

# 24.09 Minds and Machines

## spring 2007

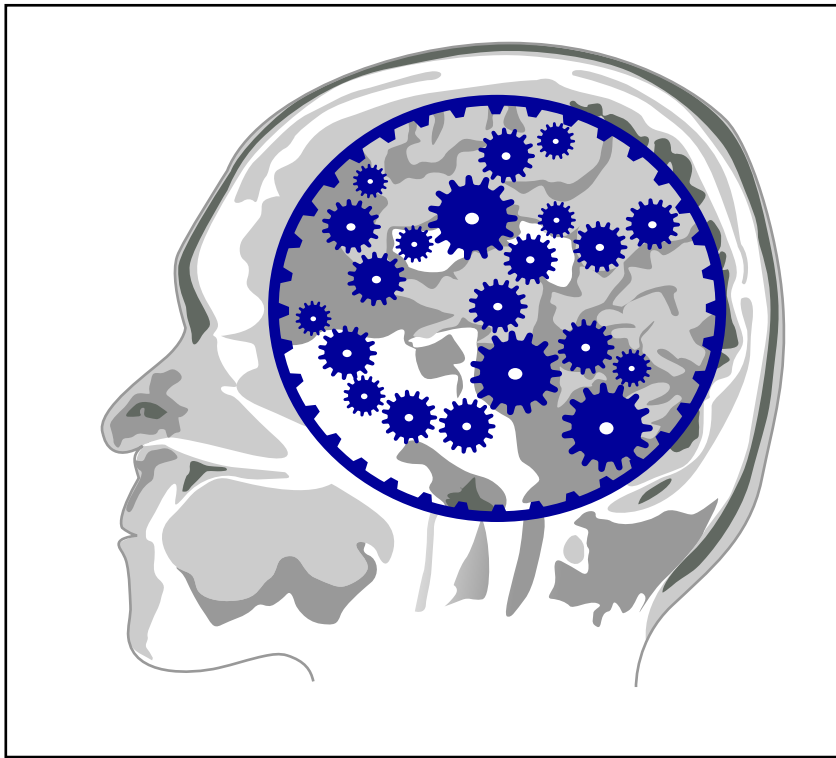


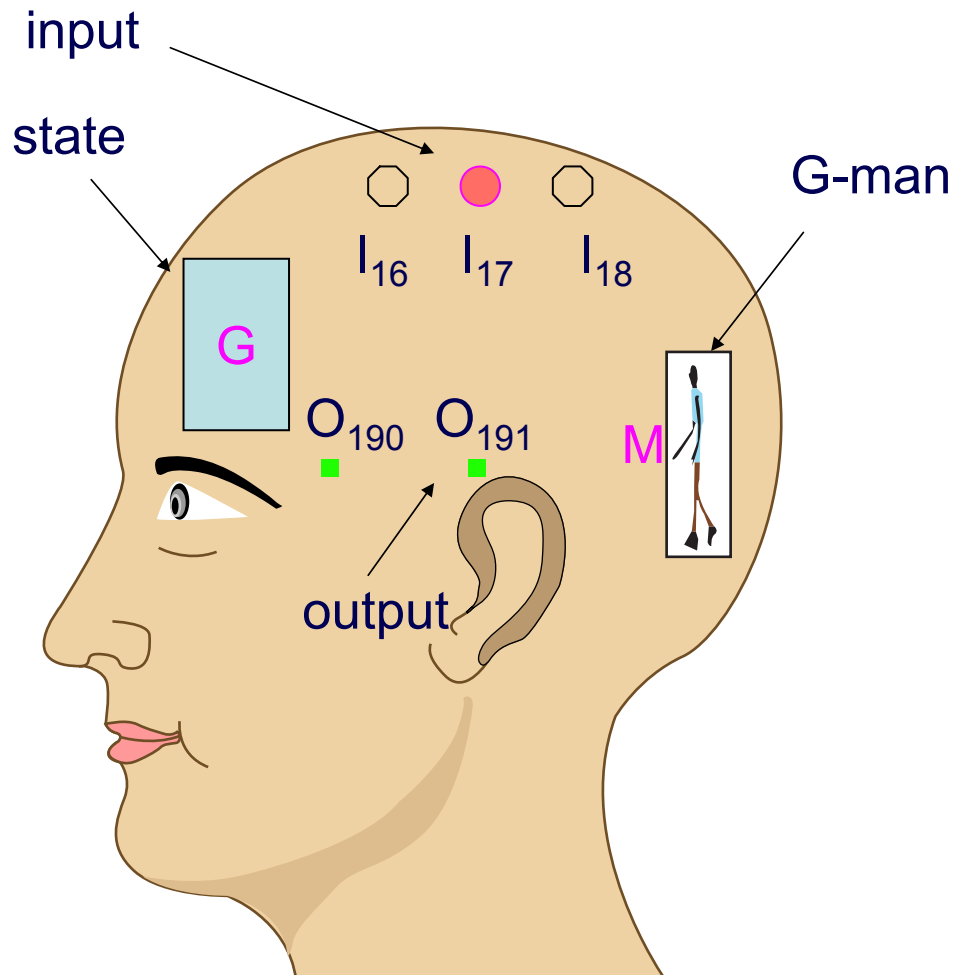
Figure by MIT OCW.

