Root Cause Analysis Notes

D. Gueorguiev, 6/18/23

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# Overview of modern approaches to probabilistic causal modeling

## David Hume

### An Enquiry Concerning Human Understanding, 1757

## Hans Reichenbach

### The Direction of Time, 1956

## Patrick Suppes

### Probabilistic Theory of Causality, 1968

## David Lewis

### Counterfactuals, 1973

### Causation, 1974

Hume defined Causation twice over. He wrote “we may define a cause to be an object followed by another, and where all objects, similar to the first, are followed by objects similar to the second”. Or, in other words, “where, if the first object had not been, the second never had existed”.

Descendants of Hume’s first definition still dominate the philosophy of causation (as of 1974)

//TODO: complete the review

### Causal Explanation, 1986

### Causation as Influence, 2000

## Wesley Salmon

### Probabilistic Causality, 1980

Richard Otte

Ellery Eells

Peter Spirtes

Causation, Prediction, and Search, PhD thesis, 1993

Samantha Kleinberg

Algorithmic Enquiry Concerning Causality, PhD thesis, 2010

Branden Fitelson

Probabilistic Measures of Causal Strength, 2011

# Overview on Structural Equation Modeling

## Judea Pearl

### Causality: Models, Reasoning and Inference, 2nd edition, 2009

## Kevin Murphy

### Dynamic Bayesian Networks: Representation, Inference, and Learning, 1992

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(Eells, 1991): [here](https://github.com/dimitarpg13/root_cause_analysis_and_model_checking/blob/main/literature/books/eells_probabilistic_causality_1991.pdf)

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