

How might causal determinism be criticised?

1. Are all things made of matter? *Perhaps our minds are not made of matter. Our minds do not have to obey causal laws and might therefore be free...*
2. Are all material things governed by causal laws? *Quantum physics suggests that causal laws only really operate at the macroscopic (large) scale.*
3. Do causes really exist? Are they just products of our mind? (Kant) *If causes do not really exist "out there" in nature then it is hard to say that every material thing really is governed by causal laws.*
4. Are causal determinists guilty of *reductionism*? See next page.

Reductionism and Causal Determinism

Reductionism is the belief that complex systems are nothing more than the sum of the parts that make them up, and that the behaviour of these parts explains the behaviour of the system as a whole.

Reductionism is often seen as naïve. Reality is made up of many different levels and there are different principles that can be used to explain behaviour at each level.

For example, the many ways in which humans may be understood are shown below:

Level of reality	Field of study
Society	Sociology, Politics, History
Groups of humans	Social Psychology
Individual human being	Psychology, Biology
Organs	Biology
Cells	Biology
Atoms	Chemistry, Physics
Subatomic particles	Physics

You can see that each level of reality has a corresponding field of study associated with it. A reductionist believes that a high level of reality (e.g. groups of humans) can be understood through a “low” field of study (e.g. Physics).

Reductionists are criticised for this because they ignore the fact that as systems become more complex, the rules that control their behaviour are no longer just the sum of the rules that control the more basic parts. New rules and ways of behaving emerge. These are called *emergent properties*.

How is this relevant to causal determinism?

A causal determinist believes that because humans are made of particles that follow strict causal laws, it is impossible for them to have free will.

This belief, however, is reductionist. Humans may well be made of many particles that follow strict causal laws, but human behaviour is *more* than the sum of the behaviour of these individual particles.

It may be the case that free will is an emergent property that arises when these particles are arranged together in the system of a human body.