

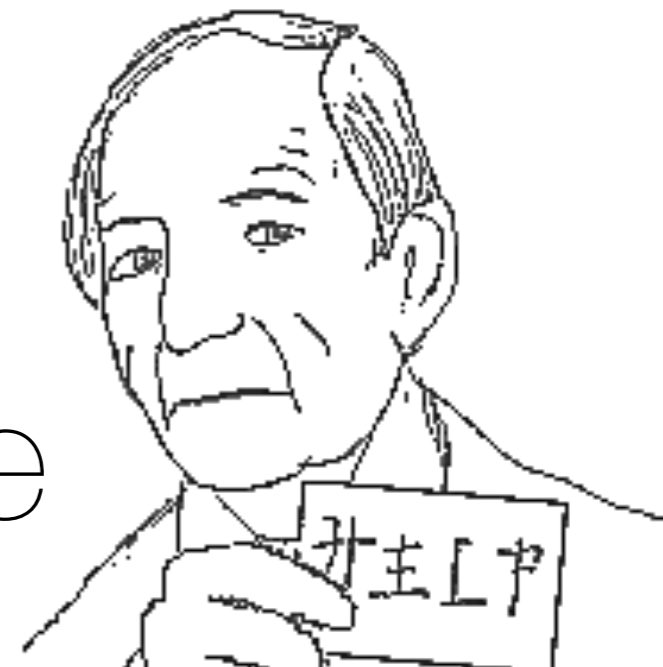


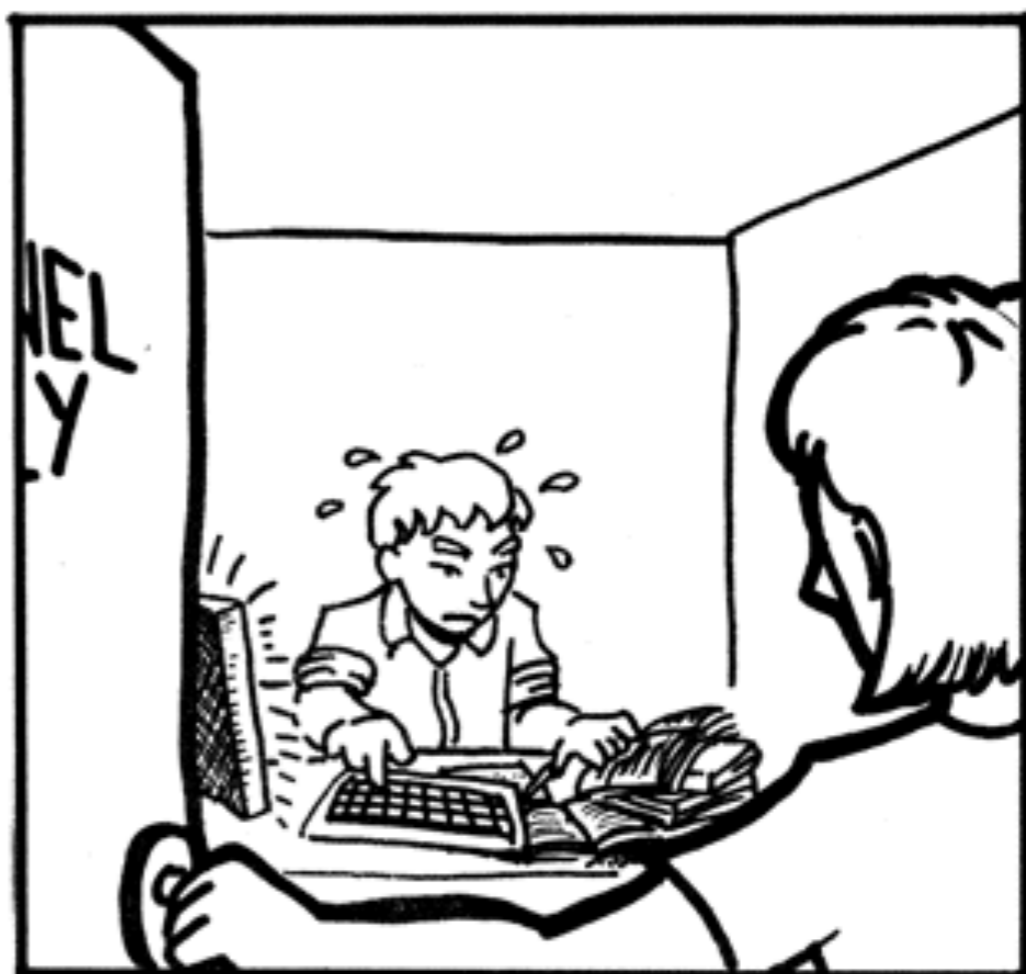
