TURING TEST

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Course : Research Professional Practice

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BIOGRAPHY

- “Born in London in 1912, Turing attended Sherborne School in Dorset and then, later, King's College Cambridge and Princeton University in the USA.
- He developed the idea of the modern computer and artificial intelligence. Durng the Second World War he worked for the government breaking the enemy’s codes and Churchill said he shortened the war by two years”.
- “This paper is based on the talk given on 5 June 2004 at the conference at Manchester University marking the 50th anniversary of Alan Turing’s death.
- Half a century after Alan Turing’s death in 1954, we can ask whether computing can go beyond the framework of computability that he set out in his classic 1936 paper on computable numbers, with an application to the Entscheidungss problem

OTHER WORKS

- Alan Turing was a mathematician, cryptographer, and a pioneer of computer science. Today, Turing may best be known for his work at Bletchley Park during World War II, and his part in breaking the German Enigma code. Yet by this time Turing was already well known as a mathematician. As a young man, his idea of a 'Universal Machine', a hypothetical type of computer, resolved one of the most important problems in 20th century mathematics.
- 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.

TURING TEST

- According to TECHTARGET, Alan Turing says that, a computer is deemed to have artificial intelligence if it can mimic human responses under specific conditions.
- To do that he proposed a test that is known as Turing test
- Alan Turing wrote this paper while employed at the Computing Laboratory in Manchester University.
- The prospect of Artificial Intelligence was raised as an issue for the general public from the very start, stimulated by the success of wartime science technology.
- But it was in the 1950 paper that Turing held, most fully and confidently, that computers would, in time, be programmed to acquire abilities rivalling human intelligence. Even where he saw difficulties and was doubtful about what could be achieved, he advocated experiment. He saw this not a dogma, but as an important conjecture, to guide future research.

TURING TEST CONT….

- Alan Turing made many predictions about artificial intelligence, but one of his lesser known may sound familiar to those who have heard Stephen Hawking or Elon Musk warn about AI's threat in 2015.
- "At some stage… we should have to expect the machines to take control," he wrote in 1951.These fictional representations misrepresent the Turing Test, turning it into a measure of whether a robot can pass for human.
- The original Turing Test wasn't intended for that, but rather, for deciding whether a machine can be considered to *think* in a manner indistinguishable from a human - and that, even Turing he discerned, depends on which questions you ask.
- There was a philosophical debate about how to define "thinking. Turing devised a subjective test to answer the question, "Can machines think?" and reasoned that if a computer acts, reacts and interacts like a sentient being, then call it sentient
- .

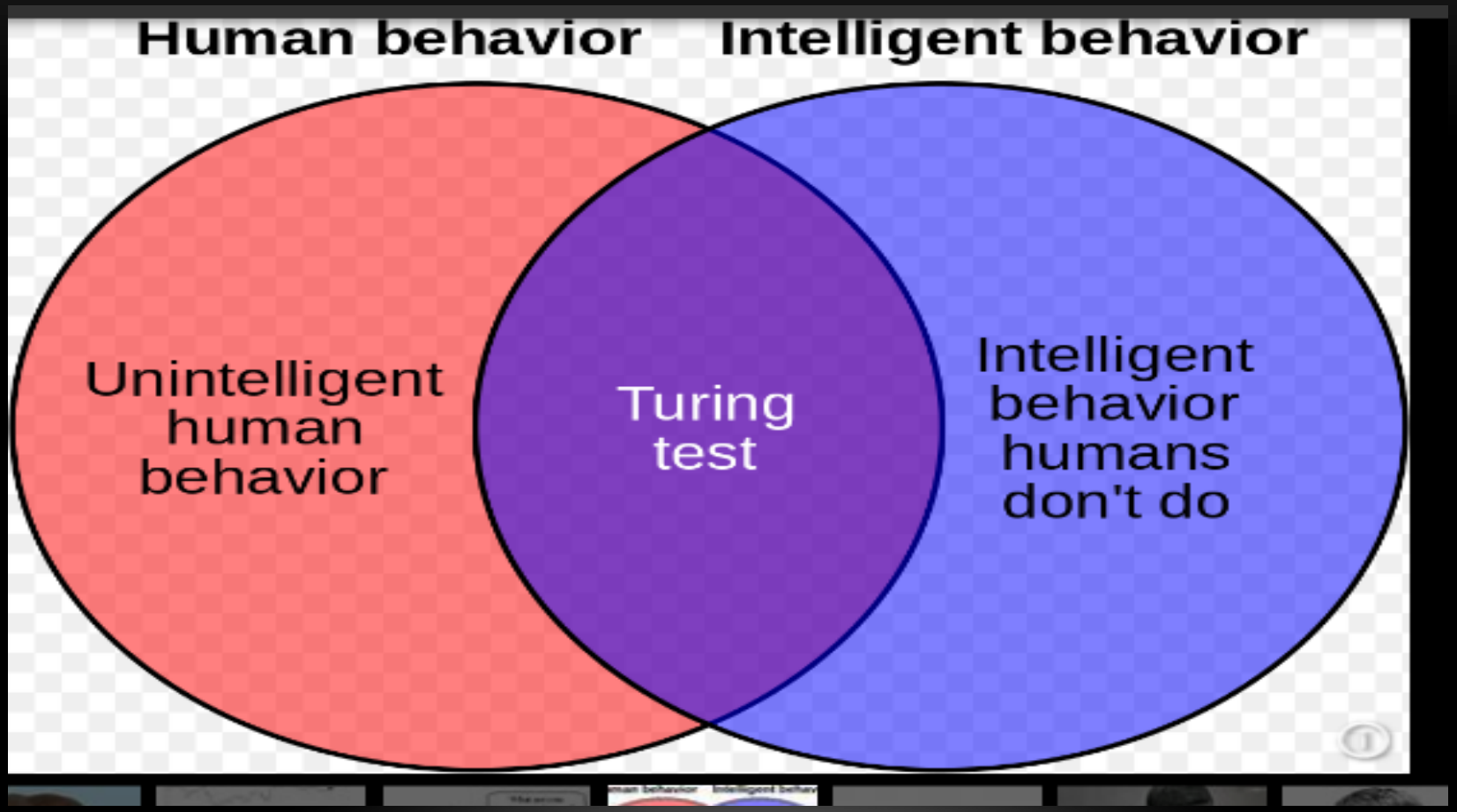
CRITICS OF TURING TEST

- **TECHTARGET explains that the Turing Test has been criticized, in particular because the nature of the questioning must be limited in order for a computer to exhibit human-like intelligence**
- "The machine (programmed for playing the game) would not attempt to give the right
- answers to the arithmetic problems. It would deliberately introduce mistakes in a calculated to confuse the interrogator.

CRITICS CONT…

- Can a computer exhibit real intelligence? Simon provides an incisive answer: “I know of only one operational meaning for ‘intelligence.’
- A (mental) act or series of acts is intelligent if it accomplishes something that, if accomplished by a human being, would be called intelligent. I know my friend is intelligent because he plays pretty good chess (can keep a car on the road, can diagnose symptoms of a disease, can solve the problem of the Missionaries and Cannibals, etc.).
- I know that computer A is intelligent because it can play excellent chess (better than all but about 200 humans in the entire world). I know that Navlab is intelligent because it can stay on the road, etc, etc.... Let’s stop using the future tense when talking about computer intelligence

ILLUSTRATIONS



VIDEO EXPLANATION

- https://www.youtube.com/watch?v=sXx-PpEBR7k

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