UNIVERSITY OF CAPE TOWN
IYUNIVESITHI YASEKAPA • UNIVERSITEIT VAN KAAPSTAD

WEEK 3 ANSWER TO QUESTION 1

STEP 3.9 ASK MARK

Hi. Welcome to our answer session in relation to the questions that you posted for week three of the course, in which we dealt with the issue of consciousness. The mentors have selected four questions. And you'll see that the first two and the second two are sort of grouped together. But I'm going to deal with them one by one.

So here comes the first question, and I'm quoting. "I find it doubtful that consciousness only existed upon the development of the reticular activating system. Why would it suddenly spring into existence? What evolutionary purpose would subjective awareness serve, that it would only be realised upon the evolution of vertebrates?

It's hard for me to believe that. All of a sudden, a particular arrangement of brain matter caused subjective experience to emerge somehow. It seems more intuitive that some degree of consciousness or awareness is inherent to all biology or even all matter." That's the question.

The problem here is the final sentence about what seems more intuitively likely to one person as opposed to another. The questioner believes that it's more likely that some degree of consciousness or awareness is inherent to all biology or even all matter. Now, I'm not sure that everyone would agree with that. I think there would be many people who find it highly unlikely, intuitively, that awareness attaches to all biology; for example, to trees. Or even more so, to all matter; for example, to carpets.

The main issue that I was trying to grapple with this week was how do we go about answering questions of this kind, determining what does and what does not have consciousness? How do we go about doing this empirically so that we don't have to rely on intuition or opinion?

I think that at the one extreme, we have the view that I've just alluded to, that everything could have consciousness. At the other extreme, we have the view, oft-repeated in this week's lessons, that one can only know one's own mind. And therefore, it's impossible to determine whether anything other than yourself has a mind or has consciousness.

These are the two extremes of the range of opinions that we are confronted by. And the question becomes how can we decide between this range of opinions empirically? The approach that I've taken is to start with that last extreme that I mentioned, namely that I at

least know for sure that I myself am conscious. Even Descartes was sure that he was conscious.

I then move to the question as to what can I observe empirically about my own consciousness which enables me to then generalise to the consciousness of others or the possible consciousness of others? What I can observe empirically about my own consciousness is that it's dependent upon the integrity of my reticular activating system. I then generalise that the same applies to all other creatures who have reticular activating systems.

And that includes, as it happens, not only all another humans, all other primates, all other mammals, but also all vertebrates. I then hypothesise that all of these creatures have consciousness like me. Which leads me to make predictions as to how they will behave given the hypothesis of consciousness, predictions as to how they will behave if their reticular activating system, portions of that system, are stimulated in specific areas.

For example, I predict that if I stimulate the dorsal periaqueductal grey, the back part of the PAG, that all of these creatures will behave as if they're in excruciating pain, as I myself experienced when my dorsal PAG was stimulated. Likewise, I predict that if their ventral PAG, the front part of their PAG was stimulated, they will experience extreme pleasure, as I do when mine is stimulated. When those predictions are confirmed, and they must be disconfirmable predictions, if they're confirmed, I have done ordinary science. I've approached the question in the same way as we would anything else in science. This gives me an empirical basis for provisionally accepting that these creatures, at least, have consciousness.

But I must emphasise that this does not mean that other creatures or other entities do not have consciousness. It's just that these at least we can, on an ordinary scientific basis, assume they do. That's not a small step because if you remember where our starting point was, that we can only really be sure that each of us ourselves can only be sure that we have consciousness because we can only directly observe our own. To go from that intractable problem of other minds to being able scientifically to at least incorporate a whole of vertebrate animal life in the category of creatures in which we may reasonably assume consciousness, that's an achievement not to be sneezed at.

But I do accept that it is unlikely that this particular arrangement emerges suddenly in evolution and that nothing prior to that has any semblance of consciousness. It's just that then we start to get into the murky area of speculation and it becomes increasingly difficult to do experiments. So I hope that that clarifies the matter. And you'll see now as I go to the second question that these issues recur once more.