

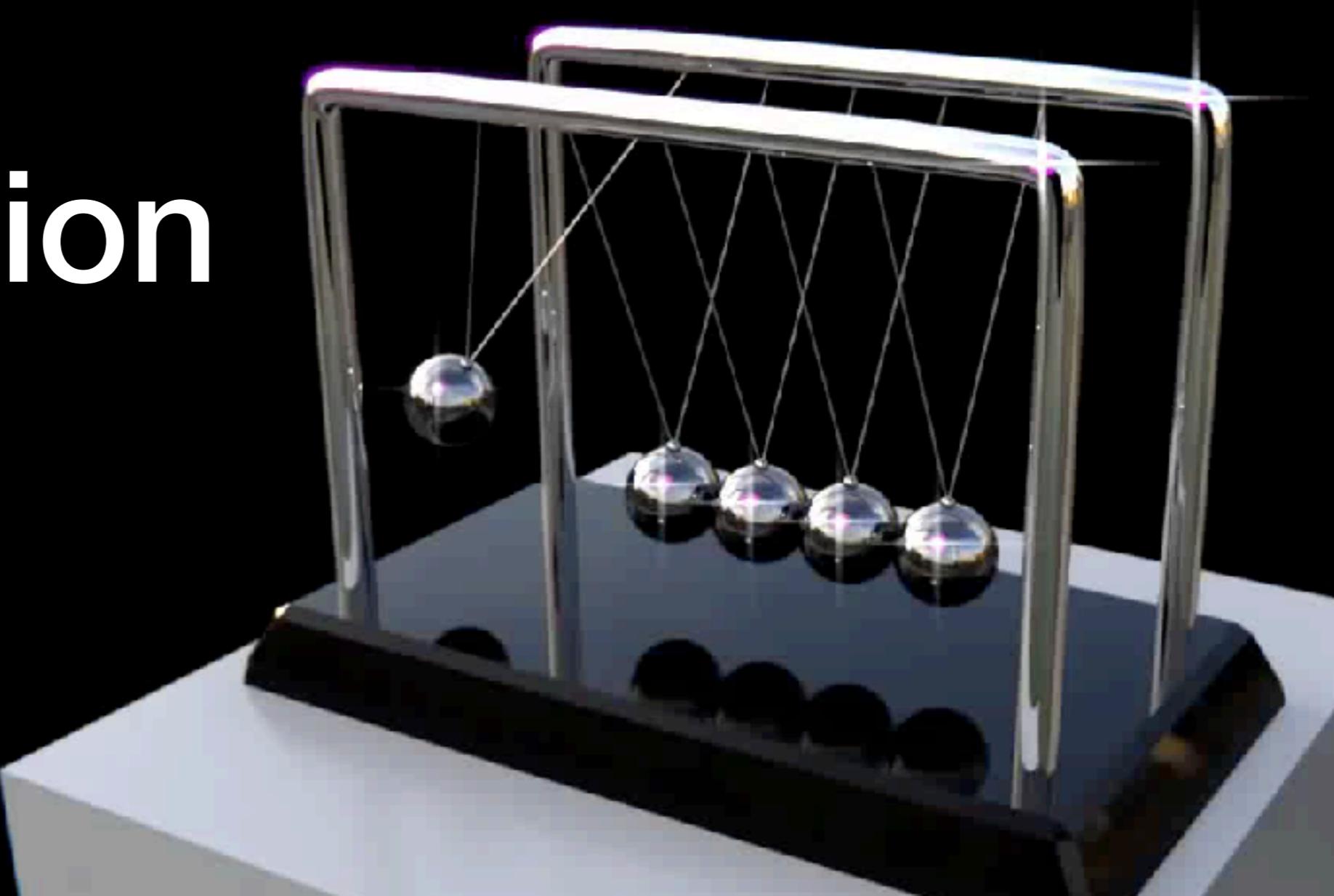
## LECTURE ONE | MICHAELMAS 2017

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<http://msteenhagen.github.io/teaching/>

