

For Friday

- No reading
- Program 5 due

Program 5

- Any questions?

Can Machines Act Intelligently?

- The Turing test

Argument from informality

- Human behavior is far too complex to be captured by any simple set of rules, and computer can only follow sets of rules, so computer cannot generate behavior as intelligent as that of humans.

Argument from disability

- What is this?
- What responses can we make?

Gödel's Incompleteness Theorem

- Not necessarily applicable to computers, which aren't **really** Turing machines.
- Being able to establish mathematical truth may not be the same as acting intelligently.
- Humans are inconsistent in their thinking.

Issues Raised

- Need for background knowledge to achieve good generalization from examples
- Learning should be possible without a teacher.
- Learning should be possible in the face of a multitude of features.
- Intelligent agents should be able to look for relevant information.

Could machines ever really think?

- The mind-body problem
 - Dualist
 - Monist or materialist

Problems with dualism

- Are you willing to accept the existence of an immaterial soul?
- Note that the concept of the brain as hardware and the mind as software is a dualist concept.

Problems with materialism

- Free will.
- Consciousness

Thought Experiments

- Brain in a vat
- Brain prosthesis
- The Chinese room