SENG2260 Human-Computer Interaction

Workshop 5

Week 5

SPS

Today

- Virtual agents and graphical realism

"Borderlands 2" (2K Games)

"Last of Us" (Naughty Dog)

- You will have read:
  - J. Sumerfield and S. P. Smith. "Investigating graphical realism in a virtual environment for threat identification", *10th Asia Pacific Conference on Computer Human Interaction (APCHI 2012)*, Proceedings Vol.2, 473-479, August 2012.
    http://shamussmith.myresearchsite.com/papers/Sumerfield_Smith_APCHI12.pdf

Overview

- Increasing use of virtual agents in user interfaces
  - Helper avatars, user representation, multi-agent systems, simulations, games etc.

- High levels of realism can be expensive
  - Graphical content creation
  - Graphics processing
  - Real time interaction
  - Deployment/bandwidth issues

Realism requirements

- Realism as
  - Graphical realism
    - Geometric realism (shape and dimensions)
    - Illumination realism (lighting model)
  - Behavioural realism
    - Content/environment realism (interaction)

- But how **real** do we need it or even want it?

Increasing realism

"Last of Us" (Naughty Dog)

Increasing realism

"Borderlands 2" (2K Games)

Meet Amelia: the computer that's after your job

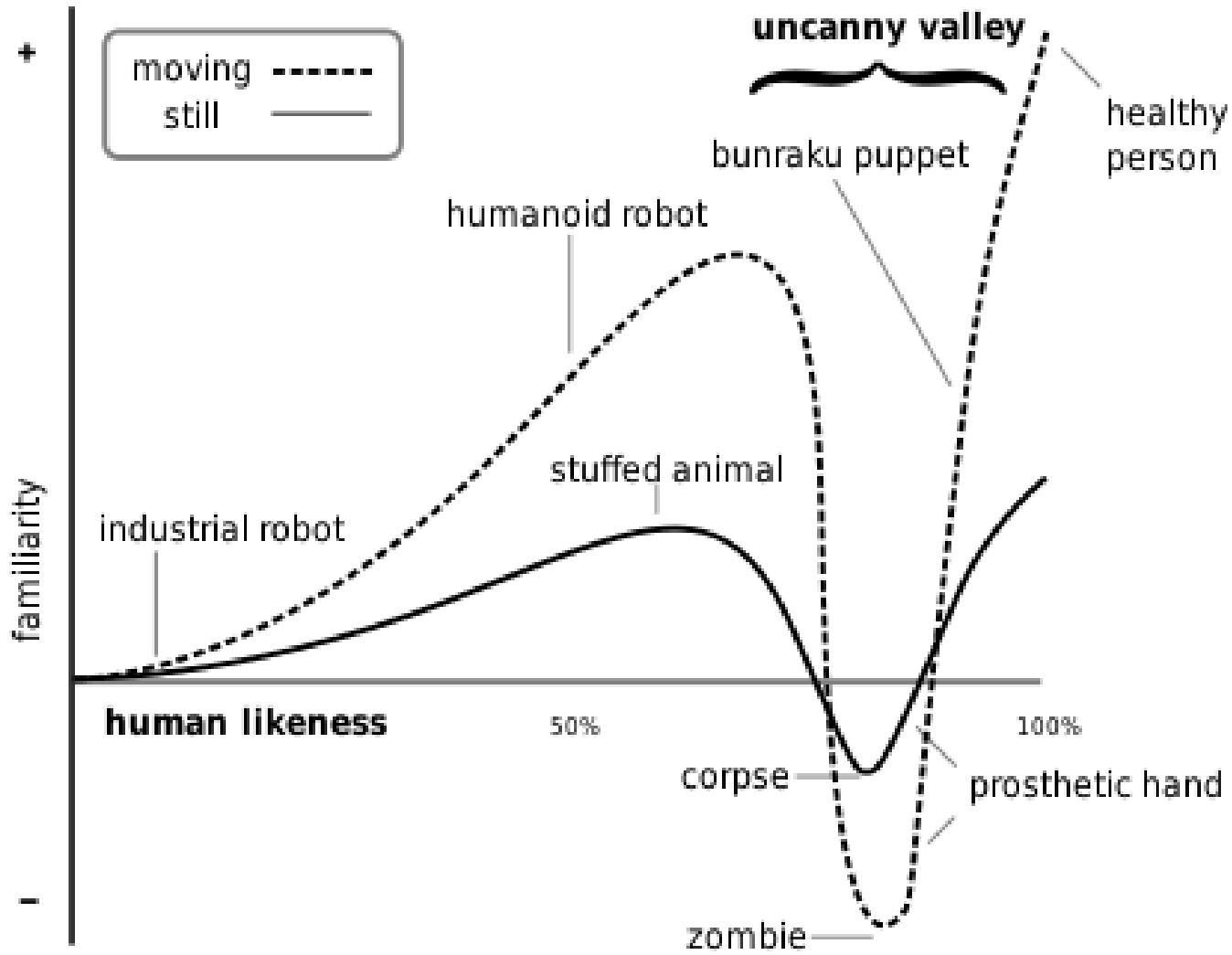
“A new artificially intelligent computer system called 'Amelia' – that can read and understand text, follow processes, solve problems and learn from experience – could replace humans in a wide range of low-level jobs.”

