Admin

- Exam 23 April 8:30 AM; choice, study aid: 1 sheet
- Wiki “Subject Map”: Due April 14
  - Contributions:
    - Video link/recommendation (Japneep)
    - Commentary/notes on
      - assigned video (Leo)
      - Assigned reading (Erik)
  - Suggestions:
    - Lists of concepts, contrasts, approaches
    - Other study aids...

- Tournament & Presentations
- Course Evaluations (today)
View from Senior Land
Where are the Walkers?
Ethical Issues in Robot Care for the Elderly

COGS 300 002
31 Mar 2015
Peter Danielson
Focusing on Robots

• “The Roomba is the most successful elder-care robot ever created,” [CEO] Angle said. “It helps people who can’t push a vacuum maintain a sense of control over the environment they live in.”

Q1

What country is showing the MOST interest in robots that take care of the elderly and why?

a) USA because of the increasing obesity rates that are related to decreased activity and autonomy
b) Japan because of the low birth rate and long life expectancy
c) India because of the rapidly growing population
d) All countries are showing equal interest
e) None of the 3 countries listed

Tisha
Rate Quiz Question 1

A. Excellent
B. Very Good
C. Good
D. Acceptable
E. Poor
Drivers:
Japan’s Aging Crisis
OECD Pop% Over 65 Years
Macro Ethics

- Demographics/Immigration
- Senior Rights/Social Welfare (and political power)
- Savings
- Home/Institutions

- Else: let them live on cruise ships
  - (Lindquist & Golub, 2004)
Assistive Tech: Cyberdine Exoskeleton Suit HAL

• “First nursing-care robot certified ...based on a draft version of an international safety standard for personal robots” (2013)
  • http://www.33rdsquare.com/2013/07/cyberdine-exoskeleton-suit-hal-meets.html
Q2

Using a scenario discussed in the reading, if a senior citizen in an exoskeleton suit were to kick and injure a nurse, which of the following answers BEST encasulates the set(s) of potentially conflicting values that are implicated?

a) autonomy of the elderly VS dignity
b) the feelings of the exoskeleton suit VS safety of caregivers
c) need for social interaction VS objectification of seniors
d) autonomy of the elderly VS accountability
e) would pay to watch mechanized elders VS robotic nurses on PayPerView...

Leo
Rate Quiz Question 2

A. Excellent
B. Very Good
C. Good
D. Acceptable
E. Poor
Q3

Which of the following was not listed in the Sharkey and Sharkey paper as a major issue that must be addressed before fully deploying robot technology in eldercare?

A) Neglect of seniors due to people thinking their physical and emotional needs are being fulfilled entirely by the robots.
B) Loss of freedom when robots are allowed to restrict seniors from certain behaviors.
C) Loss of privacy.
D) Deception and infantilisation of the elderly resulting from encouraging them to interact with robots as companions.
E) Question of responsibility if a robot causes injury to a senior.

Paul
Rate Quiz Question 3

A. Excellent
B. Very Good
C. Good
D. Acceptable
E. Poor
Q4

Which of the following are the main concerns regarding the application of robots for monitoring the elderly?

I. Infringement upon the right of the elderly to privacy in their own home
II. High cost to produce robots to monitor the elderly
III. Reduction in human contact and companionship of the elderly person
IV. The elderly feeling a loss of freedom and autonomy from a robot supervising them in their home
V. Difficulty determining at what point an elderly person needs a monitoring robot (in their prognosis)

a) I, II, III
b) II, III, V
c) I, III, IV
d) I, II, V
e) none of the above
Rate Quiz Question 4

A. Excellent
B. Very Good
C. Good
D. Acceptable
E. Poor
Q5

Which approach to designing caregiving robots seems to be the most promising in terms of not reducing the quality of life of a senior and still accessing the advantages afforded by the caregiving robots?

a) authoritarian approach - the robot has complete control over the safety of the senior

b) utilitarian approach - the robot takes actions to ensure the overall best outcome for the senior (in the robots point of view)

c) value sensitive approach - the robot only completes tasks that are appropriate for the senior's condition

d) submissive approach - the senior is in complete control of the robot

Pearson
Rate Quiz Question 5

A. Excellent
B. Very Good
C. Good
D. Acceptable
E. Poor
Sanyo Robot Bathtub

Robot Ethics Survey

• Should robots replace humans for some tasks in the physical care of the old?
• Top reason: “Yes because it should be used if it helps ensure the lifestyle of the community. In this case because there isn't enough people to support them it should be used.”
Eldercare Robotics: A Popular Solution
Monitoring

Cameras vs Big Data
Robot Companions
Par, Primo Puel & Ollie
Q6

Which of the following benefits of robot companionship for the elderly do the authors of the paper NOT advocate?

