The computational or representational theory of thought (CRTT)

mind is literally a complex piece of computer software implemented on the hardware of the brain.

Turing machine functionalism: **Universal Turing Machine** - an abstract specification of a mechanical device capable of implementing any algorithm

Algorithm: reasoning through a long chain of argument to a conclusion - in a series of simple steps. The steps can in fact be so simple that we often speak of carrying them out "mechanically."

Simple but significant: Since the elementary operations are so extremely simple, it is possible to construct a machine which is capable of performing them with a very high degree of reliability.

the laws of logic: it is possible to construct a purely material system whose operations parallel exactly the laws of logic.

A suitably programmed computer can be depended upon always to display "4" following the inputs "2," "+," and "=," and always to generate "Socrates is mortal" following the inputs "All men are mortal" and "Socrates is a man."

If an artificial device can do this, why not a brain?

Just as the implementation of a computer program is ultimately reducible to the network of causes and effects instantiated in a piece of computer hardware, so too would the implementation of the program that is the human mind be reducible to the network of neuronal firing patterns constituting the brain.

Sameness of the Laws of physics: The capacity of the brain, considered as a purely material system governed by the same laws of physics that govern everything else in the universe, to generate patterns of thought that correspond to the laws of logic, would be no more mysterious in principle than the capacity of a calculator reliably to function in accordance with the **laws of arithmetic**.

Sentential form of the brain and the computer: a particular mental state, such as the belief that *Socrates is a man*, is to be understood as a relation between the person having the belief and a sentence that has the meaning that *Socrates is a man*.

where is this sentence?

surely it can't be in the brain itself - there is nothing in the brain that looks like the sentence "socrates is a man." And what language is this sentence written in? **surely not English**, since lots of people who do not speak English have the belief that Socrates is a man.

sentential expressions and the proposition

"sentences in the head"… so why couldn't a proposition exist as a **neuronal firing pattern** in the brain?

If there are such sentences they would be **sentences of a universal language** - a "**language of thought**" common to all human beings.

Philosophers who take the view that there is such a language of thought often refer to it as **Mentalese**

the overall theory of which the **Mentalese hypothesis** is a part is one that takes thought to be computation of a sort analogous to the computation performed by the computers.

this theory is often referred to as **the conputational/representational theory of thought or CRTT** (in the words of Jerry Fodor, the theory's best-known advocate).

Its defenders claim that, there is, in principle, no problem in explaining our capacity for rational thought in purely materialistic terms.