

# Philosophy of Mind

# Three Accounts of the Relation between my mind and my body

## Dualist

**Cartesian:** The mind and body are separate kinds of *things* — one non-physical, the other physical — that interact with each other, and each with its own kind of properties.

## Physicalist

**Mind/Brain Identity:** The mind and brain are one and the same thing. Mental phenomena are just a special kind of physical phenomenon (viz., a kind of brain state). The actual matter of the brain is necessary for mental phenomena to occur.

**Functionalism:** Mental phenomena are functional states of a certain kind of complex physical system (e.g., a brain, a computer). The matter of the brain is **not** necessary for mental phenomena to occur; a mind can occur in any properly organized physical system.

# Dualism and Physicalism

# Irresponsibly Brief Summary

## What is the mind?

### Dualism

An immaterial mind is needed to think.

### Mind/Brain Identity

A brain is needed to think.

### Functionalism

A certain causal array of events is needed to think.

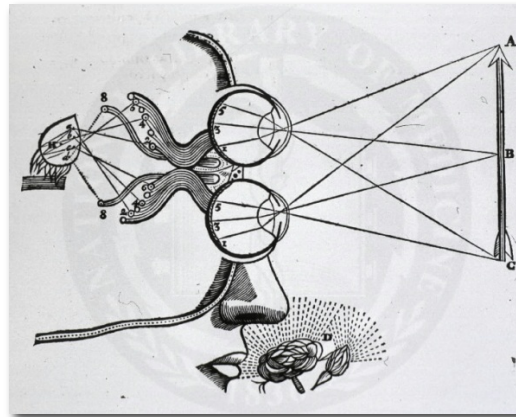
# Dualism

# Cartesian Dualism

- What is it?
- Descartes's arguments for dualism.
- Apparent irreducibility of the mental.
- Problems with Cartesian dualism



René Descartes (1596-1650)



Two woodcuts from  
Descartes's *Optics* (1637)

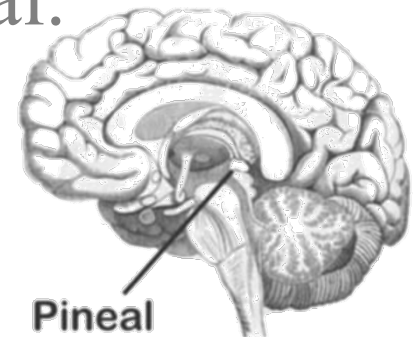


# Cartesian Dualism

- What is it?
  - Two kinds of substance (or kinds of reality):
    - (1) minds/mental things (thinking substance)
    - (2) bodies/physical things (extended substance)
  - Human being = mind + body (a natural machine).
  - All other organisms are simply bodies (machines).
  - Mind-body interaction occurs at the pineal gland.
- Descartes's arguments for dualism.
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# Cartesian Dualism

- What is it?
- Descartes's arguments for dualism.
  - **Based on methodological doubt**: I can imagine not having a body, but I can't imagine not having a mind.
  - **Based on divisibility**: My body (if I have one) is divisible, whereas my mind is indivisible.
    - (1) conceptual: I can't imagine the mind divided.
    - (2) empirical: losing part of my body does not entail losing part of my mind.
- Apparent irreducibility of the mental.
- Problems with Cartesian dualism.

# Cartesian Dualism

- What is it?
- Descartes's arguments for dualism.
- **Apparent irreducibility of the mental.**
  - The subjectivity/interiority of experience: sensations, mental imagery, emotions.
  - Free agency.
  - Personal continuity (personal identity over time).
  - Hope for an afterlife (personal continuity past the death of the body).
- Problems with Cartesian dualism.