a) providing a topic of conversation between the senior and their visitors

b) making the senior believe that the robot is a real living being so that they feel looked after

c) helping mentally stimulate the senior, helping alleviate age-related memory loss and confusion

d) stimulate more conversation between elders living together in a retirement home

Michael W.
Rate Quiz Question 6

A. Excellent
B. Very Good
C. Good
D. Acceptable
E. Poor
What is Sparrow's view on robot pets for the elderly?

a) He sees no benefit in having robot pets for the elderly
b) He argues that even though there are benefits it should not be encouraged. We should not deceive the elderly because it is unethical.
c) He firmly believes that robot pets have no disadvantages and are a great way to help elderly find companionship.
d) He argues that chea pets are the future not robot pets.

Imran
Rate Quiz Question 7

A. Excellent
B. Very Good
C. Good
D. Acceptable
E. Poor
Sparrow’s Deontological Objection

• The relationships of seniors with robotic pets “are predicated on mistaking ... the robot for a real animal.
  – to benefit significantly ... they must systematically delude themselves regarding the real nature of their relation...

• Violates a (weak) duty ...to ourselves to apprehend the world accurately.

• The design and manufacture of these robots is unethical...” (Sparrow 2002).
Ollie

• An Affordable Dementia Therapy Robot
• $500 (Paro: $5,000)
• http://designed.mit.edu/gallery/view-2013-Ollie.html
Deception

• “Ollie is an otter because humans know that otters are cute and familiar, but generally, we don’t know enough about otters for anything about Ollie to be obviously unnatural. This line of thinking, incidentally, is why Paro is a harp seal instead of a cat and Pleo is a dinosaur instead of a dog.”
Discussion Question

Sharkey raises that companion robots that respond to interaction with social cues can be considered a form of deception - that these robots are "pretending" to be a real human or animal.

• In your opinion, would such behaviour be deceptive for the seniors you know?
More Abstract Ethical Question

• When is an Act, $A^R$, done by a robot, different from $A^*$ done w/o robot intervention?
  – “a carer [using a remote controlled robot to] restrain an elder”?
  – E.g. if talking to my dog is deceptive, no designer/manufacturer to blame!
Evaluative Frameworks

Deontological Focus on
• Agents,
• Acts,
• Relationships

Utilitarian/Distributive Justice
• Broader framework
What’s missing from the evaluative frame?

• Frame: Robot vs. preferences/rights of seniors

1. For who/what do robots substitute?
   – Immigrants and low wage caregivers
   – Real pets (companion animal)
   – Welfare of each counts in global utilitarian calc
What’s missing from the evalutive frame? - 2

2. Cost of human vs. robot interaction
   – “It costs banks an average of U$1.25 to conduct an ATM transaction as opposed to U$4.25 at the branch”

• Preferences of seniors ignore costs
  – I may prefer a teller to an ATM, but when who is paying extra cost?
  – Because seniors have right...
Cost and Institutions

- < $1K
- Roomba
- Fall detector app
- Ollie
- ...Home support affordable

- > 100 K
- Bathbot
- Bed Lifter
- ...only affordable in institution
- Right to refuse institution? Walker?
Rights/Justice

• A constraint on utility
  – Different from duties

• E.g. Rawls’ social contract:
  – Political religious rights prior
    • Seniors easy case: excess political influence!
  – Worst off must benefit

• For late life heath care: Dworkin
**Dworkin’s Healthcare Social Contract**

- Insulation of health care vs. competition with other goods
- “We should aim to make collective, social decisions about the quantity and distribution of health care so as to match, as closely as possible, the decisions that people in the community would make for themselves, one by one, in the appropriate circumstances, if they were looking from youth down the course of their lives and trying to decide what risks were worth running in return for not running other kinds of risks.” (Dworkin, 1992)
- ~ Veil of individual ignorance/full social information
Which Insurance Contract?

A. Gold: “Provide life-sustaining equipment once one had fallen into a persistent vegetative state”

Most expensive
Which Insurance Contract?

In most developed countries, a major fraction of medical expense - in the United States it approaches forty percent of the health care budget - is spent on people in the last six months of their lives...

B. [Silver]...insurance that would keep them alive, by heroic medical intervention, four or five more months, in the condition in which most such patients undergoing that intervention live, compared with the value the premiums necessary to purchase that insurance could add to their earlier lives if spent in other ways.
Which Insurance Contract?

C. Bronze: Support seniors with a right to benefit from any cost-saving innovation (instead of making everyone (of all ages) as well off as possible).

D. Plastic: make everyone (of all ages) as well off as possible.
Vote on Insurance

A. Gold
B. Silver
C. Bronze
D. Plastic
Our Results
Course Evaluation

• https://eval.ctlt.ubc.ca/arts.
References


