

'All that exists are atoms and the void.' What is an atom? And what is the void?

Democritus was an atomist and he had a great influence on the science of today. He believed that atoms were the root of all substances in the world, and the atom is undividable, eternal and infinite. The void, meanwhile, is an empty space. This is similar to Parmenides' non-being idea. Without the void, I would not be able to raise my arm or use this keyboard. To be able to move my body, I need enough space to move. If I fall into cement, I may sink and stay there until the cement is dry: in that situation, I have no space at all to move my leg from one place to another. This example can illustrate the idea of an atom not having enough void to move into.

This world is a quantity world, if we follow Democritus' idea of the atom. It is not, for him, a quality world. If I enjoy listening to music, it can only be the quantity of atoms that represent my happiness. For example, perhaps 1,000 atoms account for my enjoyment of a piece of music; the sound of the music that affects me may have 5,000 atoms; the instrument that generates this sound may be made of 20,000 atoms. According to this example, my pleasure in listening to music has nothing to do with my brain, the emotions inspired or the ability of musician. Everything is about numbers of atoms and the void in Democritus' quantity world.

Everything appears to us by the convention of the atom. When I watch sport on television, there are always rules or conventions applied to playing that sport. This keyboard in front of me is just a convention of atoms. If I feel cold air from the air conditioning in my office, Democritus will say it is because of a convention of atoms of cold air touching my skin. The symbolic convention is the way we create rules or agreements in the world. For example, if I smile at my colleague in my office, in the view of the atomist, this may mean nothing. Democritus may say it is only a quantity of atoms and the void. When I lift my cheeks, open my mouth and show my teeth, it is how I show my happiness or greet my colleague; but the atomist will say that cheek is only a number of atoms that move to the void. Our rules or agreements therefore make us human and not just a convention of atoms in this quantity world.

The way I touch, feel or perceive the world is in terms of quality, not quantity. I listen to music; I appreciate the beauty of a flower or smell my wife's hair, and I perceive those things in a quality way. I learn, I study and I acquire knowledge from this world by quality, or doxa. The atom as an individual unit is invisible. We cannot see it with our eyes. When it is combined together with many more atoms to form an entity, the entity will become visible to us. When I look at my computer screen right now, the computer screen appears in front of me because billion of atoms combine together to be this computer screen. If I throw it into a sink that is full of hydrogen fluoride, a dangerous chemical acid, it is able to digest everything including this computer screen until it disappears. It is the same method that the killer in the horror movie uses to destroy the victim's body. The screen will therefore disappear from my visible sensory world. The atomist will say that the atoms are still there, but I just can't see them.

For me, I think this is the main idea or belief that I have grown up with in my generation—the science of physics, able to explain almost everything. Today, the concept of an atom as a substance is basic knowledge. The materialist can win the majority vote in society. I think

Democritus had an influence on Leibniz's *Monadology*. As a human, this materialistic way of belief makes me feel uneasy. When I think about that, I am nothing but atom and void. What makes the difference between me and this table in front of me? We can use the idea of Descartes' mind-body problem to differentiate us from the table. I live and enjoy my everyday world. I eat delicious food; I enjoy spending time with my family. I use my knowledge to improve my life and that of other people. This makes me feel human. At the same time, I am always aware of the fact that nothing is permanent; nothing exists forever. Everything is just the convention of atoms that exist with the void.