# Cartesian Dualism

- What is it?
- Descartes's arguments for dualism.
- Apparent irreducibility of the mental.
- **Problems for Cartesian dualism.**

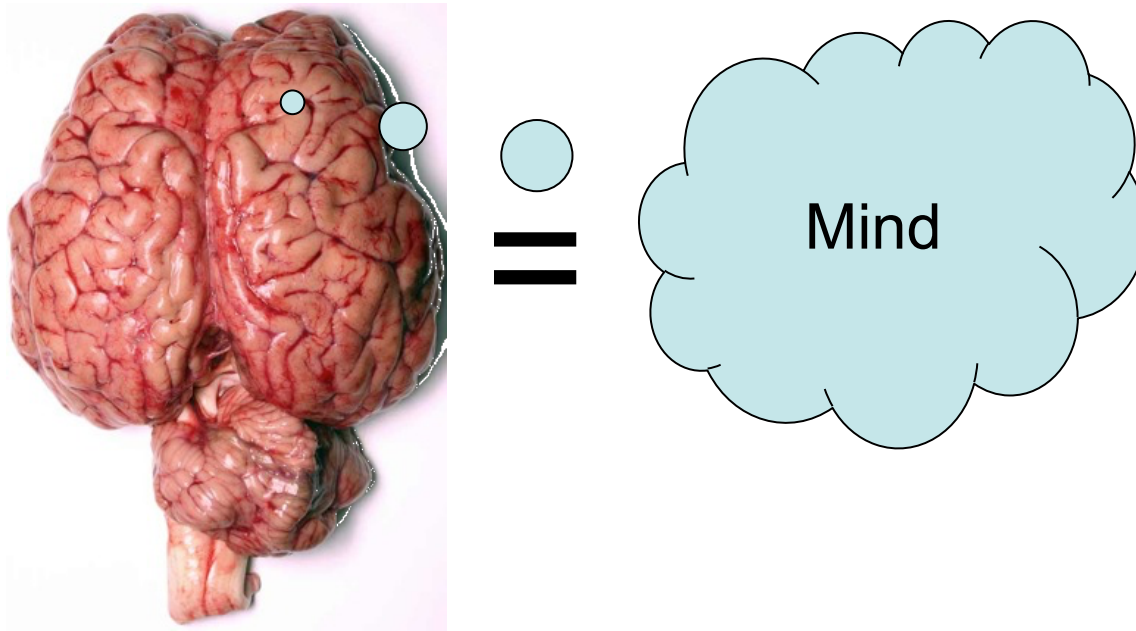
If Cartesian Dualism is correct, then ...

- Mind-body causal interaction is incoherent.
- Localizing the non-local mind is incoherent.
- Conservation of matter and energy is violated.
- Non-perceptual consciousness should remain unaffected by changes to the body (e.g., blows to the head) — but it isn't.

# Physicalism

# Mind/Brain Identity

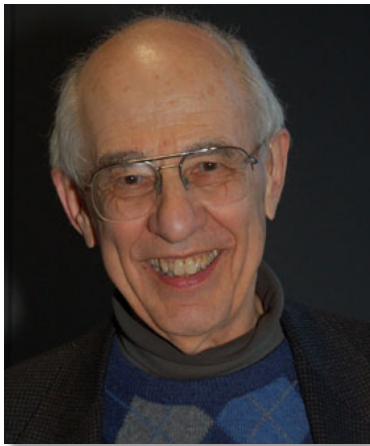
Mental states are real and have explanatory roles, but they are identical to a special kind of physical phenomena, viz., brain states.



David Armstrong  
(1926- )

# Functionalism

The mind is real, but it is just the functional description of a certain kind of body (primarily, of the brain within that body).



Hilary Putnam  
(1926-2016)

- Mental states can be defined in terms of their causal role: what caused them, their effects on other mental states, and their effects on behavior.
- A certain event in the brain will be an act of thinking not because it is a special *kind* of brain event, but because it performs the appropriate *function* in the brain's causal system.
- Imagine replacing the neurons in your brain, one by one, with transistors.

Objections to this theory: (see Searle)

Where Am I?

