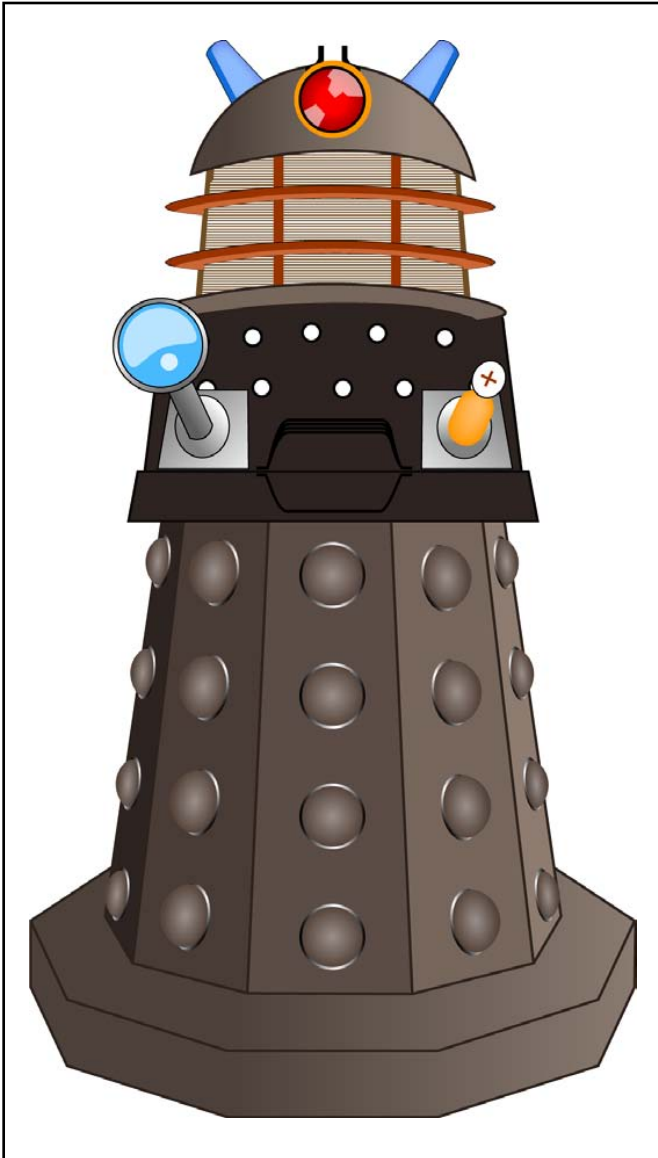Image by MIT OpenCourseWare.

self-assessment

the Chinese room argument

Something has <u>derived</u> intentionality just in case its intentionality can be explained in terms of the intentionality of something else (see Searle, *Mind: A Brief Introduction*, 5.) Plausibly, 'dog' refers to dogs in virtue of the beliefs, intentions, etc., of English speakers—hence 'dog' has derived intentionality; my belief that dogs have fur is an intentional state, and doesn't have its intentionality in virtue of the intentionality of anything else—hence my belief has <u>underived</u> (or original) intentionality. If thinking is conducted in a language written in the brain, then the words of this language have underived intentionality.

underived vs. derived intentionality

underived:

the belief that Fido is a dog

the desire for a walk

the intention to use 'Fido' to refer to Fido

derived:

the English sentence 'Fido is a dog'

the Spanish sentence 'Fido es un perro'

this sign:

PICK UP AFTER YOUR DOG

Image by MIT OpenCourseWare.
3

an analogy

an object has 'derived mass' just in case its mass can be explained in terms of the masses of other things; otherwise it has 'underived mass'

atoms: derived mass

elementary particles: underived mass

Image removed due to copyright restrictions.

according to 'Strong AI', 'the mind is to the brain, as the program is to the computer hardware'

Searle's Chinese room argument purports to show that Strong AI is false

WEAK AI: the principle value of the computer in the study of the mind is that it gives us a very powerful tool—e.g. it enables us to simulate various kinds of mental processes

Image removed due to copyright restrictions.

cf. WEAK ARTIFICIAL METEOROLOGY

WEAK AI is obviously correct (ditto WEAK AM)

STRONG AI: an appropriately programmed computer literally has mental states (in particular, cognitive states)

cf. STRONG AM—an appropriately programmed computer literally has meteorological states