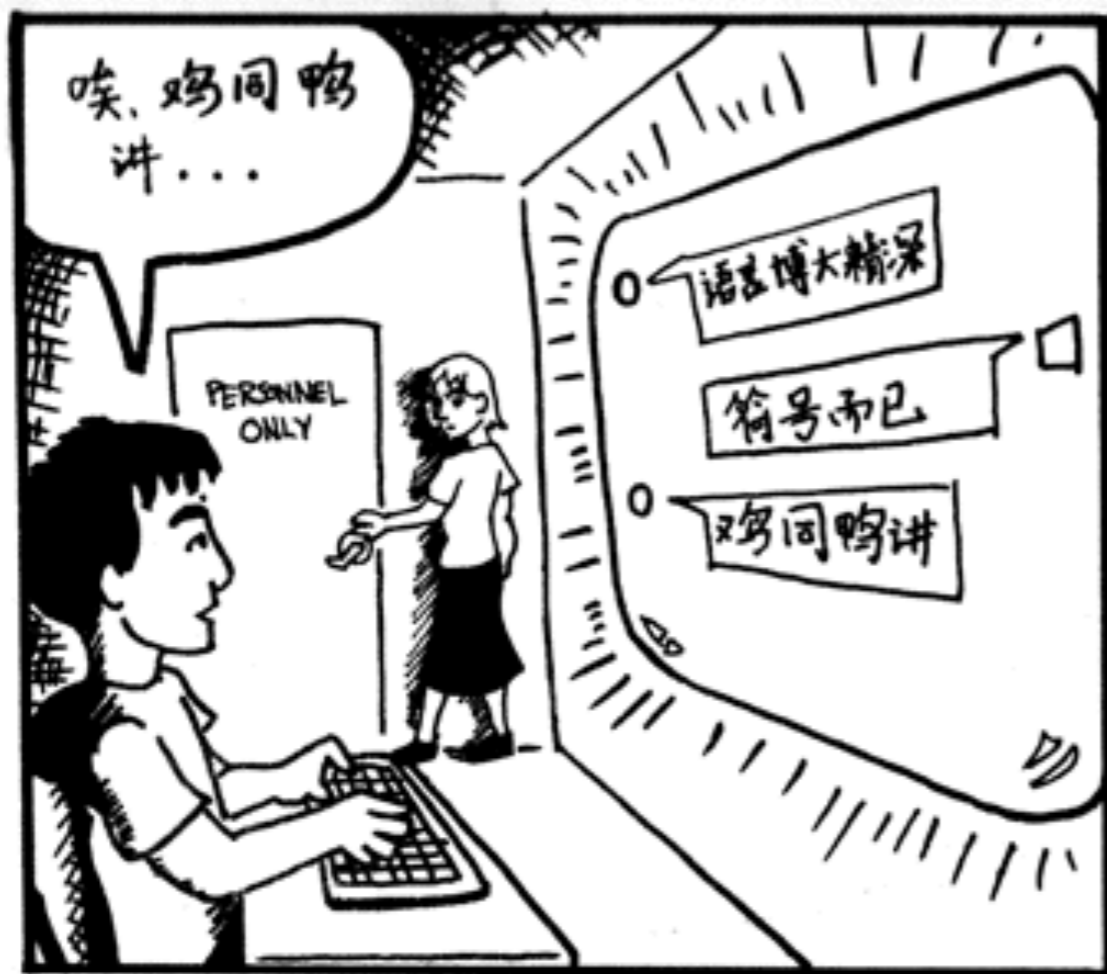
tea talk

