# Liberal democracy

- liberal – individual rights, social equality


- democracy – participation of people in decisions that govern their lives

# Habermas, "The Public Sphere" (1964)

- public sphere is the arena in which people affect government

- requires equal access, and access to information

- competes with "publicity"

- society is private – e.g. nonprofit orgs

# Howard Rheingold (1947- )

- co-founder of the Well (1985)

- interactivism

- smart mobs

- cooperative technology

# Skinner, Beyond Freedom and Dignity (1972)

- tradition versus science

- dangers of individualism

- making the environment as an alternative – social engineering

# Lessig (2000)

"Code is law"

# Benkler (2006)

*The Wealth of Networks: How Social Production Transforms Markets and Freedom*

# Jonathan Zittrain (2008)

## *The Future of the Internet and How to Stop It*

# Conclusions

# The Four Module Questions

Can computers think?

Is language innate?

Are people generally rational?

Is information technology pro-social?

# The Bias in Symbolic Systems

Can computers think?

    yes

Is language innate?

    no

Are people generally rational?

    yes

Is information technology pro-social?

    yes

# More practical questions

How can you design a voice interface that will work well for people?

How can you design an ontology for events in a calendar program?

How can you design an experiment to see whether an interface change will improve usability?

How can you design a computational model that will predict human responses on a task?

How can you design a program that will correctly parse a sentence?

# Important things we really haven't talked about (just examples)

Newell and Simon

eye movements

ostension

grammar formalisms

parallel versus serial processing

local versus distributed representations

programming languages

# Core methods and their markers

Philosophical – definitions, claims, arguments, analysis

Formal – definitions, axioms, theorems, proofs, syntax, semantics, models

Computational – data structures, algorithms, programs, frameworks, complexity

Observational – independent and dependent variables, qualitative and quantitative measures, hypotheses, data, analysis

Experimental – conditions, subjects, hypotheses, data, analysis

# Characteristics of the Symbolic Systems Program

Interdisciplinarity

Problem/question-based, not methods-based

Application-oriented

- computation<->cognition
- theory to real life

# The Sym Sys trajectory 1980s

cognitive

science

|

v

- - >  symbolic systems  <--

      |                        |

artificial intelligence         human-computer

interaction

# The Sym Sys trajectory 2000s

cognitive

science

A

|

---  symbolic systems  ----

|                                    |

v                                    v

artificial intelligence        human-computer

interaction

# What is a symbolic system?

formal logic?

language?

Turing machine?

computer program?

person?

mind?

brain?

society?

# Practical advice

Get to know faculty – find an advisor

Do some research and/or independent study

Plan ahead

Don't take too many courses

Read your SSP email

Go to the forum, other lectures, and dinners

Attend SSP social events

Live in Arroyo

# Practical advice (continued)

Practice reading and listening – learning is a skill!

Think of yourself as the young version of whatever you want to become

Talk to people about what you are studying

Watch what excites you

Don't get too caught up in how much you like instructors

Learn time management