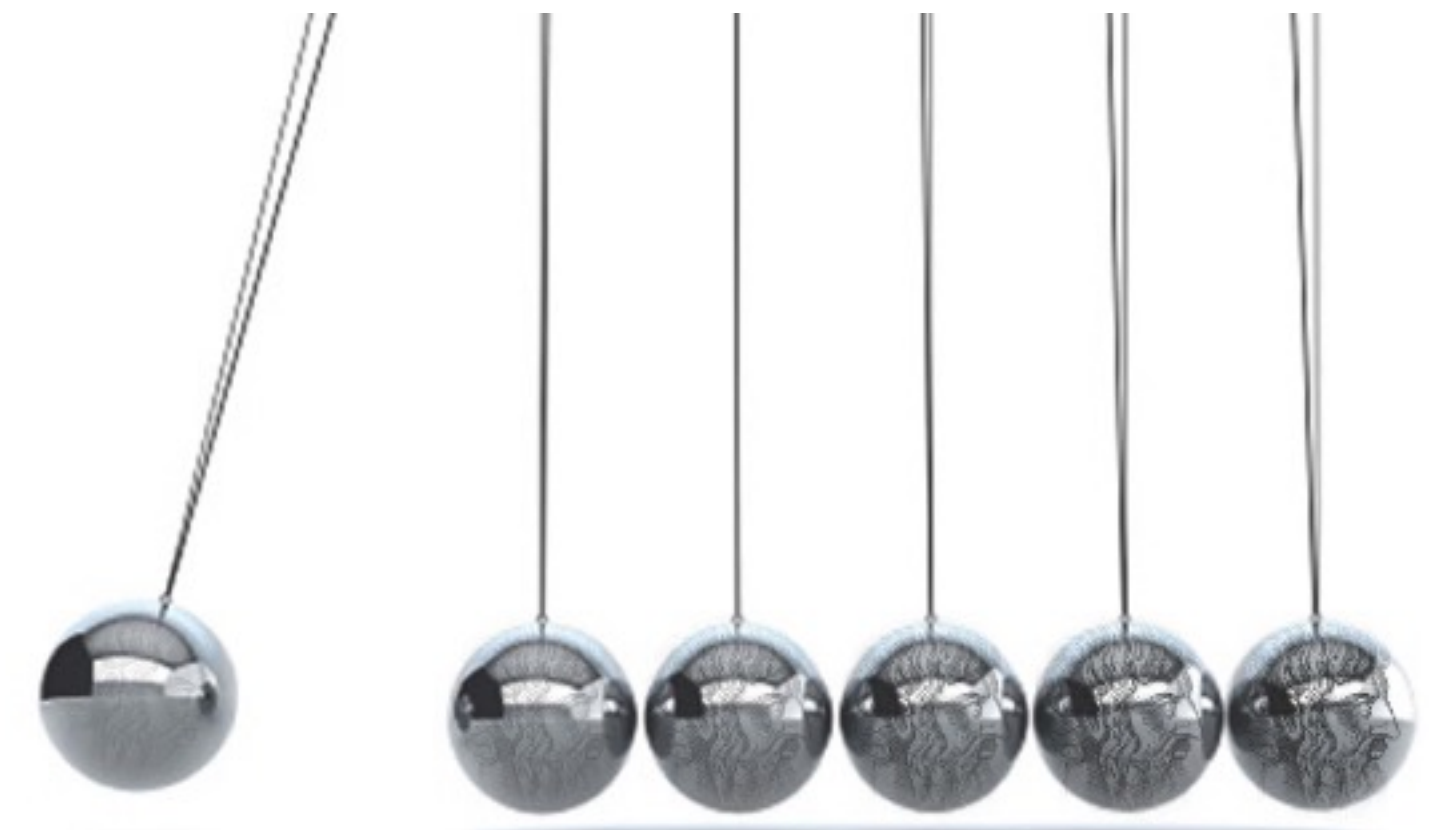# Using DAGs to build models

- If we represent our putative causal relations using DAGs, we have a set of rules that tells us what variables we need to include in the model in order to calculate a particular effect, or if the effect can be estimated at all

  - This is a formalism called **do-calculus**

- There are also more complicated methods, like Structural Equation Modeling or **Full-Luxury Bayesian Inference**:

  - Regression, Fire, and Dangerous Things (1/3)

CAUSAL INFERENCE IN STATISTICS

A Primer

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WILEY

Open and closed paths

- Paths containing **uncontrolled** pipes and forks are **open**

- Paths containing **colliders are closed by default**, but **open if we condition** on the collider

- To estimate the true causal effect of x on y, we need all non-causal paths from x to y to be closed in our model

Identify all the open paths from X to Y