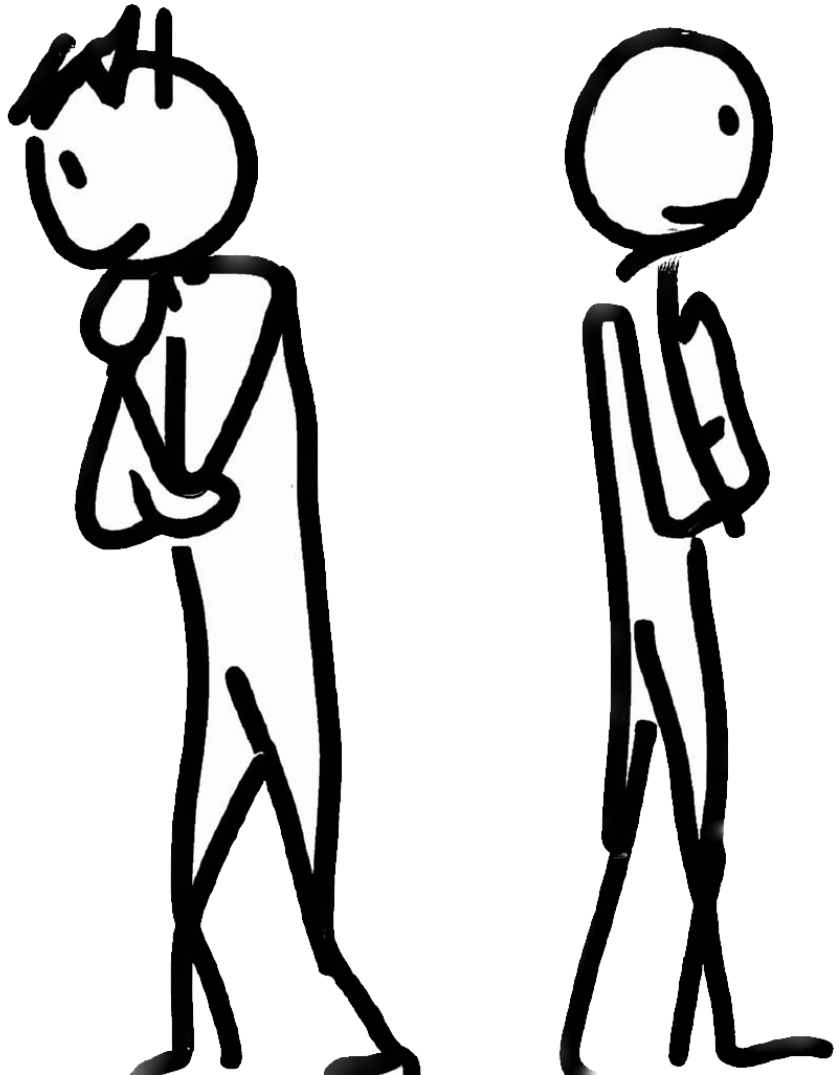
Attitudes toward risk

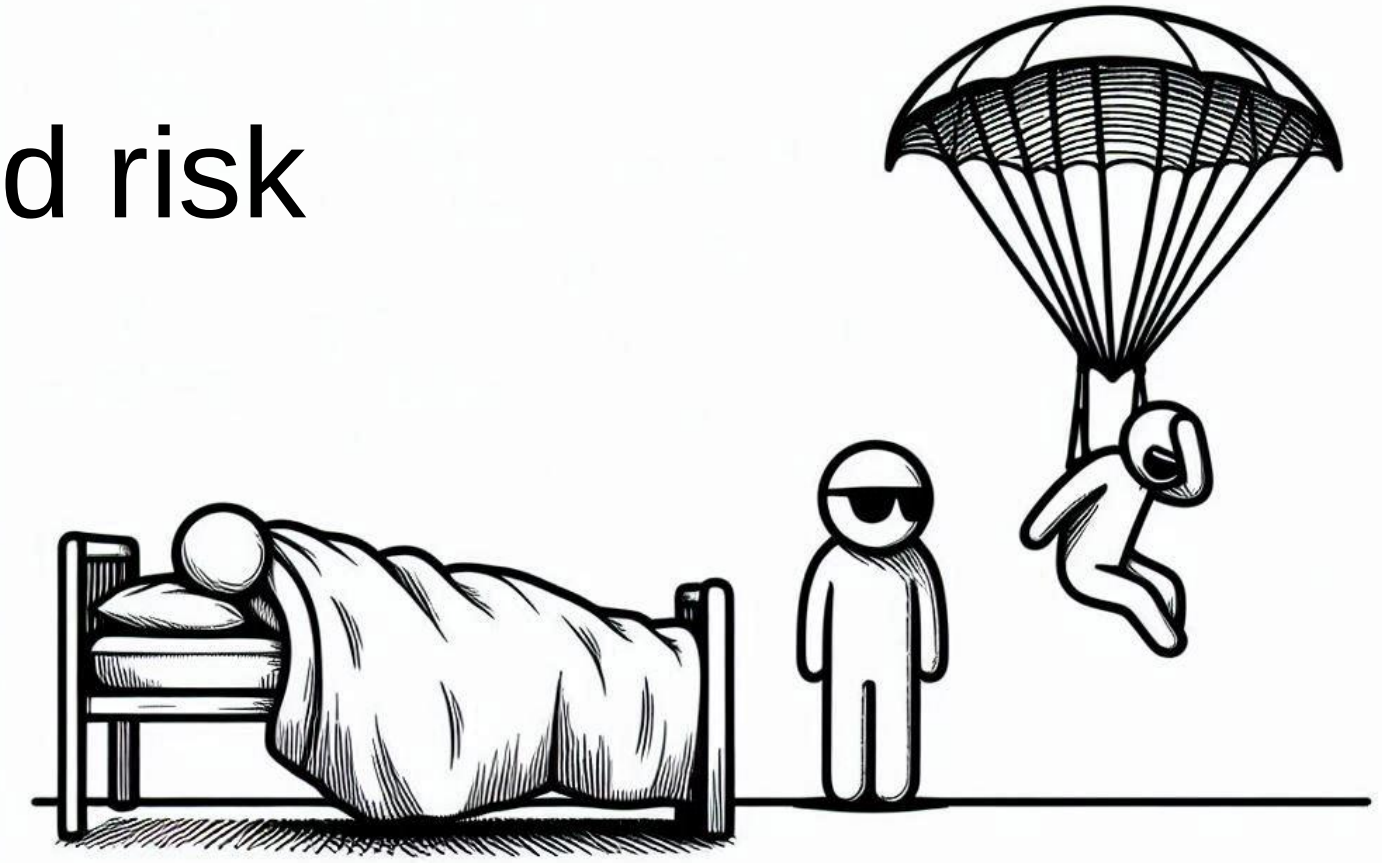
Notes on Behavioural Economics

Jason Collins



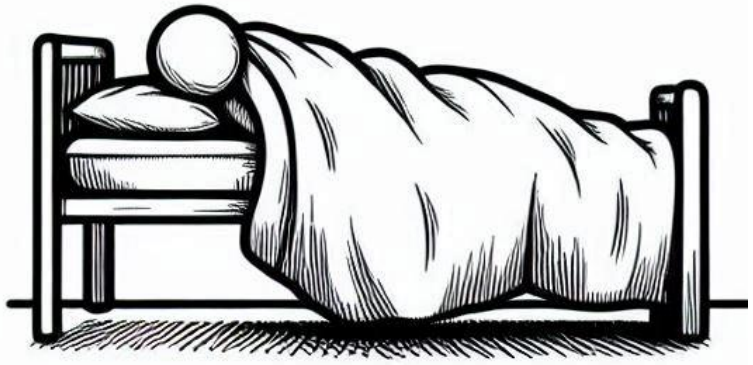
