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Ubiquity published 2000.

Causality - Hume/Kant

Total causality means determinism?

Aristotle's 4 causes.

Efficient (past->present)

Final (present->future)

Material (substance)

Formal (shape)

The first two dynamic, the second can be static.

Buchanan's take on Causality is dynamic, but there's a shape to that dynamic.

Power Law distributions

Non-equilibrium physics

Mathematical Game of Life (late 1960s)

Sand piles (1987)

Grain piles

Earthquakes

Freezing metals

Forest fires

Epidemics (Measles)

Species Extinctions - geologically

Species Extinctions - ecologically

Wars

Revolutions

Scientific Revolutions

Film Stars

Towns

Magnetic materials at critical state temperature

Financial markets

Wealth

Upheavability

Historical physics

Critical points (iron, at 770 degrees Celsius)

Self-organised criticality

Shortcomings of the narrative approach to history

Teleological models of history

How much should one trust it? What difference does it make? How novel is it?