

robopec

Christophe Rousset

Emotions in Human / Robot interaction

Summary

- ▶ Why to express emotions ?
- ▶ How to express emotions without being scary ?
- ▶ Panel of emotions
- ▶ Perception of emotions
- ▶ The social interaction
- ▶ Some present and future applications
- ▶ Reeti, an expressive Robot

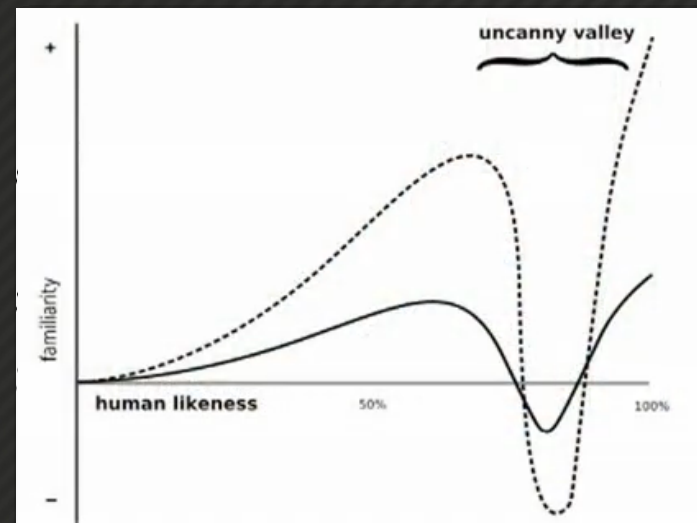
Why to express emotions ?

- ▶ Attractivity / sympathy of the robot
- ▶ Non verbal interaction
- ▶ Without expressivity / With expressivity



How to express emotions without frightening ?

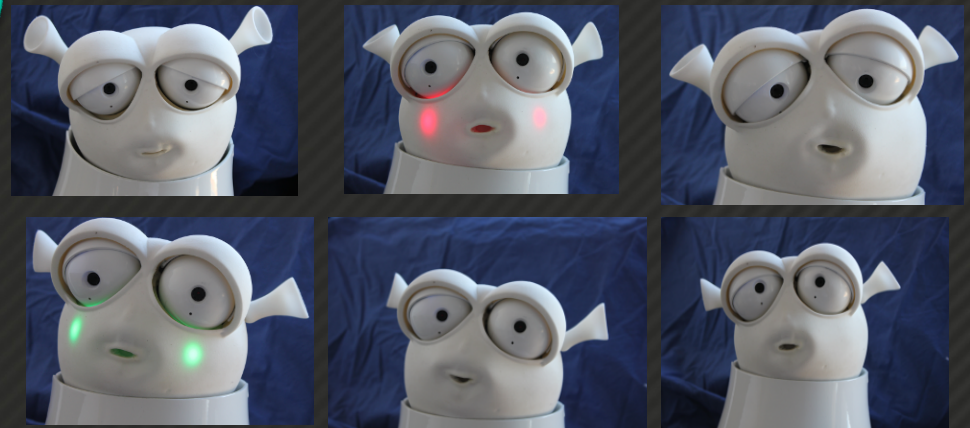
- ▶ Uncanny Valley
- ▶ The Design → Avatar
- ▶ Movements / Face / Colors



- ↓
- ▶ Eyelids / Eyes / Mouth / Neck / Ears

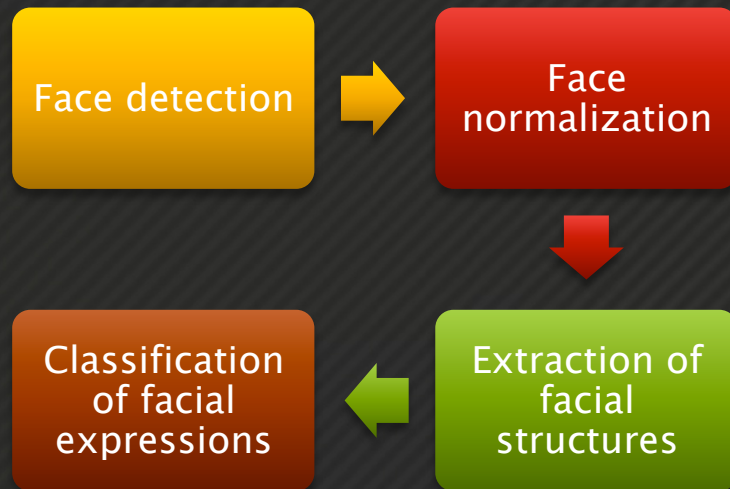


Panel of emotions



Perception of emotions

- ▶ Facial expressions



- ▶ Body expressions

- ▶ Multimodal perception

- ▶ Analyse of dynamical behavior

Social interaction sociale through emotion

- ▶ Which « intelligence » between perception and expression of emotion ?
- ▶ Elementary reactive AI
- ▶ Intelligent behaviors function of :
 - ▶ history
 - ▶ social context
 - ▶ state of the robot (temper, personality)
- ▶ More Researches in AI ...

Some applications

- ▶ Promotion on booth or at entrance
 - Presentations, animations
 - Interactive Quizz



Some applications

- ▶ Education :
 - Educative games
 - « Assistant » of the teacher
 - Teaching support
- ▶ Video games
 - Robot avatar of the game
 - Robot presenter of the game
- ▶ Videosurveillance and « intimidation »

Future applications

- ▶ Research in :
 - Natural human-machine Interaction
 - Robotics therapy
 - Help for lonely people (surveillance, interaction, web access, ...)
 - Social natural interaction
 - ...

Reeti, an expressive robot



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