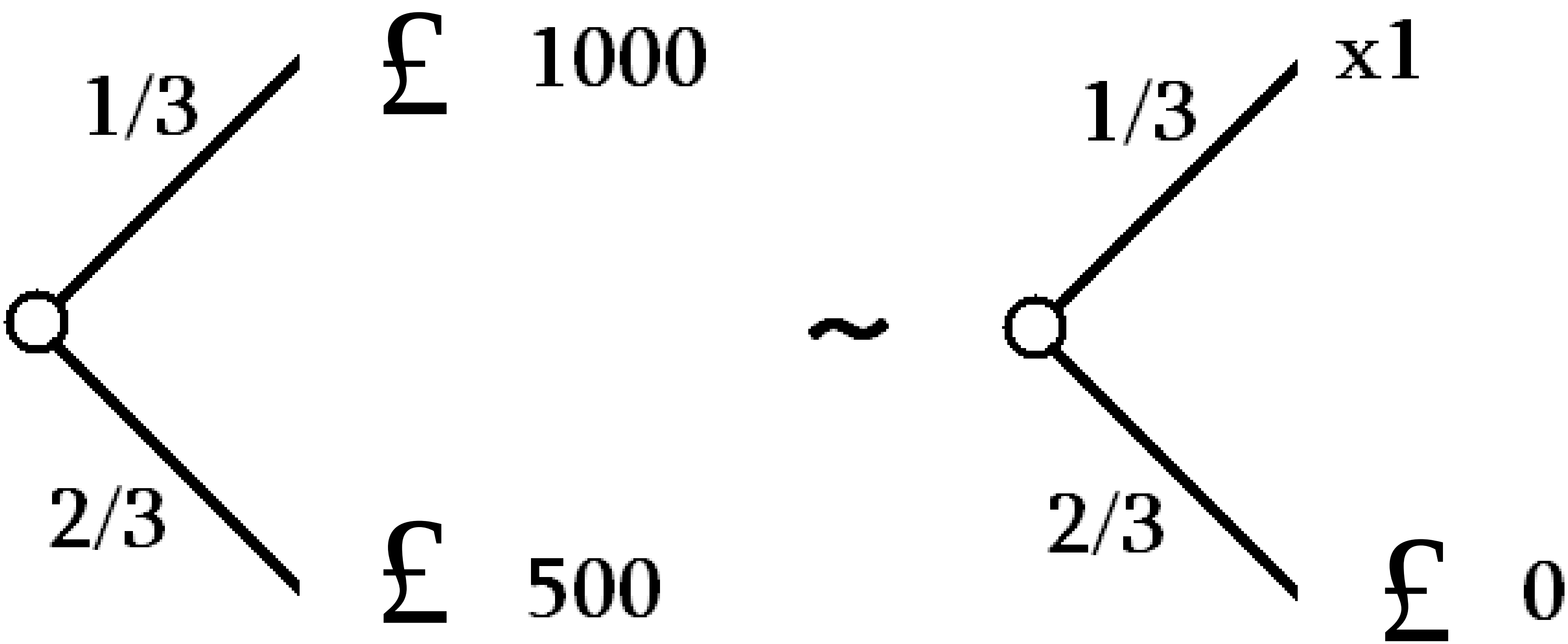
Utility Function
(Trade-off Method)

