

The Tyrant's Headache

When the doctors couldn't cure the Tyrant's headache, he called upon the philosophers. "Show me some necessary condition for having a headache, which I can defeat!"

The philosophers sent forth the great David K. Lewis in magician's robes. Beside him traveled a madman, in top hat and monocle, and a Martian. Said the Philosopher to the Tyrant:

There might be a strange man who sometimes feels pain, just as we do, but whose pain differs greatly from ours in its causes and effects. Our pain is typically caused by cuts, burns, pressure, and the like; his is caused by moderate exercise on an empty stomach. Our pain is generally distracting; his turns his mind to mathematics, facilitating concentration on that but distracting him from anything else. Intense pain has no tendency whatever to cause him to groan or writhe, but does cause him to cross his legs and snap his fingers. He is not in the least motivated to prevent pain or to get rid of it.¹

The Philosopher gestured at the madman, who did forty jumping-jacks, then sat crosslegged upon a windowsill, snapped his fingers six times, and began a discourse on the relation between e and π . ("Most Stoical, how he deals with his pain!" whispered an advisor to the Tyrant.)

Continued the Philosopher:

Also, there might be a Martian who sometimes feels pain, just as we do, but whose pain differs greatly from ours in its physical realization. His hydraulic mind contains nothing like our neurons. Rather, there are varying amounts of fluid in many inflatable cavities, and the inflation of any one of these cavities opens some valves and closes others. His mental plumbing pervades most of his body – in fact, all but the heat exchanger inside his head. When you pinch his skin, you cause no firing of C-fibers – he has none – but, rather, you cause the inflation of many smallish cavities in his feet. When these cavities are inflated, he is in pain. And the effects of pain are fitting: his thought and activity are disrupted, he groans and writhes, he is strongly motivated to stop you from pinching him and to see to it that you never do again.

The Philosopher gestured at the Martian, who gave the customary three-elbow salute, then dodged the Philosopher's attempted pinch. Continued the Philosopher:

As materialists, we want to characterize pain as a physical phenomenon. We can speak of the place of pain in the causal network from stimuli to inner states to behavior. And we can speak of the physical processes that go on when there is pain and that take their place in the causal network. We seem to have no other resources but these. But the lesson of mad pain is that pain is associated only contingently with causal role, while the

¹ Lewis, David K. (1980), "Mad pain and Martian pain", in *Readings in Philosophy of Psychology*, ed. N. Block (Cambridge, MA: Harvard). All block quotes in the story are from this article.

lesson of Martian pain is that pain is connected only contingently with its physical realization.

“Oh, ’tis a puzzle most perplexing!” said the Tyrant to the Philosopher. “My subjects may feel pain for diverse and bizarre reasons, as I have well discovered in my chambers, and they may react to it in strange and different ways, as I also well know. Some even appear to seek pain.” Here, the Tyrant paused to gaze wisely across the sea, his eyes perhaps tilted ever so slightly toward the heavens. “So we cannot identify pain with any particular causal role. Pain would instead seem to be a particular physiological state of the brain, which can be variously caused and various in its effects. Who could deny it! And yet, it would seem then to follow that no being with a differently constructed brain could feel pain, much less a being with no brain at all!”

The Royal Torturer now wrapped her net around the Martian and smiled gently. The Martian whined and quailed.

Concluded the Tyrant: “This manifest absurdity and contradiction might indeed be the atypical cause of my unceasing pain! What is a piece of flesh, such that it might have a headache? O, Philosopher, can you shatter me up this fearsome granite?”

Said the Philosopher:

The concept of pain... is the concept of a state that occupies a certain causal role, a state with certain typical causes and effects... *for a population*.... Human pain is the state that occupies the causal role of pain for humans. Martian pain is the state that occupies the same role for Martians.... We may say that *X* is in pain... if and only if *X* is in the state that occupies the causal role of pain for the *appropriate* population.

The Tyrant steered his coagulant gaze to the madman, who was still snapping his fingers. The madman was in pain because his brain was in that painish-feeling state, however weirdly caused and manifested; and that state was the painish-feeling state because... because... because it was the brain state occupying the causal role of pain, or selected to function painwise, not for the madman in particular but rather for... whom? Normal people? His evolutionary ancestors? The madman’s own past self? His mom?

