

CS-525H: Immersive HCI

Immersion

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What is Immersion?

- □"Being There"
- □ Being in *Flow*
- Natural interaction that recedes into the background
- □ Tapping into personal experience

Being There: Remote Physical Environment

Phone

□Video conference

Teleoperated robots

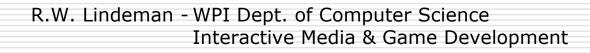
Being There: Virtual Environment



- □Video game
- Immersive learning environment
 - Immersive chemistry
- Surgical simulation

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Being There: Described Environment

Books

Movies

□ Phone sex



Being in Flow

- Introduced by Mihály Csíkszentmihályi
 - Flow: the Psychology of Optimal Experience. Harper Perennial, 1990
 - Heightened sense of perception
 - Highly focused on primary task
 - In the "sweet spot" between frustration and boredom
- Athletes often report this
- □Video gamers too



Characterizing Flow

- A challenge activity that requires skills
- □ The merging of action and awareness
- Clear goals
- Direct feedback
- Concentration on the task at hand
- □ The sense of control
- □ The loss of self-consciousness
- The transformation of time



Natural Interaction

- Recedes into the background
 - Low cognitive load for interaction techniques
 - Visual (and other) feedback can be easily digested
 - Low cumber

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The Role of Personal Experience

- □ We all filter our senses
- □Variations in sight, hearing, etc.
- My childhood versus yours
- □My mood
- □Can we harness this?

When is Being Immersed Bad?

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