

Against Neural Philosophy Of Mind

PN [philosophynow.org/issues/137/Against Neural Philosophy Of Mind](http://philosophynow.org/issues/137/Against_Neural_Philosophy_Of_Mind)

Raymond Tallis argues that your brain waves are not themselves thoughts.

If the neural philosophy of mind were true, could it be entertained by a philosopher? The question is entirely serious. It is a challenge addressed to those philosophers of mind who claim that all forms of consciousness, from tingles to world pictures, are merely activity in the brain. If this were true, it must follow that the belief that thoughts are neural discharges is itself also neural discharges.

If this idea makes you feel giddy, join the club. Fasten your seat belts for a bumpy ride.

Imagine that you're Professor X (fill in whatever name you like), who believes, or claims to believe, that all her thoughts, including her thoughts about the nature of thought, are just electronic ripples in, for example, the prefrontal cortex, or perhaps that they're discharges located in a 'global workspace' of neural activity maintained by the brain. If you try to have this thought about the nature of thought – including the very thought you're having now – you will quickly run into problems.

The most obvious is that of attempting to imagine that two quite different things are the same thing: the thought itself, and its supposed neural basis. The thought seems to be something 'in here', in the sense of being private to you, while its neural basis is something 'out there' in the material world and potentially visible to the objective gaze of neuroscientists.

That the thought you're having now is utterly unlike the propagation of electrochemical waves through the wetware of the brain of you the thinker, is equally true of less elevated experiences. Consider a common-or-garden experience such as seeing a red tomato. There is nothing red or even red-like about neural discharges in the pathways associated with vision in the cerebral cortex, so how could they be identical with the experience?

Many counter-arguments have been put forward to this objection to the neural theory of mind. Among the most popular is one advanced by John Searle.

Searle argued that conscious experience is an 'emergent property' of neural activity. He invokes the analogy of the emergence of slipperiness and shininess from collections of molecules of H₂O that are in themselves neither slippery nor shiny, notwithstanding that water is composed of nothing other than such molecules.

This argument does not work. The passage from molecules of H₂O to slippery, shiny water, is achieved by a change in the scale of attention from the microscopic to the macroscopic, and scales of attention *presuppose* consciousness. A change in the scale of attention cannot therefore *explain* the emergence of consciousness from neural activity – how the experienced redness of a tomato emerges from electrochemical discharges, for instance.

Thinking Through The Differences

What about the claim that more upmarket conscious contents, such as philosophical ideas about the basis of consciousness, are themselves identical with neural activity?

Press your mind's refresh button and think as follows:

“This thought that all thought is electrochemical activity in my prefrontal cortex is itself [simply] electrochemical activity in my prefrontal cortex.”

Unfortunately, if neural activity does not have the wherewithal to be something as basic as an experience of red, it seems impossible that it should be identical with something as complex as a philosophical thought. A philosophical thought also has some rather extraordinary properties. Let's examine some of them.

For a start, like other thoughts, philosophical thought is both silent and heard. We do not *always* hear our thoughts in our minds – some people claim never to hear them – but we often do when (as in the present case for me) we articulate them to ourselves preparatory to writing them down, to sharing them with others, or even to be sure what thought it is we have had. Their heard silence is an aspect of their privacy.

Thoughts about the neural basis of mind have other features that aren't found in any imaginable neural activity. First, these thoughts belong to a longstanding philosophical debate. As such, they are addressed to an imagined community of individuals who might agree or disagree with the thinker. This highlights something about thoughts in general that is not true of material events such as nerve impulses. The thought that some proposition *p* is the case belongs to what the American philosopher Wilfrid Sellars called 'the logical space of reasons'. He contrasted this with 'the space of causes'. Items in the space of reasons are true or false, compatible or incompatible, justified or not justified. These properties do not apply to causal events in the material world *per se*. And when something is asserted as being the case, it is implicitly or explicitly asserted



against alternatives. 'Things are like this' implies 'Things are not like that'. The thought that all thoughts are neural activity is opposed to the view that thoughts are not neural activity. As inhabitants of the space of reason, thoughts are entertained, asserted, and defended. That's why they can be right or wrong. But physical events such as nerve impulses just happen.

What's more, there's nothing in the material world that, like a thought, has a subject attached to a predicate. Indeed, it is this subject-predicate sentence-like form of thoughts, beliefs, and other so-called 'propositional attitudes' that has made some philosophers, such as Paul and Patricia Churchland, dismiss them as the fantasy objects of 'folk' (that is to say, pre-scientific; that is to say, pre-truth) psychology. Behind this denial of the reality of propositional attitudes is the neurophilosophers' belief that if neuroscience cannot see or accommodate an entity then future science will expose that entity as a myth or illusion.

