HRI Reading Group

@ Instituto Superior Técnico

Meeting #6 (26 Nov 2018)

Paper

Meerbeek, B., Saerbeck, M., & Bartneck, C. (2009). **Iterative design process for robots with personality.** In Proceedings of the AISB2009 Symposium on New Frontiers in Human-Robot Interaction Edinburgh pp (Vol. 94, p. 101).

Personality definition

Personality: the set, characteristic of an individual, of behaviors, cognitions, and emotional patterns that evolve from biological and environmental factors.

Properties:
- Consistent throughout lifetime
- Before some age, it may be fluid

How to assess it?
- Big five
- MBTI
- Personality 16
- TIPI
- ...

Note: Personality ≠ Personality trait

Can robots have personalities?
Or are they only perceived as having one?

From paper: "What is the product or 'who' is the product?"

Artificial personality?

Are robots like actors expressing personality traits, or can they have a personality?

Personality is not a clearly defined concept in humans, and hence it is hard to answer this question in regards to robots. We believe that robots can possess personality traits, and not just evoke them (unlike artificial emotions). E.g., a simple reinforcement learning agent can be more or less "open to experiences" (safe learning, Rmax learning), …

Design Process

- **Create a personality profile**
  +: Tailored to what users expect
  -: People don't always know what they want; Want they want may not actually be what is best for the application; if the robot will not be built as part of the design process, then it is better to show the robot physically.

- **Get inspiration for expressions**
  +: Idea of using actors; Camera metaphor was cool; Agnostic to the robot appearance capabilities may be helpful
  -: Cultural; Replication; Agnostic to the robot appearance capabilities may be restrictive

- **From actor to robot expressions**
  +: Abstraction step; Can be used for different robots
  -: Preferable to hire artists as well in this stage

- **Visualize in 3D animation**
  +: If robot is not built, very cost and energy-efficient
  -: Physical interaction matters; Fine-tuning could have been introducing

- **Evaluate with Think-out-loud**
  +: Powerful to get insight about interaction specifics and spontaneous attitudes
  -: Lack of quantitative measures; Subject to pleasing the experimenter

Individual sharing

Based on one of your previous projects/scenarios, discuss the following questions to relate artificial personality to your own investigation:

- Was there any personality trait deliberately programmed into your agent?

- If yes, was it perceived? If not, was any personality trait perceived on the agent?

- If you had to implement it again, how would you (re)design it?

- Can your agent benefit from (an) additional personality trait(s)?

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Meeting #7 (3 Dec 2018)