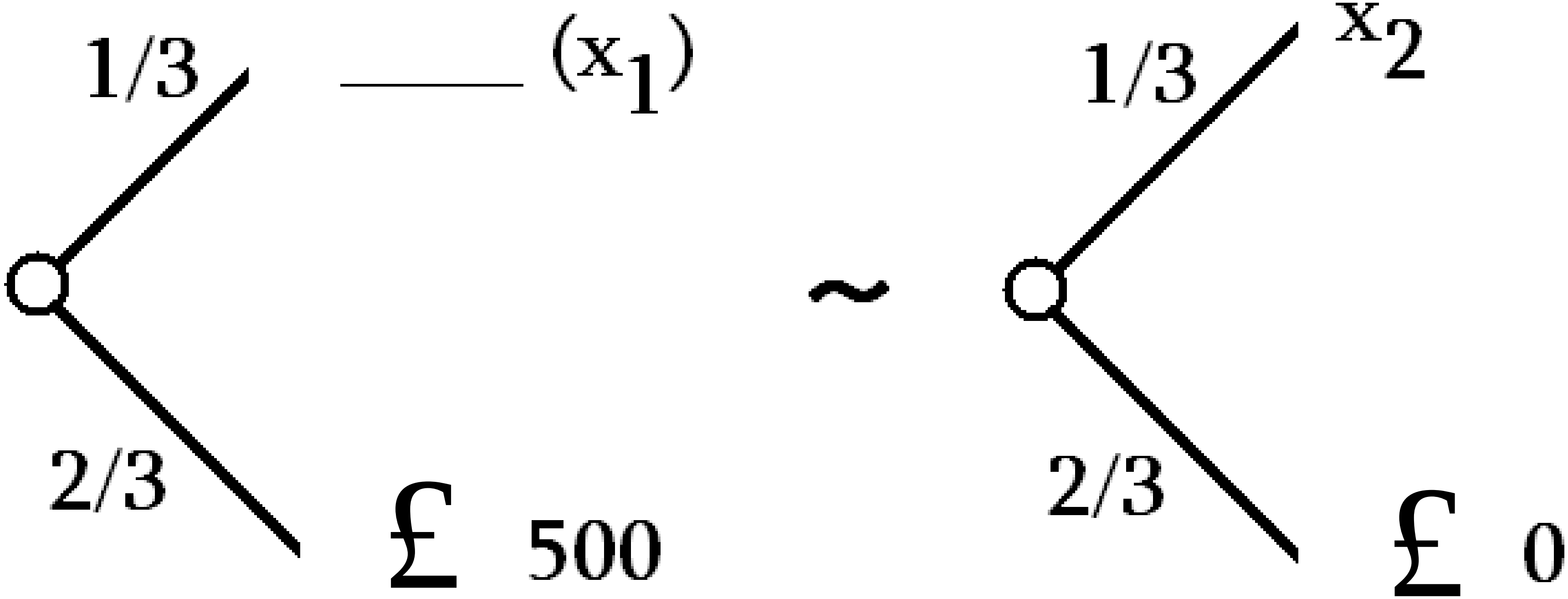
Wakker and Daneffe 1996

- Elicit utility functions
- Using trade-off method

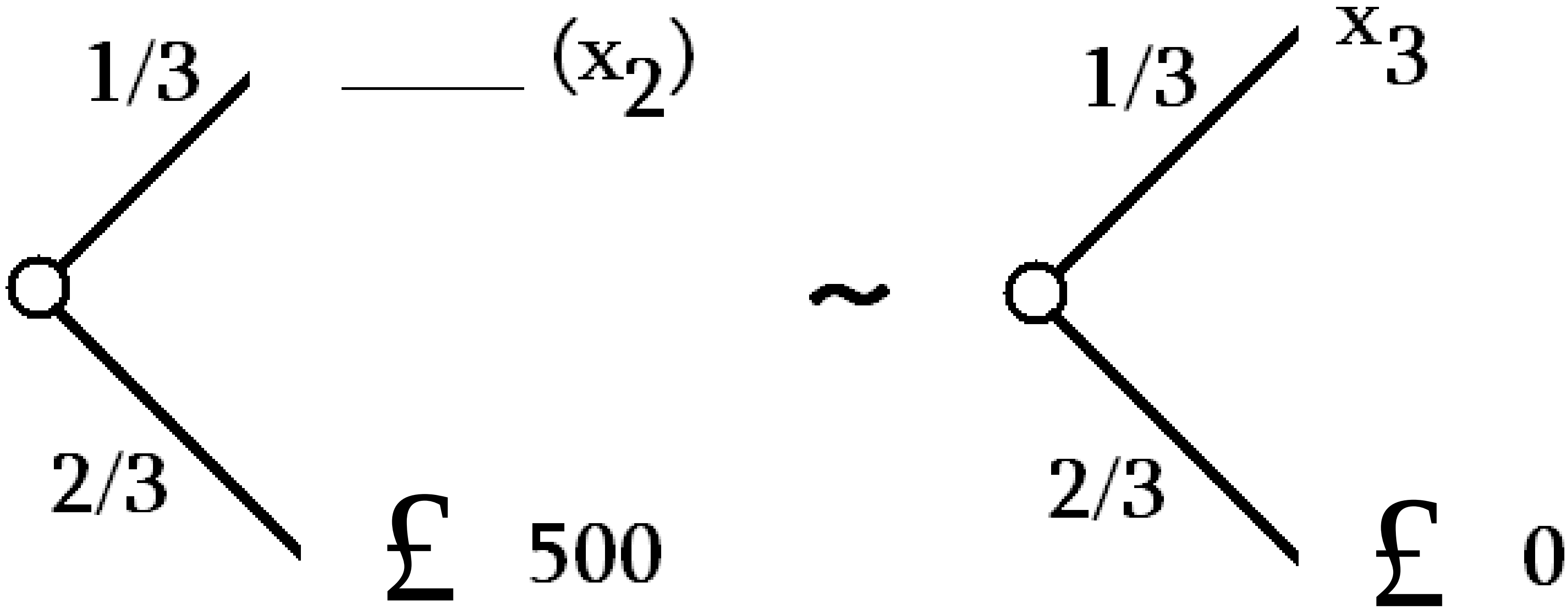
What amount x_1 makes you exactly indifferent between these two lotteries?



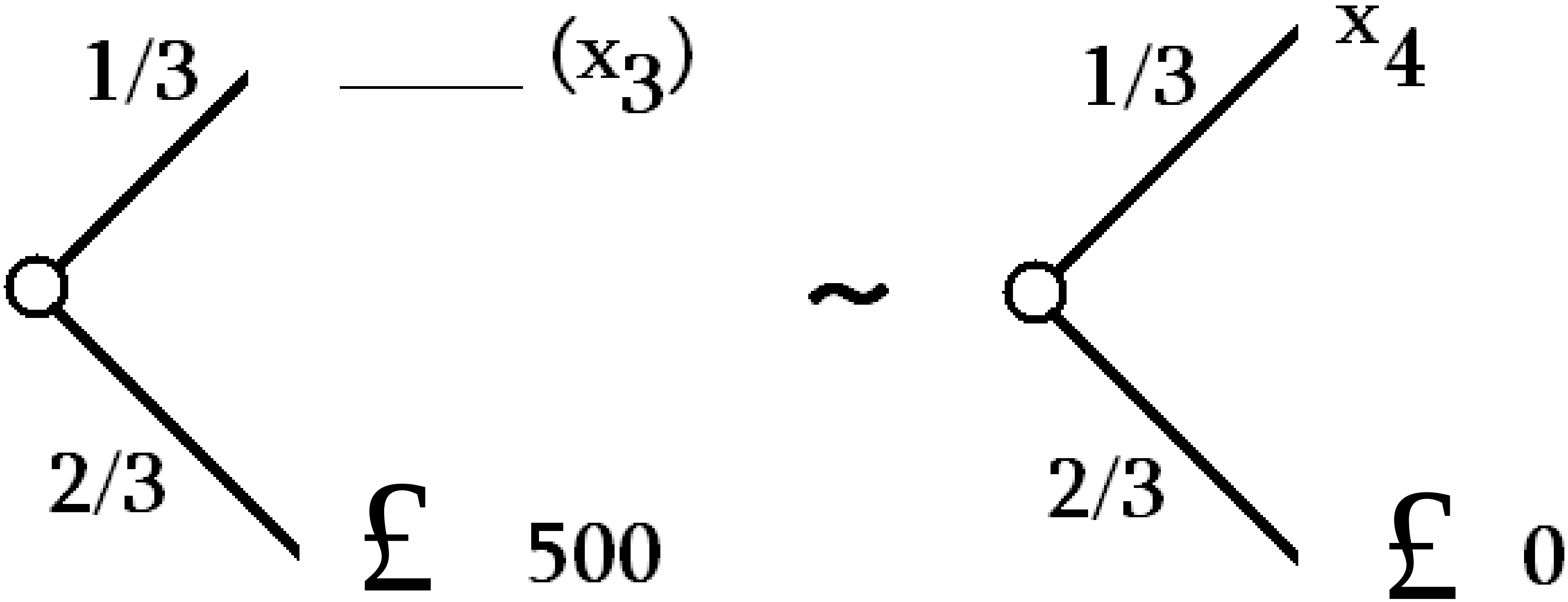
1. Fill in amount x_1 that you obtained on the previous slide
2. What amount x_2 makes you exactly indifferent between two lotteries?



