## Why? Because . . .

## I Causation

II Explanation

## I Causation (yah boo!)

II Explanation (huzza!)

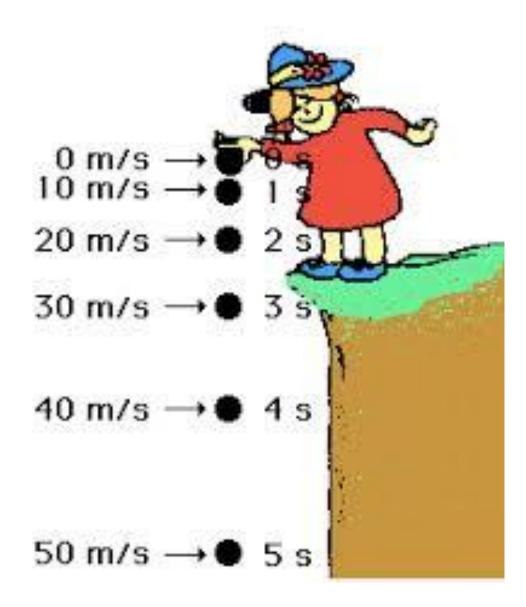
## I Causation (yah boo!)



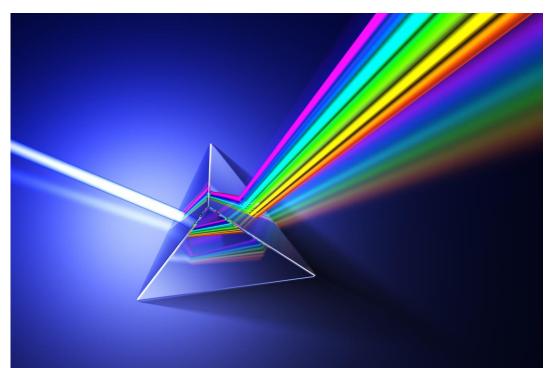
This calls for a beating... castigation

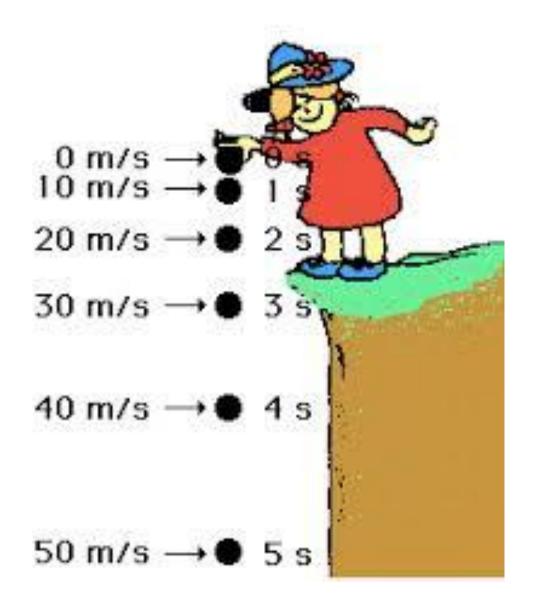












## we are never *sensible*\* of any connexion betwixt causes and effects

David Hume A Treatise on Human Nature 1.4, #165

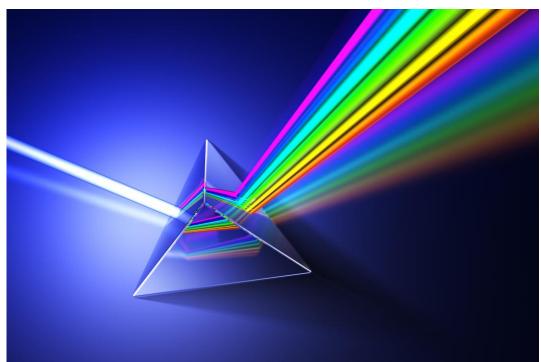
\*ie we never *observe* such a connection, never *perceive* causation at work.









