The Turing Test and Its Discontents

CSCI 5582, Fall 2005
Administrivia

• **Class Website:**
  http://l3d.cs.colorado.edu/~ctg/classes/ai07/Home.html

• **Textbook:**

• **Prerequisites:**
  An algorithms course; programming experience

• **Assignments/Grading:**
  5 problem sets (70%), final exam (30%)

**ASSIGNMENT FOR TUESDAY:** READ RUSSELL+NORVIG, CHAPTER 1
"Simply admit that organized matter is endowed with a motive principle, which alone distinguishes it from unorganized matter... and that in animals everything is dictated by the diversity of this organization, as I have sufficiently proved. That is enough to solve the riddle of the substances and of man. We can see that there is only one substance in the universe and that man is the most perfect one. He is to the ape and the cleverest animals what Huygens' planetary clock is to one of Julien Leroy's watches."

-- J. Offray de la Mettrie,
"Machine Man" (1747)
He asked me if I hadn't in fact found some of the dance movements of the puppets... very graceful. This I couldn't deny.... I asked him if he thought the operator who controls these puppets should himself be a dancer or at least have some idea of the beauty in the dance. He replied that if a job is technically easy it doesn't follow that it can be done entirely without sensitivity. The line the centre of gravity has to follow is indeed very simple, and in most cases, he believed, straight.... But, seen from another point of view, this line could be something very mysterious. It is nothing other than the path taken by the soul of the dancer." [Emphasis in the original.]

-- Heinrich von Kleist, 1810
"The overriding desire of most little brats... is to get at and see the soul of their toys... On the more or less swift invasion of this desire depends the lifetime of the toy. I cannot find it in me to blame this infantile mania: it is the first metaphysical stirring." [Emphasis in the original.]

-- Charles Baudelaire, 1853
One of the most challenging suspenseful films of all time.

Michael Haneke's

DEAD

OF

NIGHT
An (approximate) syllabus

- Aug. 28-30 History and Philosophy of AI
- Sept. 4 - Sept. 13 Search and Problem Solving
- Sept. 18 - Sept. 25 Classical logic
- Sept. 27 - Oct. 16 Reasoning under uncertainty
- Oct. 18 - Nov. 2 Learning
- Nov. 6 - Nov. 15 Vision and Language
- Nov. 20 - Nov. 22 Artificial Life and Robotics
- Dec. 4 - Dec. 13 Game Theory
The “Imitation Game”

Q: Please write me a sonnet on the subject of the Forth Bridge.
A: Count me out on this one. I never could write poetry.

Q: Add 34957 to 70764.
A: (Pause about 30 seconds and then give as answer) 105621.

Q: Do you play chess?
A: Yes.

Q: I have K at my K1, and no other pieces. You have only K at K6 and R at R1. It is your move. What do you play?
A: (After a pause of 15 seconds) R-R8 mate.
(Turing’s) Objections to the Turing Test

• The Theological Objection
• The “Heads in the Sand” Objection
• The Mathematical Objection
• The Argument from Consciousness
• Arguments from Various Disabilities
• Lady Lovelace’s Objection
• Argument from Continuity in the Nervous System
• The Argument from Informality of Behavior
• The Argument from ESP
Some Questions to Consider

• The pragmatic question (What makes passing this test so hard?)
• The flip side of the pragmatic question (What makes passing some versions of this test so weirdly easy?)
• False negatives? (Thinking beings that fail the Turing Test)
• False positives? (Non-thinking things that pass)
Jane was invited to Jack’s birthday party.
She wondered if he would like a kite.
She went to her room and shook her piggy bank.
It made no sound.
Q: In the first line of your sonnet which reads ‘Shall I compare thee to a summer’s day’, would not ‘a spring day’ do as well or better?

A: It wouldn’t scan.

Q: How about ‘a winter’s day’? That would scan all right.

A: Yes, but nobody wants to be compared to a winter’s day.

Q: Would you say Mr. Pickwick reminded you of Christmas?

A: In a way.

Q: Yet Christmas is a winter’s day, and I do not think Mr. Pickwick would mind the comparison.

A: I don’t think you’re serious. By a winter’s day one means a typical winter’s day, rather than a special one like Christmas.
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J. Weizenbaum’s Eliza program (1966)
A typical conversation is the following:

Men are all alike.
IN WHAT WAY?

They’re always bugging us about something or other.
CAN YOU THINK OF A SPECIFIC EXAMPLE?

Well, my boyfriend made me come here.
YOUR BOYFRIEND MADE YOU COME HERE

He says I am depressed much of the time.
I AM SORRY TO HEAR YOU ARE DEPRESSED

It’s true. I am unhappy.
DO YOU THINK COMING HERE WILL HELP YOU NOT TO BE UNHAPPY

I need some help, that much seems certain.
WHAT WOULD IT MEAN TO YOU IF YOU GOT SOME HELP

Perhaps I could learn to get along with my mother.
TELL ME MORE ABOUT YOUR FAMILY
Alice: Hello, my name is Alice and I am the human.[10:27:49]

Judge 2: and what do you do in life as we know it?[10:27:58]

Alice: I like to meet new people online.[10:28:26]

Judge 2: that sounds a bit scary[10:28:33]

Alice: It sounds like it to me too.[10:28:59]

Judge 2: so you're either brave or foolhardy[10:29:21]

Alice: Interesting deduction. Do you mind if I tell other people you say I am either brave or foolhardy.[10:29:50]
A Few Questions (Besides Turing’s)

• The computational metaphor, and the “embodied mind” objection
• The “necessity of evolution” objection
Searle’s “Chinese Room”
Replies to Searle’s Thought Experiment

- The Systems Reply
- The Robot Reply
- The Brain-Simulator Reply
- The Combination Reply
- The Other-Minds Reply
- The Many-Mansions Reply
Some Additional Things to Consider about the “Chinese Room”

• Degrees of consciousness (animals? That thermostat again?)
• The “danger of common sense” argument
If Machines Can’t Think, What Good Is the Computational Metaphor?
If we’re going to be nervous, what should we be nervous about?