Attitudes toward risk

- Risk averse
- Risk neutral
- Risk seeking



Risk averse

$U(E[X]) > E[U(X)]$

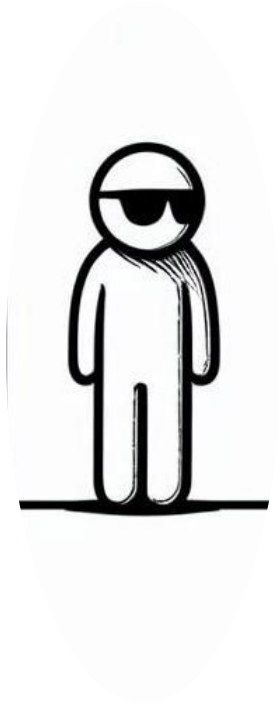


Risk seeking

$U(E[X]) < E[U(X)]$

Risk neutral

$$U(E[X]) = E[U(X)]$$



Certainty equivalent

$$U(CE) = E[U(X)]$$

Certainty equivalent

$U(CE) = E[U(X)]$

Risk averse: $CE < E[X]$

Certainty equivalent

$U(CE) = E[U(X)]$

Risk averse: $CE < E[X]$

Risk neutral: $CE = E[X]$

Certainty equivalent

$U(CE) = E[U(X)]$

Risk averse: $CE < E[X]$

Risk neutral: $CE = E[X]$

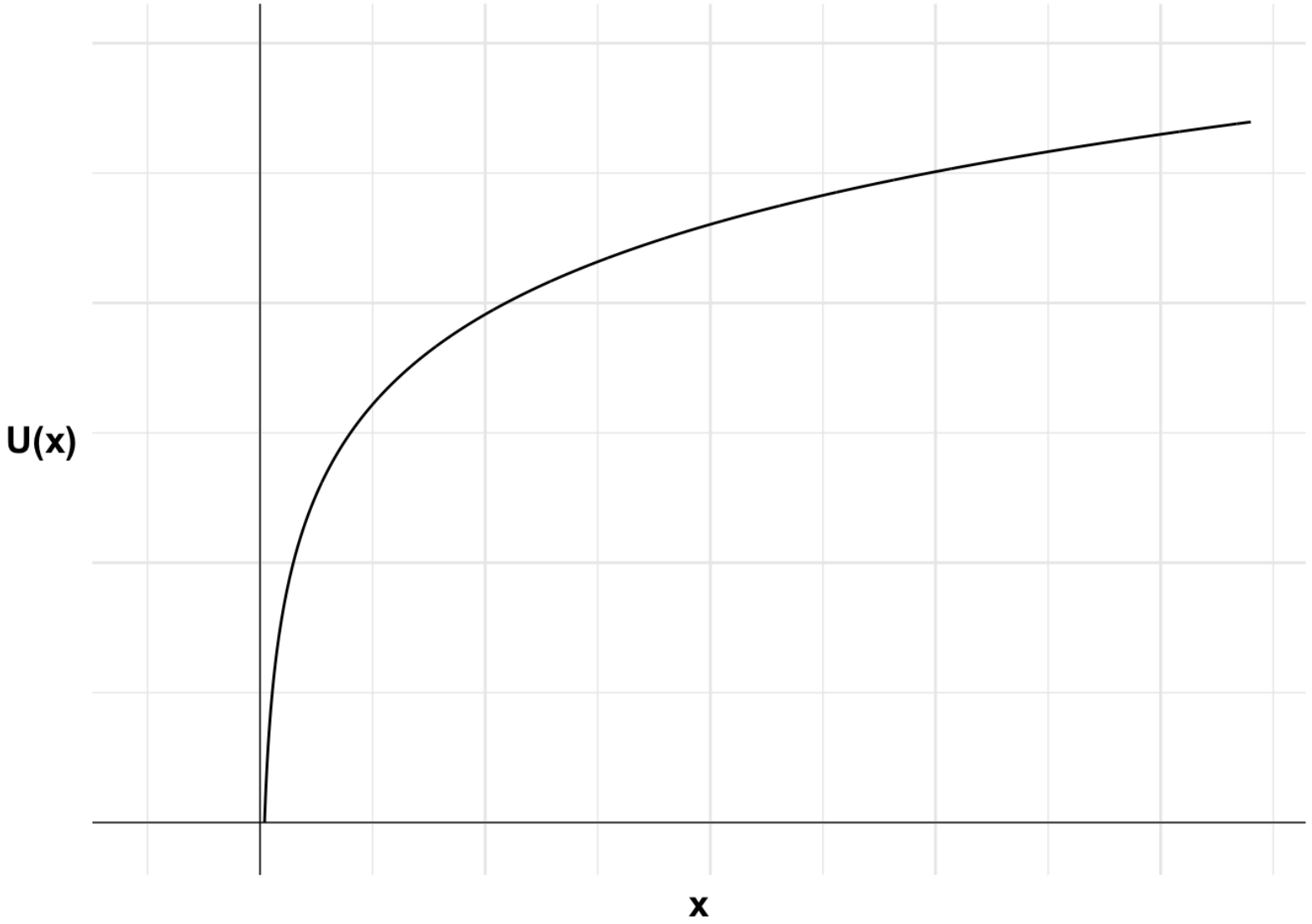
Risk seeking: $CE > E[X]$

