24.09 Minds and Machines
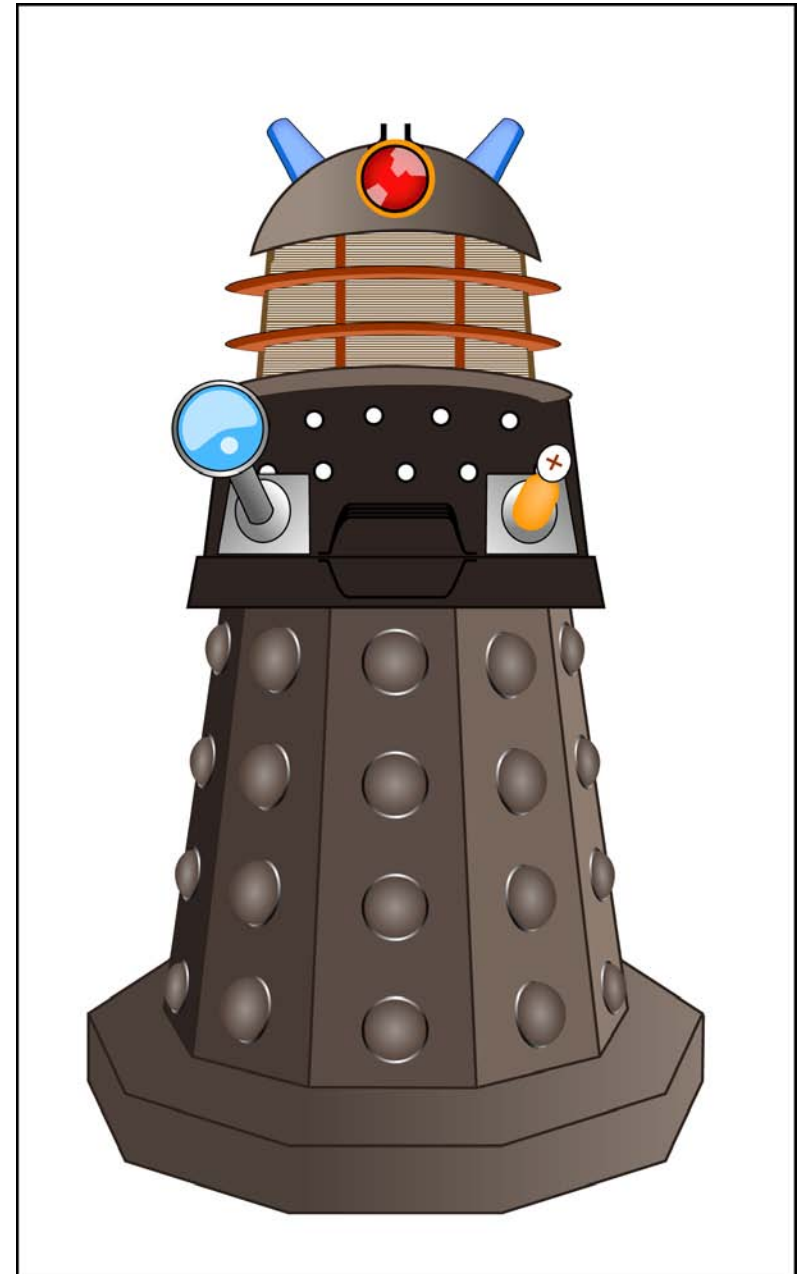# Fall 11 HASS-D CI

lecture 1

nuts and bolts

course overview

first topic: Searle on AI

occasional quizzes in recitation

3 5-page papers

2 argument analyses

final exam

all readings are electronic

1. can computers think?

2. from dualism to functionalism

    a survey of theories of mind

3. externalism

    is the mind in the head?

4. perception

5. consciousness and the mind-body problem

Without consciousness the mind-body problem would be much less interesting. With consciousness it seems hopeless.