# Where Am I?



I peered through the glass. There, floating in what looked like ginger ale, was undeniably a human brain, though it was almost covered with printed circuit chips, plastic tubules, electrodes, and other paraphernalia...I thought to myself: "Well, here I am sitting on a folding chair, staring through a piece of plate glass at my own brain . . . But wait," I said to myself, "shouldn't I have thought, 'Here I am, suspended in a bubbling fluid, being stared at by my own eyes'?" I tried to think this latter thought. I tried to project it into the tank, offering it hopefully to my brain, but I failed to carry off the exercise with any conviction...[W]hen I thought "Here I am," where the thought occurred to me was *here, outside the vat, where I, Dennett, was standing staring at my brain.* [From Daniel Dennett, "Where Am I?"]



What does it  
Mean to “Have  
a Mind”?

# Recent Work in Neuroscience

What can we learn about the mind from studies on blind sight and phantom limbs?

V. S. Ramachandran  
Professor of Neuroscience  
UC San Diego



# Discuss in Your Groups

What is the difference between human beings and non-human animals?

What is the difference between human beings and computing machines?

# Testing for Minds

# Descartes's Two Tests of Mind

“If there were machines bearing the image of our bodies, and capable of imitating our actions as far as it is morally possible, there would still remain two most certain tests whereby to know that they were not therefore really men. [...]

Of these the **first** is that they could never use words or other signs arranged in such a manner as is competent to us in order to declare our thoughts to others. [...]

The **second** test is, that although such machines might execute many things with equal or perhaps greater perfection than any of us, they would, without doubt, fail in certain others from which it could be discovered that they did not act from knowledge, but solely from the disposition of their organs: for while reason is an universal instrument that is alike available on every occasion, these organs, on the contrary, need a particular arrangement for each particular action.” [*Discourse on Method*, section 5 (1637)]

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Language Use

# Descartes's Two Tests of Mind

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# 18th Century Automata

“My second Machine, or Automaton, is a Duck. The Duck stretches out its Neck to take Corn out of your Hand; it swallows it, digests it, and discharges it digested by the usual Passage.”



— Jacques Vaucanson (1709-1782),  
Letter to Abbé Desfoutaines (1738)