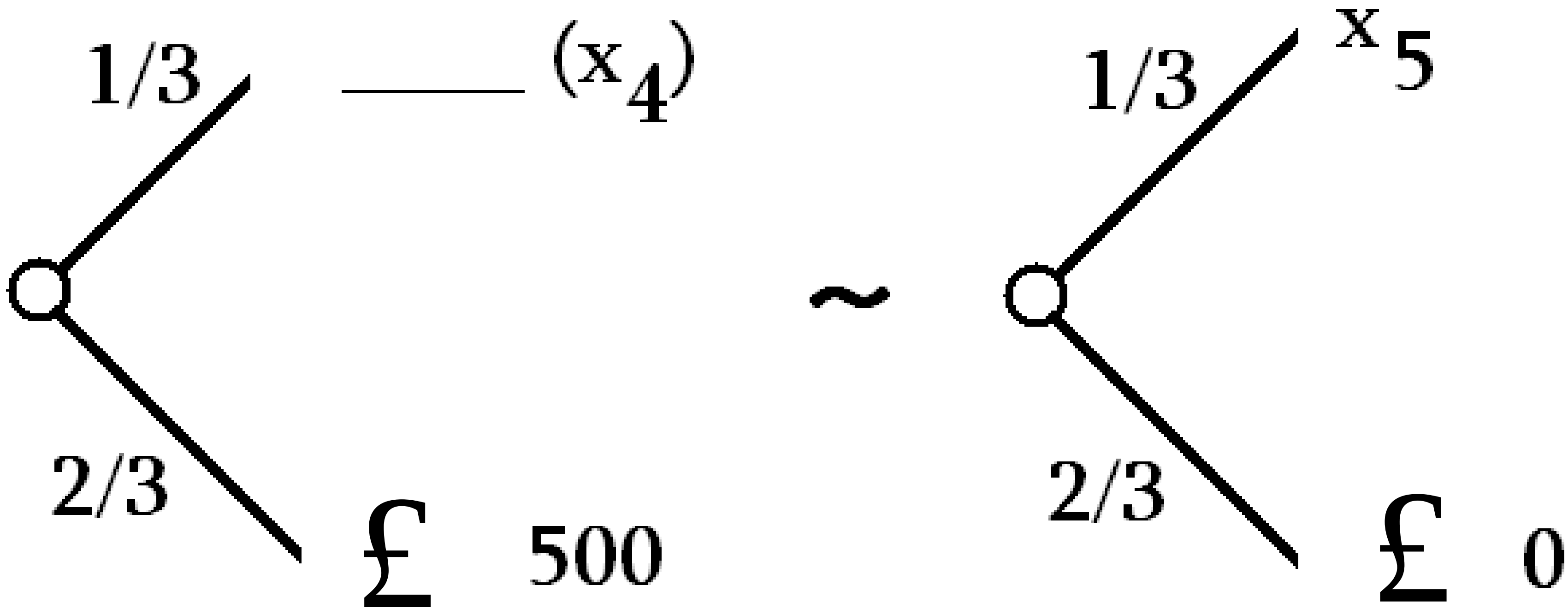
1. Fill in amount x_2 that you obtained on the previous slide
2. What amount x_3 makes you exactly indifferent between two lotteries?



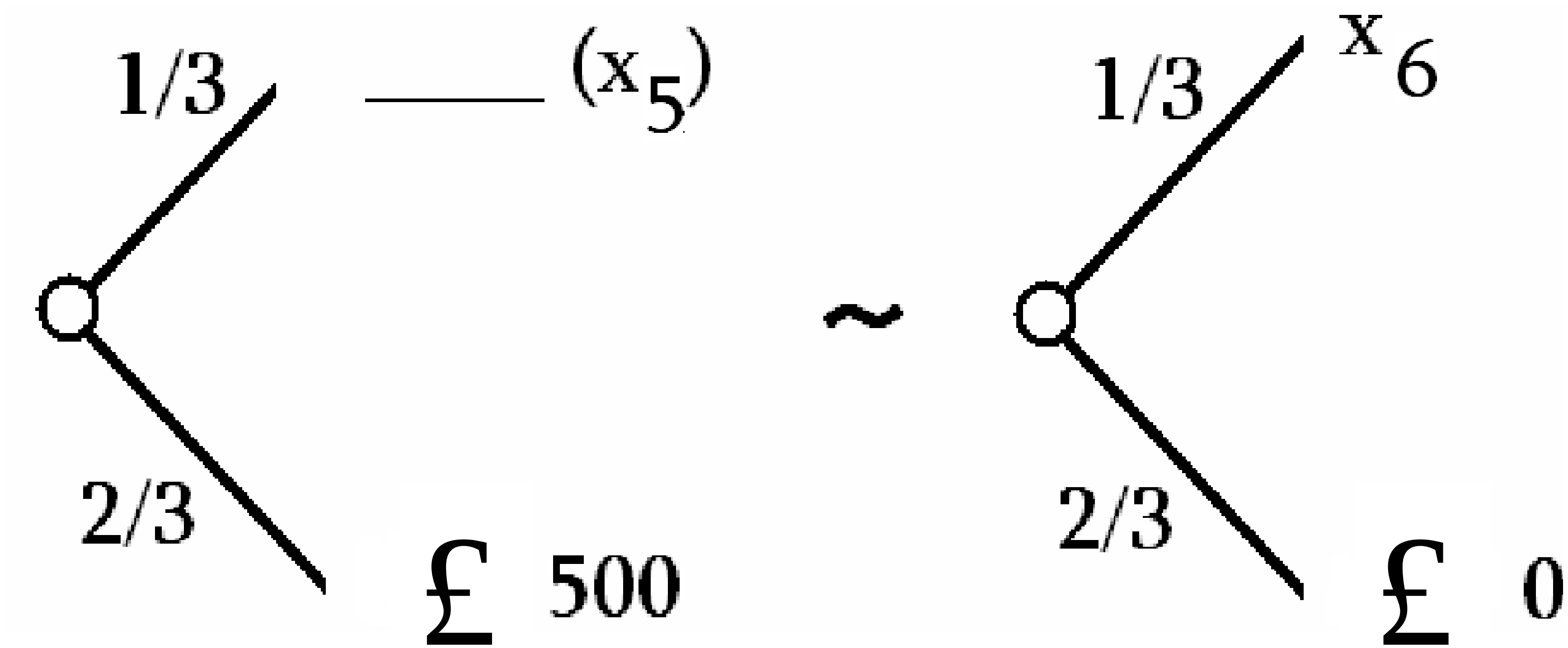
1. Fill in amount x_3 that you obtained on the previous slide
2. What amount x_4 makes you exactly indifferent between two lotteries?



