Can machines think?

Probably (In the future…): Turing test

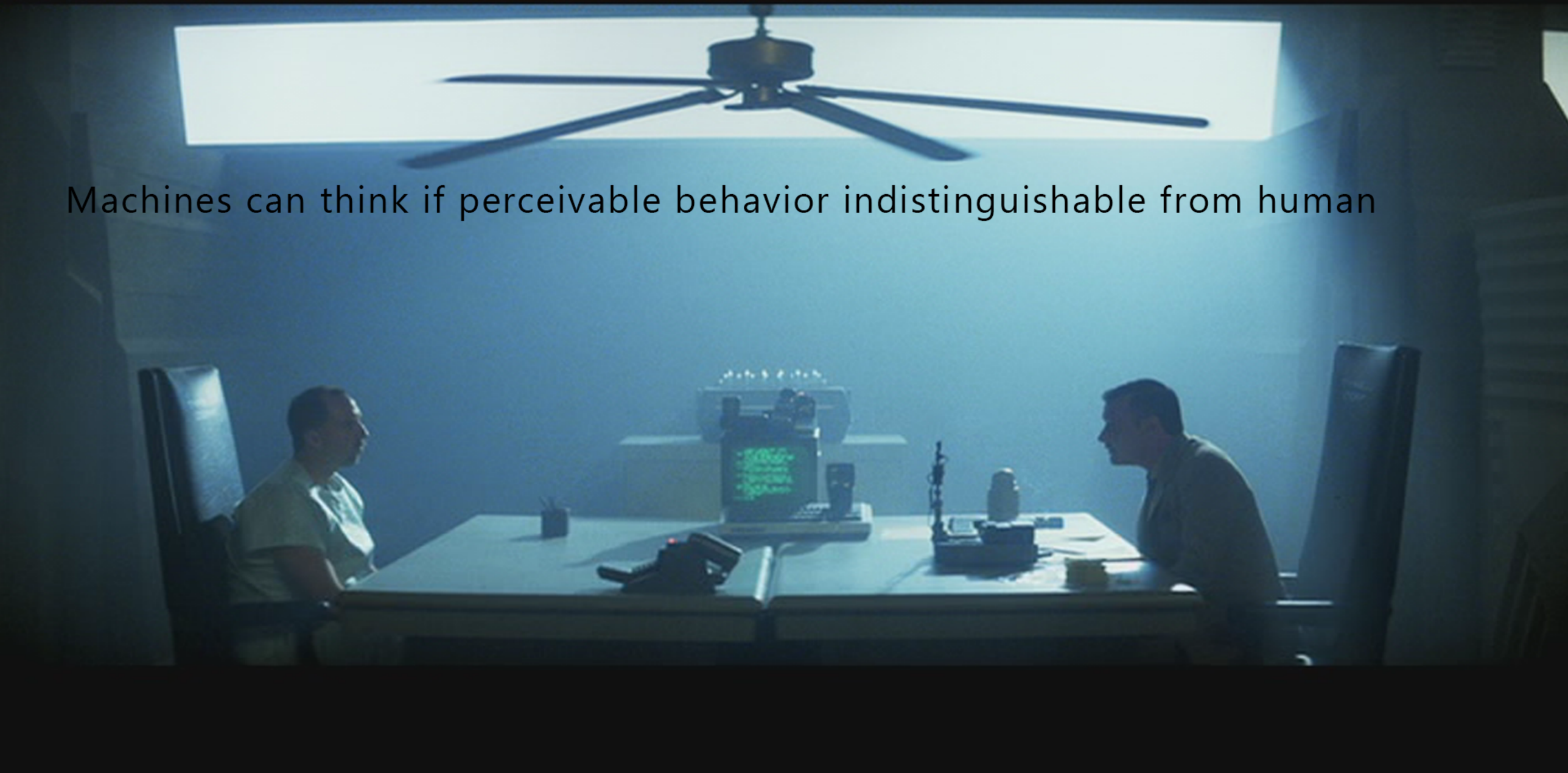
Maybe: Mirror experiment

No: Chinese room experiment

Yes and No: Epistemological argument

Yes, but only in their own inhuman way

Can machines think? Probably (In the future...): Turing test



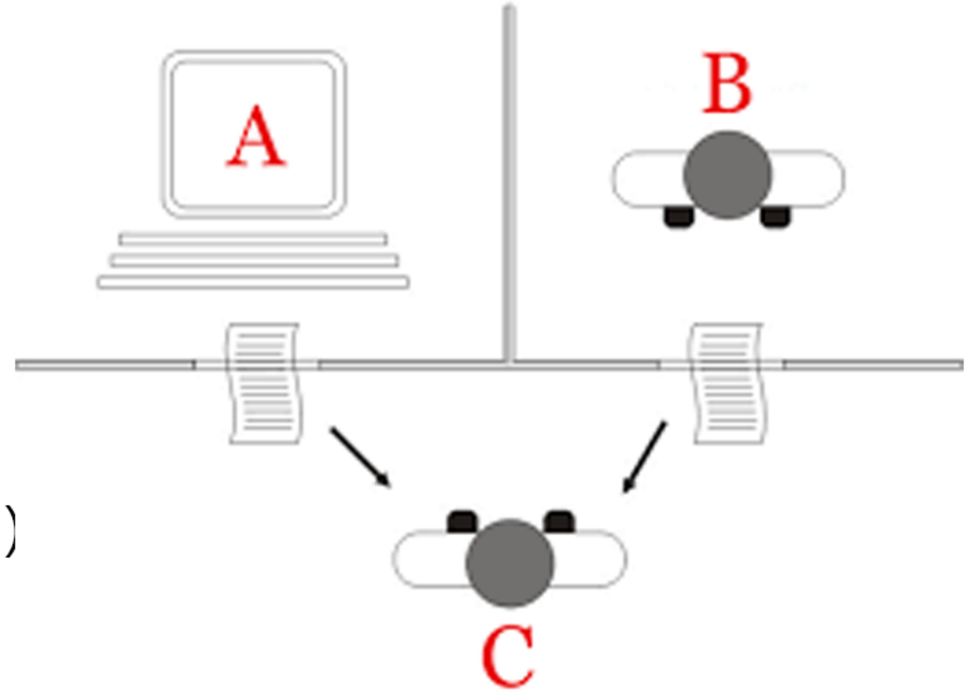
Machines can think if perceivable behavior indistinguishable from human