Risk averse

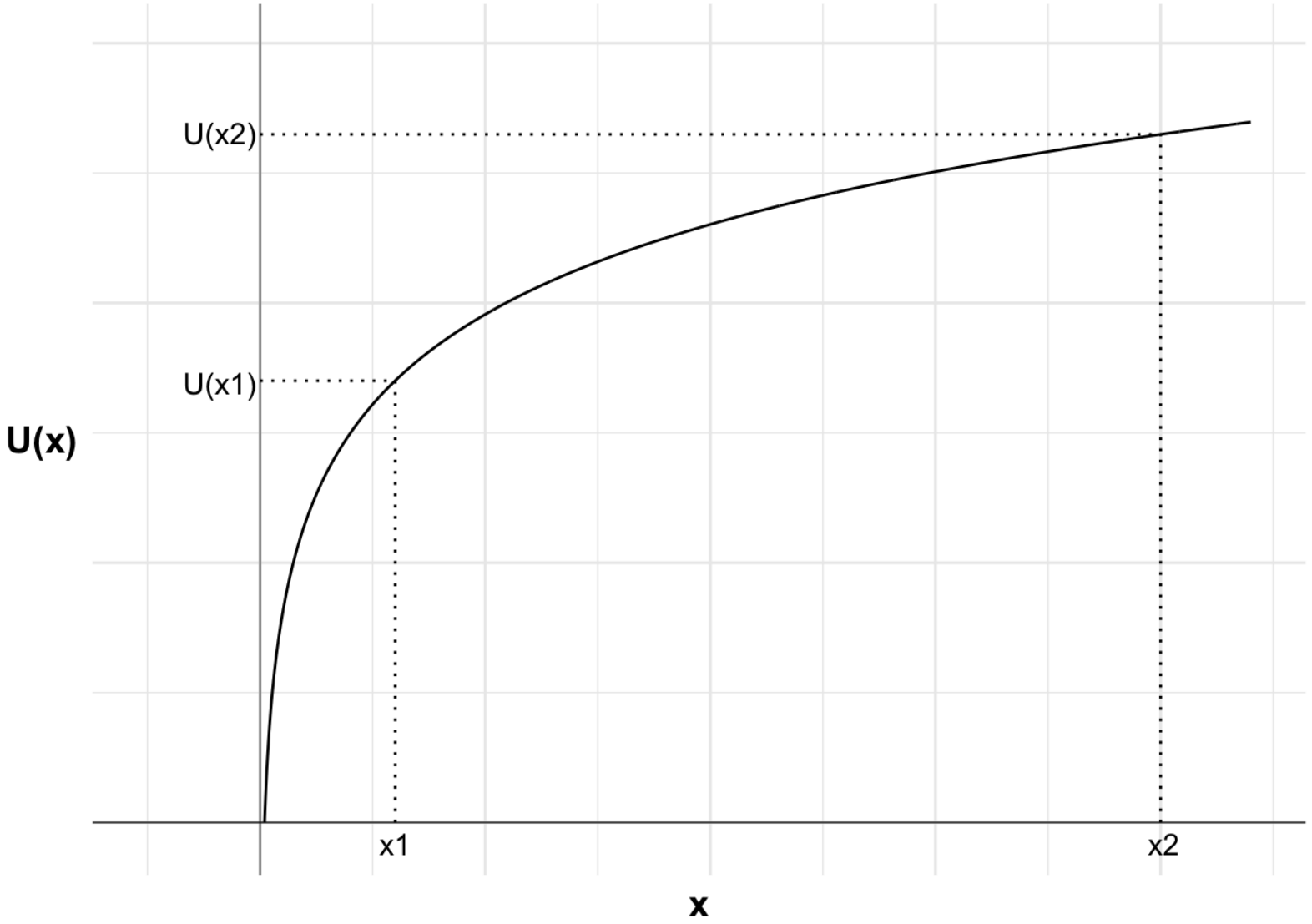
$U(\$10) > E[U(X)]$ if $E[X] = \$10$

$CE < \$10$

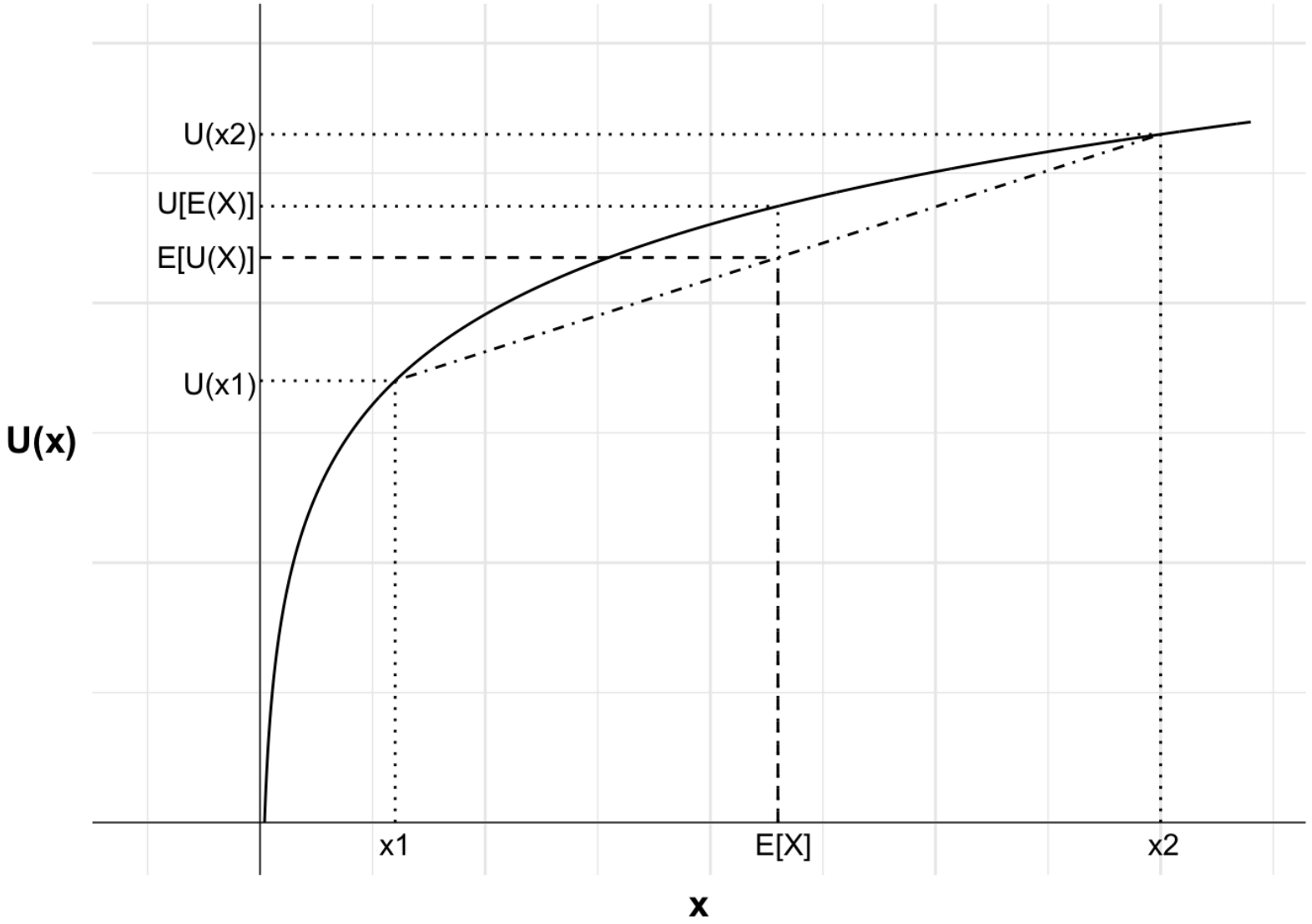
Risk averse



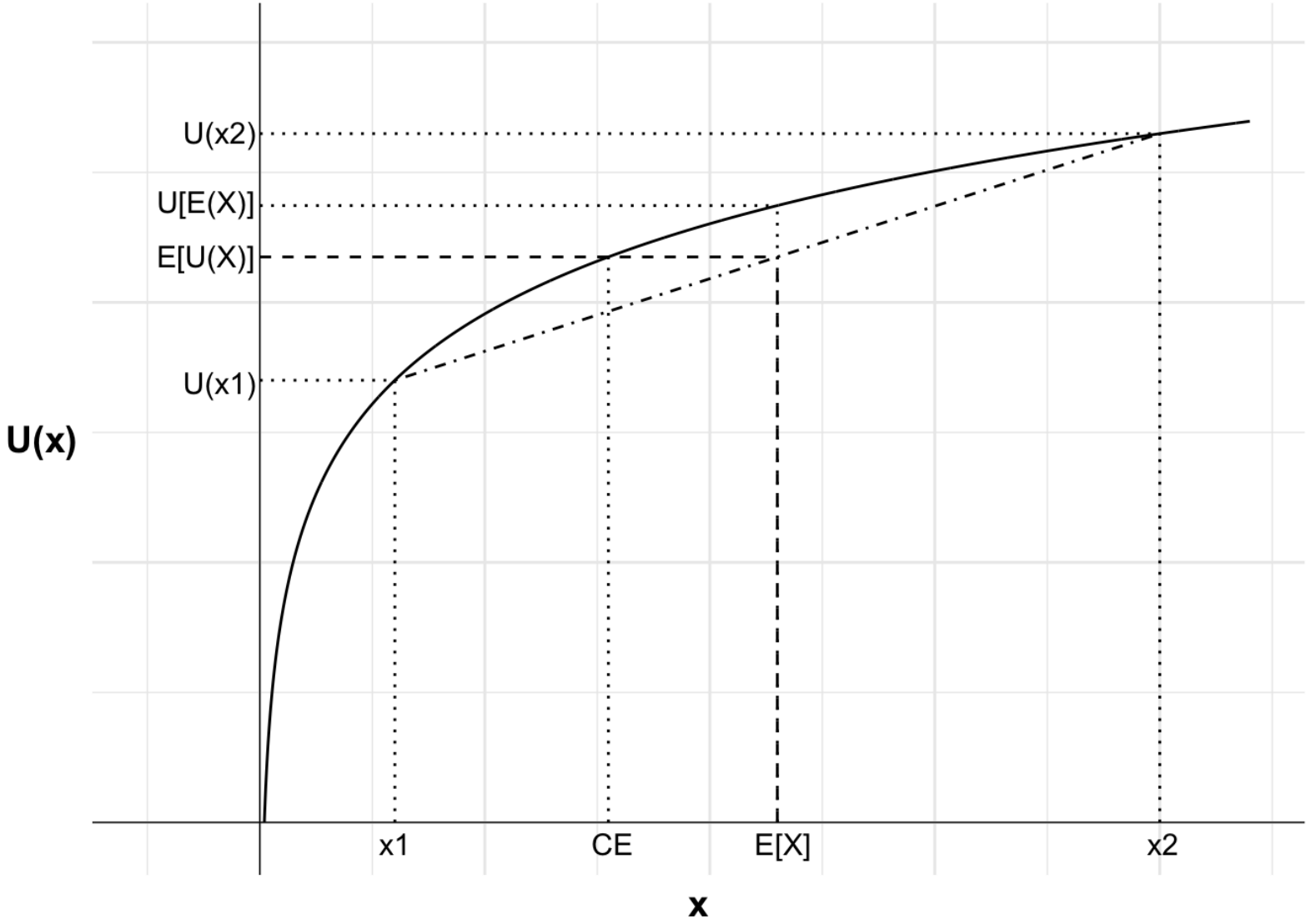
Risk averse



Risk averse



Risk averse



Risk aversion

- Absolute risk aversion
- Relative risk aversion

Absolute risk aversion

Would you accept a 50:50 bet to win $20, lose $10?

