

MIND: Thinking Machines (Part 1)

Lecture 15

Phil 1000, Fall 2008
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Quick Review

- Review: Searle's Animal Minds
 - Consciousness, Intentionality, and Thoughts
 - Importance of Language...
 - Not Behavior, but Internal Mechanisms
 - Analogy, levels, and explaining other minds?
- Today: Can Machines Think?
 - The Turing Test
 - Computational Minds
 - What else?

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Artificial Intelligence?

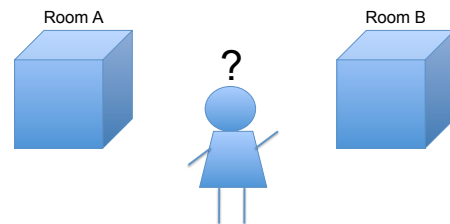
- AI: the science of getting machines to perform jobs that normally require human-like intelligence.
- What is intelligence?
 - Being sensitive to information in the environment and responding adaptively, even to non-regular information.
- Some think that by constructing machines that act intelligently, we have constructed genuine intelligence; machines with minds, thinking machines.
- Okay: Are they genuinely intelligent? Are machines thinking? Do they have minds?

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The Turing Test

(a.k.a., the imitation game)

Suppose we have an "intelligent" computer or machine in one room and an intelligent human in another room. If we (you) could communicate with both rooms (without direct visual/auditory contact) and *can't distinguish between the machine and the human*, then the machine should be considered genuinely intelligent (have a mind).



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Do You Agree with Turing?

Uses behavioral criteria, exclusively. That is, being intelligent is equivalent to acting intelligently.

- Is a simulation real?
- If behavior alone doesn't indicate real intelligence, then what else is needed?

(Remember: What did Searle say about behavior and other minds?)

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Mind = Internal Mechanisms

- Its not just that a thing behaves intelligently, but how that behavior is caused:
 - Searle: Intentionality and Thought
 - Searle: A mind is caused by the brain (is the brain)
 - Language: Units of Meaning & Productivity
- Computational Minds
 - Symbol manipulating machines
 - Information is processed in certain ways:
 - input-storage & manipulation-output

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Lycan's Challenge: Harry

- Imagine a robot (inorganic), "Harry":
 - Acts intelligently (passes Turing test); and
 - Processes information similarly to humans
(perceives the world, stores information, acts on that information, has goals, etc.)
- Is Harry a person? (Lycan says, yes.)
 - Intelligent?
 - Conscious?

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Objections

- Harry is made of different stuff than humans.
- Machines only do what they are programmed to do; not free like humans.
- Harry don't have *qualia*; no inner conscious life.

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Lycan's Replies

- Harry is made of different stuff than humans.
 - Human- or organic-chauvanism (racism)
 - Example of "Henrietta"
- Machines only do what they are programmed to do; not free like humans.
 - Free? Caused by internal states...Harry is, too.
 - Unpredictable? Complex enough to be unpredictable and learn (self-programming behavior)
- Harry doesn't have *qualia*; no inner conscious life.
 - What reasons do we have for thinking this?
 - All the same reasons as we have for other persons, and animals.

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What are we asking for?

- Why not animal minds? Why not intelligent machines? Immortal souls? What?
- Are we being unduly anthropocentric in answering the question about other minds, animal or machine?

What? Are you afraid of robots taking over the world?

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Loebner Prize in Artificial Intelligence



- Since 1991, an annual prize of \$2000 and a bronze medal is awarded to the most human-like computer. The winner of the annual contest is the best entry relative to other entries that year, irrespective of how good it is in an absolute sense.
<http://www.loebner.net/Prize/loebner-prize.html>

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Next Time

The Mystery of the Chinese Room

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