Can machines think? Probably (In the future...): Turing test

Turing test/Imitation game: Alan Turing 1950

Behavioral definition of thought...

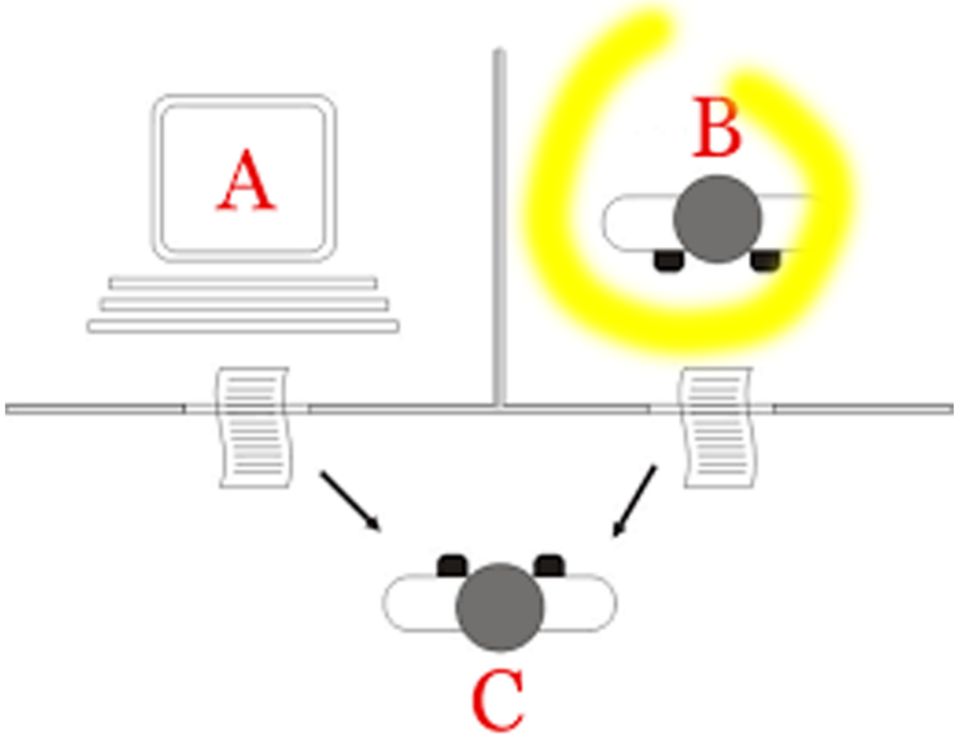
Can robots be trained to imitate humans?
(Probably for short durations, narrow contexts)



Can machines think? Probably (In the future...): Turing test

Problems: Babies?
Tourette's syndrome?
Senility?

