History AI Luke,Maria,Paul

First Robot - 1928 – Eric Robot - Capt. Richards & A.H. Reffell (Luke)

> Eric Robot was constructed at Gomshall, near Dorking, by Captain William H. Richards, a veteran of the First World War, and a noted journalist and A. H. Reffell, a motor engineer. What caused its invention was the need of an important person to take the place of the Duke of York in opening the Exhibition of the Society of Model Engineers, in London. As Richards was secretary of the organization, he decided to make a Robot who could open the exhibition. On 20th September 1928 at the at the Royal Horticultural Hall, Eric arose, bowed, looked to the right, to the left, and, with appropriate gestures, proceeded to give a four minute opening address . His exterior was of aluminium, not unlike a mediaeval knight in armour. His eyes are white bulbs with red pupils painted on them. The use of 35,000 volts of electricity causes blue sparks to emanate from his teeth. (Cybernetic Zoo, 2009)

Who is Turing?

Alan turning was born on 23 June 1912, the second and last child (after his brother John) of Julius Mathison and Ethel Sara Turing. “He was An English mathematician, logician and cryptographer, Alan Turing was responsible for breaking the Nazi Enigma code during World War II. His work gave the Allies the edge they needed to win the war in Europe, and led to the creation of the computer.” (Jacobson, 2014)

His death came at his own hands because in “in 1954, two years after being outed as gay. Homosexuality was still a crime in Great Britain at the time, and Turing was convicted of “indecency.” He died from eating an apple laced with cyanide. He was only 41 years old.” (Jacobson, 2014)

Turing education

He had problems in his education because “Science was a considered a second-class pursuit in English public schools in the 1920s, Hodges said. Turing’s passion for science embarrassed his mother, who had hoped he would study the classics, which was the most acceptable pursuit for gentlemen.”His English teacher once said:

> *I can forgive his writing, though it is the worst I have ever seen, and I try to view tolerantly his unswerving inexactitude and slipshod, dirty, work, inconsistent though such inexactitude is in a utilitarian; but I cannot forgive the stupidity of his attitude towards sane discussion on the New Testament.”*

“His math and science grades weren’t much better. He was nearly stopped from taking the national School Certificate exams on the subject, for fear he would fail.” (Jacobson, 2014).He was also into physics, biology, chemistry and neurology which he was good at but was noted for.” He also was a huge reader he used to :

read Einstein's theory of relativity as a teenager, and immediately filled a notebook with his own thoughts and ideas on the subject. He dabbled in quantum mechanics, a new field at the time, as well as biology, chemistry and neurology after the war. Much of this work was related to creating machines that could learn and "think", but some of it came out of simple curiosity about the world." (Jacobson, 2014)

This made him understand the stuff he worked on the future for example when he worked on his his enigmas and the first computer.

Figure 1 :Sculpture of Alan Turing in slate at Bletchley Park. Photo from Wikimedia Commons, taken by Jon Callas (Jacobson, 2014).

The early computer

This is the story of him and the first computer during the Second World War.

"During World War II, Turing was a leading participant in wartime code-breaking, particularly that of German ciphers. He worked at Bletchley Park, the GCCS wartime station, where he made five major advances in the field of cryptanalysis, including specifying the bombe, an electromechanical device used to help decipher German Enigma encrypted signals. Turing's contributions to the code-breaking process didn't stop there: He also wrote two papers about mathematical approaches to code-breaking, which became such important assets to the Code and Cypher School (later known as the Government Communications Headquarters) that the GCHQ waited until April 2012 to release them to the National Archives of the United Kingdom." (website, 2018).

Turing Test(Paul)

The Turing Test is a proposal made by Alan Turing in 1950, as a way of dealing with questions whether machines can think. A panel of judges (humans) conversing with an unknown entity believes that on the other end it is a human, and if it is a computer, then the computer passes the Turing Test.

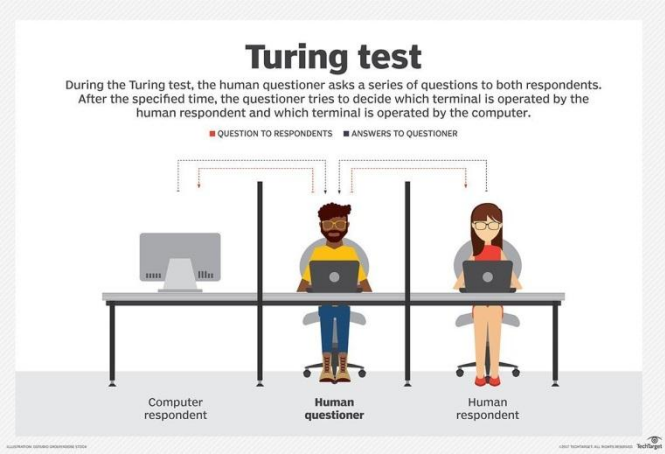


Figure 2. M. Rouse (2017)