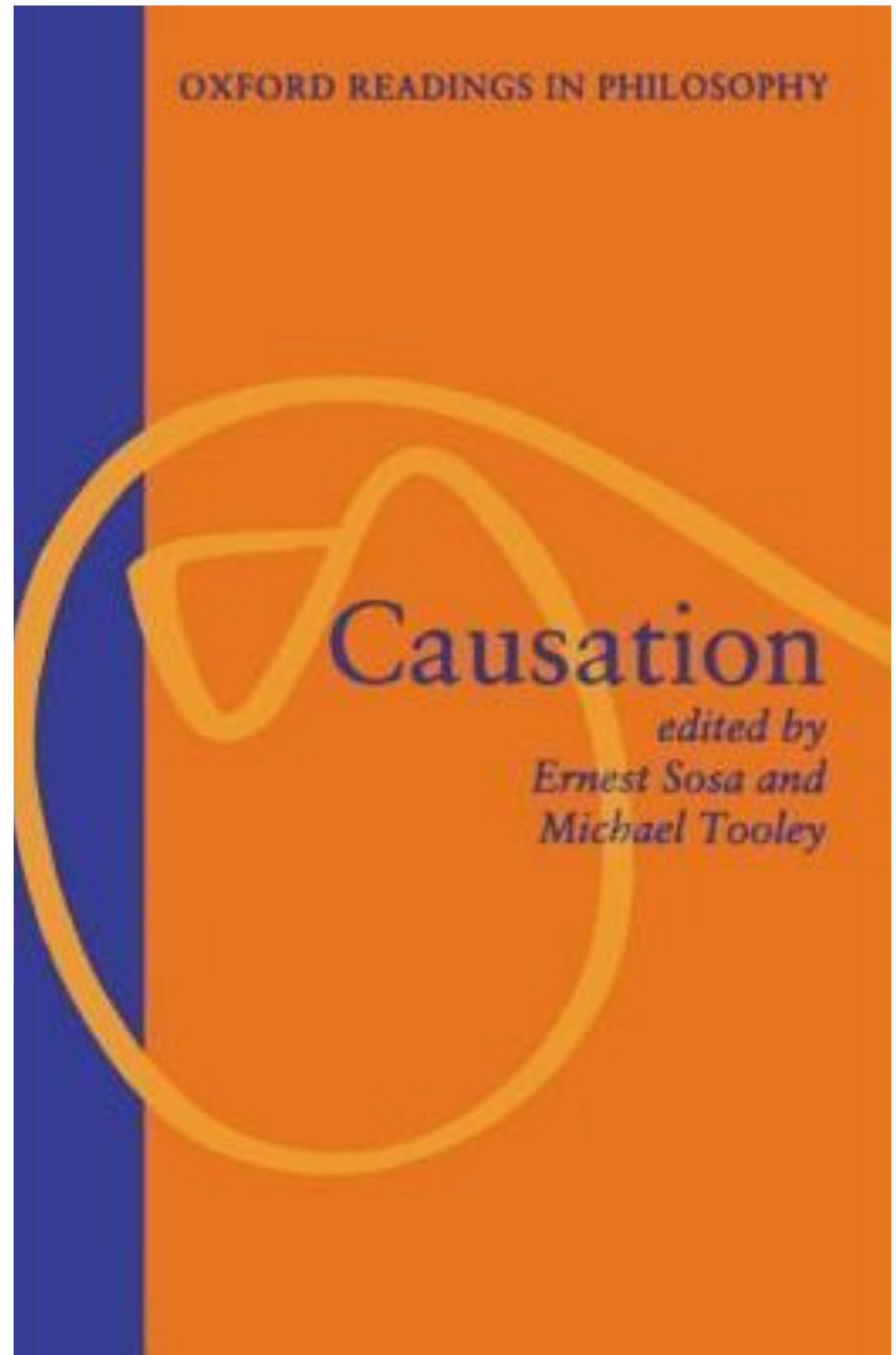
# Causation



# These lectures

- Lecture 1: **The very idea of a cause**
- Lecture 2: **Regularity theories**
- Lecture 3: **Counterfactual theories**
- Lecture 4: **The problem of redundant causation**

**Library suggestion:**  
Ernest Sosa and Michael  
Tooley (eds.) *Causation*  
(Oxford: Oxford  
University Press 1993)



The idea of a  
cause

A → ? → B

# Causes in ordinary language

- We talk about causes in different ways:
  - **Rational:** What *motivates* people to do something (“Mr. Baldwin's speech causes adjournment of House.”)
  - **Practical:** What enables an *intervention* in the course of nature (“Ronald Ross discovered that mosquito bites cause malaria.”)
  - **Theoretical:** What determines the course of nature independently of human freedom or intervention (“The gust of wind caused the fire to light up.”)