STRONG AI is disputable, and disputed by Searle

STRONG AM, at least, is obviously false

STRONG AI: an appropriately programmed computer literally has mental states (in particular, cognitive states)

more precisely: there is a computer program P such that, *necessarily*, any computer running P is in such-and-such mental states (believes it's raining in Beijing/intends to vote for Perry/wants Romney to win/....)

a program: an algorithm (mechanical recipe) for transforming symbols into symbols

the thought experiment exploits the fact that computer programs can be 'multiply realized'

that is, computer programs can be implemented on a diverse range of hardware

in particular, the Chinese room
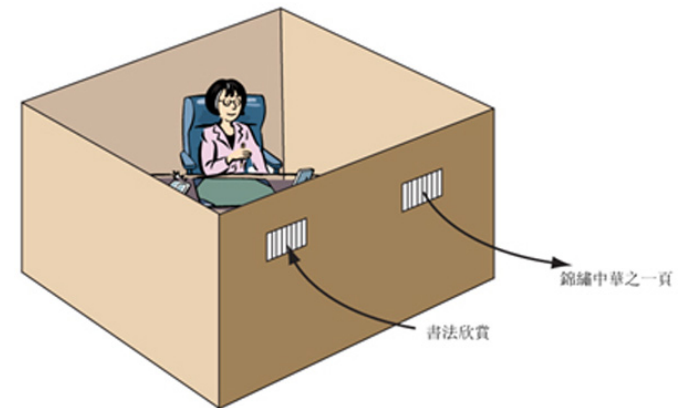
…you behave exactly as if you understood Chinese, but all the same you don't understand a word of Chinese. But if going through the appropriate computer program for understanding Chinese is not enough to give <u>you</u> an understanding of Chinese, then it is not enough to give <u>any other digital computer</u> an understanding of Chinese.

so, strong AI is false   ?
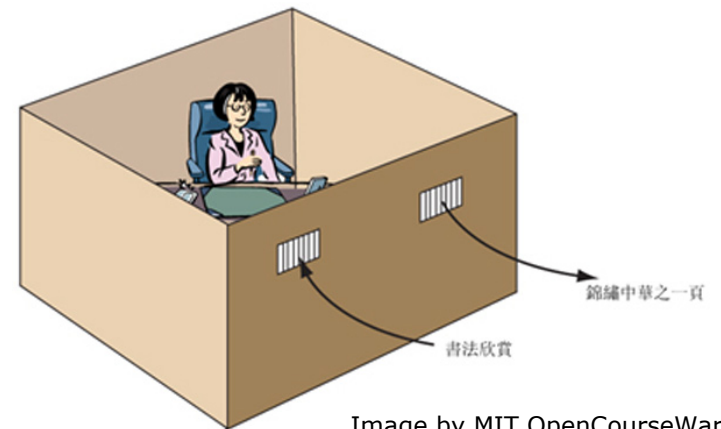
Image by MIT OpenCourseWare.

don't get hung up on 'understanding Chinese'

it's simpler to consider a 'believing that it's raining in Beijing' program

?
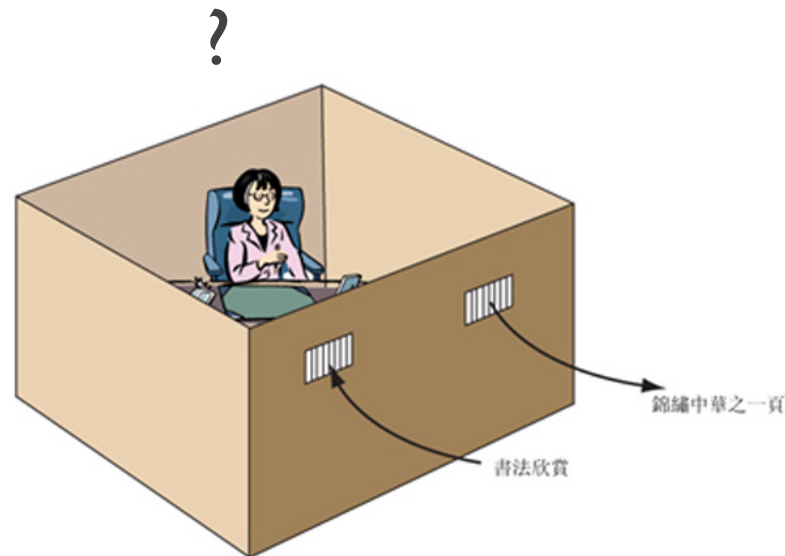

Image by MIT OpenCourseWare.

