THE CHINESE ROOM IS A ZENO PARADOX

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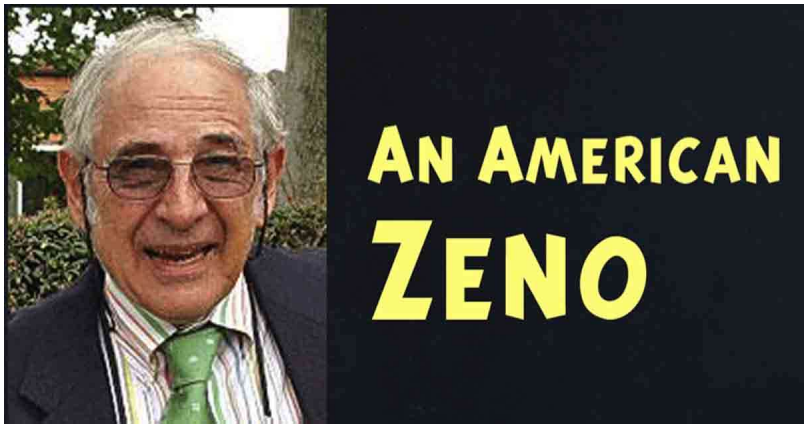

The Chinese room argument against the feasibility of artificial consciousness is a variant of Zeno's paradox.

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THE CHINESE ROOM ARGUMENT

Here, I discuss what is commonly known as "**The Chinese room argument**" against the feasibility of synthetic consciousness. This argument was first proposed by professor John Searle, an American philosopher, in an article titled "***Minds, Brains, and Programs***", published in Behavioral and Brain Sciences in 1980. The mind experiment on which the argument rests is still extensively discussed in countless articles and symposia.

Any Internet search will rapidly generate ample information about both professor Searle and the Chinese room argument.

The Chinese room argument holds that:

a program cannot give a computer a "mind", "understanding" or "consciousness", regardless of how intelligently or human-like the program may make the computer behave.

The centerpiece of professor Searle's argument is a thought experiment known as the **Chinese room**. The thought experiment begins with a hypothetical premise: suppose that artificial intelligence research has constructed a computer that behaves as if it understands Chinese. It takes Chinese characters as input and, by following the instructions of a computer program, produces other Chinese characters, which it presents as output. Suppose, says Searle, that this computer performs its task so well that it convinces a human Chinese speaker that the program is itself a live Chinese speaker that understands Chinese.

The question professor Searle asks is: does the machine literally "*understand*" Chinese (this is what he calls strong A.I.)? Or is it merely simulating the ability to understand Chinese (what he refers to as weak A.I.).

To answer, he places himself, figuratively, in a closed room holding an English version of the computer program. He receives Chinese characters through a slot in the door, processes them according to the program's instructions, and produces Chinese characters as output. He then observes that if the computer executing the program has convinced a Chinese speaker it can understand Chinese, he would do so as well, even though he does not understand or speak any Chinese.

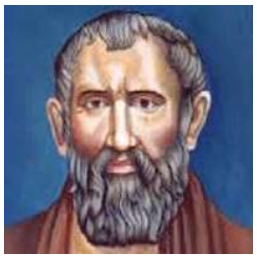
He argues, that similarly, a program consists of thousands of processes that simply receive, process and output symbols without "understanding" (or "intentionality") he argues, so, we cannot describe what the machine is doing as "thinking" and it does not have a "mind" in anything like the normal sense of the word. Therefore, he concludes that "strong AI" the conjecture that the machine can have understanding and consciousness is false.

This summarizes the Chinese room argument. As I stated, you can easily find references to it on the Internet.

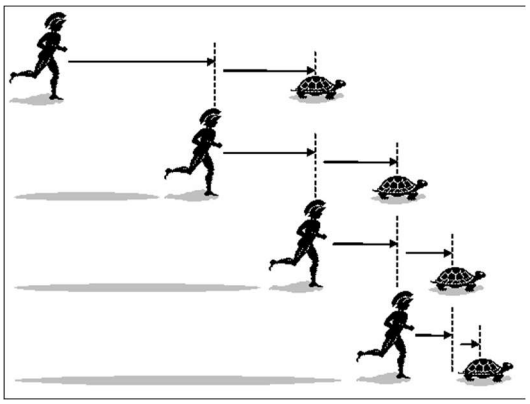
A VARIANT OF ZENO'S PARADOX

My position is this:

> **John Searle's "Chinese room argument" against of the feasibility of Machine Consciousness is a variant of Zeno's Paradox applied to cognition.**



Here, I am talking to Zeno of Elea, a pre-Socratic philosopher who used a particular type of argument to produce paradoxes that contradicted observed events. His most famous paradox (also known as Zeno's paradox) asserts that, in a race between Achilles and a turtle, if the turtle has a head start then, Achilles can never overtake it, since the pursuer must first reach the original point when the pursuit started so that the slower must always hold a lead.