# Aristotle on causation

*In the most general sense, to give the cause of something is to say why it is the way it is*

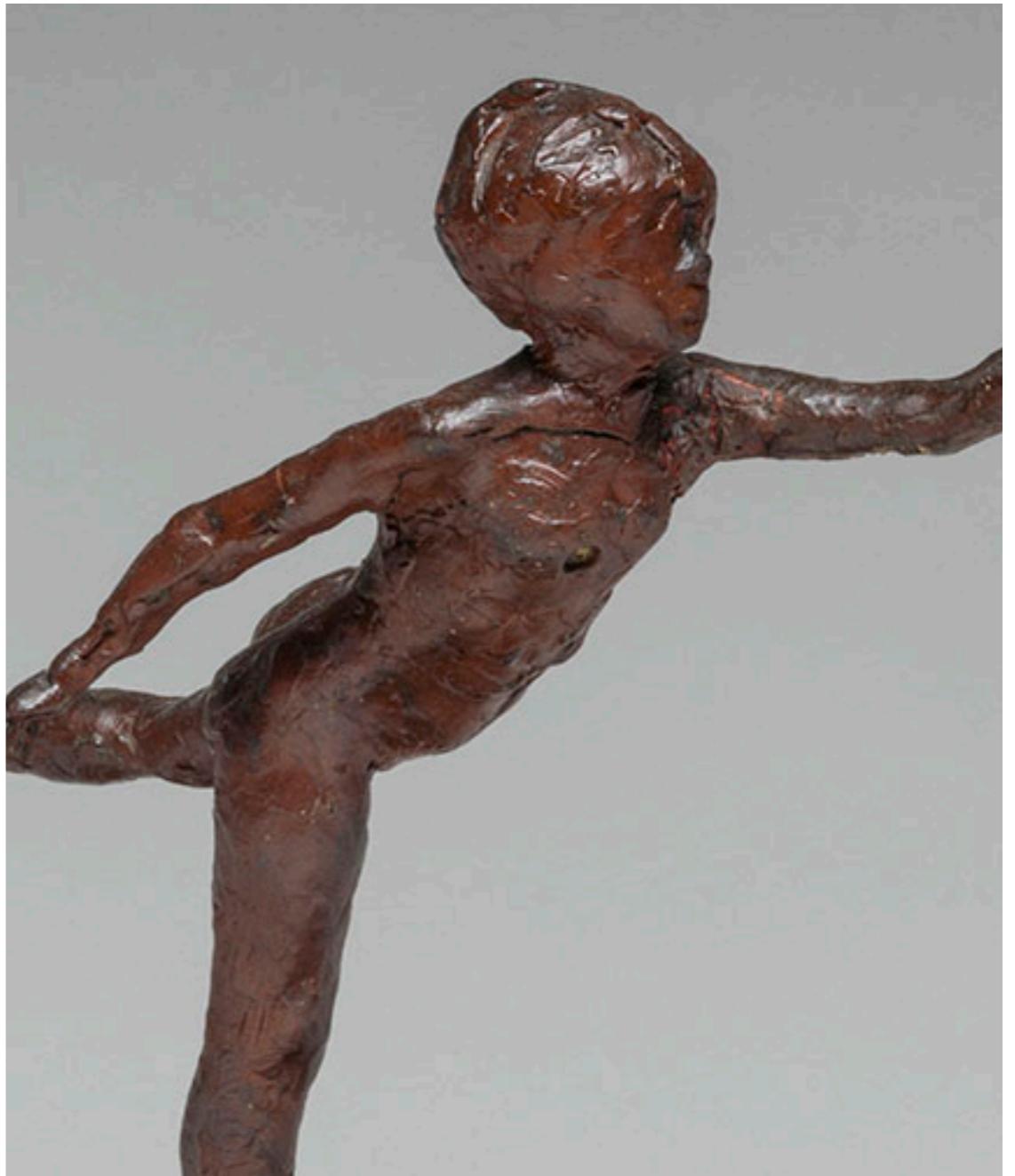




# Four ‘causes’?

Why is this statue the way it is?

