LSU PHIL 4941 / Spring 2016 / John Protevi

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John Searle, "Minds, brains, and programs." *Behavioral and Brain Sciences* 3 (1980): 417-424.

1. INTENTIONALITY is a product of causal features of the brain. That is, certain brain processes are sufficient for intentionality. (They might not be necessary; it's conceivable an artificial machine could be built with causal powers sufficient for intentionality. But simply programming a machine to manipulate symbols is not sufficient, because the program doesn't have those causal powers. In other words, intentionality is due to hardware, not software.)
    a. Intentionality = aboutness" (not necessarily what you "intend," i.e., what you plan on doing).
        i. Endnote 3: Beliefs, desires, and intentions are intentional states, but anxiety and depression are not.
        ii. Page 420: "real beliefs, beliefs with direction of fit, propositional content, and conditions of satisfaction."
    b. Direction of fit:
        i. Assertion and belief go from mind to world, so that it's the world that decides if a belief is true or false, and thus requires the mind to change its beliefs if need be.
        ii. Command and desire go from world to mind: if the world is not as it should be, the mind decides on a plan of action to change the world.
    c. Conditions of satisfaction: a belief is satisfied if things are as they are believed to be. A desire is satisfied if it is fulfilled (i.e., if the world is changed in keeping with the desire).
    d. Propositional content: a proposition is that which is expressed by a statement and about which one can have an attitude (of belief, of desire, of various emotions). "I believe that it is raining, I fear that it is raining …"
2. Searle's argument is directed against STRONG AI.
    a. Weak AI = computers are tools enabling good hypotheses in study of mind
    b. Strong AI = a programmed computer is a mind;
        i. It understands and has other cognitive states
        ii. It explains psychological processes (rather than testing hypotheses about psych processes)
3. The CHINESE ROOM (CR) thought experiment
    a. Operators: who provide input
    b. Input:
        i. Cards with Chinese symbols
        ii. Cards with English rules for manipulating Chinese symbols
        iii. Cards with English story, questions, and answers
    c. Processing: SEARLE, a monolingual English speaker with symbol recognition and rule following capacity who "performs computational operations on formally specified elements" (418)
    d. Output:
        i. Cards with Chinese symbols
        ii. Cards with English words
    e. Evaluators
        i. Judge relation of input and output
        ii. Both Chinese and English input-output (that is, relation of questions to answers) is judged to pass Turing test (so that it is impossible to tell whether it is an artificial computer or a human doing the processing).

4. Searle, the author, concludes that the CR experiment invalidates the two Strong AI claims.
    a. Insofar as SEARLE, the processor, does not understand Chinese, then programmed computers do not have cognitive states (in this case, understanding – as that requires access to the semantic properties of input and outputs, but computation operates syntactically).
    b. Insofar as SEARLE, the processor, does not understand Chinese (i.e., does not deal with the semantic properties of the inputs and outputs), even though he / it performs computation qua manipulation of formal symbols (syntactically), then understanding is not computation.