copyright literature for the
betterment of humanity.

Luis von Ahn: Re-Captcha



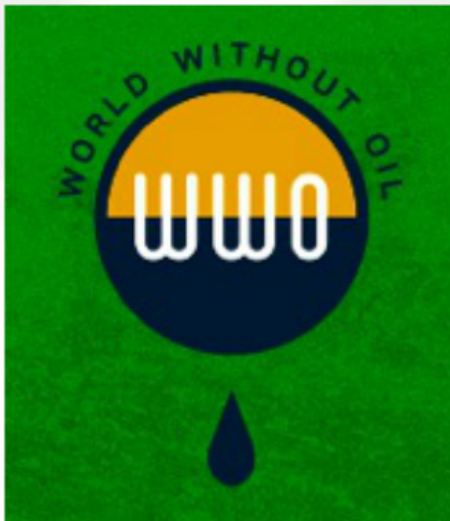
Leverage this to tell segregate people from robots.

Leverage this to have people help computers.

Games with a Purpose (GWAP)

Get people to play games to help do something useful (i.e., subbing entertainment for payment).

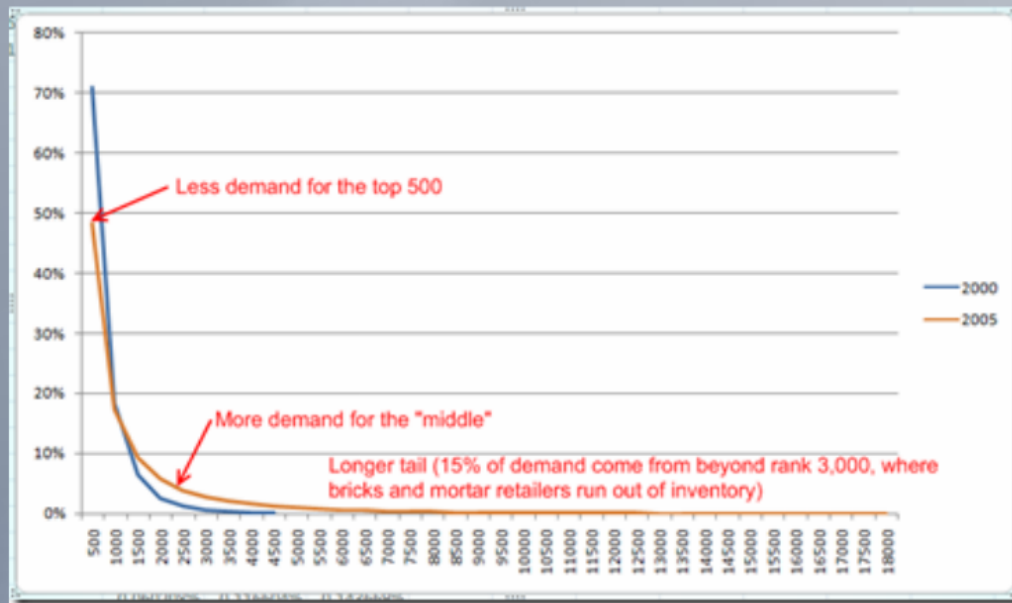
cf **Jane McGonigal**'s earlier talk about games.



now synthesizing new proteins!

The Long Tail

Chris Anderson's description of the effect of the web.
How Amazon, eBay, Netflix function and profit from web scale.



Quick Question: What is the ramification for universal usability?

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