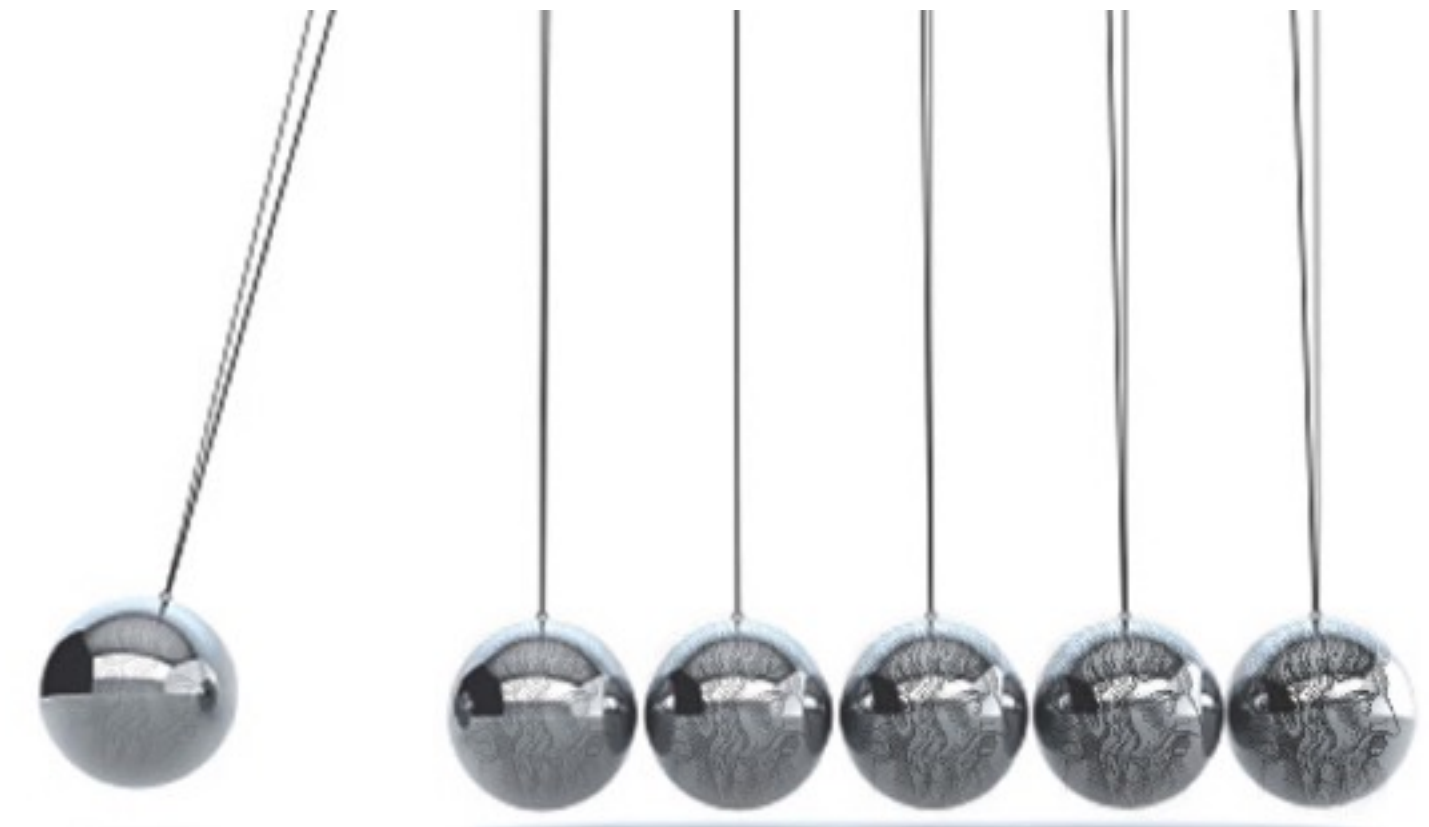


Using DAGs to build models

- 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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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