> The test, as Turing designed it, is carried out as a sort of imitation game. On one side of a computer screen sits a human judge, whose job is to chat to some mysterious interlocutors on the other side. Most of those interlocutors will be humans; one will be a chat bot, created for the sole purpose of tricking the judge into thinking that it is the real human. (Hern, 2014)

One of the first winners of this test is a robot in a persona of a 13 year old boy named as Eugene. He was programmed to claim that he knows everything but at the same time he knows only a few because of his age. He convinced 33% of the human judges that he was a human. One of the tests that was given to Eugene was:

Test 1

[12:43:37] Judge: Hi, I'm Cathy.

[12:43:43] Eugene: Cathy! Nice to meet you! You're a woman, if I'm not mistaken.

[12:44:20] Judge: Right. What is your name?

[12:44:29] Eugene: People call me Eugene. Or "Zhenya". It is a short name for Eugene in Russia and Ukraine.

[12:45:17] Judge: Nice name. Are you from either area?

[12:45:41] Eugene: Agree :-) Oh, what a fruitful conversation;-)

[12:45:52] Judge: Do you really think so?

[12:46:04] Eugene: No, your guess was wrong. I don't think so. By the way, I still don't know your specialty – or, possibly, I've missed it?

[12:46:56] Judge: What speciality? What's yours?

[12:47:01] Eugene: Huh? And I forgot to ask you where you are from.

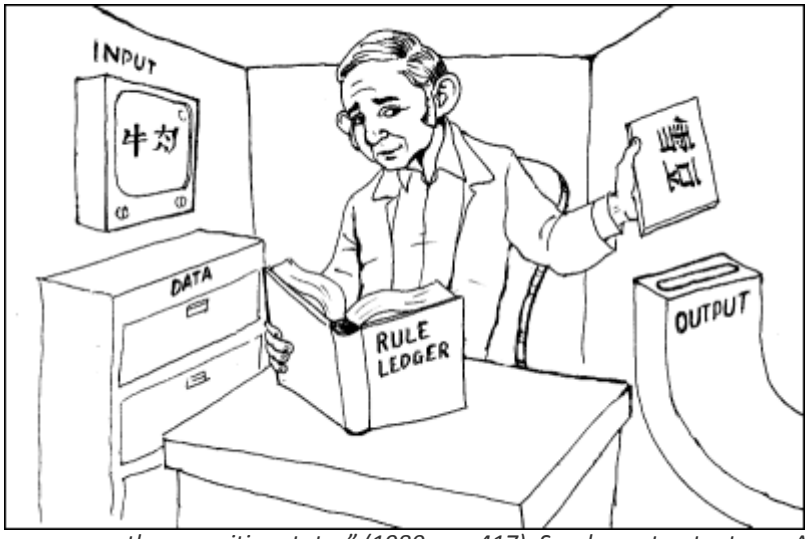
[12:47:51] Judge: The universe and you?

[12:48:01] Eugene: Is it your hobby to ask little poor Jewish boys such tricky questions they don't have an answer for?

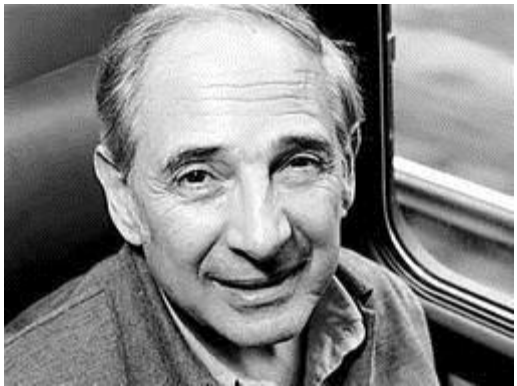
Who is John Searle?(Maria)

He was born in Denver, Colorado on July 31st 1932. American philosopher best known for his work in the philosophy of language—especially speech act theory—and the philosophy of mind. He also made significant contributions to epistemology, ontology, the philosophy of social institutions, and the study of practical reason. He views his writings in these areas as forming a single picture of human experience and of the social universe in which that experience takes place.

What is the Chinese Room?



