Alien Presence
Using Artificial Intelligence to Make Things Strange

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Combine AI Research and Art Practice

Artistic practice
Wrestling with meaningful human experiences suggests new AI research directions…

Expressive AI

AI research
AI methods and technology suggest new audience experiences…
Examples

Goals of Alien Presence

- Offer participants opportunities to reflect on their own activity through making strange

- Alien Presence accomplishes this by providing a non-human sense of aliveness and awareness

- Use AI techniques to
  - Perform an idiosyncratic, author-given interpretation
  - Generate an affectively and aesthetically engaging display

- The goal is not to model goals and tasks (ubiquitous computing)

- The goal is not to encode sensed variables in a display (information visualization)
Cycle of Interpretation

- Sensing
- System Interpretation
- Generation
- Display
- Participant Interpretation

Case study: Office Plant #1

- Creates a background presence
- Sorts incoming email into social and emotional categories
- Behavior is a function of the email received

Collaborator: Marc Böhlen, Media Studies, SUNY Buffalo
Architecture

Sensing
Sense individual workday mood
Proxy: Full text of email stream

Interpretation
Statistical text classification
Rules mapping to FCM

Generation

Display

Case Study: Tableau Machine

Background presence reflecting the mood of the home
Uses cameras positioned throughout the home to sense physical activity in salient “zones”
Generates a display as a function of the activity in these zones

Collaborators: Zach Pousman, Mario Romero
Architecture

Sensing
Rule-based system generates display elements as a function of energy, density and flow

Interpretation
Map temporal patterns of region activity to social energy, density, and flow

Generation

Display

AI for Ambient Intelligence

- AI supports complex mappings between sensing and display
- Different architectures offer different affordances to the designer
- The affective presence agenda informs work in machine interpretation while avoiding AI-completeness
- Support co-interpretation – avoid simple one-to-one mappings or incoherence
Research Issues

• Balancing authorship and empirical study in feature selection and interpretation

• Generating a sense of an alien “other” while avoiding anthropomorphism

• Matching expressive affordances of display to the interpretation

• Evaluating alien presence

Interaction Logics

• Currently games are based (almost) solely on graphical logic
  • Movement
  • Collision detection

• Games are computer graphics made *playable*

• So all topics a game might take on must be expressed as movement and collision of graphical objects
  • “Skinning”
Many Possible Interaction Logics

- **Simulation**
  - Cause and effect chains in intricate, recursive networks
  - Simulation has been made playable (Will Wright, wargames)

- **Text**
  - Word relationships (synonyms, antonyms, hyper/hyponyms, etymology, ...), meaning, ...

- **Character & Narrative**
  - Emotion, backstory, through lines, relationships, ...
  - Premise, tension, resolution, economy, ...

- **Rhetoric and ideology**
  - Bias, communicative intent, social class, politics, ...

- **Everyday life**
  - Social interaction, waiting, resting, fighting, boredom, ...