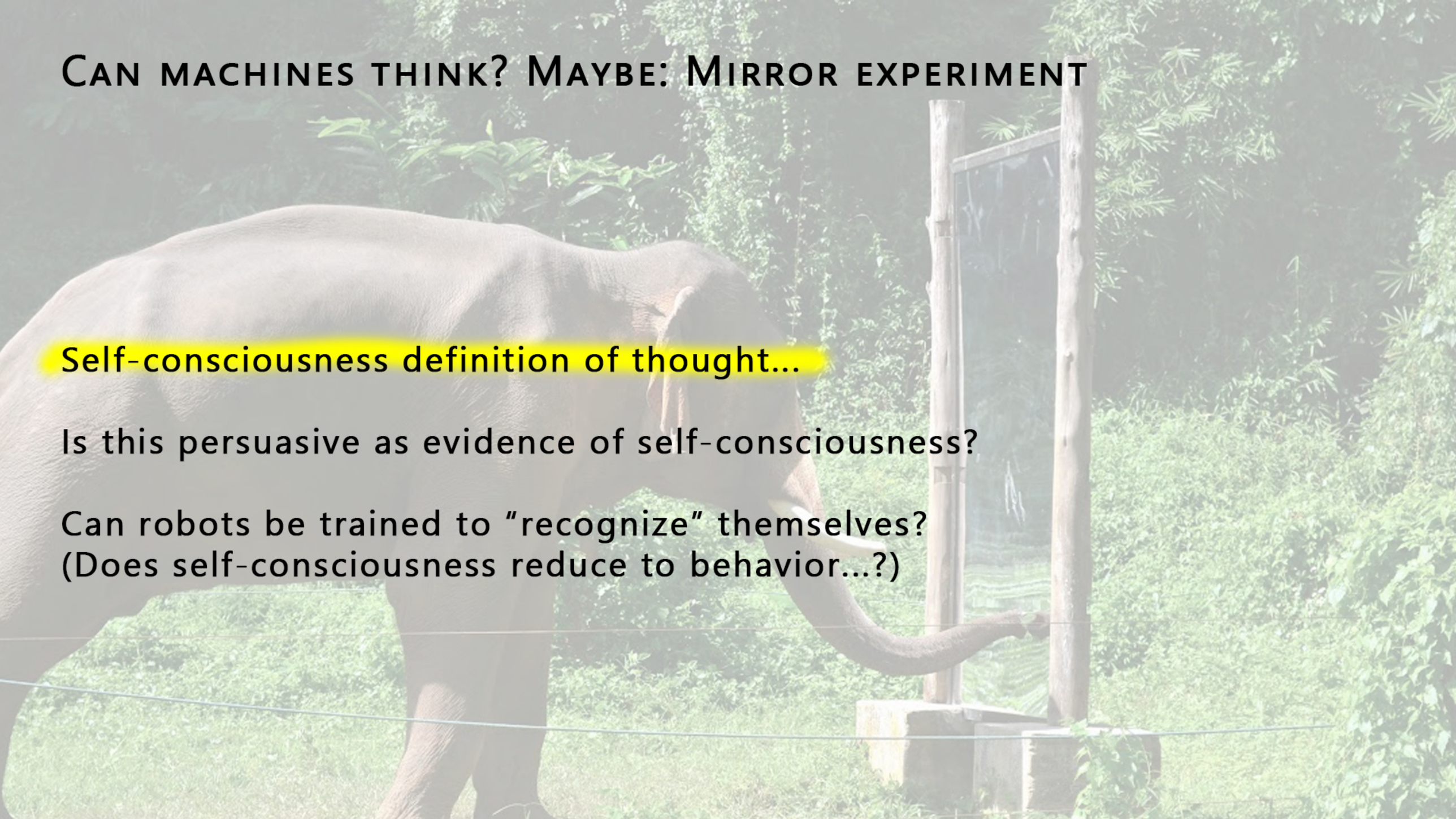
(Does the Turing test tell us about computers,
or about ourselves?)