The Chinese room argument is a thought experiment of John Searle (1980a) and associated (1984) derivation. It is one of the best known and widely credited counters to claims of artificial intelligence (AI)—that is, to claims that computers do or at least can (someday might) think. According to Searle's original presentation, the argument is based on two key claims: brains cause minds and syntax doesn't suffice for semantics. Its target is what Searle dubs "strong AI." According to strong AI, Searle says, "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" (1980a, p. 417). Searle contrasts strong AI with "weak AI." According to weak AI, computers just simulate thought, their seeming understanding isn't real understanding (just as-if), their seeming calculation is only as-if calculation, etc. Nevertheless, computer simulation is useful for studying the mind (as for studying the weather and other things)(Hauser, 2001)



Against "strong AI," Searle (1980a) asks you to imagine yourself a monolingual English speaker "locked in a room, and given a large batch of Chinese writing" plus "a second

batch of Chinese script" and "a set of rules" in English "for correlating the second batch with the first batch." The rules "correlate one set of formal symbols with another set of formal symbols"; "formal" (or "syntactic") meaning you "can identify the symbols entirely by their shapes." A third batch of Chinese symbols and more instructions in English enable you "to correlate elements of this third batch with elements of the first two batches" and instruct you, thereby, "to give back certain sorts of Chinese symbols with certain sorts of shapes in response." Those giving you the symbols "call the first batch 'a script' [a data structure with natural language processing applications], "they call the second batch 'a story', and they call the third batch 'questions'; the symbols you give back "they call . . . 'answers to the questions'"; "the set of rules in English . . . they call 'the program'": you yourself know none of this. Nevertheless, you "get so good at following the instructions" that "from the point of view of someone outside the room" your responses are "absolutely indistinguishable from those of Chinese speakers." Just by looking at your answers, nobody can tell you "don't speak a word of Chinese." Producing answers "by manipulating uninterpreted formal symbols," it seems "[a]s far as the Chinese is concerned," you "simply behave like a computer"; specifically, like a computer running Schank and Abelson's (1977) "Script Applier Mechanism" story understanding program (SAM), which Searle's takes for his example. (Hauser, 2001)

John Searle vs Alan Turner

The Turing test developed by Alan Turing, is a method which is used in the field of Artificial Intelligence (A.I.) to determine whether an agent is intelligent in some manner. It does so by asking the agent to perform a series of tasks, cognitive or physical, and if the tester cannot distinguish the difference between the agent performing the task and a person, the agent is deemed intelligent (Turing, 1950). John Searle does not think this is enough to prove intelligence and claims that a machine or agent need only the proper syntax of a system to pass the Turing test, and demonstrates so quite convincingly in his "Chinese room" argument (Searle, 1980). While Searle's claim that "Syntax is all we need" may be true for narrow A.I., in this paper I will attempt to show that his system fails to properly emulate a generally intelligent agent, and would ultimately fail a Turing test for general intelligence; disproving his argument that the Turing test is not a good enough test to distinguish between real intelligent understanding and emulated understanding. (McRae, 2017)

Criticisms of the narrow Chinese Room argument against Strong AI have often followed three main lines, which can be distinguished by how much they concede:

(1) Some critics concede that the man in the room doesn't understand Chinese, but hold that nevertheless running the program may create something that understands Chinese. These critics object to the inference from the claim that the man in the room does not understand Chinese to the conclusion that no understanding has been created. There might be understanding by a larger, or different, entity. This is the strategy of The Systems Reply and the Virtual Mind Reply. These replies hold that the output of the room reflects understanding of Chinese, but the understanding is not that of the room's operator. Thus Searle's claim that he doesn't understand Chinese while running the room is conceded, but his claim that there is no understanding, and that computationalism is false, is denied.

(2) Other critics concede Searle's claim that just running a natural language processing program as described in the CR scenario does not create any understanding, whether by a human or a computer system. But these critics hold that a variation on the computer system could understand. The variant might be a computer embedded in a robotic body, having interaction with the physical world via sensors and

motors ("The Robot Reply"), or it might be a system that simulated the detailed operation of an entire brain, neuron by neuron ("the Brain Simulator Reply").

(3) Finally, some critics do not concede even the narrow point against AI. These critics hold that the man in the original Chinese Room scenario might understand Chinese, despite Searle's denials, or that the scenario is impossible. For example, critics have argued that our intuitions in such cases are unreliable. Other critics have held that it all depends on what one means by "understand"—points discussed in the section on The Intuition Reply. Others (e.g. Sprevak 2007) object to the assumption that any system (e.g. Searle in the room) can run any computer program. And finally some have argued that if it is not reasonable to attribute understanding on the basis of the behavior exhibited by the Chinese Room, then it would not be reasonable to attribute understanding to humans on the basis of similar behavioral evidence (Searle calls this last the "Other Minds Reply"). The objection is that we should be willing to attribute understanding in the Chinese Room on the basis of the overt behavior, just as we do with other humans (and some animals), and as we would do with extra-terrestrial Aliens (or burning bushes or angels) that spoke our language. (Cole, 2004)

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