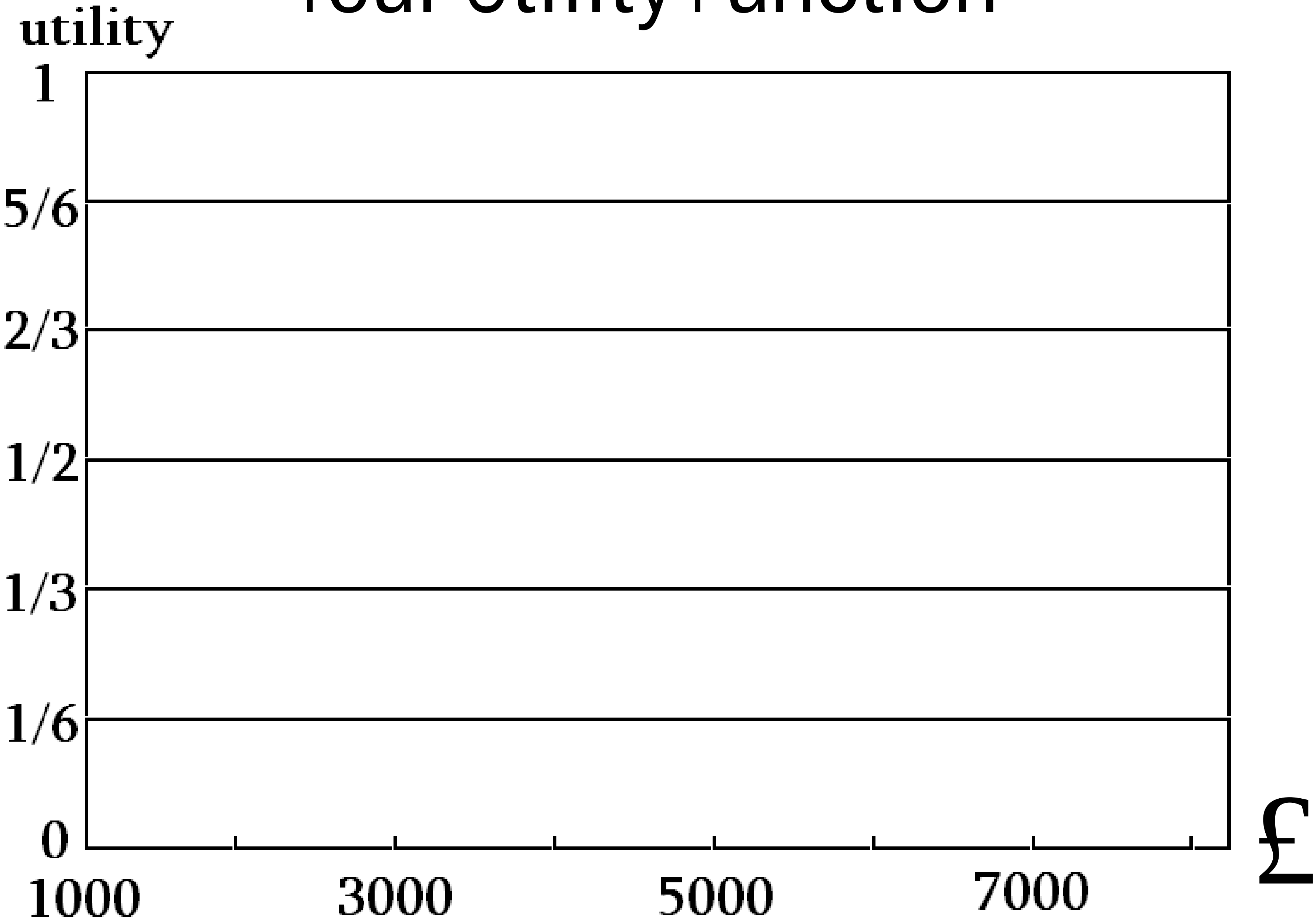
1. Fill in amount x_4 that you obtained on the previous slide
2. What amount x_5 makes you exactly indifferent between two lotteries?



1. Fill in amount x_5 that you obtained on the previous slide
2. What amount x_6 makes you exactly indifferent between two lotteries?



