# The imitation game

In 1950, Alan Turing wrote a paper called “COMPUTING MACHINERY AND INTELLIGENCE”. In this paper, Alan Turing has tried to answer the following question: “Can machine think?”.

However, he does not directly answer the aforementioned question as he believes that firstly an exact definition of the term “thinking” is necessary. Since, there is no agreement in the definition of the term then it is meaningless to answer the question.

This is why, Turing has replaced the question with a test “The imitation game” which according to him is relevant in order to answer the “Can machine think?” question.

My claim is the following: How can Alan Turing claim that the imitation game is relevant and strictly related to the question “Can machine think?” if he personally claims that there is no established definition of the term “thinking”?

## Description of the imitation game

Turing (1950) describes the following kind of game. Suppose that we have a person, a machine, and an interrogator. The interrogator is in a room separated from the other person and the machine. The object of the game is for the interrogator to determine which of the other two is the person, and which is the machine. The interrogator knows the other person and the machine by the labels ‘*X*’ and ‘*Y*’—but, at least at the beginning of the game, does not know which of the other person and the machine is ‘*X*’—and at the end of the game says either ‘*X* is the person and *Y* is the machine’ or ‘*X* is the machine and *Y* is the person’. The interrogator is allowed to put questions to the person and the machine of the following kind: “Will *X* please tell me whether *X* plays chess?” Whichever of the machine and the other person is *X* must answer questions that are addressed to *X*. The object of the machine is to try to cause the interrogator to mistakenly conclude that the machine is the other person; the object of the other person is to try to help the interrogator to correctly identify the machine. About this game, Turing (1950) says:

I believe that in about fifty years’ time it will be possible to programme computers, with a storage capacity of about 109, to make them play the imitation game so well that an average interrogator will not have more than 70 percent chance of making the right identification after five minutes of questioning. … I believe that at the end of the century the use of words and general educated opinion will have altered so much that one will be able to speak of machines thinking without expecting to be contradicted.

Turing claims that an advantage of the Imitation game is the fact that it draws a fairly sharp line between the physical and the intellectual capacities of a man. In other words, a machine that has thinking capabilities to the same extent as humans cannot be claimed not to be able to think for the reason of not looking like a man.

While Alan Turing claims that this is an advantage of the Imitation Game, I believe that this is rather a fairly flaw of the game. Indeed, Alan Turing assumes that a machine can be labelled to able to think if it thinks human-like. Thus, he assigns a definition to the term “thinking” even though his intent was to bypass the definition of the term itself. Therefore, the whole imitation game is based on the assumption that “thinking” is a mental process that occurs in human minds. Consequently, he believes that a machine that is able to simulate these mental processes can be labelled as a “thinking machine”. Furthermore, Turing does not care about the Weak AI VS Strong AI debate as he believes that a machine that is able to pass the Imitation game can be categorised as a thinking machine despite the fact that it may not really understand what is doing.

Another objection to the Imitation game is the fact that once again Turing associates the term “thinking” with the ability to conduct a conversation as a person. This is rather limiting.