A thought swelled inside the Tyrant. “What counts as the appropriate population?”

The Philosopher answered:

Perhaps (1) it should be *us*; after all it’s our concept and our word. On the other hand, if it’s *X* we’re talking about, perhaps (2) it should be a population that *X* himself belongs to, and (3) it should preferably be one in which *X* is not exceptional. Either way, (4) an appropriate population should be a natural kind – a species perhaps.

(An advisor whispered to the Tyrant, “Although Mr. Lewis does not seem very confident, it is the best theory the philosophers have.”)

“I shall try it!” proclaimed the Tyrant. Lovingly substituting himself in for X, he adopted the task of defeating condition (1).

From the doctors’ scans, the Tyrant knew that he was in Brain State #1117A. (The brain picture was entirely clear on the card before him, with a small “#1117A” handwritten in the lower right corner in loopy green letters with hearts.) Brain State #1117A was the type of state apt, in normal human beings, to be caused by pinchings, pokings, excessive pressure, excessive heat, and other types of tissue stress, and to cause writhing, screaming, moaning (the Tyrant here emitted a noise which might have been a moan), avoidance, answering “Yes!” when asked whether one still has that miserable pain (assuming one knows English and wants to tell the truth), and so forth. In short, Brain State #1117A filled the causal role of pain. Brain State #1117A was exactly the Tyrant’s problem. The doctors could not eliminate the state, but philosophy might alter its significance.

The condition (1) seemed to require that to be pain, Brain State #1117A play the causal role of pain for the population whose word and concept “pain” is. The word “pain” was at that time a piece of standard English. The Tyrant’s first course, then, would be to kill everyone who had enough English to use the word. He issued the orders and it was done. The rolls of the dead included, sadly, David K. Lewis, the madman and the Martian, and all of the tyrant’s advisors and doctors, including the one who had drawn the little hearts. However, the Tyrant’s headache persisted.

It occurred to the Tyrant that he himself still knew English. Perhaps for this reason alone “pain” endured? So the Tyrant taught himself Sanskrit, and with the help of Sanskrit-speaking hypnotists he forgot English.² Brain State #1117A and his headache persisted.

The Tyrant gazed wisely upon a coconut, like Aristotle in the famous painting. It was foolish, he decided, to expect that eliminating a *word* (what word was that again?) would end his pain. Surely, if condition (1) had merit, it would be in virtue of the *concept* of pain, which is shared across languages. His course, then, was clear. He eliminated from the universe the concept of pain. This he did by setting a timer. For exactly 10,000 seconds, the intelligence of all entities in the universe would be reduced to that of frogs; then intelligence would be restored. He arranged for a video camera and brain scanner to record him throughout the crucial interval. Then he flipped the switch, expecting relief.

Brain State #1117A remained. The Tyrant squirmed and bellowed, banged his fist against his head, flopped upon the floor and cried. He laid down no memories of these moments (frogs being notoriously forgetful), but after the 10,000 seconds had elapsed, he reviewed the tapes. The evidence did not incline him to believe that his pain had been eliminated.

Perhaps, the Tyrant thought, concepts can be invented but never removed? He invented the concept of utter peaceful bliss, apt to be caused, in Tyrants of a certain natural sort, by pokings, burnings, etc., and apt to cause (despite the bliss), writhing, groaning, and sincere belief in the

² The reader confused to find this text in English should be reminded that this ancient language was later reconstructed from archival records. ईशावास्यमिदं सर्व!

existence of one's own pain. He rested his mind smoothly within this thought. As far as he could tell, however, this conceptual intervention gave him no help. (The Tyrant did have to admit he might have only falsely believed it gave him no help. In light of this possibility, he took the conservative course of preserving that concept and founding a Bureau dedicated to forming new awesome concepts of Tyrannical delight under all possible conditions.)

The Tyrant grew concerned that he had been focusing on the wrong condition. The Philosopher had never said that *all* of the conditions must be met for a state to qualify as pain.

The Tyrant turned his attention to conditions (2)-(4). Though he humbly knew that he was in no way exceptional, that could be changed! There were, he had learned, a small group of people in whom Brain State #2324B rather than Brain State #1117A played the causal role of pain. In them, Brain State #1117A played the causal role of mild annoyance at someone else's bad jokes – a far preferable state! The Tyrant might kill everyone except for this small group of people. He would then belong to a species in which Brain State #1117A normally played the causal role of annoyance at bad jokes, not the causal role of pain.