- A. The material cause: because it is made out of red wax
- B. The formal cause: because it has the form of a dancer (or image of a dancer)
- C. The efficient cause: because Edgar Degas made it
- D. The final cause: because it is needed to serve as a model for a bronze statue



# Explanation and causation

- Have we really seen causes here?
- What we have is a list of different kinds of answers to why-questions
- Answers to why questions are *explanations*
- So perhaps it is more natural to talk of Aristotle as offering an inventory of different kinds of explanation
- One reason why we find the more general heading 'explanation' more natural is the modern focus on efficient causes as the 'true' causes

# Efficient causes and effects: causes as events?



# Kinds of being

## Particular

- **Objects**  
*a dog, Aristotle, the sun*
- **Events**  
*a brawl, the sinking of Titanic*

## Universal

- **Qualities / Properties**  
*crimson, heaviness, being bald*
- **Relations**  
*being a sister of..., sharing a room with...*

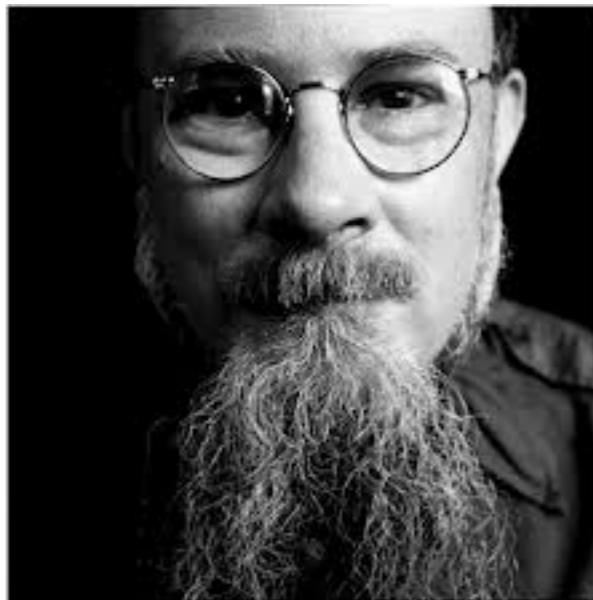
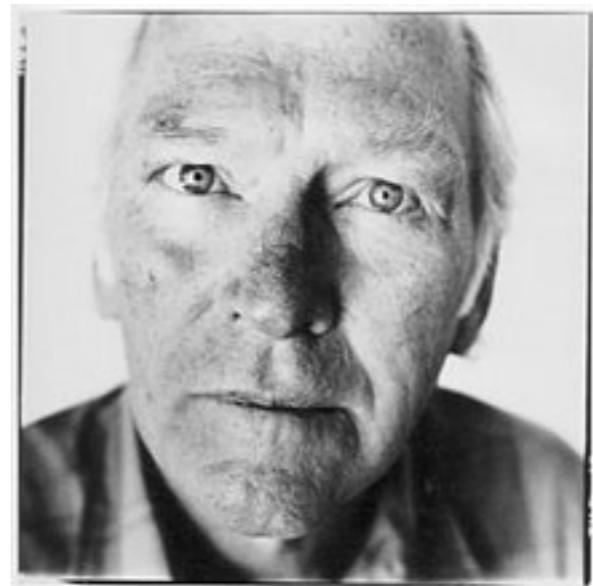


# Effects as events...

- Things that happen, or come about, are events. So it is natural to say that all *effects* of efficient causes are events
- But what about the causes themselves?
- We've already seen that in ordinary language we identify many different kinds of things as causes:
  - “*Aristotle pushed Theophrastus off the stage.*” (object)
  - “*The hurricane caused fluctuations on the stock market.*” (event)
  - “*I fainted because of the high temperature of the room*” (quality)

# Causes and effects as events

- Some philosophers (e.g. Davidson, Lewis) think that all causation must fundamentally relate events, and all other causation must be explained in terms of this
- Why is it attractive to abandon ordinary language here?