Chinese Room

Strong AI “the computer is not merely a tool in the study of the mind; rather, the appropriately programmed computer really is a mind, in the sense that computers given the right programs can be literally said to understand and have other cognitive states.”

Searle







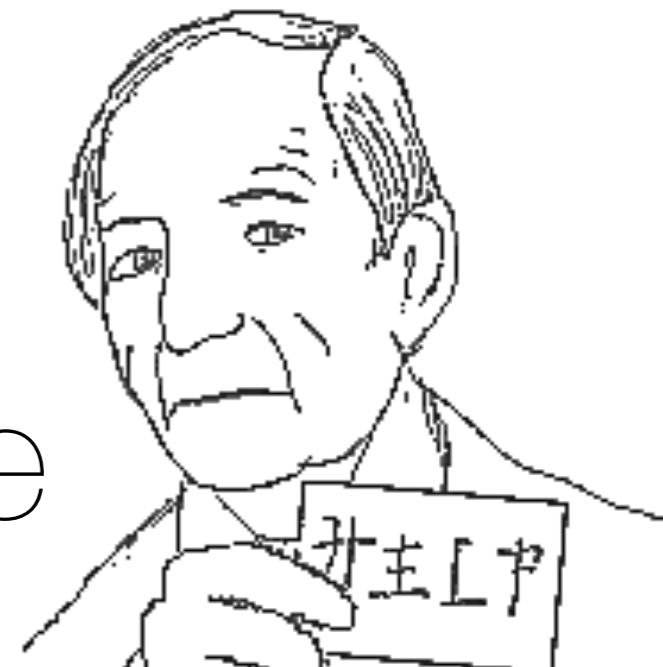
systems reply

systems reply

“While it is true that the individual person who is locked in the room does not understand the story, the fact is that he is merely part of a whole system; and the system does understand the story. The person has a large ledger in front of him in which are written the rules, he has a lot of scratch paper and pencils for doing calculations, he has ‘data banks’ of sets of Chinese symbols. Now, understanding is not being ascribed to the mere individual; rather it is being ascribed to this whole system of which he is a part. ”

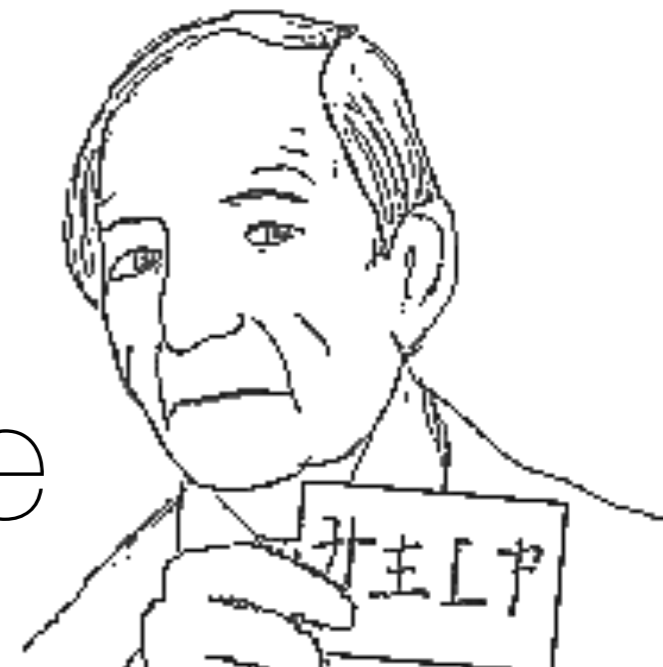
“Actually I feel somewhat embarrassed . . . because the theory seems to me so implausible to start with. The idea is that while a person doesn’t understand Chinese, somehow the conjunction of that person and bits of paper might understand Chinese. It is not easy for me to imagine how someone who was not in the grip of an ideology would find the idea at all plausible.”

