

LCC 6310
The Computer as an
Expressive Medium

Lecture 24

Overview

Project 5 questions?

Discuss readings

Readings for next week

Project 5

Due tomorrow!

In this project, build a collection of simple AI agents that interact with the user, each other, and their ecosystem, to give the illusion of life. You can build upon the provided framework of Braitenberg vehicles, which can produce complex agent behaviors, or code your own simulation.

Readings

Summary presentations & questions for discussion

Video Games and Computer Holding Power - Turkle (NMR pp.499-514)

The Six Elements and the Causal Relations Among Them & Star Raiders: Dramatic Interaction in a Small World - Laurel (NMR pp.563-573)

From *Theater of the Oppressed* - Boal (NMR pp.339-352)

Sherry Turkle



Clinical psychologist and Professor of Science, Technology & Society at MIT

She studies the psychology of people's relationships with computer technologies and has written a number of books on aspects of this:

The Second Self: Computers and the Human Spirit (1984)

Life on the Screen: Identity in the Age of the Internet (1995)

<http://web.mit.edu/sturkle/www/>

Turkle on video games

"When you play a video game you enter into the world of the programmers who made it. You have to do more than identify with a character on the screen. You must act for it. Identification through action has a special kind of hold. Like playing a sport, it puts people into a highly focused, and highly charged state of mind. For many people, what is being pursued in the video game is not just a score, but an altered state."

(Sherry Turkle, Video Games and Computer Holding Power)

Talks about video games as...

Drugs, metaphysical machines, perfect mirrors, perfect contests

Talks about space war, pong, asteroids, pac man, joust, adventure

Working versions in the Java Arcade Emulator

<http://web.utahnet.at/nkehrer/jae.html>

Brenda Laurel



Researcher/designer in new media, games, interactive narratives and areas of HCI. Worked in gender and technology at Interval in the 90s and spun off a games company for girls (Purple Moon - bought by Mattel in 1999).

Her PhD thesis proposed an architecture for computer-based interactive fiction and formed the basis for her book Computers as Theater (1991). She also edited The Art of Human-Computer Interface Design (1990).

http://www.tauzero.com/Brenda_Laurel/

Computers as theater

Digital media technologies provide a communication medium that is built on culture - metaphors, storylines, action.

Computers as theater:

Focus on directing actors and actions in a story

Designing digital technologies is like writing, casting and directing a play

Interacting with digital technologies is like playing a role or character

Laurel proposes an Aristotelian framework to coordinate or direct the design and interaction with computer systems, e.g. games

Aristotle's six elements

"One of Aristotle's fundamental ideas about drama (as well as other forms of literature) is that a finished play is an organic whole. He used the term organic to evoke an analogy with living things. Insofar as a whole organism is more than the sum of its parts, all of the parts are necessary for life, and the parts have certain necessary relationships to one another. He identified six qualitative elements of drama and suggested the relationships among them in terms of formal and material cause." (p. 564)

Six elements

Laurel examines the six elements and causal relations of Aristotle's model versus that of human-computer activity:

Action, character, thought, language, melody or pattern, spectacle or enactment

"Aristotle described the fundamental material element of drama as 'spectacle' - all that is seen." (p. 564)

Thought and language

Relationship between thought and language

"The thought of a play can appropriately only deal with what is already manifest at the levels of enactment, pattern and language." (p. 568)

i.e. language influences thought because it is not good drama if a character in a play suddenly thinks about something outside of the story world.

Closed universes

"Plays, like human-computer activities, are closed universes in the sense that they delimit the set of potential actions. ...it is key to the success of a dramatic representation that all of the materials that are formulated into action are drawn from the circumscribed potential of the particular dramatic world. Whenever this principle is violated, the organic unity of the work is diminished, and the scheme of probability that holds the work together is disrupted." (p. 568)

Characters and action

"In drama, character may be defined as bundles of traits, predispositions, and choices that, when taken together, form coherent entities." (p. 568)

Relationship between characters, action and agency

"In a purely Aristotelian sense, an agent is one who takes action. Interestingly, Aristotle admits of the possibility of a play without characters, but a play without action cannot exist. This suggests that agency as part of representation need not be strictly embodied in 'characters' as we normally think of them - that is, as representations of humans. Using the broadest definition, computer programs that perform actions that are perceived by people can be said to exhibit agency in some form." (p. 568-569)

Knowledge Navigator agent

Apple's vision of a conversational computer shown in a 1987 concept video called the "Knowledge Navigator"

Laurel points out that people identified better with a later "cartoon" version of Phil, the knowledge navigator interface agent, than with the original live-actor version shown in the original video.

[[Concept Video](#)]

Phil



Augusto Boal



Theatrical director, writer and theorist from Brazil.

Began experimenting with participatory theater in Rio de Janeiro in the 50s & 60s, going beyond the stage to organize performances in the streets, factories, churches etc. to reach the people of the favelas.

In 1971 he attracted the attention of the military dictatorship and was arrested, tortured, imprisoned, and finally sent into exile.

Has written a number of books on his methods, including the Theatre of the Oppressed (1979) and Games for Actors and Non-Actors (1992).

Theater of the Oppressed (TO)

"Oppression is when one person is dominated by the monologue of another and has no chance to reply." - Augusto Boal

Core ideas for TO:

Monologues create oppression

Theater can transform these monologues into dialogues

TO provides tools for expression using theater and Boal has evolved forms of theater workshops that bring the audience into an active relationship with the performance.

Emphasis on dialogue

TO is rooted in Paulo Freire's pedagogical principles (described in his book Pedagogy of the Oppressed) which emphasize dialogue:

- see the situation lived by the participants
- analyze the root causes of the situation, including both internal and external sources of oppression
- explore group solutions to these problems
- act to change the situation

Contrast with Aristotle/Laurel

"...the poetics of Aristotle is the *poetics of oppression*: the world is known, perfect, or about to be perfected, and all of its values are imposed on the spectators who passively delegate power to the characters to act and think in their place."

"The *poetics of the oppressed* is essentially the poetics of liberation: the spectator no longer delegates power to the characters either to think or to act in his place. The spectator frees himself: he thinks and acts for himself! Theater is action!"

(Augusto Boal, p. 352)

Readings for next week

For **Tuesday** next week:

Concepts: Java for real continued

Next **Thursday** is Thanksgiving!

Happy Thanksgiving! (and no readings...)

But for the **Thursday** after that...

Two students: present one reading each

Everyone else: prepare one discussion question for each reading

The Lessons of Lucasfilm's Habitat - Morningstar & Farmer (NMR pp.663-678)

The Work of Culture in the Age of Cybernetic Systems - Nichols (NMR pp.625-642)