- functionalism, contd.

# “troubles with functionalism”

Imagine a body externally like a human body, say yours, but internally quite different. The neurons from sensory organs are connected to a bank of lights in a hollow cavity in the head. A set of buttons connects to the motor-output neurons. Inside the cavity resides a group of little men. Each has a very simple task: to implement a “square” of an adequate machine table that describes you. (96)

# Block's homunculus head



input state	$I_{16}$	$1_{17}$	$I_{18}$
G	$O_{25}$ K	$O_{191}$ M	$O_{45}$ P
H	$O_8$ H	$O_{77}$ Z	$O_5$ C

Figures by MIT OCW.

there is prima facie doubt whether [the homunculus head] has any mental states at all—especially whether it has what philosophers have variously called “qualitative states”, “raw feels”, or “immediate phenomenological qualities”...there is prima facie doubt whether there is anything it is like to be the homunculi-headed system. (97)



Figure by MIT OCW.

from the philosophical toolkit:

## a priori and a posteriori

- (knowable) proposition p is knowable a priori iff p can be known independently of experience
- otherwise, proposition p is knowable (only) a posteriori

a priori and necessary: $2+3=5$	a priori and contingent: ??
a posteriori and necessary: water= $H_2O$	a posteriori and contingent: it's sunny

# Functionalism vs. psychofunctionalism (see Block)

- suppose functionalism is true
- could you (at least “in principle”) write down the functional characterization of mental states just by reflecting on the meanings of mental vocabulary?
- the (“commonsense”, “analytic”) **Functionalist** says ‘yes’
- the (“scientific”, “empirical”) **psychofunctionalist** says ‘no’—science will tell us the functional story, not conceptual analysis

# Functionalists and psychofunctionalists

- Lewis and Armstrong are **Functionalists** (“analytic functionalists”)
- Putnam is a psychofunctionalist
- psychofunctionalism is probably the more popular version
- we will return to this issue when we discuss Chalmers’ paper “Consciousness and its Place in Nature”

# “mad pain and martian pain”

- defends **Functionalism**—the functional specifications of mental states can be noodled out from the armchair
- defends “realizer state” as opposed to “role state” functionalism
- replies to the “knowledge argument” (to be discussed later)



the madman

his pain is caused by  
moderate exercise

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intense pain  
causes him to  
snap his fingers

# the martian

- his hydraulic mind contains nothing like our neurons
- the causes and effects of his pain are like the causes and effects of our pain

Image removed due to copyright restrictions.  
Representation of a martian.

- a simple identity theory solves the problem of mad pain, but not martian pain
- a simple functionalism goes the other way: right about the martian, wrong about the madman
- Armstrong's and my theory...wriggles between Scylla and Charybdis Image removed due to copyright restrictions.

