

Hilary Putnam – The nature of mental states (1967)

Why isn't, according to Putnam, pain a physicochemical state of the brain? What type of state is pain instead (according to Putnam)?

In his paper „The nature of mental states“ from 1967 Hilary Putnam proposes an hypothesis regarding mental states. He claims that mental states are functional states of Probabilistic Automaton rather than brain states or behavior dispositions. Putnam defines his position in the actual philosophical debate, especially the Identity theory, and then defines his hypothesis on grounds of empiricism. I will follow his argumentation until he makes clear why one should prefer his theory over the brain-state theory and then talk a little about my own understanding.

First, Putnam defines the question 'Are pains brain states?' as his key topic, which he mentions as one of the three typical concerns of philosophers of the mind at those days. Putnam starts with two rules of analytical philosophy he finds 'excellent', based on the program of reductive analysis. He makes clear that (1) 'A is B' should follow from the meaning of the terms A and B and (2) that 'being A is being B' can only be informative for reductive reasons. Arguing against Carnap. Putnam clearly divides the terms 'concept' and 'property', so that 'A is B' can be true, but 'the concept of A is the concept of B' does not follow thereof. This is where the first rule considering the meaning of terms holds.

In the following, Putnam discusses some objections against the brain-state theory which have not convinced him. They all say that the theory violates some rule of English, involves an 'extension the usage' or involves a 'change of meaning'. The first objection is also the first objection Smart discusses in 'Sensations and Brain Processes' (1959) and is rejected by Putnam in the same manner. It says that A knows of its pain but nothing about brain states would show they cannot be the same thing. The next objection says that the statement 'pain is a brain state' would be unintelligible. Putnam states that this objection shows no understanding of the concept of empirical reduction. He then dismisses the objections that pain and brain states should appear in the same region to be the same (the location of pain 'in the arm' is not necessarily physical) as well as the objection that identity could be replaced by only correlation (hereby the 'empirical meaningfulness' is no longer given).

Putnam then points out that after all he still wouldn't decide on the meaningfulness of the statement 'pains are brain states' since the notion 'change of meaning' is ill defined. It served other purposes on philosophy, cruder ones, and is no longer useful. He wants to search the answer by allowing a statement 'pain is A' where 'pain' and 'A' do not have to be synonyms and then test such statements on empirical grounds.

At this point, Putnam goes on to present his own hypothesis. He makes clear how his hypothesis is an empirical one, which finds its strategy on plausibility grounds. Putnam then introduces some technical notions concerning Probabilistic Automata. In general, he describes them as a broader defined Turing Machine, in the sense that transitions between states have various probabilities. The Automaton is equipped with sensory inputs, motor outputs and a well-defined description. It's important to state that this description does not say anything about physical realizations of the different states.

His hypothesis is then advanced in spelling out some statements. They describe how every organism which can feel pain has a description in Putnam's sense and how this description defines a subset of sensory inputs which need to be activated for that organism to be in pain (or any other psychological state). The most compelling statement says that only the whole organism possesses that description, any subpart will not. Putnam explains these statements considering some questions and talks about how possible investigation could be done. Interestingly, he mentions the production of 'mechanical models' as what psychology should be all about, a strategy widely used in Cognitive

Sciences today.

Putnam is now ready to compare his hypothesis with the brain-state theory. He first states that physical-chemical states are the only ones mentioned by the brain-state theorists and that, opposed to them, functionalists have no need to disregard dualism to hold their hypothesis (I don't think that Putnam really regards this as an argument against the brain-state theory, rather as an interesting fact).

In the following, the brain-state theory and the functional-state theory are compared on grounds of empirical probability. This just follows the way Putnam stated how one should proceed in the beginning of the paper. In his view, a brain-state theorist is bound to the claim that specified brain states are the same everywhere. Such a state, e.g. pain, would need to be defined in such a way that every organism capable of feeling pain should have a suitable brain, and those who are not capable of it must not have a suitable brain. This holds in every branch of evolution as well as for every form of extraterrestrial life. Putnam states how ambitious this hypothesis is, though not impossible. Plus, he claims, the theory collapses if only one psychological state is found where the requirements are not met.

In contrast, the functional-state theorists can build on well-known empirical strategies. First, similarities in observable behavior is a strong sign for functional equality rather than physical details. Secondly, our own description of organisms constitutes in transition probabilities. We define states as 'in love' as such that we expect the behavior to direct towards mating.

Thirdly, psychological laws that are not species-specific are much more likely to be found than neuro-physiological laws (which the brain-state theorists hope for). In addition, such psychological laws would already include a description of the functional organization.

Putnam has now introduced his hypothesis and positioned it against the brain-state theory. He tried to argue in an analytical-reductive and empirical manner. This makes sense at a point in the philosophy of the mind, where theories become all the more complex and cannot be defended on old-fashioned philosophical grounds alone. One has to take probability in account, which is fed by what we know. What we know is in turn based on our models that help us gather information. By suggesting a good and usable model (which has served many scientists since), Putnam is surely doing a good thing.

I myself haven't understood the brain-state theory in that sense Putnam has (specified brain states are the same everywhere). Of course, when one compares brain states in different organisms, one automatically talks about a 'concept' (of pain, for example). And then, the only thing a brain-state theorist would have to define this concept would be a physical-chemical state. I just don't think that, from the very start, the brain-state theory was made up to compare organisms. It's just about the identity of one brain state at a time. That's why I think Putnam's hypothesis doesn't need to stand against the brain-state theory but on top of it, as another layer of theoretical complexity.