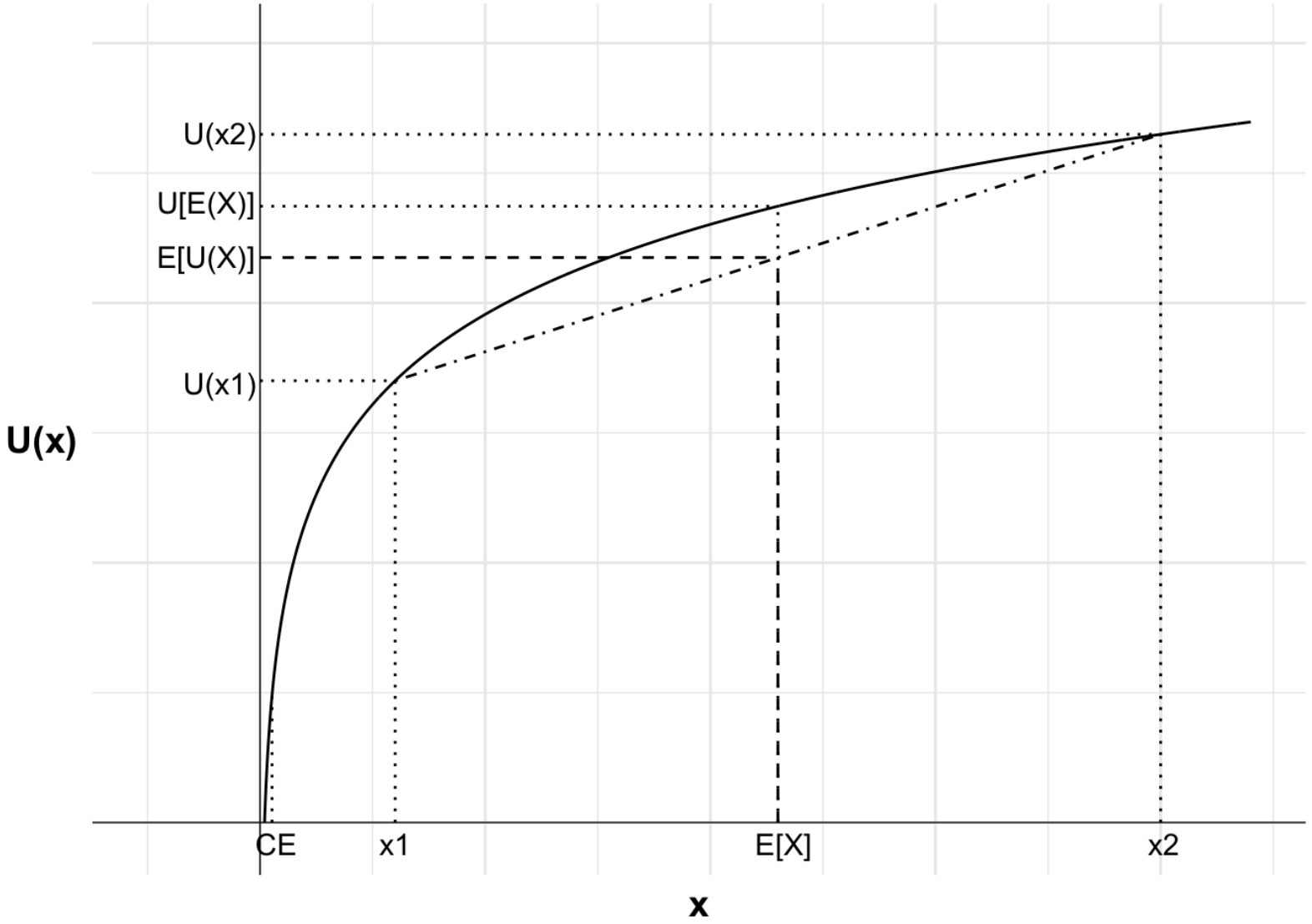
Constant absolute risk aversion (CARA): always respond in the same way, whatever their wealth.

Relative risk aversion

Would you accept a 50:50 bet to win 50% of your wealth, lose 40% of your wealth?

Constant relative risk aversion (CRRA): always respond in the same way, whatever their wealth.