Searle



“My response to the systems theory is quite simple: Let the individual internalize all of these elements of the system. **He memorizes the rules in the ledger and the data banks of Chinese symbols, and he does all the calculations in his head.** The individual then incorporates the entire system. There isn't anything at all to the system that he does not encompass. [...] All the same, he understands nothing of the Chinese, and a fortiori neither does the system, because there isn't anything in the system that isn't in him.”

Searle



“As if a human being could, by any conceivable stretch of the imagination, do this. The program on those “bits of paper” embodies the entire mind and character of something as complex in its ability to respond to written material as a human being is, by virtue of being able to pass the Turing test. Could any human being simply “swallow up” the entire description of another human being's mind?”

Hofstadter



“On June 4, 2012, the following posting of characters was blocked on Sihu Weibo [a Chinese blogging service]. Can you figure out why?”

“占占占占人 占占占点 占占点占
占点占占 点占占占 灬占占占占”

Dennett



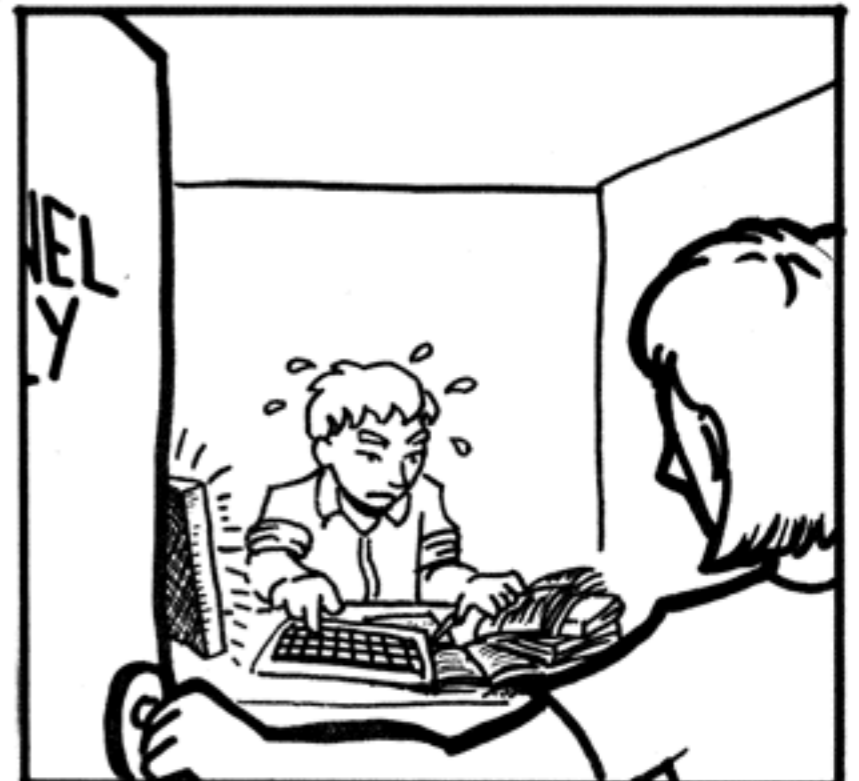
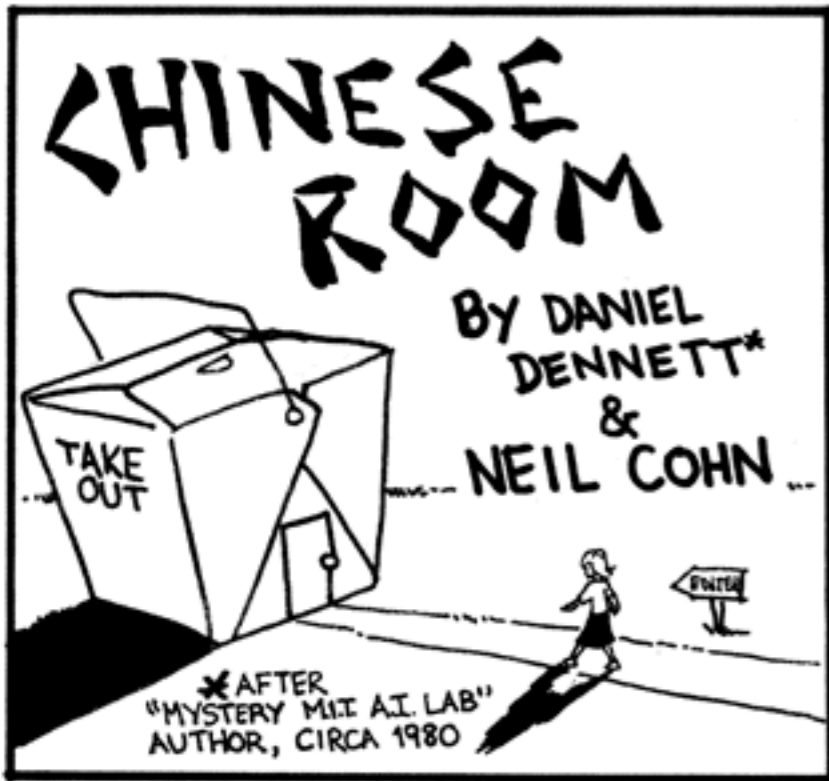


