Fundamentals of Situated Interaction

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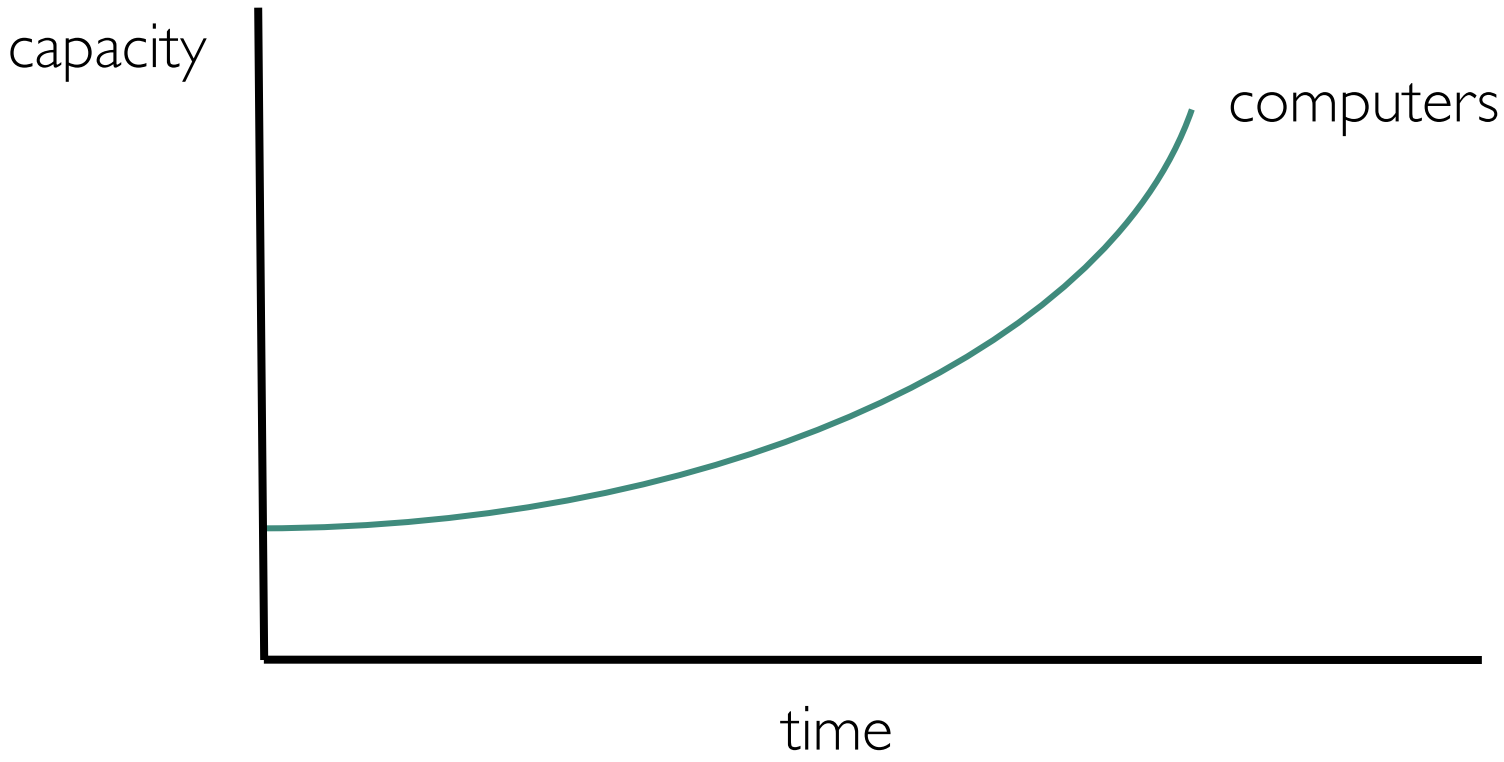