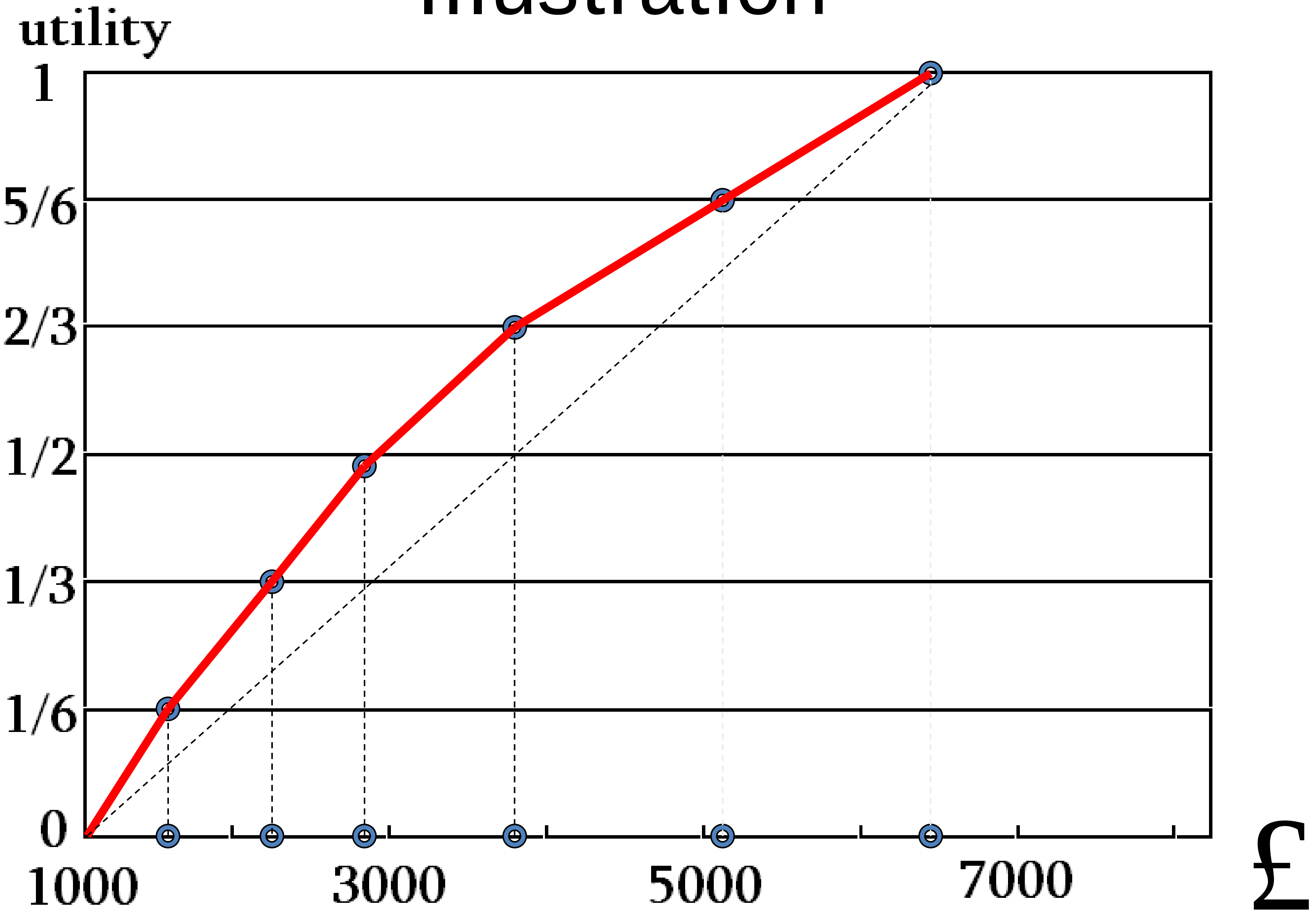
Your Utility Function



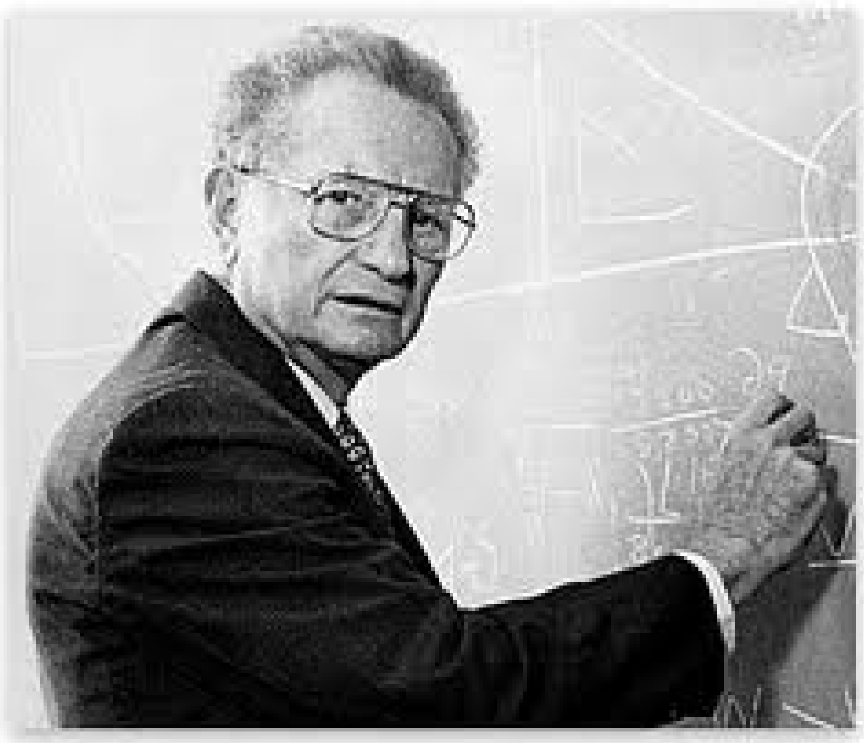
Instructions

- Locate amounts x_1, x_2, x_3, x_4, x_5 and x_6 on the horizontal axis (approximately)
- Connect together points (1000,0) and (x_1,1/6)
- Connect together points (x_1,1/6) and (x_2,1/3)
- Connect together points (x_2,1/3) and (x_3,1/2)
- Connect together points (x_3,1/2) and (x_4,2/3)
- Connect together points (x_4,2/3) and (x_5,5/6)
- Connect together points (x_5,5/6) and (x_6,1)
- This is the graph of your utility function

