Phil 317: [handout #8]
Hilary Putnam: *The Nature of Mental States*

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§ The Goal:

1. **Putnam compared mental states to the functional or 'logical' states of a computer:**
   ___ Just as a computer program can be realized or instantiated by any of a number of physiologically different hardware configurations, so can a psychological 'program' be realized by different organisms of various physicochemical composition, and that is why different physiological states of organisms of different species can realize one and the same mental state-type.
2. **To establish machine functionalism:**
   ___ Under machine functionalism, to be in (mental state) M is merely to be in some physiological state or other that plays role R in the relevant computer. The physiological state 'plays role R' in that it stands in a set of relations to physical inputs, outputs, and other inner states that matches one-to-one the abstract input/output/logical-state relations codified in the computer program.
3. **To argue that pain is not a brain state, but another *kind* of state entirely.**
   ___ Putnam proposes the hypothesis that pain, or state of being in pain, is a functional state of a whole organism.

§ Putnam's Argument Against the Brain State Theory (Type-Identity Theory)

___ 1. The brain state theorist maintains that *every* psychological state is a brain state in the sense that there will always be one and the same physical "correlate" of the same psychological state.

___ 2. But we can find at least one psychological state (such as "feeling hungry") which can clearly be applied to both a mammal and an octopus, but whose physical-chemical "correlate" is different in the two cases.

___ 3. Therefore, the brain state theory must be false.

§ Putnam's Proposal: (Machine) Functionalism

___ A *functional state* is a state specified implicitly by its place in a *functional description* of the organism.

___ To be in mental state M is merely to be in some physiological state that *plays role R* in the relevant computer (a *Probabilistic Automaton*).

___ If the organism is in state S_i and receives so-and-so sensory input, then with so-and-so probability the organism will go into state S_j and produce so-and-so motor output.

[Note]: "Probabilistic Automation"

___ is defined similarly to a Turing Machine, except that the transitions between "states" are allowed to be with various probabilities rather than being "deterministic."

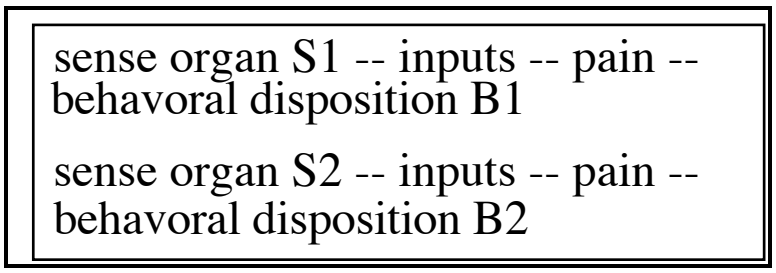
___ Putnam chose "probabilistic automaton" rather than a Turing Machine because human beings are not predicable in the way that a Turing Machine is. There are many probably options for each of our decision.

§ The Functionalist's Specification of "Pain":

___ 1) Pain is <u>not</u> a brain state; it is rather a *functional state* of a whole organism.

___ 2) Pain is the state of

(i) receiving <u>sensory inputs</u> from the sense organs whose function is to detect damage to the body, etc. And the "inputs" themselves represent a condition that the organism assigns a high <u>dis-value</u> to.
(ii) being responsible for a certain behavioral disposition appropriate to the organism in question.



§ Functional Organization

*** Requirements for a functional organization that is capable of feeling pain:**
(i) a " preference function"
(ii) an "inductive logic" (i.e. the Machine must be able to "learn from experience")
(iii) "pain sensors," i.e., sensory organs which normally signal damage to the Machine's body, or dangerous temperatures, pressures, etc.
(iv) the inputs have a high dis-value on the Machine's preference ordering.

Supplementary:
David Lewis: ***Review of Putnam***

A functional state is a state specified implicitly by its place in a functional description of the organism: a true statement to the effect that the organism possesses states S_1, ..., S_n governed by a network of laws of the form:

> If the organism is in state S_i and receives so-and-so sensory input, then with so-and-so probability the organism will go into state S_j and produce so-and-so motor output.

An example of a functional description is given by the machine table for a Turing machine, provided we regard the tape not as part of the machine but as an external source of inputs and recipient of outputs.

*** I do not think Putnam has shown that pain cannot be both a brain state and a functional state, these being identical.... Suppose pain is indeed a certain functional state S_{17} in an appropriate functional description; suppose that description is realized *inter alia* by the human brain states B_1, ..., B_n, respectively. Those are the states that are lawfully related to one another, and to suitable human inputs and outputs, by the proper transition probabilities. Why not conclude that pain = S_{17} = B_{17} (in the case of humans)? On this view, a functional state is better called a functionally specified state, and might happen to be a functionally specified brain state.

*** A reasonable brain-state theorist would anticipate that pain might well be one brain state in the case of men, and some other brain (or non-brain) state in the case of mollusks. It might even be one brain state in the case of Putnam, another in the case of Lewis... Of course no one says that the concept of pain is different in the case of different organisms. It is the fixed concept expressed by 'pain' that determines how the denotation of 'pain' varies with the nature of the organism in question.
=> **Kim: species-specific identity**