EMOTIONALLY AUGMENTED SPACE

Maxim Safioulline

ABSTRACT

* Connection between a human and an environment

* Inherent difference in human and machine behaviour

* Translating human emotions into media: the ultimate goal of art?

* Personalized artistic experience

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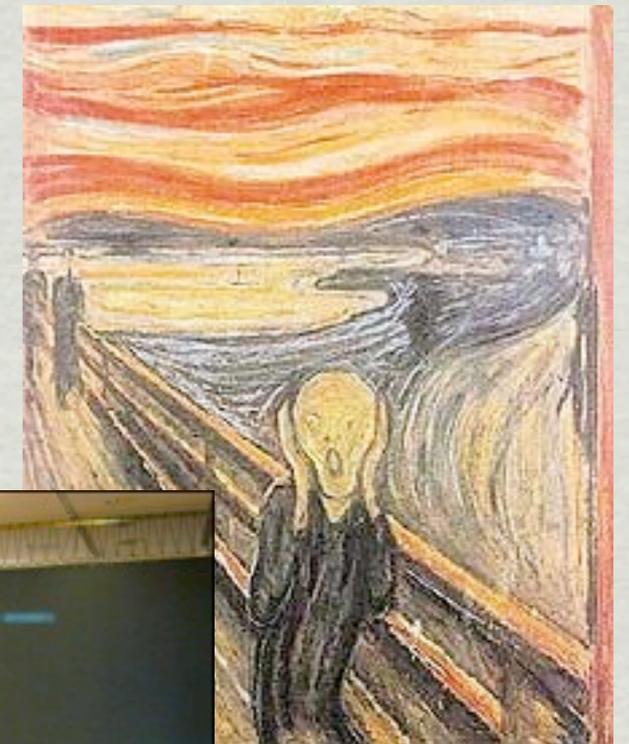
QUESTION

How can augmented interactive spaces improve human emotional conditions?

CONCEPT

An interactive environment that responds to the emotional state of the user and responds with a series of stimuli to alter it

* Recognizes the emotional state - "understands"

* Allows users to develop relationships with the environment

* Alters the emotional state of the user based on the needs of the user

USER

* Primary: people with emotional and psychological disorders

* Secondary: urban dwellers living in modern technology-enhanced environments dealing with stress and loneliness

* Secondary: people looking for entertainment or distraction

RESEARCH

✳ Publications and academic studies

"Building HAL: Computers that sense, recognize, and respond to human emotion" Rosalind W. Picard@ MIT Media Lab

"Affective Dynamics in Responsive Media Spaces" by Wolfgang Reitberger @ Georgia Institute of Technology

"Hybrid Interaction in Unobtrusive Augmented Reality" by Alex Olwal @KTH (Royal Institute of Technology), Stockholm

"Emotionally Responsive Robotic Avatars" by David Burden and Stuart Slater @University of Wolverhampton

"Analysis of Emotion Recognition using Facial Expressions, Speech and Multimodal Information" Carlos Busso et. al @Emotion Research Group@University of Southern California, Los Angeles
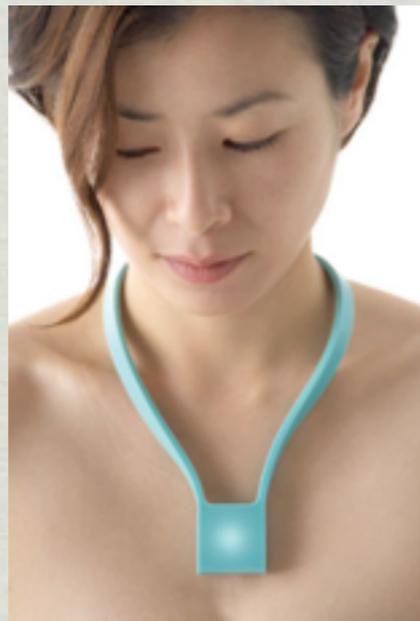
RESEARCH 2

* Projects:

  "Mood Chair" by Aether & Himera

  Philips Emotion Sensor and Emotion Jacket

  "Emotiv" BCI

  Hanson Robotics

  ScoutLabs, StubHub, Jodange

SYSTEM ARCHITECTURE

TWITTER FACEBOOK BROWSER HISTORY

CV & FACE RECOGNITION

BCI AND BODY SENSORS

USER INPUT

PROCESSING RANDOM / THERAPEUTIC / SELF-ASSIGNED

MUSIC SYSTEM　　　**ART WALL**　　　**EMOTION CHAIR**　　　**POEM MESSENGER**

SCENARIO

SELECT YOUR MOOD

GO

interface with "anticipation" option selected

sry

"Call Me"
by Blondie

Last nite I lay in bed
looking at the stars
the beautiful sky and
the endless horizon ..... .
and suddenly I thought .....
where the hell is my roof?

YES   NO

PROTOTYPE TESTING

✳ "Cultural Probe" methodology

Perceived usefulness of the system

How much trust do users have for computers when it comes to humane aspects

How much input are users willing to provide in order personalize the system?

COMPUTER MAGIC

RESTRICTED ACCESS TO PERSONAL INFO

TRUST IN HARDWARE BUT NOT IN SOFTWARE

DEVELOPMENT

* Collaboration with psychologists and psychiatrist

* Playful interactions

* Further technology research

* No clear therapeutic implications

* Expensive and complicated, i.e. not ubiquitous

THANK YOU
especially the ones who provided the much needed feedback:)

questions?