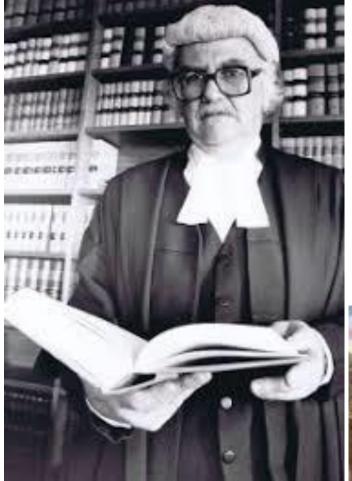




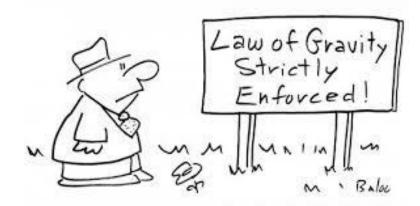












## Light travels in straight lines

## Light travels in straight lines

### LIGHT CAUGHT BENDING

#### Time

Refraction

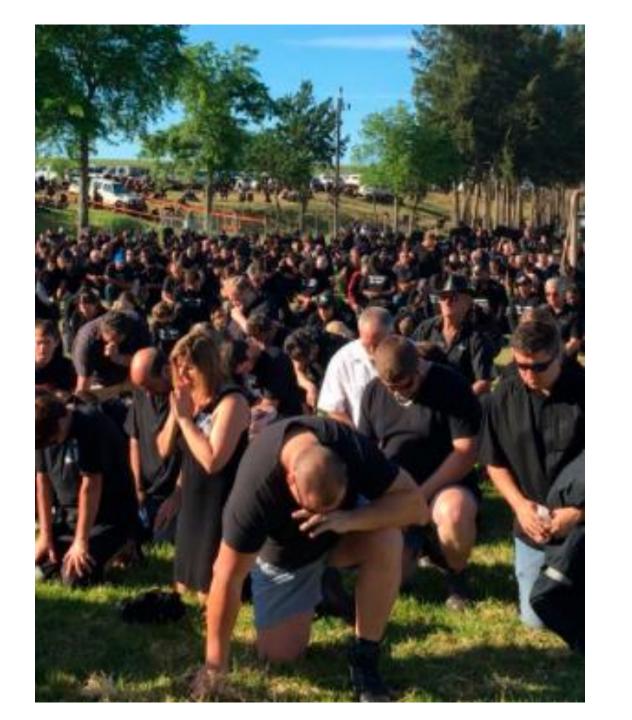
**Spectrum** 

?

