

AI :PHILOSOPHY & ETHICS

Today

- Reading
 - AIMA Chapter 26

- Goals
 - Artificial Intelligence: hopes, fears, and reality
 - What is “artificial intelligence”?
 - Philosophy: Is it possible to create true AI?
 - Ethics: What are the ethical concerns in creating AI?

Artificial Intelligence

What is “artificial intelligence”?

A.I. according to CS 151

“application of algorithms capable of performing tasks which would normally require human cognition”

“an intelligent agent is able to reason about itself and its environment just as well, if not better, than a human could...learn new ideas and concepts and make logical connections to its existing knowledge and and further infer information from those connections”

“create computer systems able to...make their own decisions”

What is “artificial intelligence”?

“machine...that is capable of emulating...the rationality, problem-solving skills, and reactionary nature of human intelligence”

The ability “to input, process, and output information in such a way that viewers, possibly humans, deem to be logical, precise, and human-like”

“a man made machine that is sentient...a thinking being which is able to reflect on itself and understand that it itself exists”

“create machines that make decisions and process information in ways that mirror how humans think”

A.I. according to CS 151

“very likely...human-like intelligence is near the horizon”

“I’d say about 60%”

A “Moderate probability”

“I do not think true, perfectly human AI will be created within my lifetime”

“Als that succeeded in Turing’s test have existed for a long time”

How likely are you to see the creation of true artificial intelligence?

“scientists may get really close...within my lifetime, but I don’t think it will be possible”

“very convincing [AI] will be made during my lifetime”

“I don’t think that true [AI] will be created in my lifetime...humans are too unpredictable...for their thought processes to be implemented fully by machines”

“very possible...very likely that I will see some sort of human machine...hybrid, which is intelligent (but not entirely artificial)”

Weak AI vs. Strong AI

- Weak Artificial Intelligence
 - It is possible to create machines that act intelligent. Beyond that, who cares?
 - Simulated intelligence

- Strong Artificial Intelligence
 - Machines that do so are in fact intelligent
 - Real intelligence

Weak AI vs. Strong AI

“Surely, it may be said, however closely a computer might model the outward manifestations of human thought processes, the machine would not really be thinking, since that involves being able to have subjective, inner processes.”

“The question of whether *Machines Can Think*...is about as relevant as the question of whether *Submarines Can Swim*” -Dijkstra

“Not until a machine could write a sonnet or compose a concerto because of thoughts and emotions felt, and not by the chance fall of symbols, could we agree that machine equals brain – that is, not only write it but know that it had written it” – G. Jefferson (1949)

Chinese Room (Searle 1980)



Ethics of Artificial Intelligence

- What are the ethical concerns surrounding artificial intelligence?
 - What are the concerns or issues highlighted in the story?
 - To what extent are these issues already present in today's society?
 - What, if anything, should be done to address or prevent these concerns?