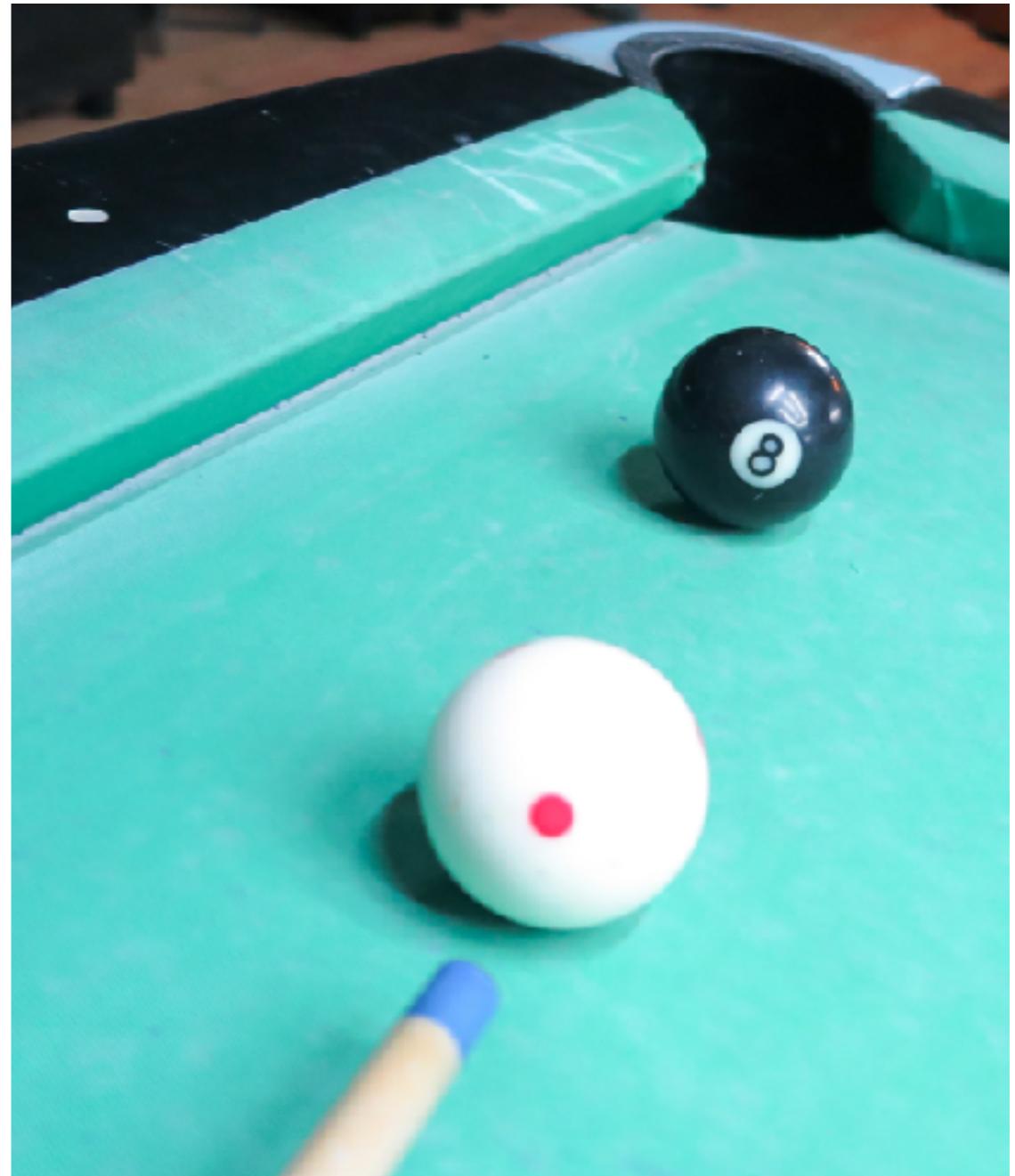
# Temporal succession

1. For any cause-effect pair, cause and effect must follow one another in time
2. Only events can be followed by something in time, and only events can follow something in time
3. Therefore, for any cause-effect pair, cause and effect must be events



# The standard view

- Causation is an asymmetrical relation (if A causes B, then B cannot cause A)
- The causal *relata* are events
- The causal *relata* are distinct events, and their number is 2 (cause + effect)



