

# Correlation, Connection, Causation

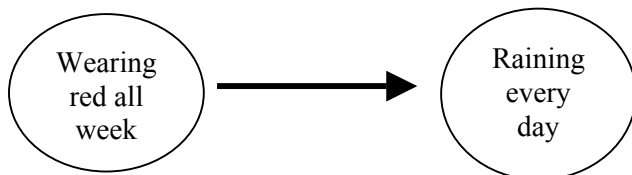
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- If we see two events happening together we assume that they are related
- If we see two related events we assume that one caused the other
- We look for causes behind random events

Unemployment – it's the immigrants!  
Chelsea losing – sack the manager!  
Floods – greenhouse effect!

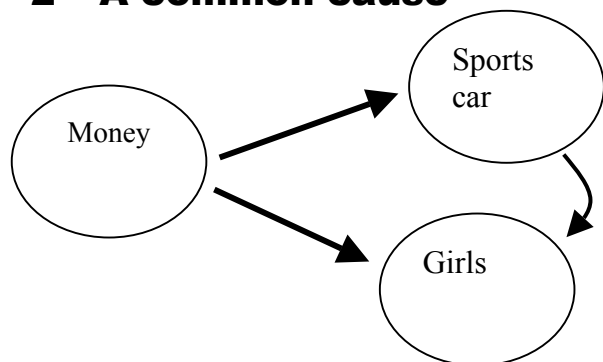
## Three ways to be wrong:

### 1 – An assumed cause



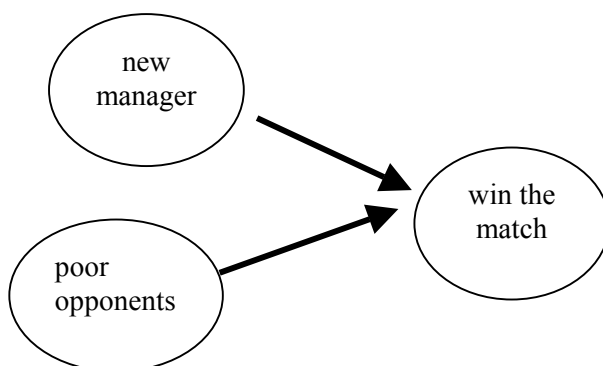
- not connected at all
- random changes
- it has to rain more or less than before
- “lumpy” = large changes

### 2 – A common cause



- we only notice the two effects, which are related, so we assume that one causes the other
- and that stopping one will stop the other happening

### 3 – An alternative cause



- we only notice one of the causes and assume it's that (and maybe sometimes it is)
- but not this time – it was the other cause!