There are other insuperable difficulties with the thought that thoughts are neural discharges. Let's refresh our minds again, and unpack our thought a little:

“This thought is electrochemical activity in my prefrontal cortex because every thought is electrochemical activity in the prefrontal cortex.”

If this were true, we would be obliged to ascribe several things to the electrochemical activity in question. The first would be self-reference: '*This* thought...'. How on earth would *bursts of discharges* refer to themselves each time the relevant thought was entertained? Electrochemical activity being about itself without mediation would be a feat like standing on one's own shadow or walking on one's own head.

Neurophilosophers might try to deal with this by invoking a second set of neural discharges that are somehow able to be 'about' the first set of discharges that triggers them, and refer to them as 'this thought'. Alas, it is difficult to imagine how neural activity could be about other neural activity in this way, and even more difficult to know how this could make the second activity self-referring as 'this thought'. The idea that self-reference could be achieved by a mere causal link between two sets of physical, neural activity is analogous to the idea that replicating some features of the first set of activity in the second set creates a representation of the first set. Mere physical replication does not generate representation or aboutness; for example, the replication of the appearance of a cloud in a puddle does not make the puddle *refer* to the cloud. You need to *add in* consciousness for that to happen.

A Class Of Its Own

By now I have probably achieved the medically impossible feat of giving you migraine on both sides of your head. Please take a paracetamol and stick with me, because there is more to come, and it is of even more fundamental importance to my opening question. It's time to remind ourselves of an absolutely fundamental feature of thoughts: thoughts

achieve their 'aboutness' by mobilizing general terms. General terms gather up elements that have salient features in common into a single class. General terms are abundant in the thought we're presently thinking about: 'electrochemical activity', 'pre-frontal cortex', and, of course, 'thought' itself.

For a long time it has been assumed without proof that the nervous system has the wherewithal to create such classes of things or ideas. They are, it is argued, merely functional groupings that neurologically connect certain important, recurrent features of the environment to appropriate patterns of behaviour. In a gazelle, for example, they might correspond to the association of lions with flight and grass with eating.

It is a rather remarkable act of faith to think this can be extended to a term such as 'electrochemical activity'. But there is a more radical challenge to this crude behaviourist biological account of general terms: the separation, most obvious in language, of classes from their members. Thoughts – mental events with conceptual content – have classes as their building bricks; and those classes are general entities liberated from their particular instances. There are no classes in the physical world. Yes, there are natural kinds; but entities do not attach themselves to categories, even less dissolve into them, without the assistance of sophisticated human consciousnesses.

This is evident in even the most basic thoughts about lions and grass. One way of understanding the separation of classes from their members is to see how they're related to each other: 'lion' is horizontally related to both 'tiger' and 'elephant', and vertically to 'animal'. The classes belong to a *system* of classification. But the terror of the gazelle does not locate a lion in a category in turn located in any system of classification.

The contrast between particular objects and the classes into which they fall can also be seen in discourse of the kind that has set our argument going: thoughts about the nature of thought. In the sentence "This thought is electrochemical activity in my prefrontal cortex because every thought is electrochemical activity in the prefrontal cortex", the token of the word 'thought' occurs twice. This enables the thought to be turned back on itself to be both about itself in particular and about thought in general. No event in the physical world, including in the brain, has this generality.

Connected with generality is something even bigger: *possibility*. Material events such as electrochemical discharges in brains are *not* the realization of something first entertained as a possibility. Without consciousness to entertain it, there is no basis for possibility that might go unrealized. The rather obvious fact is that what is out there in the material world simply *is*, end of story.

Let us gather up these thoughts about thought. Where there are classes, there is generality; where there is generality, there is possibility; and where there is possibility, entities or states of affairs that may or may not exist can be proposed. But all of this presupposes

consciousness. Indeed classes, generality, and possibility demonstrate the irreducible distance between physical events, such as neural activity, and any thought – including the thought that thoughts are neural activity.

So the answer to my introductory question is no. Neural activity, which does not contain generality and possibility, could not support or instantiate any general thought, least of all about thought. So if the materialist philosophy of mind were true, no philosopher – whose mind would, according to this view, be neural activity – could entertain or argue for it.

© Prof. Raymond Tallis 2020

Raymond Tallis's latest book, Seeing Ourselves: Reclaiming Humanity from God and Science is out now.