“Suppose, for instance, the questioner in the Turing test began tutoring the candidate in quantum physics, using the Socratic question-and-answer method, giving the student simple problems to solve. Searle, in the engine room, would be obliged to take the system through elaborate intellectual exercises in order to hold up its end of the conversation, but Searle would emerge from the ordeal as uncomprehending of quantum physics as when he went in. The system, in contrast, would now have a much better working understanding of the field than it had before the Turing test began, because it had done the exercises.”

Dennett



the other minds reply



the brain simulator reply

the brain simulator reply

“Suppose we design a program that doesn't represent information that we have about the world, such as the information in Schank's scripts, but **simulates the actual sequence of neuron firings at the synapses of the brain of a native Chinese speaker when he understands stories in Chinese and gives answers to them.** The machine takes in Chinese stories and questions about them as input, it simulates the formal structure of actual Chinese brains in processing these stories, and it gives out Chinese answers as outputs. We can even imagine that the machine operates, not with a single serial program, but with a whole set of programs operating in parallel, in the manner that actual human brains presumably operate when they process natural language. **Now surely in such a case we would have to say that the machine understood the stories; and if we refuse to say that, wouldn't we also have to deny that native Chinese speakers understood the stories?** At the level of the synapses, what would or could be different about the program of the computer and the program of the Chinese brain?”

wonder tissue



“If more and more of the cells in your brain were to be replaced by integrated circuit chips, programmed in such a way as to keep the input-output function each unit identical to that of the unit being replaced, you would in all likelihood just keep right on speaking exactly as you are doing now except that you would eventually stop meaning anything by it. What we outside observers might take to be words would become for you just certain noises that circuits caused you to make.”

Zenon Pylyshyn

SOURCES

John R. Searle, “**Minds, brains, and programs**”, BBS (1980)

Douglas Hofstadter, Daniel C. Dennett. “**The Mind’s I.**”

Daniel C. Dennett, “**Intuition Pumps And Other Tools for Thinking.**”

portraits are from the **Conscious Entities** blog

Dennett on Chinese Room on Philosophy Bites Podcast