Tham Jit 21049682

PSYCH 256 Nick Ray

27 September 2022

Critical Analysis on Searle: Minds, brains, and programs pg. 418-419

I have chosen to analyze the reading on Searle as it provokes thought on how one can define the term ‘understanding’. This benefits me, especially as a computer science student with an intent to develop games, I am interested in the field of artificial intelligence, and Searle has provided a unique view on what it means to be intelligent. In addition, while trivial, Searle has also caught my attention by providing an example referencing Chinese (the more formal definition would be mandarin), which I am somewhat proficient in.

Searle begins by rebutting the work of Roger Shank’s and his colleagues’ claims. These claims states that intelligence can be seen from inferring answers to questions about stories, even if the direct answer is not found in the passage. (The example given is whether a man ate at a hamburger restaurant, with two scenarios being one where the burger was burnt to a crisp and he left, and the other being that the burger was good and he gave a big tip).To rebut, he provides an example whereby he was given a document in a language which he does not understand at all (Chinese in this case), followed by instructions in English on a set of rules to apply to the first document. Lastly, he is given a third document in Chinese which he uses in conjunction with the other two documents and returns the answer. To people who can understand Chinese, the first document represents the story, while the third represents questions asked and the returned answer represents the answer to the questions. Therefore, he has managed to answer the machine while not understanding the story but by using an algorithm to solve the problem (i.e., translating one set of Chines symbols to another set).

By positing that translation of rules does not mean understanding, Searle has shown that given enough rules and time, one can provide answers to questions that are inferred from stories. This refutes the idea that any understanding of the story, and thereby intelligence, can be seen from inferring answers to questions about stories. This helps the field of cognitive science by providing a stricter definition on strong artificial intelligence, and thereby helping to reduce the doubt on what is considered “intelligent”.

However, I believe Searle’s posit on understanding is too strict. When he says that given enough rules, he can translate the story and questions to answers, I argue that understanding all rules correspond to understanding the story, as far as artificial intelligence is concerned. To note, he did not provide his definition of understanding. Therefore, I shall begin by stating that mine is a reduced form, not taking into account sensory input and forms of thought, so being unable to actually map the idea of a thing (such as burgers, money, or even more abstract things such as circles) to part of or a full sensory experience. Machines presently are created and created for a purpose. As a result, my definition would forgo such forms of thought, as if the purpose was to answer inference in the story, then it would be sufficient to be called understanding.

In his example, the rules would have to had provided some guidance on semantic analysis, for the output to have made sense to the researchers. Therefore, he would been given information that, for example, if [burger was crisp] (taking anything within square brackets to be in Chinese characters), the probability that [guy did not eat burger] is zero. To answer all inference questions about the story, all the connections between symbols would have to be realized. Lastly, by asking about the definitions of each word, and iteratively asking about any words after that, it would result in the understanding of the story.