Constant relative risk aversion

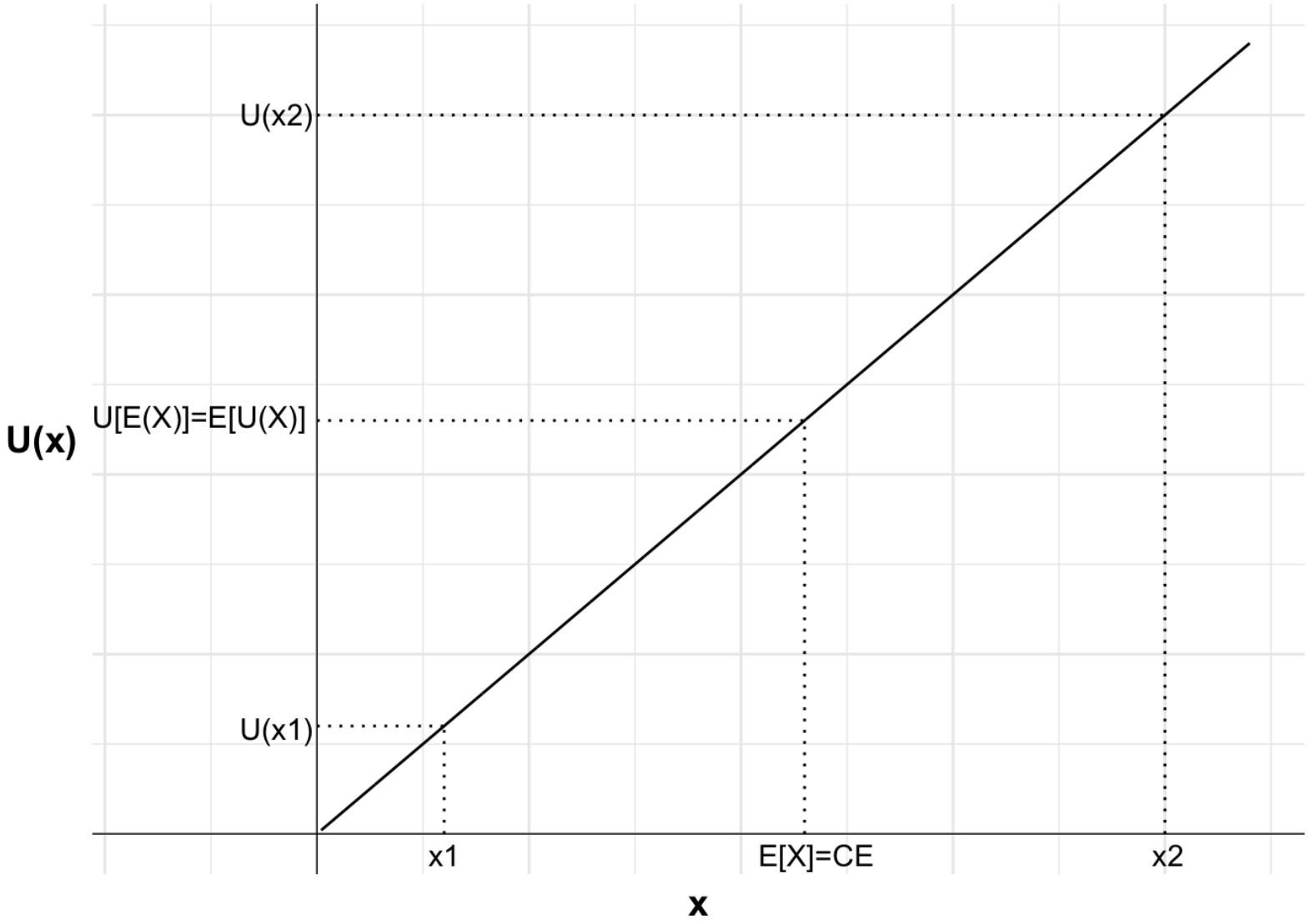


Risk neutral

$U(\$10) = E[U(X)]$ if $E[X] = \$10$

$CE = \$10$

Risk neutral



Risk seeking

$U(\$10) < E[U(X)]$ if $E[X] = \$10$

$CE > \$10$

Risk seeking