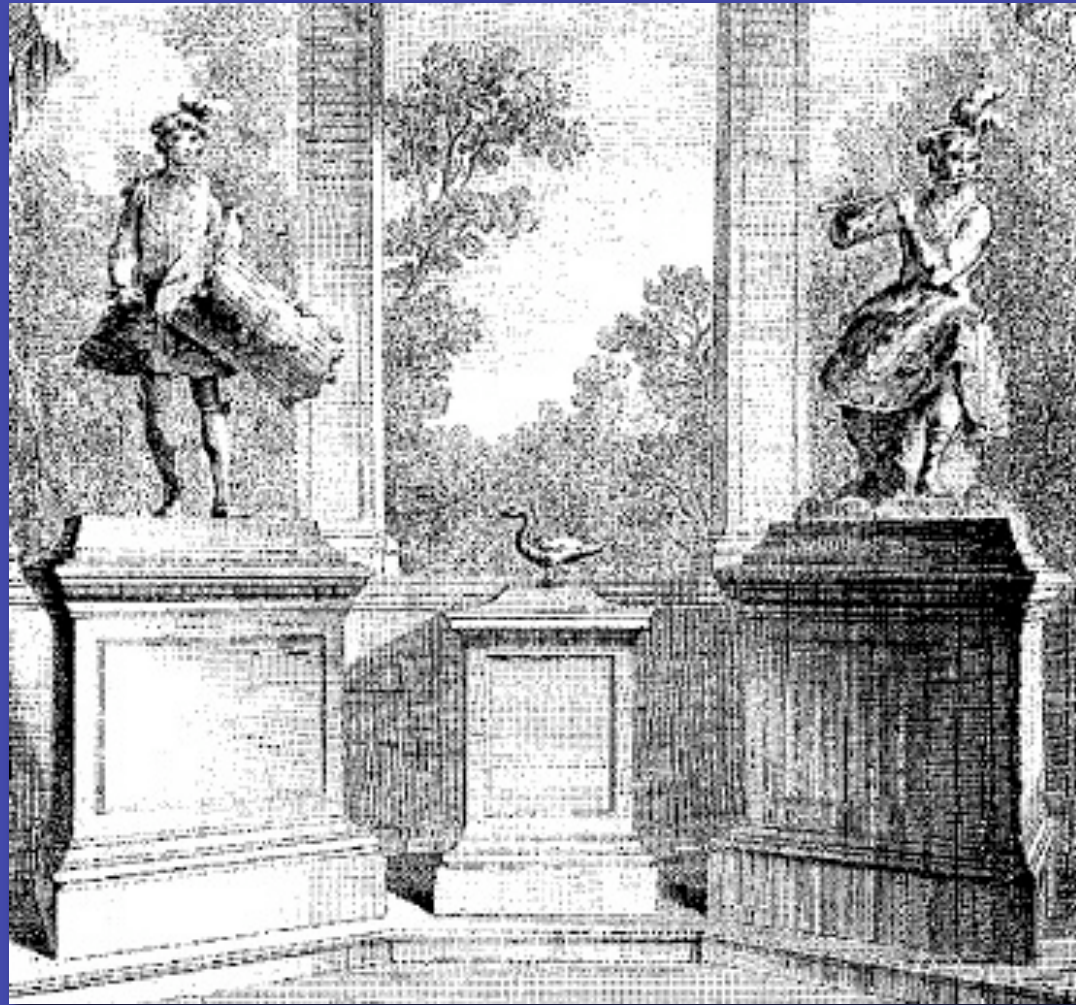


# Vaucanson's Defecating Duck

MUSEE des AUTOMATES de GRENOBLE



# Vaucanson's Automata



# The Turing Test

## What it is

A criterion for having a mind.

## How it Works

Place a human (A) in one room, and a second human (B) and a computer (C) in a separate room. The first human (A) has a keyboard and computer screen by which he communicates with both B and C. The computer (C) tries to convince A that **it** is the human, as does B. If the expert cannot tell which is the human and which is the computer, then the computer should be viewed as a thinking being.

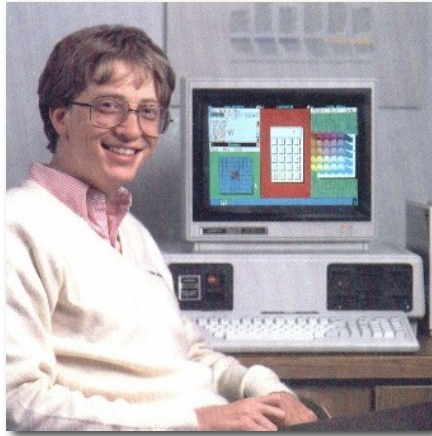
— “Computing Machinery and Intelligence” (*Mind*, 1950).



Alan Turing  
(1912-1954)



# The Turing Test



[B]



[C]

Hmm... Which is the computer, and which the human being?



[A]

Alan Turing  
(1912-1954)

# Discuss in Your Groups

Do you think that it is possible that, some day, a computer will exist that has a mind or is able to think?

Why or why not?

# Artificial Intelligence

# Searle's Critique of AI

Strong Artificial Intelligence consists of three theses, and all are false:

(1) The mind is a program

**Problem:** The Chinese Room (programs are *syntax* without *semantics*, but minds require semantics)

(2) The neurophysiology of the brain is irrelevant

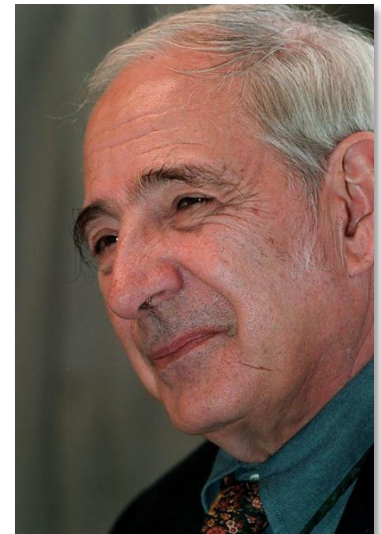
**Problem:** A *simulation of X* is not a *duplication* of X (“Thirst example”)

(3) The Turing test is the criterion of the mental

**Problem:** The Chinese Room.

John Searle teaches philosophy at the University of California/Berkeley and has become a prominent critic of functionalism and the AI project. See his essay, “The Myth of the Computer” (*New York Review of Books*, 1982).