Can machines think? Maybe: Mirror experiment

Robots can think if “recognize” themselves

Can machines think? Maybe: Mirror experiment

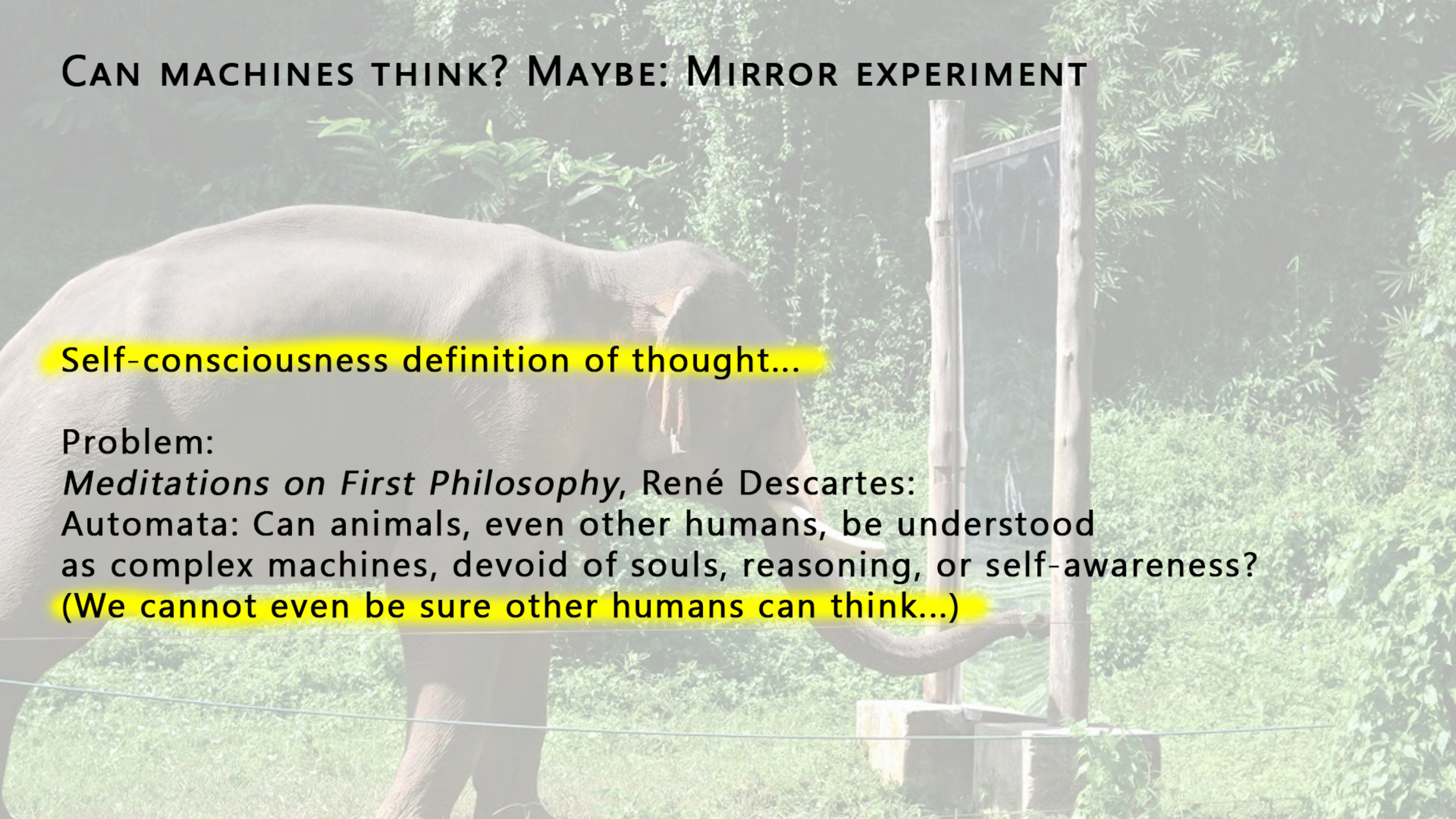


Self-consciousness definition of thought…

Is this persuasive as evidence of self-consciousness?

