



## **Cognitive psychology**

### *The evolution of consciousness*

#### **Male:**

Before we start asking about whether some artificial device is conscious or not, would we want to ask questions like 'are animals conscious?' And are they conscious to the same degree as each other. From an evolutionary point of view, we wouldn't expect consciousness to arrive on the scene all of a sudden. We might expect to find degrees of consciousness, with consciousness increasing over very long time periods, as evolution proceeds. And not least, there must be a reason that consciousness evolves, and there's probably a cost to being conscious. We intuitively feel you have to have rather a large brain to be conscious. And brains are very expensive. They use a lot of energy.

Do you think that an artificial device would necessarily have the same consciousness as us? Or would it have the consciousness of say an ant or a mouse?

#### **Male 2:**

Well if you think about animal consciousness. I think one of the questions I'd want to ask, is what would count as evidence. What could we point to, that we could say 'Ah yes, that's definitely a sign of consciousness.' Thomas Nagle asked this question about .. well he famously titled one of his articles 'What is it like to be a bat?' And I think his take on consciousness is that if something is conscious, then there is something that it is like to be that organism. And what we have to address, in explaining consciousness is exactly what it is like, to be that organism.

His point was that we can't really do it. We don't really know what it's like to be a bat. We can maybe have a little stab at it. We know their vision perhaps is a bit different. Their ways of navigating around the world is a bit different. But until we can get inside the bat's skin as it were. Until we can actually be the bat, then we can't really answer the question. What Nagle is pointing to, is this intrinsic first person perspective to consciousness. And I think that's something that maybe raises difficult questions for us, in thinking about what would count as evidence.

#### **Male 3:**

I'd pick up a little of that I think. The very simplest animals. The ones that are just about beginning to show a nerver system. So there are some neurons in there. you can see direct links across not very many synapses. From a sensory neuron that's received a stimulus, to another neuron somewhere that triggers a muscle, and makes behaviour happen. And it's just automatic. Like our own reflexes of course. And it's hard to imagine how that could be conscious. There are no other neurons around to be as it were self observing. So I think two things emerge from what. We can certainly make machines that will respond to their environment in some way. And clearly if it's a simple machine, it would be just like that sort of simple animal.

Evolution seems to have made greater and greater complexity. And we've got as far as other primates than ourselves. And there have been amusing experiments done. Such as sticking a little colour paper tab on the forehead of a great ape, and letting it look in a mirror. And it understands that it's on it's self. And it puts it's finger to it's own forehead, not to the reflection, to remove it. So it's obviously got some kind of self awareness. And between that extreme and the ants, presumable evolution has been adding to this. So it's not unreasonable to suppose that we could have such a development with computers say. And gradually produce something more and more complex that ended up with something that we would have to say 'yes' was a kind of consciousness.