

HRI Reading Group

@ Instituto Superior Técnico
Spring 2019

Meeting #8 (April 12, 2019)

Black Mirror

Black Mirror TV Show, Ep “**Be Right Back**”, season 2.

Summary

- Boyfriend Ash passes away
- Grief
- Friend signs her up for new technology meant to emulate lost ones
- First, resists
- Positive pregnancy test → Activates the technology
- V1: chatbot
- V2: voice-based AI
- V3: geminoid robot Ash'
- Relationship degrades → Moves Ash' to the attic
- Few years later, daughter has a short interaction with Ash'

Sharing impressions (brainstorming)

- Reminds me of Avatar of Holocaust victim (David Traum's work at USC)
- Problem of companionship
- Issue of preserving the memories
- Filling a gap
- Long distance relationships
- Theatre for re-enacting humans from the past
- How would it feel for a person to interview "themselves"?
- Ethical concerns
- Frankenstein
- Ash, synthetic android (Alien)

Technological credibility

Credible / Realistic	Not so credible / Unrealistic
Chatbot (very close to reality, they are not conversational and do not have memory)	Cognitive modeling and super fast learning/adaptation (cliff example)
NLP and NLU (not there yet)	Interaction modalities of the robot (from body fluid movements to theory of mind)
Voice synthesis if credible (but with so few data? And noisy data?)	
Voice recognition	

What are HRI-related aspects that are evident in this episode?

- Uncanny valley: fingerprint, mole, didn't breathe, sleep, could swallow food but didn't need to → the monster in the attic
- Dissonance between the personality of a boyfriend and its role (which was not as a boyfriend)
- Companionship, sex-robot, replacement of someone
- Novelty effect
- Attachment
- Anthropomorphism (from an alternative angle)
- Testing technology limits (curiosity-driven behavior)

Emotional evolution: Initial stages



Emotional evolution: Later stages



Emotional consequences in character's life



Social isolation

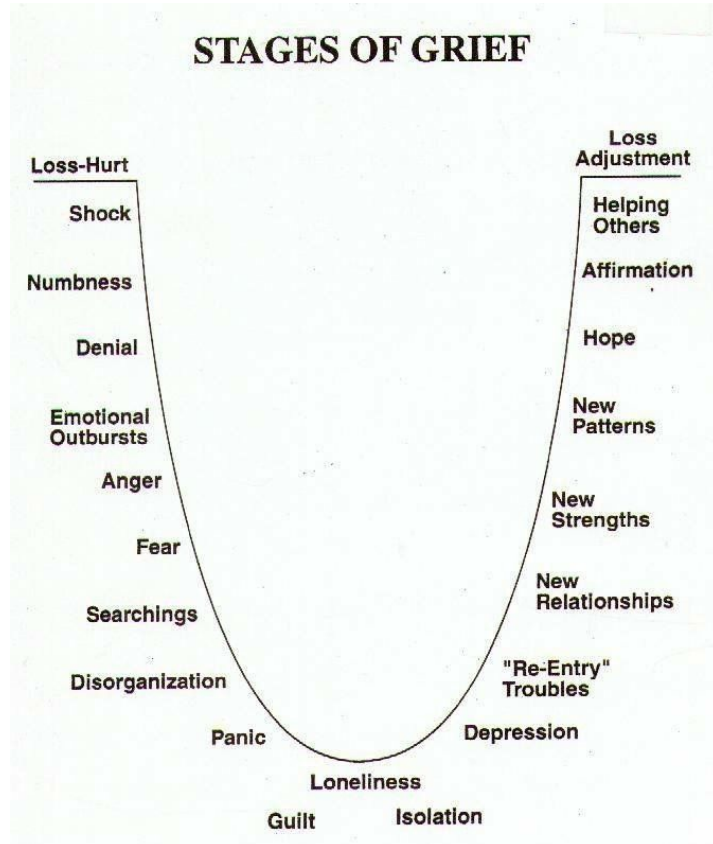


Maladaptive social functioning
for the daughter

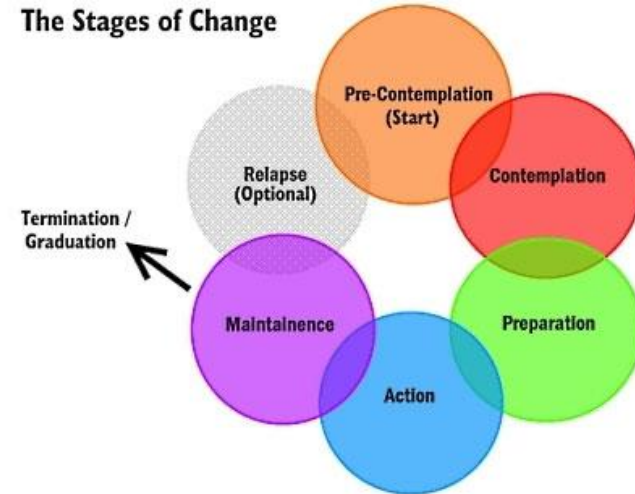


Unhappiness

Emotional evolution: some relevant models



The Stages of Change



Brainstorming: alternative endings

- Stopped using Ash
- Ash jumping into the cliff
- She dies and Ash replaces her
- Assume socially that she is dating a geminoid of the dead boyfriend

Group exercise

Come up with a design of a technological artifact for grieving

List the ethical guidelines associated with its development.

Group 1: Web-based support groups to contact and share other people with similar experiences. (Other ideas: blanket, PARO). Guidelines: not impeding to move on, beware of potential addiction, connect people and not foster isolation

Group 2: Smart software that adaptively helps you go through the stages of grief, based on monitoring data. Ethical guidelines: unlocks possibilities based on your emotional state and grief stage, gives you the choice, doesn't impose.

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Meeting #9 (26 April 2019)