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Nagel, 'What Is It Like to Be a Bat?'

cf. the 'digestion-body problem'

the 'hard problem' of consciousness (Pinker in *Time*)

The Hard Problem… is why it feels like something to have a conscious process going on in one's head—why there is first-person, subjective experience. Not only does a green thing look different from a red thing, remind us of other green things and inspire us to say, 'That's green' (the Easy Problem), but it also actually looks green: it produces an experience of sheer greenness that isn't reducible to anything else… The Hard Problem is explaining how subjective experience arises from neural computation. The problem is hard because no one knows what a solution might look like or even whether it is a genuine scientific problem in the first place. And not surprisingly, everyone agrees that the hard problem (if it is a problem) remains a mystery.

not Hollywood zombies

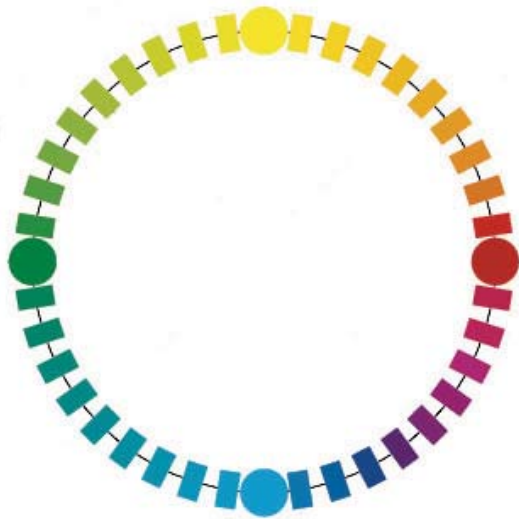physical duplicates of us, but lacking conscious experience entirely

zombies are <u>imaginable</u>, but could there be zombies—are zombies <u>possible</u>?

Image removed due to copyright restrictions. A Shaun Of The Dead movie poster.

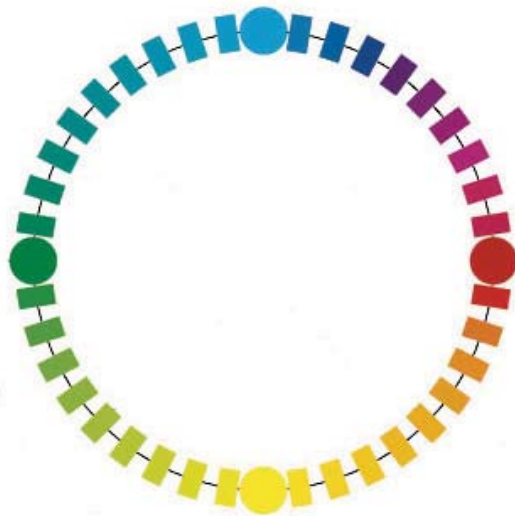<u>materialists</u> say no; <u>dualists</u> say yes

cf. a 'digestion zombie'

devised by Locke, *An Essay Concerning Human Understanding* (1689)

someone might have color experiences that are 'inverted' with respect to yours

arguably, an empirical possibility

the thought experiment can be turned into an argument against materialism

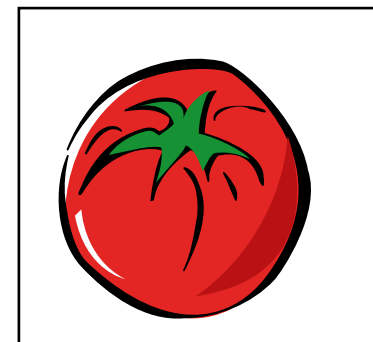I wonder what it's like to see red?

Image by MIT OpenCourseWare.

Image by MIT OpenCourseWare.

one of the main arguments against materialism

do we perceive mind-independent physical objects like roses and rubies?