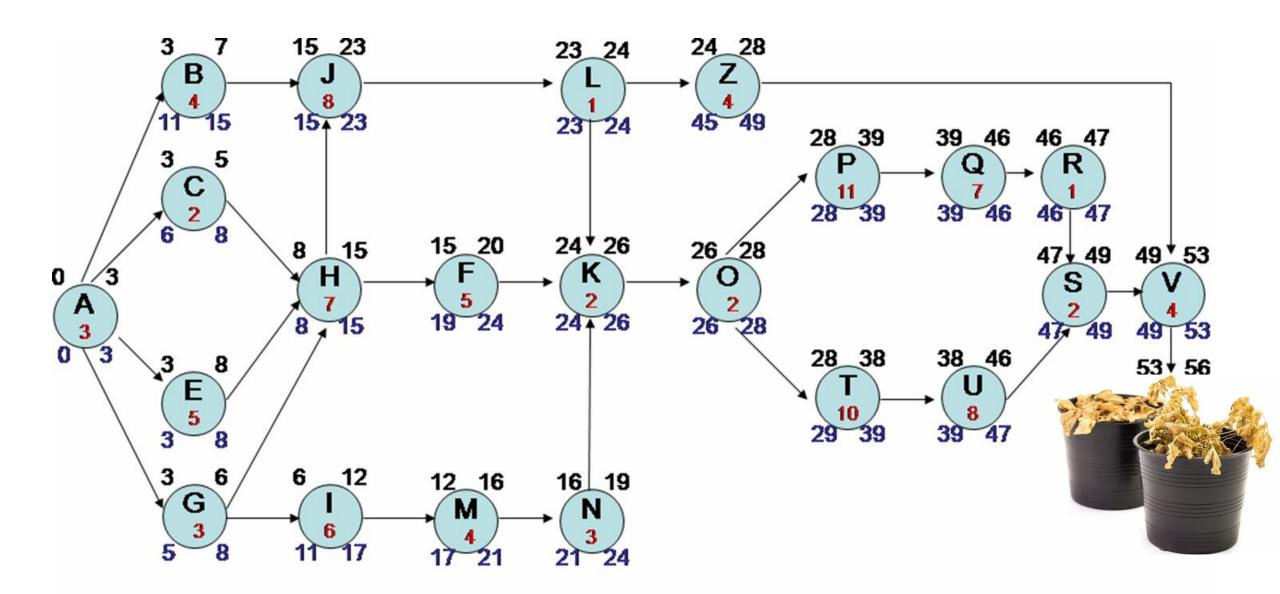
Gravity

**Ball falls** 



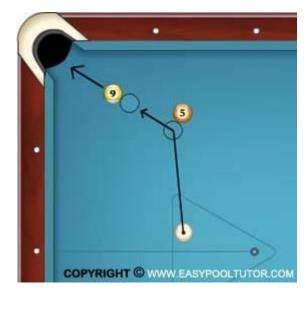








### whenever X, always Y,





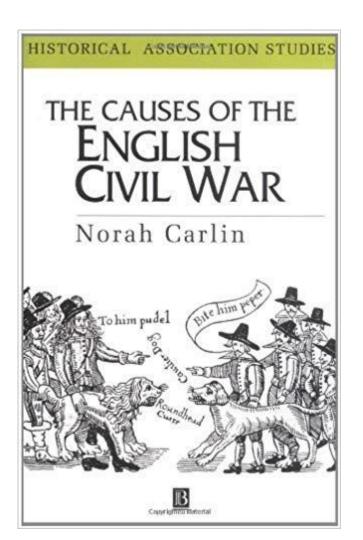
whenever X, often Y.

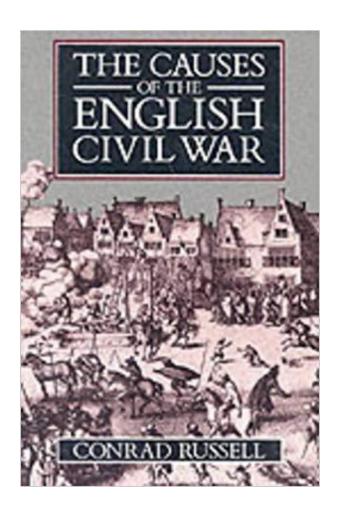


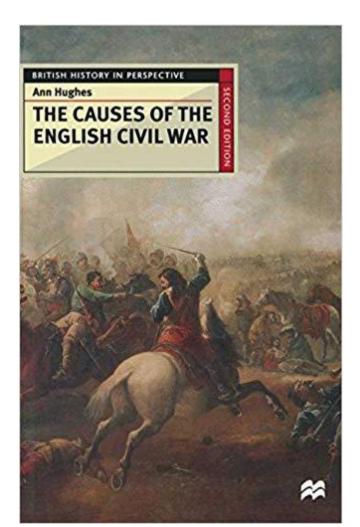


#### Causes of the English Civil War

(Document Questions for Common Entrance) by R. J. Acheson







## II Explanation (huzza!)

# **Explanation.** That which produces understanding how or why something is as it is."

(Oxford Companion to Philosophy)

"That which produces *understanding* how or why something is as it is"

"Explanation, an act of making something understandable."

(Cambridge Dictionary of Philosophy 3rd Ed)

## Why?

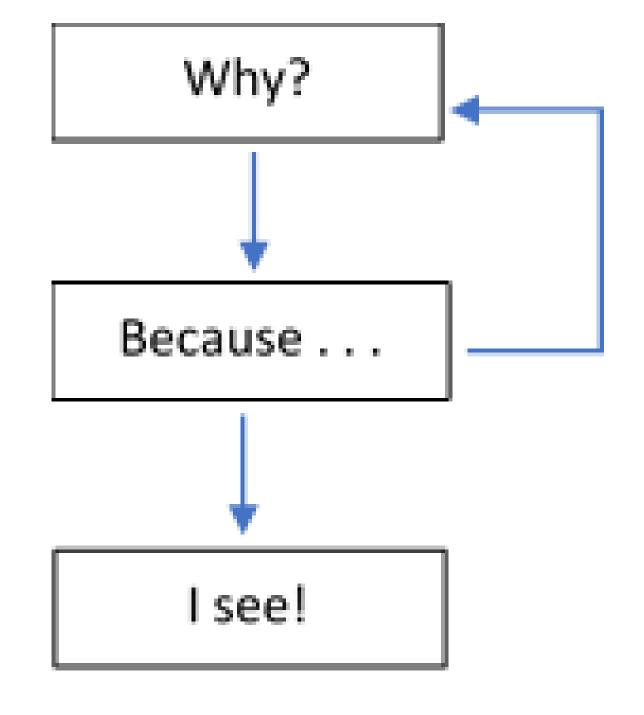
## Why?

