

Consciousness

Is an electron conscious? If we can't decide whether the simplest thing in the observable universe is conscious or not, we might as well give up talking about consciousness. If an electron is not conscious, where in the sequence electron, atom, molecule, crystal, virus, calculator, bacterium, amoeba, cabbage, flea, goldfish, computer, bird, Molly the sheep, me, you ... where does consciousness kick in?

Is consciousness made from atoms in the Periodic Table of Elements? Is consciousness an energy state? Is my digital watch conscious? How about my calculator? My personal computer? The Super Cray computer at Bracknell calculating the world's weather forecast? Are the best computers running the best chess programs, which only international grand masters stand a chance of defeating, are they conscious?

Is the lettuce leaf I had for dinner conscious? It was certainly alive. If I had planted it carefully, it would grow back into a lettuce. I could take a single cell, clone a colony of lettuce cells and grow as many lettuces as I like. Are they conscious? What about Molly the sheep, cloned from a single sheep cell? Where does consciousness first appear along that road? If a cloned human cell is allowed to develop into a human being, would it be conscious? When does consciousness arrive and where does it come from?

Where does my consciousness reside? In my big toe? If I lose my big toe will I lose my consciousness? Which bits of me do I need to lose before I lose my consciousness? My dad's best friend had the right half of his brain replaced by a lump of shrapnel. After the war he got a job driving busses, married and had children. Was he conscious? Which bits of my brain could I lose and still have consciousness? If I lose one bit where it resides, can it hop over to another bit?

Can my consciousness work with bits of me that are artificial? When I insert my contact lenses, does consciousness refuse to cooperate with them? Does it cooperate with a hearing aid? What about an artificial heart? What if all my bits were artificial, would it cooperate? At what stage in the sequence would it stop cooperating? If the rest of me is artificial and consciousness is still there, have I created artificial consciousness? Is consciousness affected by ordinary molecules and compounds like ethanol, anaesthetics and pheromones? When my appendix was removed under general anaesthetic, what happened to my consciousness?

If I stimulate a highly specific part of my brain with a local electric current, a highly specific memory flashes into my mind. Or it can be a highly specific colour, smell or taste. Is that consciousness at work? Is consciousness part of the brain or does it just reside in the same place? Why does it live there? Does it need to be near my brain? How near and why? Are there nerves, wires, channels of communication between brain and consciousness? Does consciousness have real world parts?

Is the brain more than the sum of its atoms? A calculator? How about my pencil sharpener? If I made an atom by atom copy of my pencil sharpener, would the copy work? How about my calculator? My brain? If I made an atom by atom copy of something that had consciousness, would the copy have consciousness or no consciousness? If the something were me, would the other's consciousness be the same as mine?

Does consciousness sleep when my body gets tired? Is its performance impaired when my body is sick? In the instant I die, what tells my consciousness I'm dead? Does consciousness have ears, eyes, senses, nerves? How long does it take to figure out I'm dead? Does it die, commit suicide, go somewhere or just hang around? How does it manage to die if it's not made from my kind of stuff?

Is consciousness something that comes into spontaneous being when I grow from a single undifferentiated cell? When does it arrive? Where does it come from? How does it know where to go? Can it get lost on the way or end up in the wrong place? Can two people get each other's consciousness by mistake? Is everyone's consciousness identical? Do they start identical and blank, then get personalised with use?

I don't know the answer to these questions and I suspect nobody else does either. So until someone comes up with something more coherent, I will adopt the following working hypothesis: Arrange a large number of atoms into an assembly with a high degree of organization and connectivity and that assembly will start displaying characteristics of something we refer to as consciousness.

Mankind's view of his role in the universe has suffered a sad decline over the centuries. The ancients would have us centre-stage, inhabiting a flat earth, Sun and Moon hauled daily in chariots across the sky for our convenience, the animals, plants and numerous gods all conveniently on hand to satisfy our every need and whim.

Today, our world is seen as one among a number of planets and other detritus of star formation, all moving in simple mathematical homage about the Sun. The Sun as just one unremarkable star among billions, far from the centre of an unremarkable galaxy, itself just one galaxy among billions. Numerous other planetary systems abound, both established and in the actual process of formation.

The particles of our bodies and our world are the same particles, occur with the same relative abundances and obey the same laws of interaction as they do throughout the entire observable universe. Many biochemical constituents of life on Earth are routinely synthesised in the laboratory and detectable in vast quantities in interstellar space. All life forms found on this planet use the same molecular language to record, maintain and adaptively improve their chemical blueprint from one generation to the next.

In contrast, consciousness has acquired a convenient elusiveness. Together with a raft of other distancing labels like self-awareness, free will, morality etc. Consciousness inhabits a foggy no man's land, forever retreating under the cover of vagueness, carefully maintaining a safe distance from the creeping barrage of scientific discovery and logic. Consciousness is the flag we wave to distance ourselves from other animals. It is the comfort doll to which we cling in the painful struggle to accept our true place in the universe.

It is not clear how long we can continue this delusion. If we don't admit soon the possibility that consciousness is a natural phenomenon, common to all assemblies of sufficient complexity, we might one day wake up to find the presence of another consciousness, an even more self-centred consciousness perhaps, and even less particular about sharing the planet.