# Causal necessity



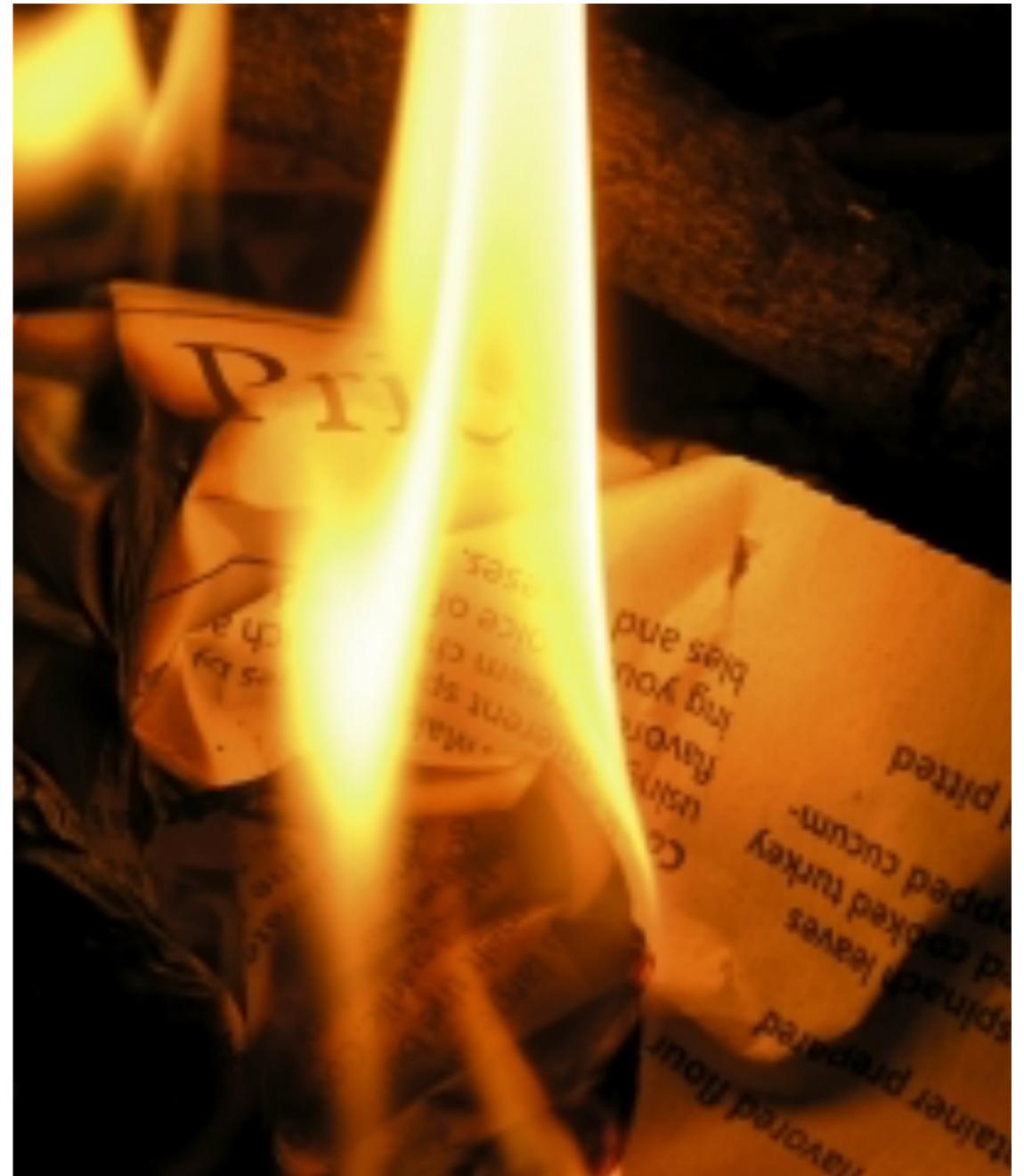
# More than temporal succession

- Example: We know that there is a fire in a house, and we know that a man was smoking a cigarette inside the house
- Evidently, the mere fact that he smoked *before* the fire broke out is not enough to establish it as the cause
- What more is needed?



# Necessitation

- Necessitation: if the cause happened, then (in some sense) the effect must happen
- But what kind of necessity is this?
- Logical necessity?
- No, because there is no contradiction in asserting both that the smoking took place and that there was no fire
- Necessity, given the laws of nature? (Natural or nomological necessity)



# Hume on causation



When we run over libraries, persuaded of these principles, what havock must we make? If we take in our hand any volume of divinity, or school metaphysics, for instance ; let us ask, Does it contain any abstract reasoning concerning quantity or number? No. Does it contain any experimental reasoning concerning matter of fact and existence? No. Commit it then to the flames: For it can contain nothing but sophistry and illusion.

— David Hume