- the concept of pain is the concept of a state that occupies a certain causal role
- whatever state (e.g. c-fibers firing) does occupy that role is pain
- but something else might have occupied the role (just as someone other than Susan Hockfield might have occupied the MIT-president role)
- so, pain might not have been pain
- ‘pain’, as Armstrong and I understand it, is a nonrigid designator

# the martian

- the thing to say about martian pain is that the martian is in pain because he is in a state that occupies the causal role of pain for martians (his population)
- ditto (mutatis mutandis) for US

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Representation of a martian.

the madman is in  
pain because he is in  
the state that  
occupies the causal  
role of pain for  
mankind

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he is an  
exceptional  
member of that  
population

the state that  
occupies the role  
for the population  
does not occupy  
it for him

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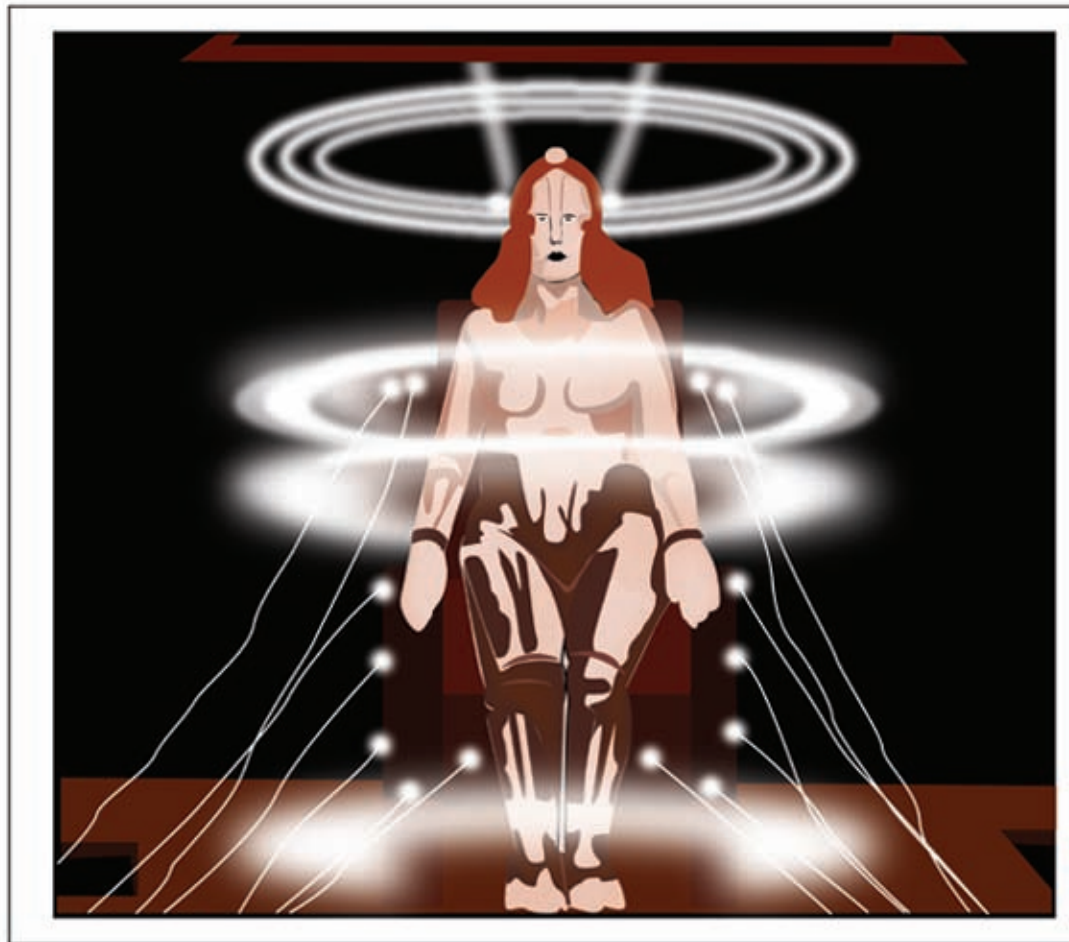


Figure by MIT OCW.

- read Putnam, Burge