

Briefing Sheet Session 1: Mechanism and Meaning¹

We understand things by asking questions, and the answer we get usually depends on the type of question we ask.

The goal of science is to understand the way the world works by asking questions about the **mechanisms** behind the things we see happening. Sometimes people call these 'how' questions:

How do trees grow?

Trees grow by taking nutrients out of the ground, converting sunlight to usable energy, and combining these together to make new molecules.

How does the sun work?

The energy that the sun gives off is produced by the incredible process of nuclear fusion within its core.

Questions about mechanism can use other words too: Why do plants grow towards the light? Where do babies come from? What are humans? These are all questions which can be answered with lots of different mechanistic explanations, but all of these questions can have other answers, too.

For example, the question 'What is a person?' can be answered, 'A person is a collection of molecules', or enough:

- Water to fill a ten-gallon barrel
- Fat for seven bars of soap
- Carbon for 9,000 lead pencils
- Phosphorus for 2,200 match heads
- Iron for one medium-sized nail
- and so on².

In one sense this is all a person is, but if you define someone in this way you will have missed something important about who they are. Neither the individual parts nor the structure they form when they are put together can explain our experience of consciousness.

Experiences of emotions like love or grief may be caused by chemical reactions within the brain, but that does not mean these things are 'unreal' in any sense. Love and grief are still real, conscious experiences of affecting, and being affected by, other people. The fact that a DJ's record has grooves does not make the music coming out of the speakers any less 'real'. The grooves are where the music is stored, but the music is what matters. What we're talking about is **meaning**.

There are other questions which have to do with meaning. For instance, the question 'What is a book?' can have many mechanistic answers. It is a collection of words, groups of letters, many pages covered in ink spots, a mixture of carbon and other elements. But these answers don't tell us what really matters. Is *Ulysses* by James Joyce a revolutionary novel or a load of drivel? Is *The British Book of Birds* accurate and helpful? Is *The Da Vinci Code* a good read or a pile of lies?

Often it is confusion of **mechanism** and **meaning** that leads people, Christians included, to think that science leads to atheism. They look at scientific evidence and think that if a mechanism has been discovered for something there can no longer be any higher meaning: there is 'nothing but' the physical explanation. This kind of confusion has been called 'nothing-buttery', or 'reductionism'. In reality, reductionism of this sort is a philosophy that has nothing to do with science, is held by few atheists, and is difficult to defend.

1. See also John Polkinghorne's illustration of the boiling kettle, Test of FAITH, Part 1 [Time code: 6 min. 36].

2. Taken from Michael Poole, 'Reductionism: Help or Hindrance in Science and Religion?' (Faraday Paper No. 6), <http://www.st-edmunds.cam.ac.uk/faraday/Papers.php>.