Can robots be trained to “recognize” themselves?
(Does self-consciousness reduce to behavior…?)

Can machines think? Maybe: Mirror experiment



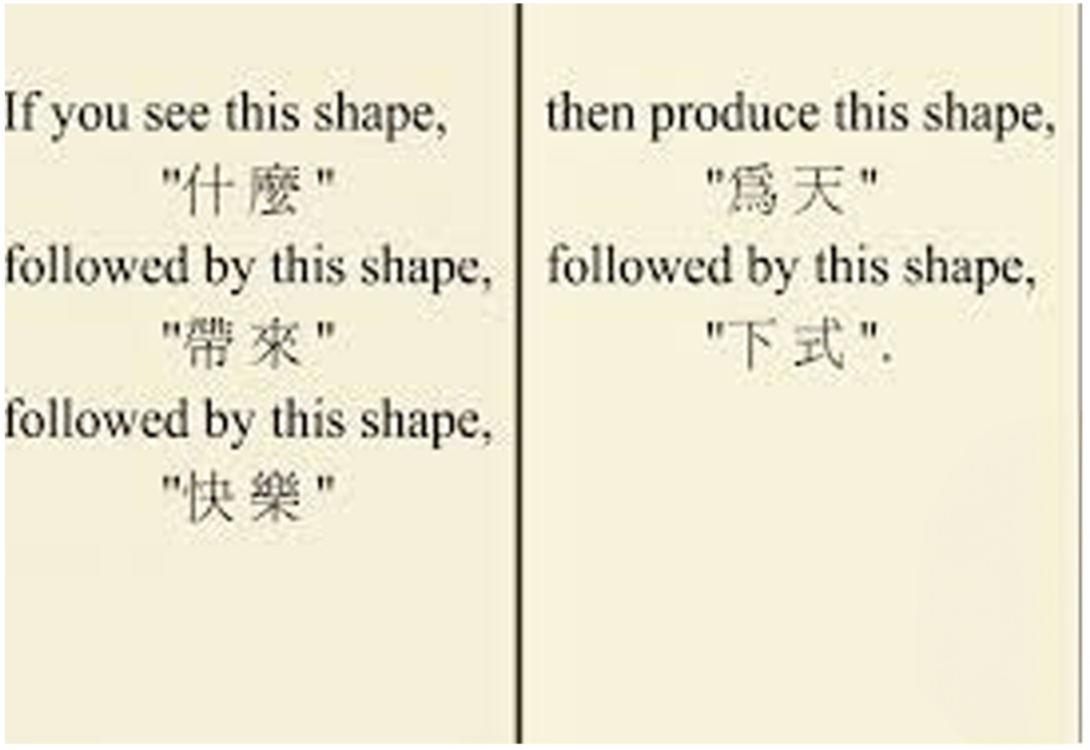
Self-consciousness definition of thought...

Problem:
Meditations on First Philosophy, René Descartes:
Automata: Can animals, even other humans, be understood
as complex machines, devoid of souls, reasoning, or self-awareness?
(We cannot even be sure other humans can think...)

Can machines think? No: Chinese room experiment

John Searle

Can machines think? No: Chinese room experiment

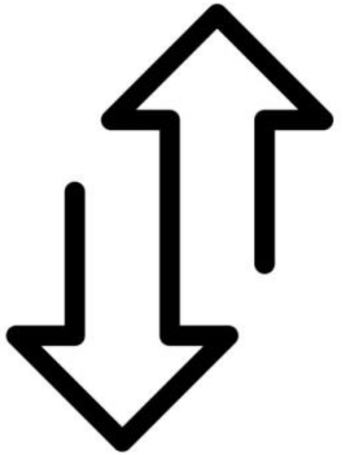


Computers manipulate symbols according to rules (syntax), but no true understanding (semantics).

Computer lacks **awareness** and **intentionality**
=
definition of thought…

Can machines think? Yes and No: Epistemological argument

Do humans actually think at machine level,
or do machines try to think at human level?



