

SOUTHERN ILLINOIS UNIVERSITY, CARBONDALE CAMPUS

Introduction to Philosophy

Minds Brains and Computers John R. Searle

Is the Mind a Computer Program?

Searle says **NO**. Searle rejects Functionalism about the mind. He denies that the mind is any kind of computer program whatsoever. Searle contrasts two ways of thinking about the relationship between computers and minds:

STRONG AI: thinking is just the manipulation of formal symbols; the mind is to the brain as the program is to the hardware; an appropriately programmed computer is a mind.

WEAK AI: Computers can teach us useful things about minds and brains, but they do not have minds. They can simulate mental activity, but not duplicate it.

According to Searle, a computer which thinks (by virtue of having the right program) is not a possible thing. No computer could ever **THINK** (e.g., that the cat is on the mat or that there is a McDonald's restaurant in the SIUC Student Center), let alone be free and creative, have feelings and emotions.

Searle's Argument

Premise 1. Computer programs are formal or [syntactic](#).

Premise 2. Human minds have mental contents or [semantics](#).

Premise 3. Syntax by itself is neither constitutive of nor sufficient for semantics.

Conclusion: Computer programs are neither constitutive of nor sufficient for mind.

Searle's Defense of Premise 3--The Chinese Room Analogy.

Imagine that **you** understand absolutely no Chinese, but are locked in **a room** and given a set of **English instructions** for manipulating strings of **Chinese** characters.

Using the instructions you have been given, you take strings of Chinese characters which are slipped to you under the door and produce a new string of Chinese characters which you slip under the door to those waiting outside.

To those outside (who are native Chinese speakers) the strings of Chinese characters they slip under the door are questions, and the strings of characters they receive from you are answers to those questions.

Finally, suppose that the "answers" you provide are so good that everyone outside the room is convinced that you are a native Chinese speaker.

Question: Do you understand any Chinese? Obviously not.

Chinese Room	Computer
You	Central Processing Unit
the locked room	computer housing
English	machine language
instructions	program
Chinese	English

Question: Does the computer understand any English? Searle's answer--Obviously not.

RESPONSES TO SEARLE

- 1. Scale Reply:** The scale of Searle's example is misleading. For the set of instructions to be analogous to the brain's program would require enough books to fill the room from floor to ceiling.
- 2. Systems Reply:** Of course the individual in the room doesn't understand Chinese; your brain doesn't understand English. You are a system, part of which is your brain and you (not your brain) understands English. Analogously, the Chinese room is a system, part of which is the individual and the room (not the individual in it) understands Chinese.
- 3. Robot Reply:** If we miniaturized the room and put it into the head of a robot so that the robot could move about and do things and have experiences, then it would understand. (The semantics would come from having the appropriate connections to the environment.)

Searle's counter-response: no matter how large, the system or robot has no way of attaching meaning to the uninterpreted Chinese symbols.

- 4. Dualist's Reply:** Searle's analogy shows more than he thinks it does. It not only shows that computers cannot think. It also shows that brains cannot think. Thus, if Searle is correct, we must have souls in order to think. Here's why:

Chinese Room	Computer	Human Body
You	CPU	brain
the locked room	computer housing	skull
English	machine language	chemical changes
instructions	program	patterns of neural activity
Chinese	English	English

Question: Does the brain understand any English? Obviously not.

The neurons in a brain do not understand English any more than the individual in Searle's Chinese

Room understands Chinese. Consequently, perhaps only an immaterial mind or soul can think.

Searle's Response: "The answer is that the brain does not merely instantiate a formal pattern or program (it does that too), but it also causes mental events by virtue of specific neurobiological processes."

But Searle never explains why a brain is able to cause mental events, but a computer or the Chinese room cannot.

Syntax:

- Examples: syntactic concepts of English--letter, word, space, punctuation mark, noun, verb, adjective, question, exclamation, sentence, etc.
- Narrow sense--the rules of grammar which are used for ordering and connecting words in a sentence
- Broad sense--rules for manipulating symbols based on their shape and position (the way a computer can find your name and address)

Semantics:

- Examples: semantic concepts of English--reference, meaning, true, false
 - The study of the **meanings** of words and other parts of language; the general study of signs and what they **stand for**.
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