Because...

Why?

Because...

I see!



There was an old woman who swallowed a cow,

[How?]

I don't know how she swallowed a cow! [Why?]

She swallowed the cow to catch the goat, Why?

She swallowed the goat to catch the dog, Why?

She swallowed the dog to catch the cat, Why?

She swallowed the cat to catch the bird, Why?

She swallowed the bird to catch the spider, That wriggled and jiggled and tickled inside her,

Why?

She swallowed the spider to catch the fly, Why?

I don't know why she swallowed the fly, Perhaps she'll die. There was an old woman who swallowed a horse . . .

She's dead—of course!

Since Aristotle obviously conceives of a causal investigation as the search for an answer to the question "why?", and a whyquestion is a request for an explanation, it can be useful to think of a cause as a certain type of explanation.

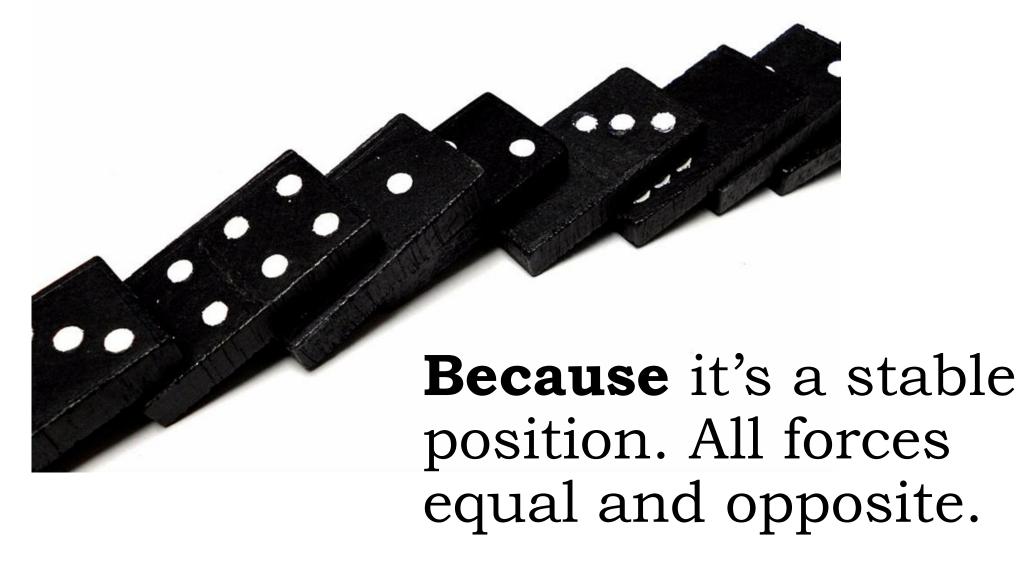
(Stanford Encyclopaedia)



#### Why are those dominoes lying like that?



#### Why are those dominoes lying like that?



#### **How** did they get to be like that?



How did they get to be like that?



#### Why did they knock each other over?



#### Why did they knock each other over?



#### Why did Alenka flip them?



Why did Alenka flip them?



Because she wanted to try a forking domino effect.

Because she wanted to try a forking domino effect.



#### I see!



"A singular event e (the explicandum) is explained if and only if a description of e is the conclusion of a valid deductive argument, whose premises, the explanans, involve essentially a lawlike statement **L** and a set **C** of initial or antecedent conditions." (Psillos summarising Hempel)

The event eOr  $e^1 + e^2 + ... + e^n$ 

Exact time space coordinates which include all *e* (and no non-*e*)?

