

## **Causal Determinism**

Present events have a connection with previous ones that is based on the self-evident principle that a thing cannot come into existence without a cause that produces it..... We must therefore regard the present state of the universe as the effect of its preceding state and as the cause of the one which is to follow. An intelligence which in a single instant could know all the forces which animate the natural world, and the respective situations of all the beings that made it up, could, provided it was vast enough to make an analysis of all the data so supplied, be able to produce a single formula which specified all the movements in the universe from those of the largest bodies in the universe to those of the lightest atom.

Pierre Simon de Laplace, *Philosophical Essay on Probability* (1814)