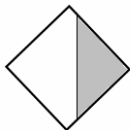


Population of interest

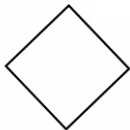
Treated

Untreated

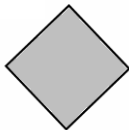


Causation

Association

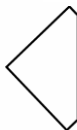


vs.

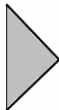


$$E[Y^{a=1}]$$

$$E[Y^{a=0}]$$



vs.



$$E[Y|A = 1]$$

$$E[Y|A = 0]$$