Can machines think? Yes and No: Epistemological argument

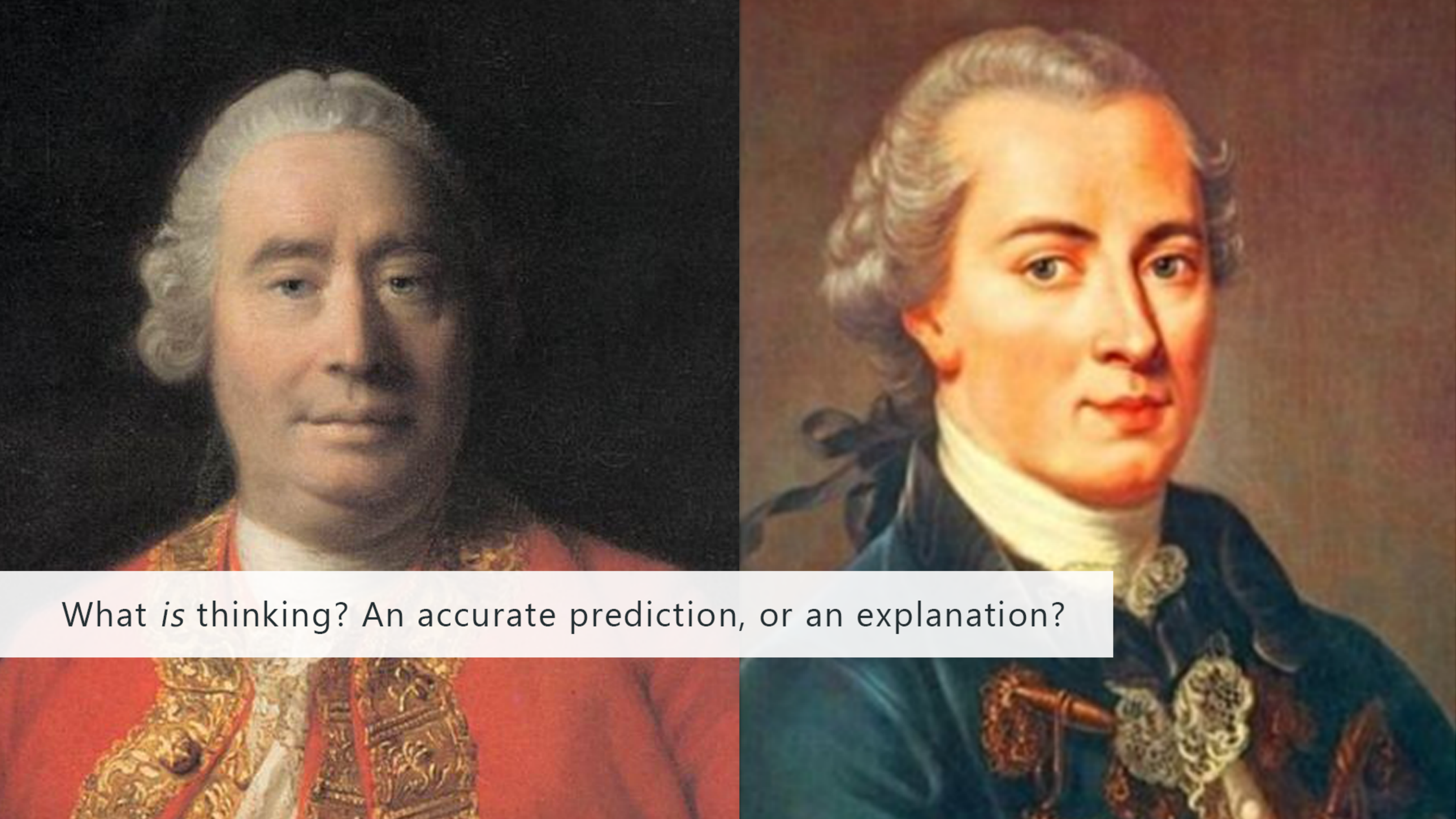
*Constant correspondence versus causality

Hume

- Knowledge production from constant correspondence & pattern recognition (Never see a cause)
- Human thought is as crude as machines! (Human reduces to machine level)