For example if Achilles allows the turtle a head start of 100 meters, then, when he will have run those 100 meters, the turtle will be in front by 10 meters, after the 10 meters, it will still be in front by 1 meter, and so on. Whenever Achilles reaches somewhere the turtle has been, he still has farther to go. Therefore, according to Zeno, he can never overtake the turtle.

This is Zeno's paradox. It is called a paradox by the way because human racers can and do overtake turtles when they race against them, even when the turtles have a head start. Otherwise, if it did not contradict observed events, **it would not be called a paradox but an argument**.

To produce his paradox, Zeno followed a specific strategy that can be described as follows:

> **Given a situation and a linked event that is either observed or hypothesized, partition the situation in such a way that none of the partition components contains the event that was hypothesized or observed and then conclude that since it does not exist in any of the components, it does not exist in the whole.**

In the case of Zeno's discussion of the race between Achilles and the turtle, the event in question is the "overtaking" or passing of the slower runner by the faster one. Here, Zeno's method partitions distance in such a way that **the overtaking**

event is not found in any of the partitioned components and concludes it does not exist in the race either.

This is what Professor Searle does in the Chinese room argument but this time with respect to cognition by mentally placing himself in the Chinese room as an organic processor that doesn't understands Chinese and describing himself as carrying out the stepwise symbol manipulations of the program. Doing this, he effectively partitions the dialog situation into components that consist only of symbol or value manipulations. He then concludes that since the "*event*" of understanding Chinese is not present in any of these components, it cannot exist in the overall situation either.

In other words, since none of the individual routines or steps is conscious, since they are only symbol or value manipulations, then the collective dynamic behavior of the whole cannot be conscious either.

This method of partitioning a situation in such a way that an observed or hypothesized event is not present in any of the components and postulating that since it is not in any component, it is absent from the whole is Zeno's methodology. A logically sound process that is nonetheless flawed since it generates observably absurd conclusions. In this case, the only reason Professor Searle's flawed argument maintains some credibility is because synthetic conscious beings have not yet been constructed.

To verify the fallacy of the Chinese room argument, let us apply the same argumentation used against the feasibility of synthetic consciousness, but this time, to a technology that widely used and obviously feasible.

BAD NEWS FOR ASPIRING ACTORS

At this point, I must share some very bad news for those young people who moved to Hollywood hoping to make a career acting in the movies.

You are wasting your time. Why? **Because movies do not exist**.

Using professor Searle's methodology I carefully scrutinized dozens of film reels searching for movement in the individual images they contain. I looked for any sign of movement anywhere, and found none of these pictures nor any part of them contained any movement at all.

I then examined the projectors and did find some movement there, however it was a completely different type of movement not comparable in any way to the

movement we could see when watching movies. Applying Professor Searle's methodology I could only reach one conclusion: **movies cannot exist.**

So, my message to those young people hoping to make a career acting in the movies is this: move out, do something else, go to Idaho, grow potatoes, go shrimp fishing in Louisiana, anything, but don't waste anymore time in Hollywood.

CONCLUSION

To conclude:

- John Searle's Chinese room argument against machine consciousness is a variant of Zeno's Paradox applied to cognition.
- It is a flawed argument that neither proves nor disproves synthetic consciousness.
- It's credibility is not derived from any intrinsic merit but to the simple fact that conscious synthetics have not yet been implemented.
- It remains a great conversation topic at a cocktail party or a barbecue. But, if you are serious about building the first generation of conscious machines then, don't waste your time, simply disregard it.

Currently, Professor Searle's Chinese room argument is an argument. When the first generation of conscious synthetics is implemented, however, **this "argument" will also become a paradox**, the application of a flawed logical reasoning that generates absurd conclusions. It will then be remembered as an amusing regurgitation of Zeno's paradox that kept dozens of Cognitive Science researchers occupied at the end of the twentieth Century and beginning of the twenty-first.

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