Illustration



Marshak-Machina Triangle

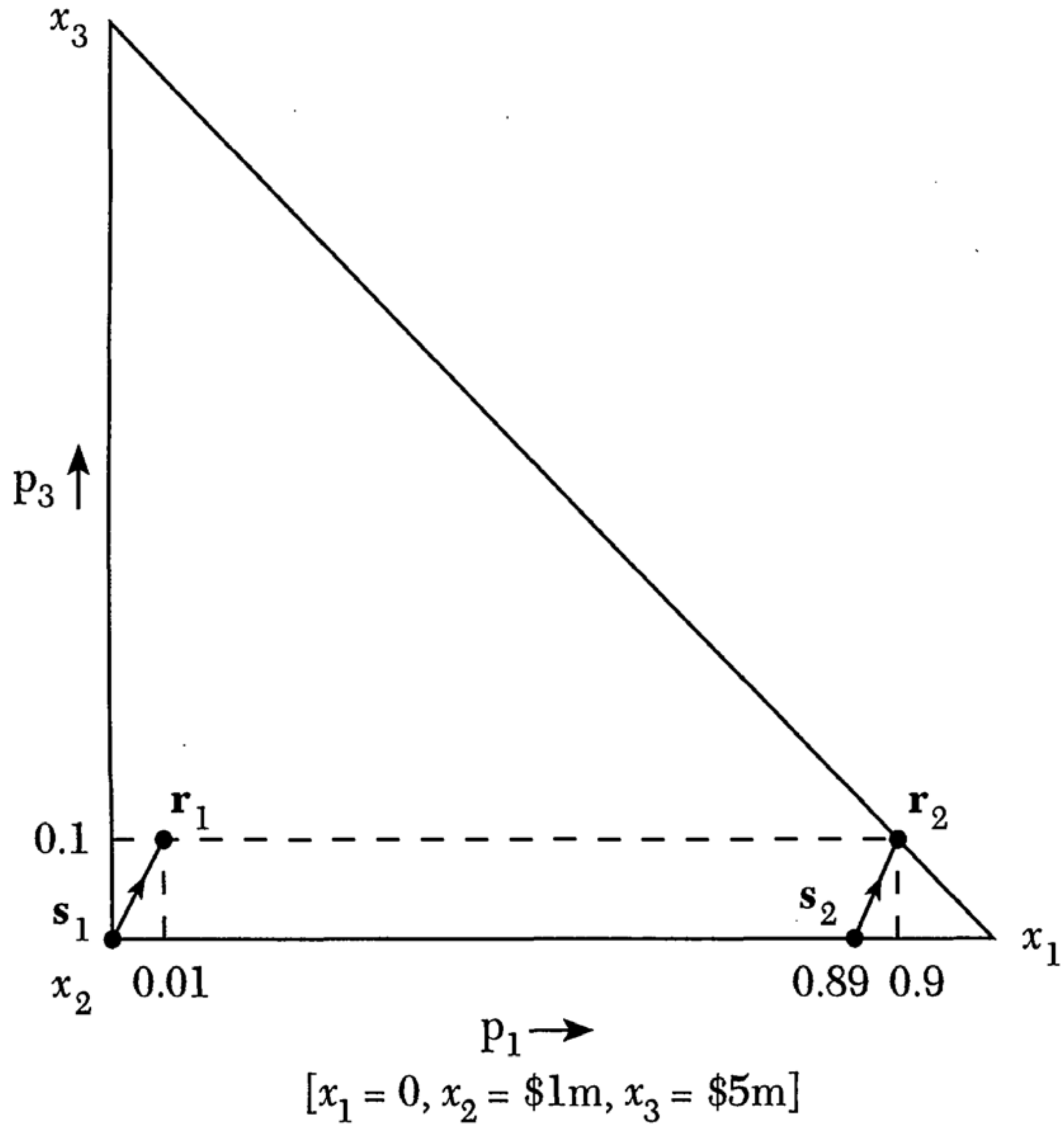


Jacob Marschak

Mark Machina

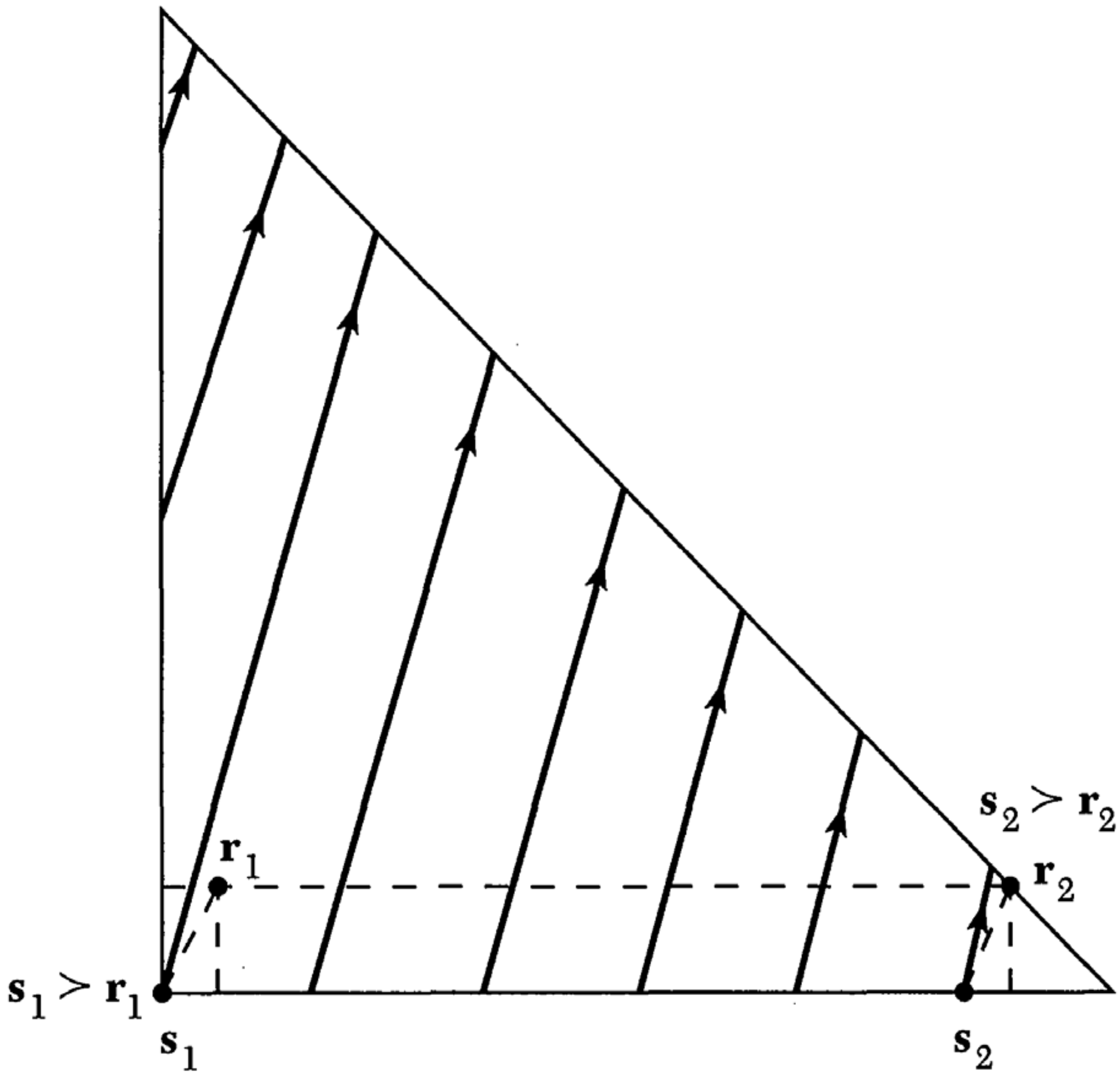
Allais Paradox

Maurice Allais



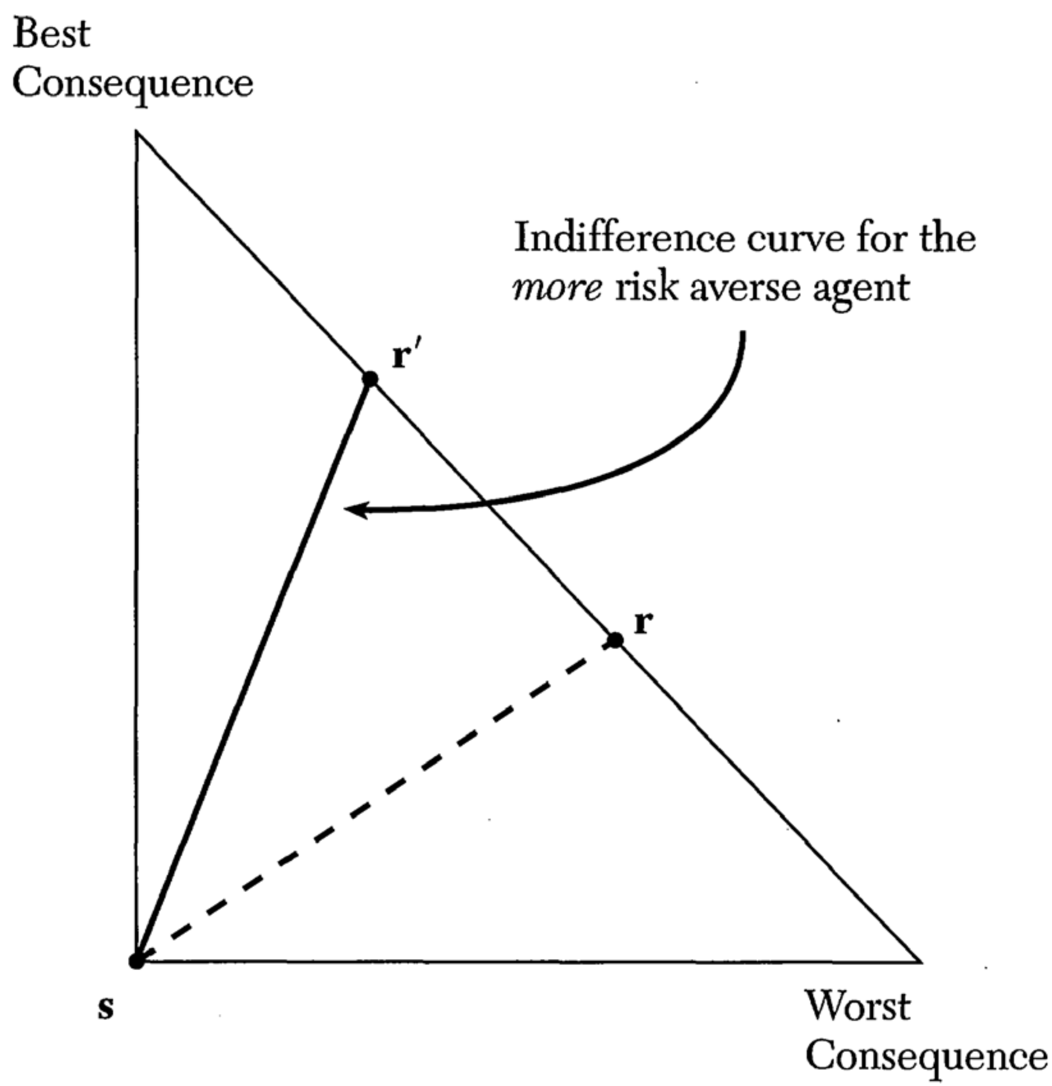
Allais Paradox