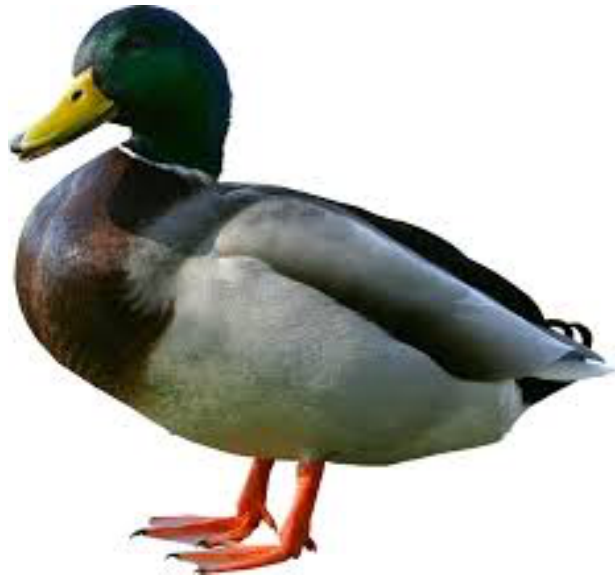
John Searle  
(1932- )



# Simulation and Duplication

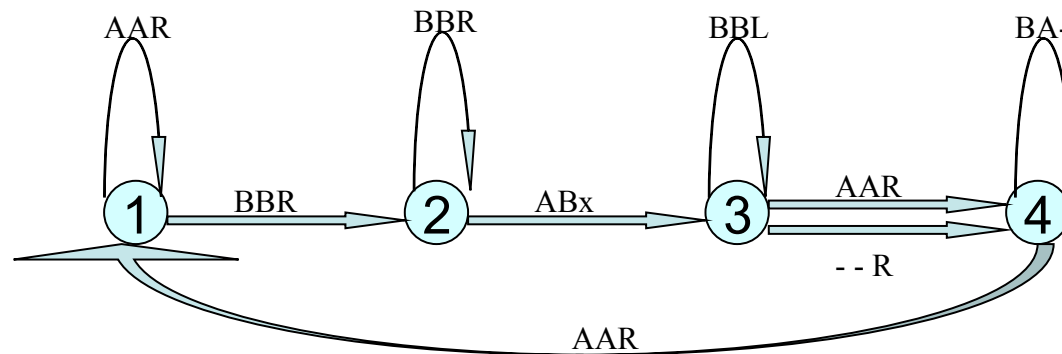
“When I see a bird that walks like a duck and swims like a duck and quacks like a duck, I call that bird a duck.”

— James Whitcomb Riley (1849–1916),  
a famous Indiana poet.





# Turing Machines



If it's in state ...	1	2	3	4
And it reads ...	A - B	A - B	A - B	A - B
Then it writes ...	A - B	B - B	A - B	A - A
And moves ...	R - R	- - R	R R L	R - -
And enters state ...	1 1 2	3 2 2	4 4 3	1 4 4

This machine will sort any random string of A's and B's so that all of the A's are listed first, then all the B's. The machine begins by reading the symbol on the far left of the tape.

# Searle's Chinese Room



# Searle's Chinese Room

## Against using the Turing Test as a criterion of mindedness:

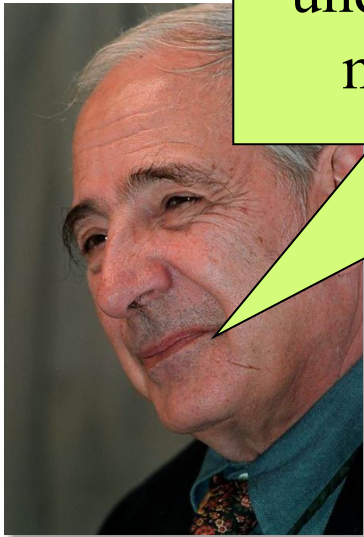
- (1) Develop a program that can pass the Turing Test in Chinese.
- (2) Put Searle in a room with a rulebook based on this program.
- (3) Searle passes the Turing Test.
- (4) But Searle doesn't understand a word of Chinese!
- ∴ (5) The Turing Test is inadequate as a test for thought or intelligence.