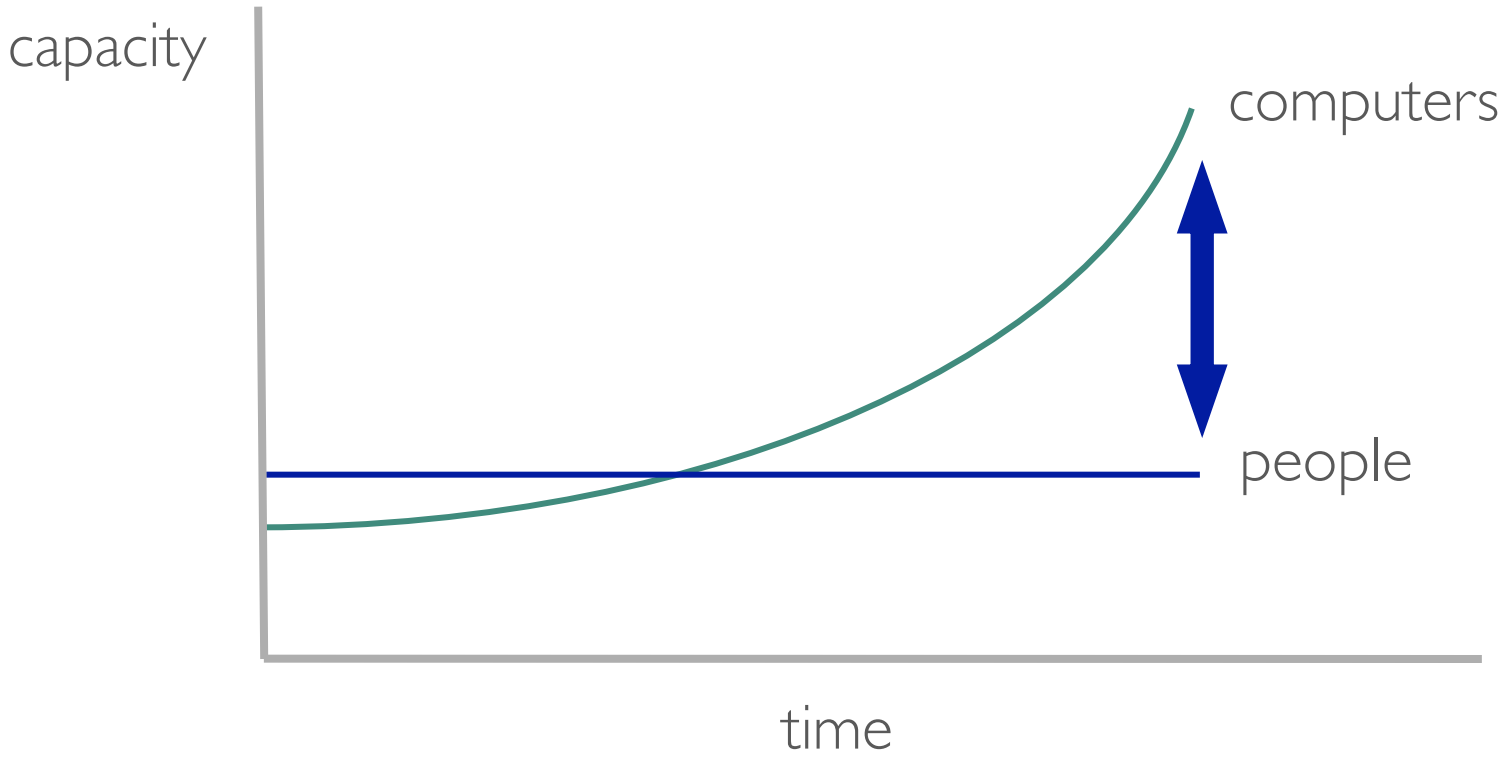
If computer capacity and functionality are increasing