from Starmer 2000



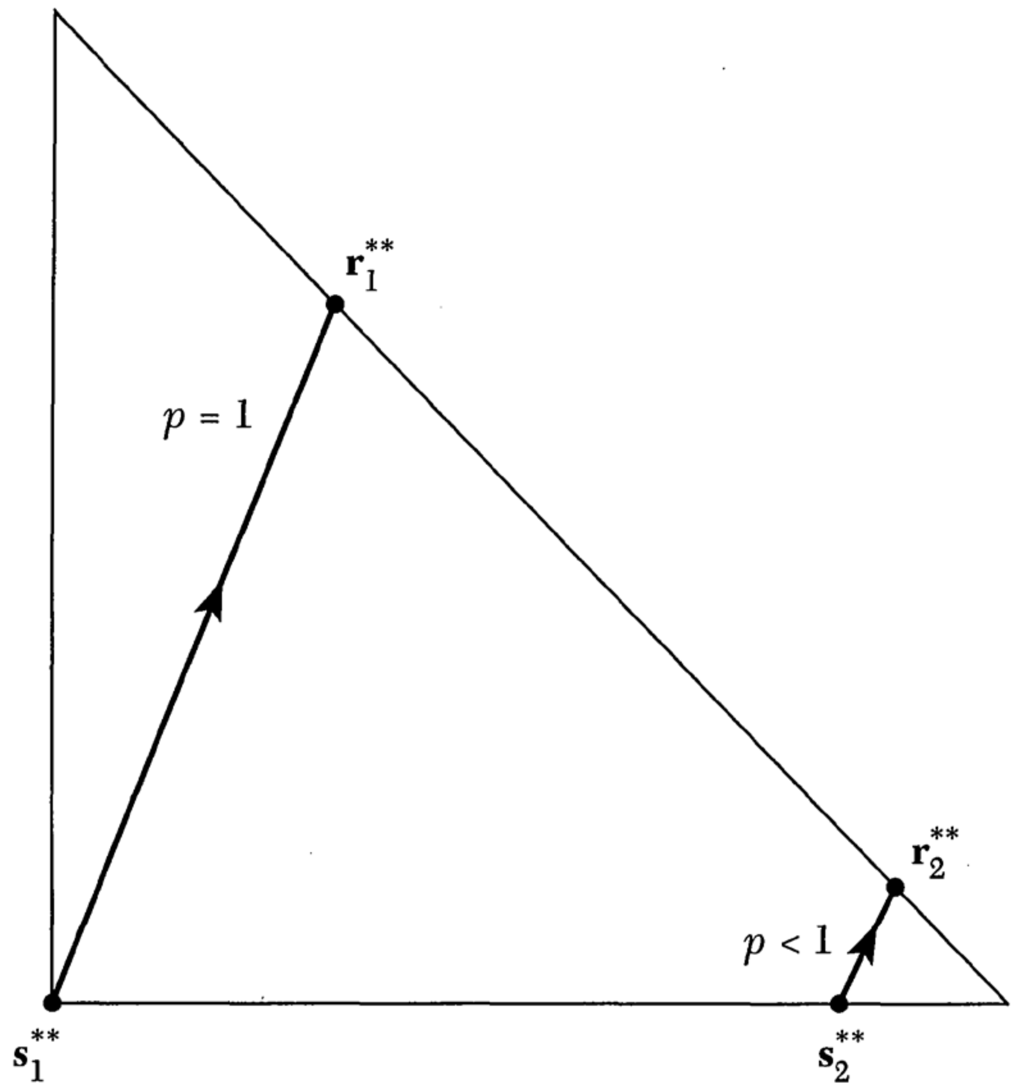
Expected Utility Indifference Curves

from Starmer 2000



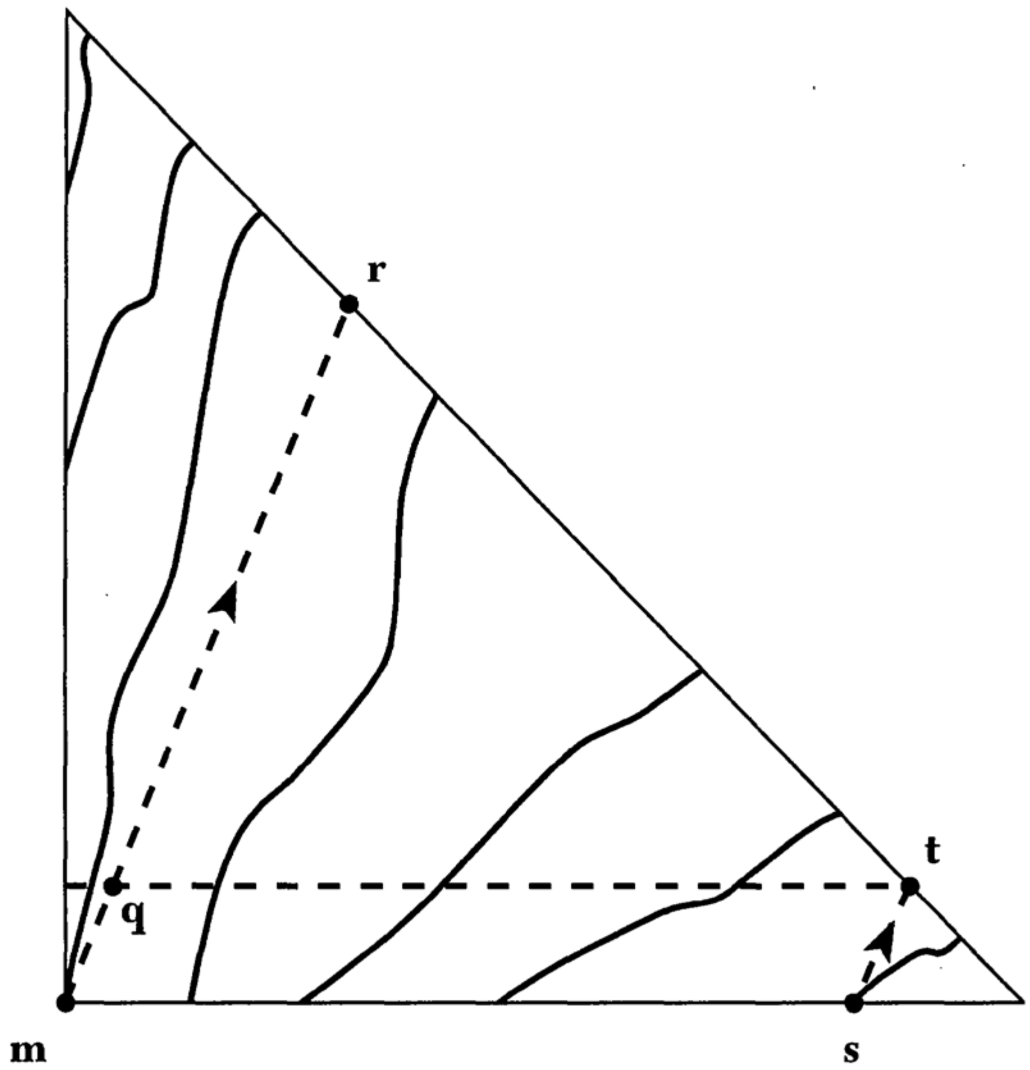
Degrees of Risk Aversion

from Starmer 2000



Common Ratio Prospects