'My perception is not of the world, but of my brain's model of the world' (Frith, *Making Up The Mind*)
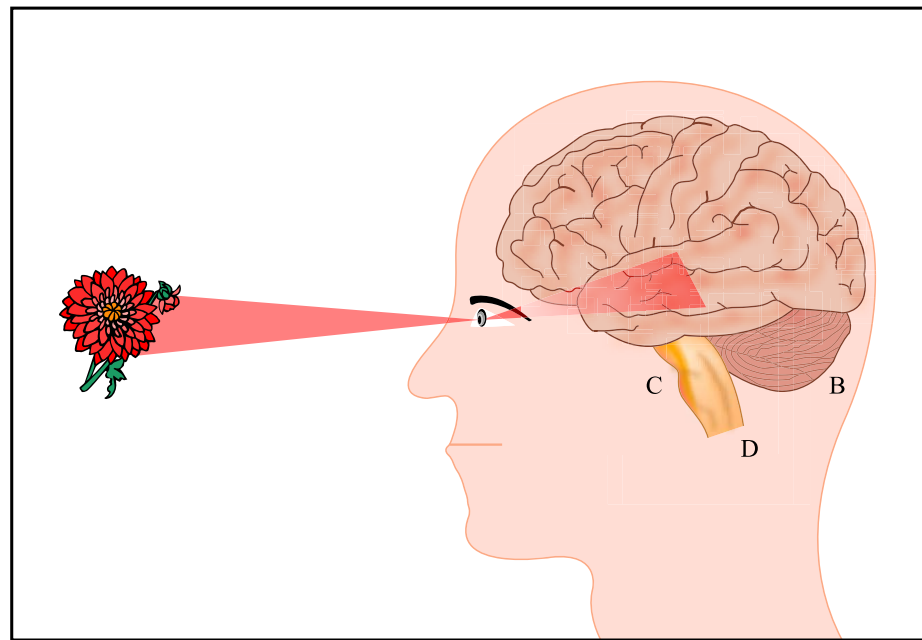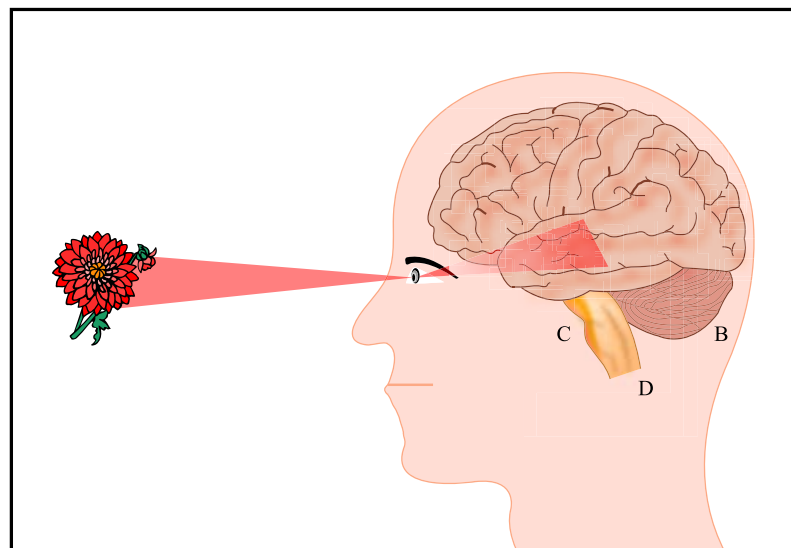

Image by MIT OpenCourseWare.

do we perceive roses and rubies as they really are?

'As we will learn in this chapter, however, blood is <u>not</u> red. As strange as it may seem, color is not a physical property of things in the world; rather, it is a creation of the mind' (Wolfe et. al, *Sensation and Perception*)

Image by MIT OpenCourseWare.
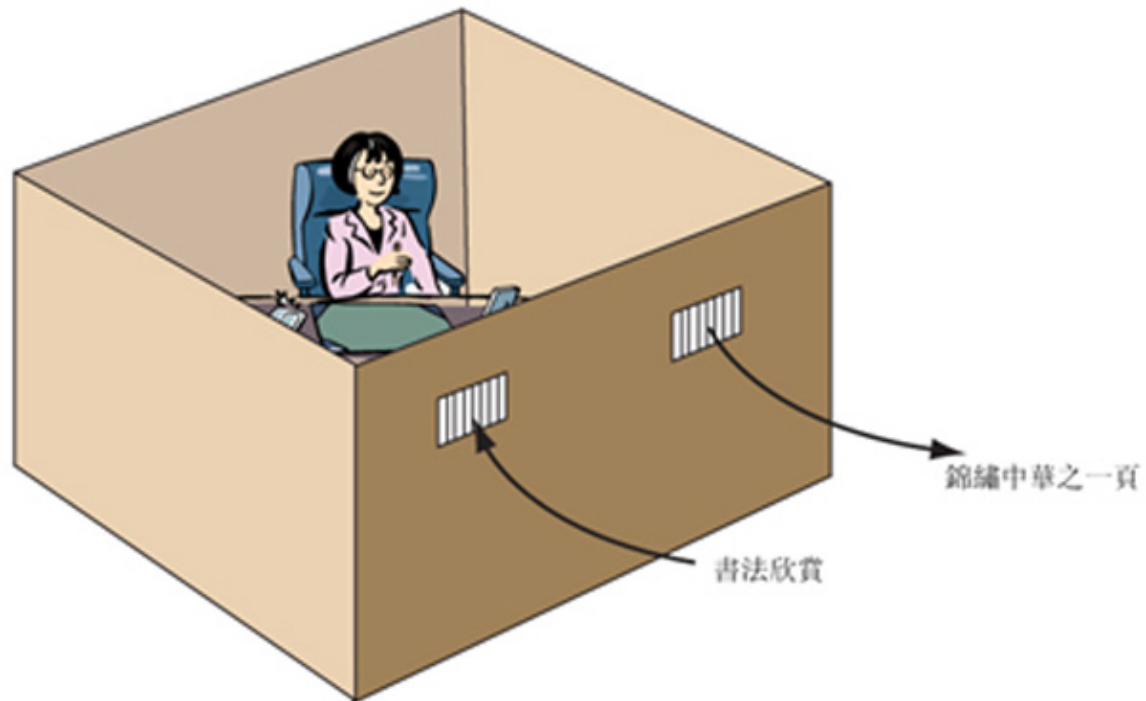
Searle's 'Chinese room argument'