O, reckless Tyrant! Shouldn't you have known that pain is an intrinsic property, not a relational one?

The Tyrant thus attempted a new round of anaesthesia by genocide, directed this time not only at English speakers. Corpses filled the rivers, piled the beaches, drifted socially across the sea, but the Tyrant's headache endured. He moaned and writhed, pictured a vise breaking his head like the broken heads of his beloved dead in their sleeps upon the palace stairs. The Tyrant firmed his resolve. He accelerated time and allowed the survivors to breed for several generations. To prevent speciation, he produced daughters and sons with them. He told the worst knock-knock jokes he knew. He watched their brains light up with #1117A while they groaned. His envy of their #1117A's was taller than a mountain. Why must he alone among humans experience #1117A as pain?

The Tyrant drove himself mad – “mad”, that is, in the strict Lewisian sense, relative to the population of his birth. He was already half-mad, since the causes of his #1117A were no longer typical; the state endured endlessly regardless of pokings, pinchings, or whatever. His neurophysicians, though they couldn't remove #1117A itself, could still alter its effects. They rewired the Tyrant's motor outputs so that the Tyrant snapped his fingers instead of writhing. They rewired his attention centers so that the pain led him to think about mathematics. For a while, they paralyzed him so that no motor outputs were possible at all. They hypnotized him so he would no longer say to himself, in inner speech, with a feeling of assent, “I am in pain”. Instead, he would say to himself “I feel entirely pain free.” They clipped his memory so that he could no longer form new memories of any moments of pain. They de-efferented his wincers. Throughout these procedures, Brain State #1117A burned on.

The Tyrant donned top hat and monocle and considered whether he was still in pain.

He decided that he couldn't know. He couldn't trust his clipped memory; he couldn't trust his manipulated inner speech and feelings of assent; he couldn't rely upon behavioral signs. But he

didn't want to become a skeptic, deprived of trustworthy information about himself! Nor did he want to be *duped* into thinking he was pain free. He wanted really to *be* pain free and to know that he was. In a way, his new situation was worse. The pain continued, he suspected, but delusion and madness were added. He sat upon his throne, snapping his fingers intensely and picturing the Mandelbrot set. He asked a physician to temporarily reverse one of his hacked-up rewirings: the finger-snapping/writhing motor output crossover. No sooner did the physician do this than the Tyrant fell to the floor writhing in (apparent) agony – all the while saying to himself, in inner speech, with a feeling of assent, “I am entirely pain free”. The Tyrant was unsettled and had the finger-snapping hack reinstated.

The Tyrant paced along the beach (cleared of corpses generations ago) and contemplated his humanity. Although it was now normal in the *currently existing* human population for Brain State #1117A to play the causal role of annoyance at someone else's bad jokes, that causal role was perhaps not normal among the human species considered across the vasty spans of time. To ensure that Brain State #1117A would not occupy the causal role of pain in the species to which he belonged, the Tyrant would have to change species.

The Tyrant had radical gene therapy (though he was careful not to interfere with relevant features of his brain function). He moved to a new land. He became reproductively isolated from human beings, giving birth now to children with substantially different traits and who could not interbreed with human beings, but who could and did further interbreed with him. In these beings, as in the Tyrant, Brain State #1117A endured persistently, causing them to snap their fingers. The mothers of this new species instinctively used their long teeth to perform the snapping/writhing motor crossover when their babies were less than one week old. (Rare was the baby whose mother never performed this operation; such babies writhed from neglect and eventually perished. Healthy babies of course snapped instead, after their first week.) Since the Tyrant was unsure whether an entity could change species during its lifetime, he had himself destroyed and two molecule-for-molecule duplicates of himself constructed out of entirely new materials six days later, one of whom promptly murdered the other.

After all this was done, the monocled, long-toothed Tyrant sat atop his throne, snapping his fingers, wondering if he was in pain. He knew what would happen if he had a physician unhack his finger-snapping/writhing motor output crossover or if a Sanskrit hypnotist were to resuggest him backwards, but he no longer knew whether such counterfactuals were relevant to the question. He wished he could have David Lewis back from the dead.

If an infinite number of universes exist, this story is true.