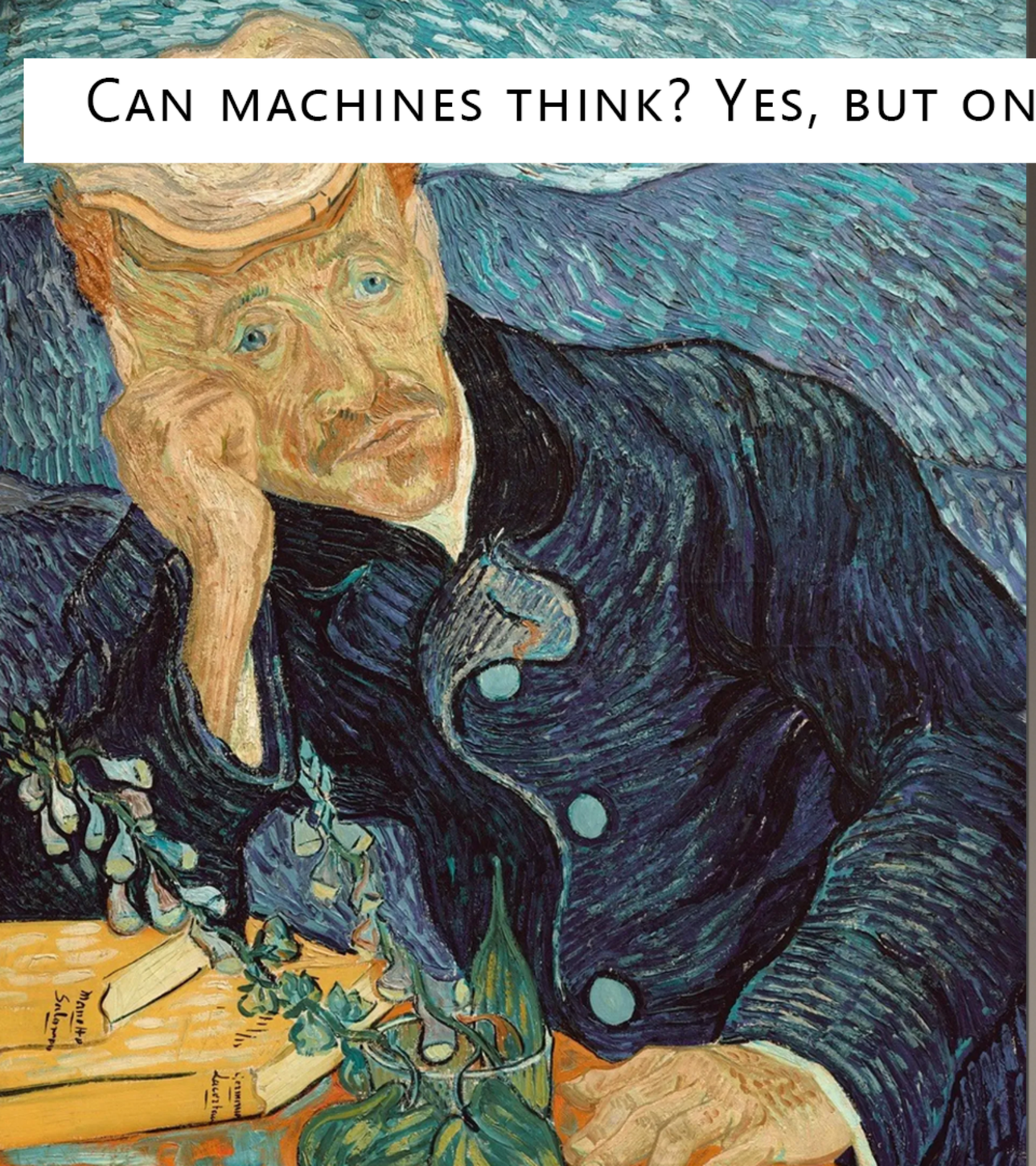
versus **Kant**

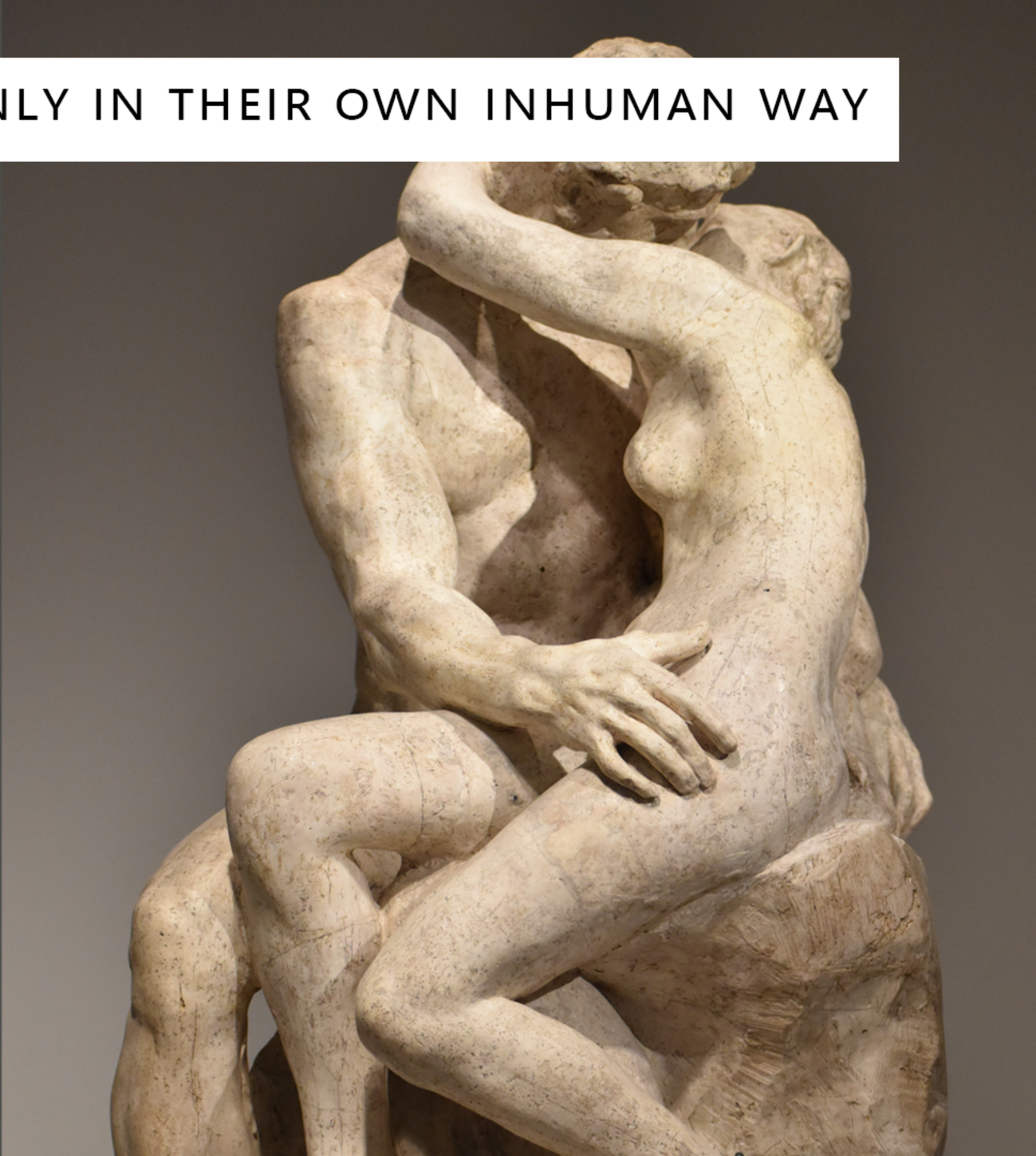
- Knowledge produced from reasons, cause/effect as condition of experience (This is what it *means* to have knowledge, and only humans have it…)



What *is* thinking? An accurate prediction, or an explanation?

Can machines think? Yes, but only in their own inhuman way





Can machines think? Yes, but only in their own inhuman way

Humans and computers produce knowledge fundamentally distinctly, like van Gogh and Rodin creating art. Regardless of how well van Gogh paints, the result will never be a sculpture comparable to Rodin's work. It will never be a sculpture at all.

So too for computers, humans, and knowledge production. It doesn't matter how much data or compute an AI has, it will never escape the reality that machines produce knowledge through correspondence, and consequently can never eclipse the kind of knowledge that humans produce through linear (cause/effect) reasoning.

Imagining that AI will be "generally" intelligent is like imagining that granite can be sculpted with a paint brush.

BUT: Maybe there are many ways of "thinking," like many ways of producing art?