書法欣賞

錦繡中華之一頁

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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

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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

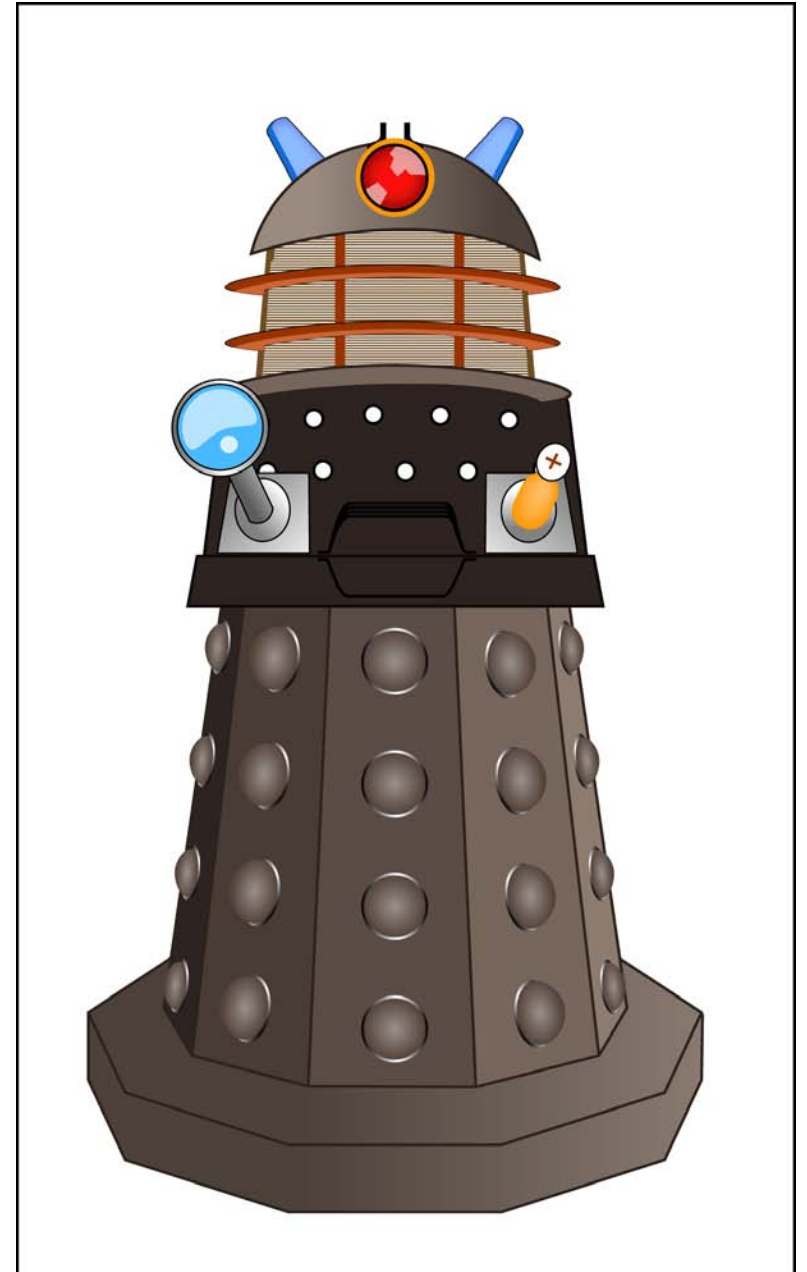read Searle, 'Can computers think?'

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