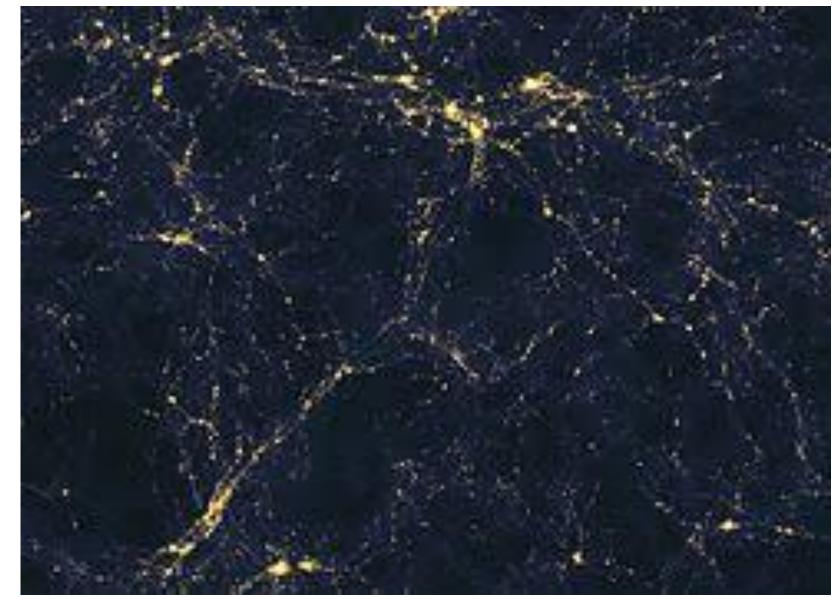
Full verbal description of every observable aspect of e within those co-ordinates?

#### the lawlike statement L

Light travels in straight lines

LIGHT CAUGHT BENDING

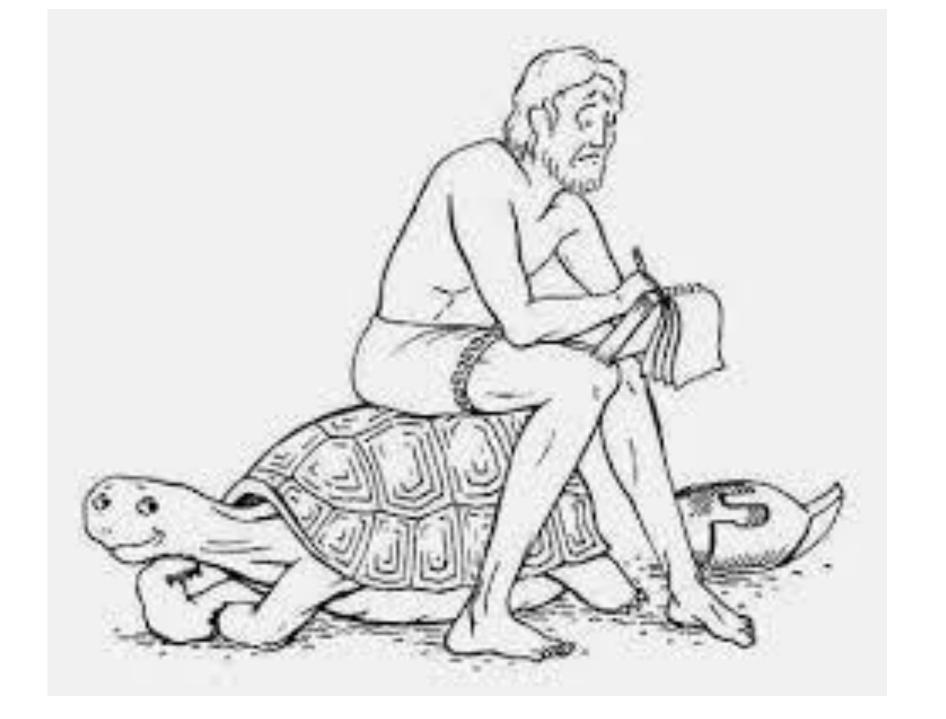
### the set C of initial or antecedent conditions



'epistemology'

About knowledge

Eπ + iστημι = I stand on or by



"I have found you an argument; but I am not obliged to find you an understanding."

Dr Johnson

#### We understand

Negative explanations – Because not . . .

We understand

Negative explanations – Because not . . .

Multiple but not exhaustive explanations – Because this . . . and that . . . and the other

We understand
Negative explanations – Because not . . .
Multiple but not exhaustive explanations – Because this . . . and that . . . and the

## Statistical explanations – Because often . . .

We understand

Negative explanations – Because not . . .

Multiple but not exhaustive explanations –

Because this . . . and that . . . and the other

Statistical explanations – Because often . . .

Non consecutive explanations – Because once . . .

- We understand Negative explanations - Because not . . . Multiple but not exhaustive explanations – Because this . . . and that . . . and the other Statistical explanations – Because often . . . Non-consecutive explanations – Because once . . .
- Intentional explanations Because they wanted to . . .

# Why? Because...

I see!