http://www.telegraph.co.uk/technology/news/11123336/Meet-Amelia-the-computer-thats-after-your-job.html

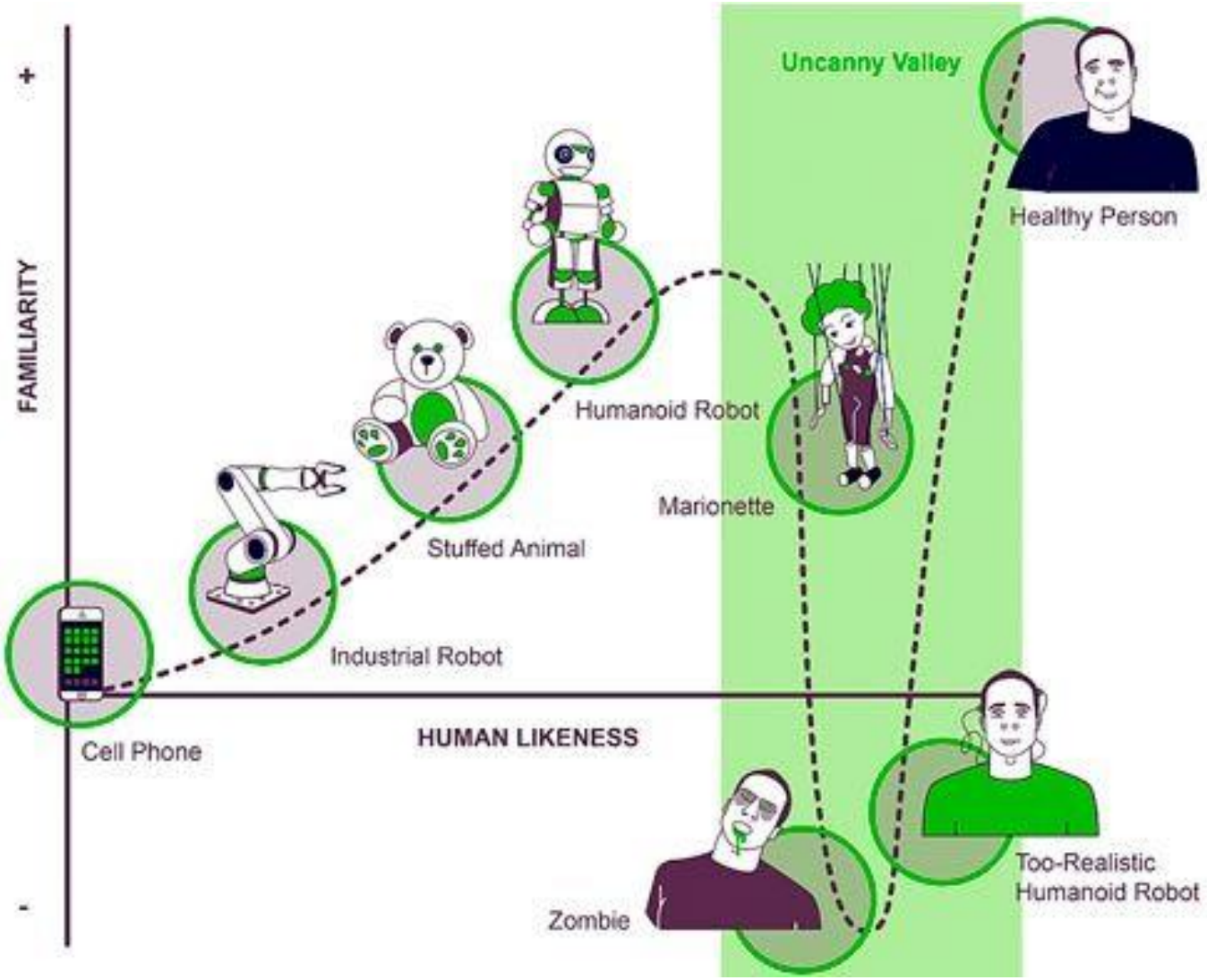
Uncanny valley

"The uncanny valley is a hypothesis in the field of aesthetics which holds that when features look and move almost, but not exactly, like natural beings, it causes a response of revulsion among some observers."

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



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



http://www.everything-robotic.com/2014/04/our-relationship-with-uncanny-valley.html

Graphical realism

(Sumerfield & Smith, 2012)

Overview - revisited

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In your groups

- Consider EITHER:
  - How you might use virtual agents in your project
    - How would the virtual agents be represented
    - Avoid or embrace the uncanny valley?
- OR
  - Consider how different levels of graphic realism in your interface might impact the user experience
    - In a positive way
    - In a negative way

- 15-20 minutes then report back to class.

Next week

- Session 1 for testing of your low-fidelity prototypes
- Bring the current version of your interface (sketches, cards, storyboards) and walk through them with your classmates
- Make sure you have reviewed the assessment specification and use this to structure your time in testing sessions 1-3.