## Against viewing the mind as a program:

- (1) Syntax is not sufficient for semantics (e.g., the meaning of words/sentences).
- (2) Programs are defined purely syntactically.
- ∴ (3) No program is sufficient for semantics.
- (4) For anything to serve as a mind, it has to include meanings.
- ∴ (5) No program can serve as a mind.

# Searle vs Dennett

Dan, the woman doesn't understand a word of Chinese! She's just shuffling symbols! Doing exactly what a computer would be doing! So obviously the computer doesn't "understand" either. It lacks a mind! It lacks meaning!



John Searle  
(1932- )



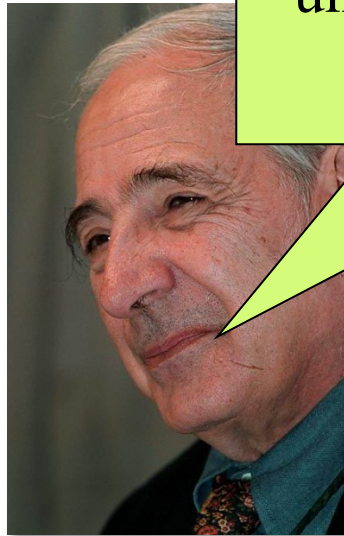
Dan Dennett  
(1942- )

# Searle vs Dennett

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“un

I *know* she doesn't understand, but she's part of a larger system that *does*. The individual neurons in your brain don't understand English, but *you* do. Meaning is found in the system as a whole, and in its interaction with the world.



John Searle  
(1932- )



Dan Dennett  
(1942- )

# Syntax, Semantics, & Searle

**Syntax:** The rules governing how symbols are arranged, or how words are arranged to create well-formed sentences.

**Semantics:** The meaning of a symbol or group of symbols.

**Searle** — A computer has a syntax, but no semantics. It can manipulate symbols, but has no meaning for them.

Can we know the **syntax** of the following sentences prior to knowing the **semantics**?

- (1) Time flies like an arrow.
- (2) Fruit flies like a banana.
- (3) Time dogs like a trainer.

# Syntax & Semantics

**Syntax:** The rules governing how symbols are arranged, or how words are arranged to create well-formed sentences.

**Semantics:** The meaning of a symbol or group of symbols.

Knowing the meaning of ‘it’ (= being able to replace it with its antecedent symbol) requires understanding the reasons for feeding the monkey:

“I gave the monkey the banana because it was ...

- (1) ... ripe.”
- (2) ... hungry.”
- (3) ... Tuesday.”
- (4) ... my turn.”

# Syntax: Surface and Deep

**Syntax:** The rules governing how symbols are arranged, or how words are arranged to create well-formed sentences.

**Semantics:** The meaning of a symbol or group of symbols.

“Surface syntax” often hides the “real syntax”:

(1) Bob and Alice are friends.

[Bob and Alice stand in a certain relationship with each other]

(2) Bob and Alice are hungry.

[Bob is hungry and Alice is hungry]



# Two Kinds of Phenomena

## Mental Phenomena

Examples: beliefs, desires, feelings, sensations, memories, imaginings, dreams, consciousness.

Features of mental phenomena:

- (1) **Subjective character**: The 'what it's like' to have an experience.
- (2) **Intentional**: They represent, or are about, something.
- (3) **Non-Spatial**: They occupy time, but apparently not space.
- (4) **Private**: We have special access to our own mental phenomena, but not to that of others.

## Physical Phenomena

Examples: mass, shape, length, motion, rocks, human and other animal bodies, atoms, electric charges, various forces.

Features of physical phenomena:

- (1) **Public**: Typically observable (and measurable) by many individuals.
- (2) **Spatio-Temporal**: They occupy space and time.