… appears to rely on the mistaken principle that if x is part of y, and x isn't F, then y isn't F. (My liver is part of me, and doesn't teach philosophy, but that doesn't mean I don't.)
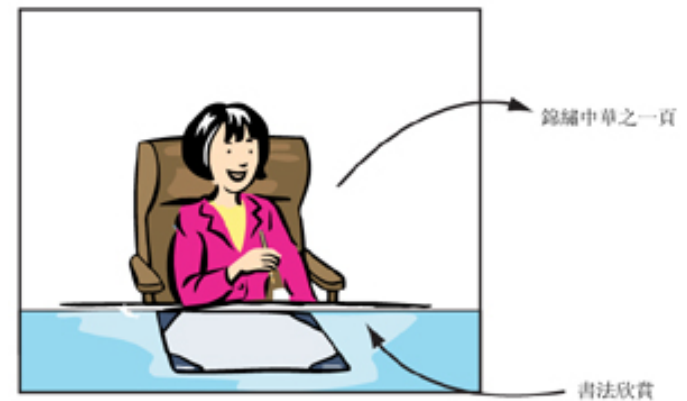

Image by MIT OpenCourseWare.

morals
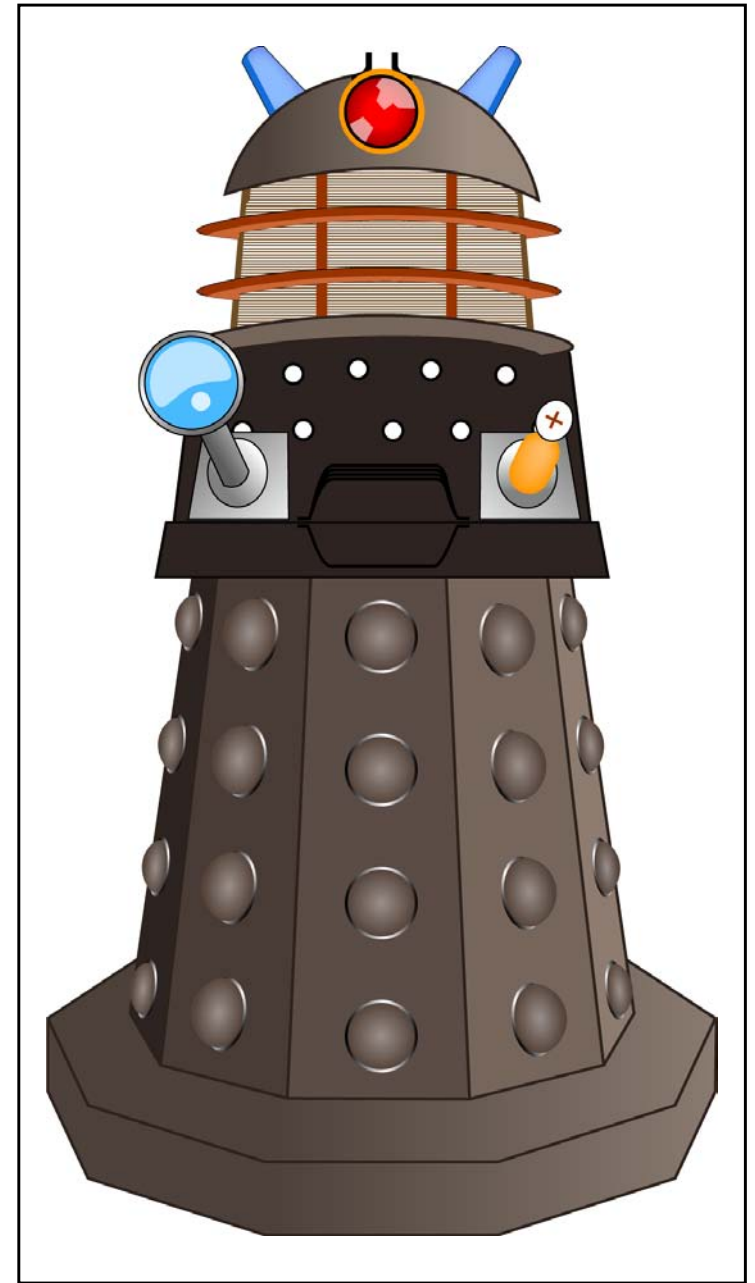from the Chinese room,
and the Turing test

Image by MIT OpenCourseWare.

24.09 Minds and Machines

Fall 2011