Tabla de Contenidos

Stuart, S. Dodig-Crnkovic, G. Computation, Information, Cognition. The Nexus and the Liminal. Introduction. (2007)

Of perennial concern to philosophy, physics, and now the cognitive sciences, are the notions of causation and causal relations; their importance is no less considerable in the domains of information and computation. “Intuitively there is conceptual connection between causation and transfer of information, because we can’t get any information from a system without interacting causally with it … Thus transfer of information is a causal process.”. [Johansson, this volume] Johansson addresses this concern by first establishing four, quite different, proposals: causation is (i) the transfer of a conserved quantity; (ii) analysed in terms of counterfactuals; (iii) explicable in terms of INUSconditions, that is, a cause can be an insufficient [I] but necessary [N] part of a condition which is itself unnecessary [U] but exclusively sufficient [S]; and (iv) something we humans – agents – can manipulate in, for example, the transfer of information which can be a cause of something else. Johansson's suggestion is that, in an attempt to understand this rather complicated notion of causality, we must drop the counterfactual approach – it leads us up a blind alley when we try to determine its truth-value – and unify the other three approaches to provide a robust concept of cause as it is used in ordinary language, and in the natural and social sciences.

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