

# Tabla de Contenidos

**Ellis, george F.R., On the nature of causation in complex systems (2008) ..... 1**



# Ellis, george F.R., On the nature of causation in complex systems (2008)

<https://doi.org/10.1080/0035919080951921>

Online: <https://pdfs.semanticscholar.org/7d00/a3cc8778761f31b0e1e5d757472330fd9c05.pdf>

A reliable understanding of the nature of causation is the core feature of science. In this paper the concept of top-down causation in the hierarchy of structure and causation is examined in depth. Five different classes of top-down causation are identified and illustrated with real-world examples. They are (1) mechanical top-down causation; (2) top-down causation via non-adaptive information control; (3) top-down causation via adaptive selection; (4) top-down causation via adaptive information control; and (5) intelligent top-down causation (i.e., the effect of the human mind on the physical world). Recognising these forms of causation implies that other kinds of causes than physical and chemical interactions are effective in the real world. Because of the existence of random processes at the bottom, there is sufficient causal slack at the physical level to allow all these kinds of causation to occur without violation of physical causation. That they do indeed occur is indicated by many kinds of evidence.

From:

<http://filosofias.es/wiki/> - **filosofias.es**

Permanent link:

<http://filosofias.es/wiki/doku.php/proyectos/tfg/bibliografia/ellis2008>

Last update: **2018/05/27 17:58**