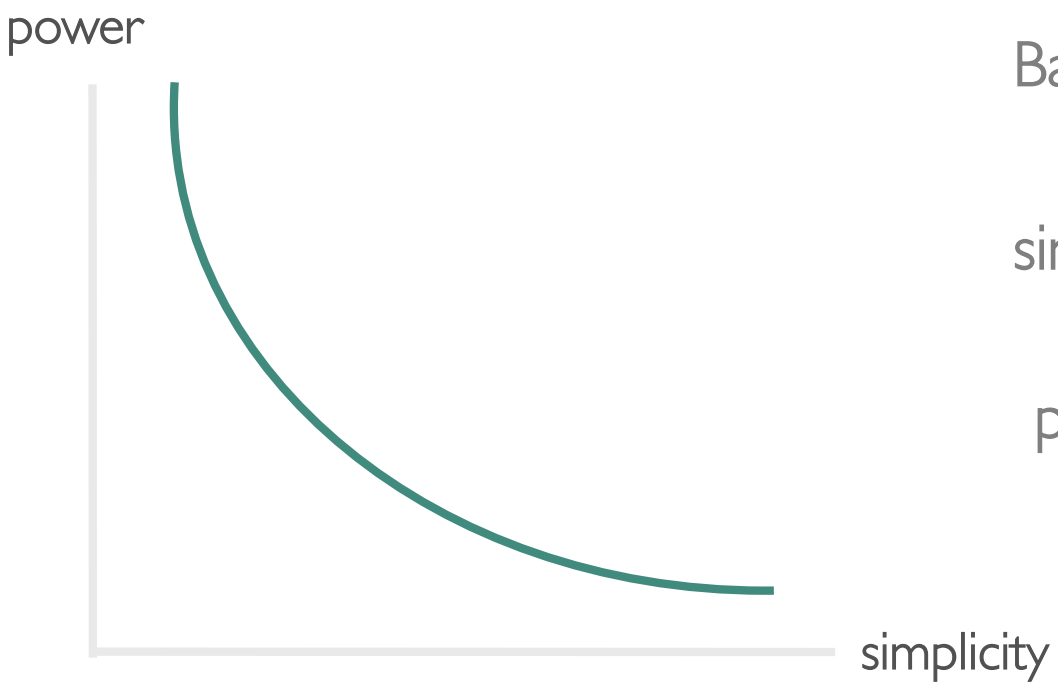


If computer capacity and functionality are increasing

… human capabilities are not



Power vs. Simplicity



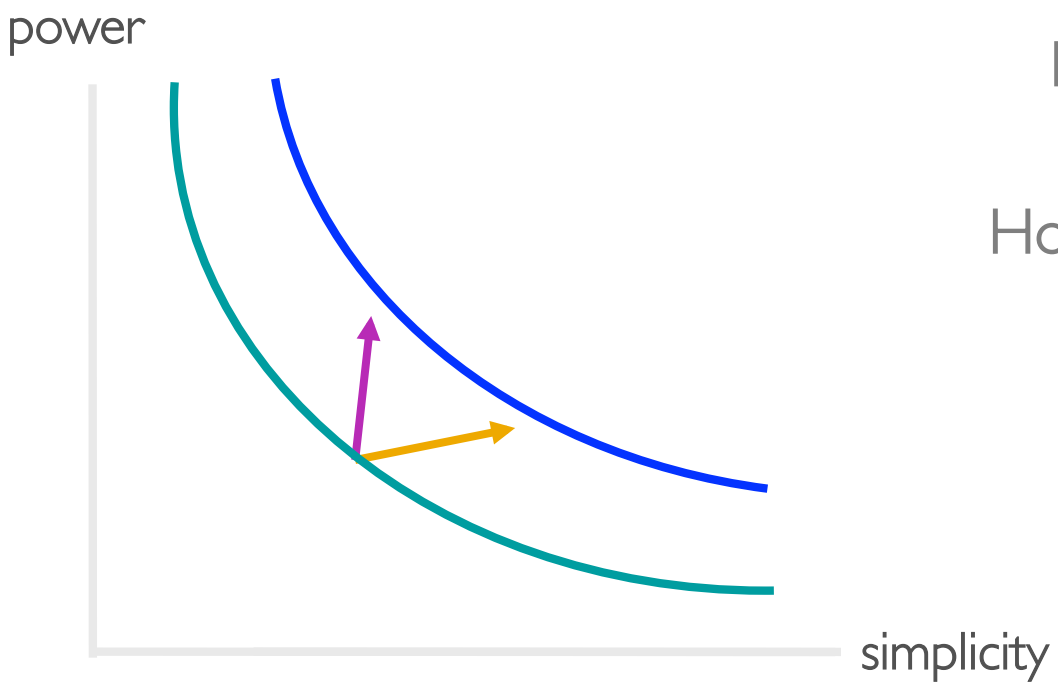
Balance the trade-offs:

simplicity of execution

and

power of expression

Power vs. Simplicity



Research challenge:

How to shift the curve?

Three interaction paradigms

Computer as tool

- First person interfaces
- Empower users

Human-Computer Interaction

Computer as servant

- Second person interfaces
- Delegate tasks

Artificial Intelligence

Computer as medium

- Third person interfaces
- Communicate

Social media
Multimedia

Next Week 13h30!!

Read:

Beaudouin-Lafon, M. (2000). Instrumental Interaction: an Interaction Model for Designing Post-WIMP User Interfaces. *Proc. ACM Human Factors in Computing Systems*, CHI 2000, The Hague (The Netherlands), CHI Letters 2(1):446-453, ACM Press.

Beaudouin-Lafon, M. & Mackay, W. (2000). Reification, Polymorphism and Reuse: Three Principles for Designing Visual Interfaces. *Proc. Advanced Visual Interfaces*, AVI 2000, Palermo (Italie), ACM Press, pp 102-109.

Key phenomenon: *Co-adaptation*

Users *adapt* to a new system
they learn to use it

Users *adapt* the new system to their own needs
they appropriate and change it

Creative activities require both
especially when integrating physical and digital information

Create digital tools that are as intuitive, and learnable,
as physical tools

Reciprocal Co-adaptation

People adapt their behavior to technology

… they learn it

People adapt the technology for their own purposes

… they appropriate it

Computers adapt their behavior to people

… machine learning

Computers adapt human behavior

… training