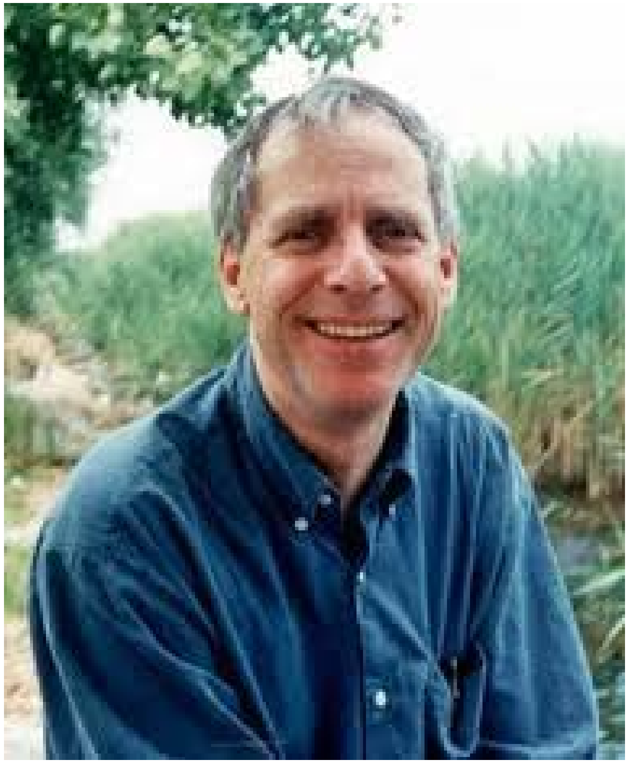
from Starmer 2000



Fanning-out Hypothesis

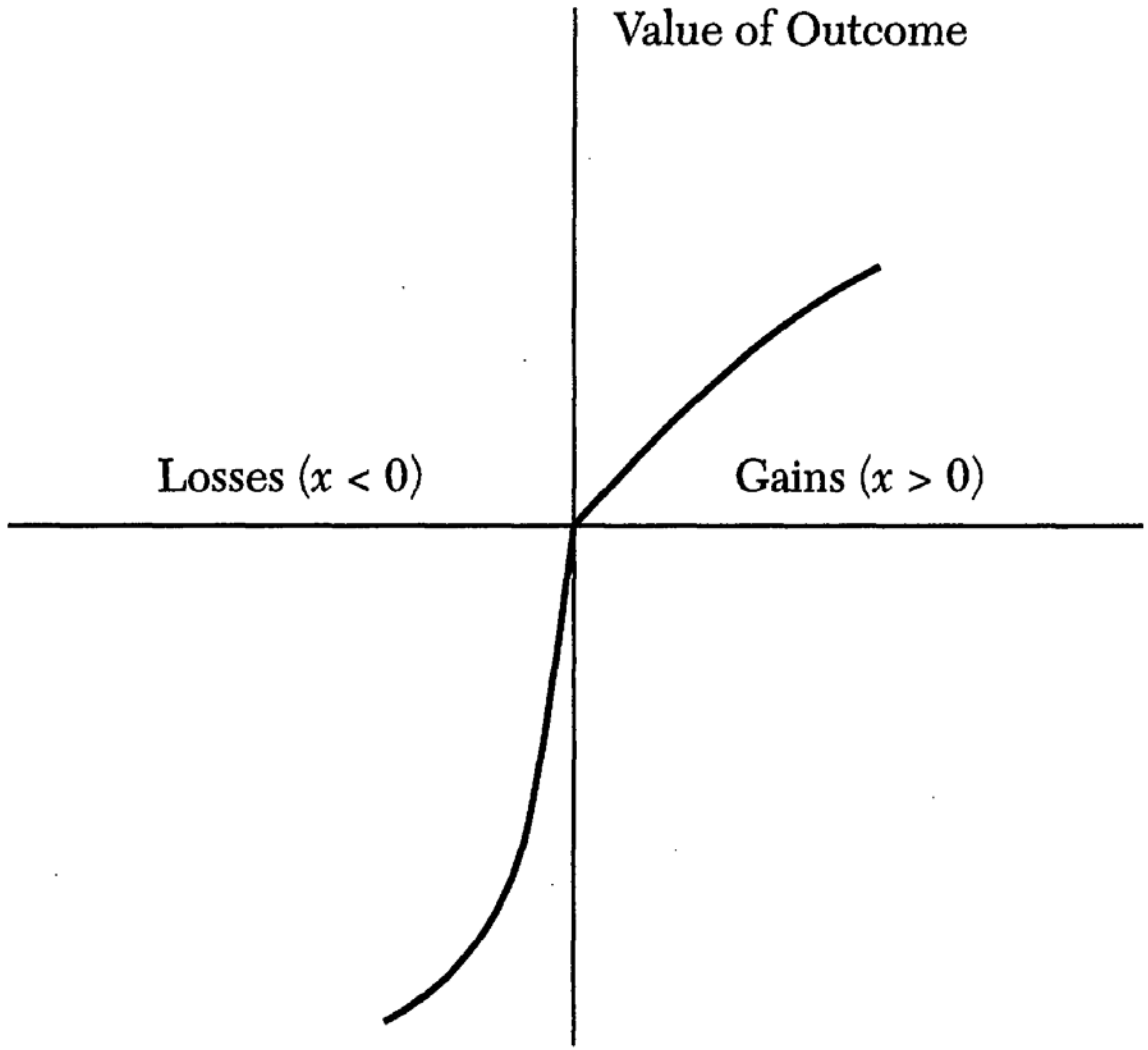
from Starmer 2000

Cumulative Prospect Theory



Amos Tversky

Daniel Kahneman



Cummulative Prospect Theory

from Starmer 2000

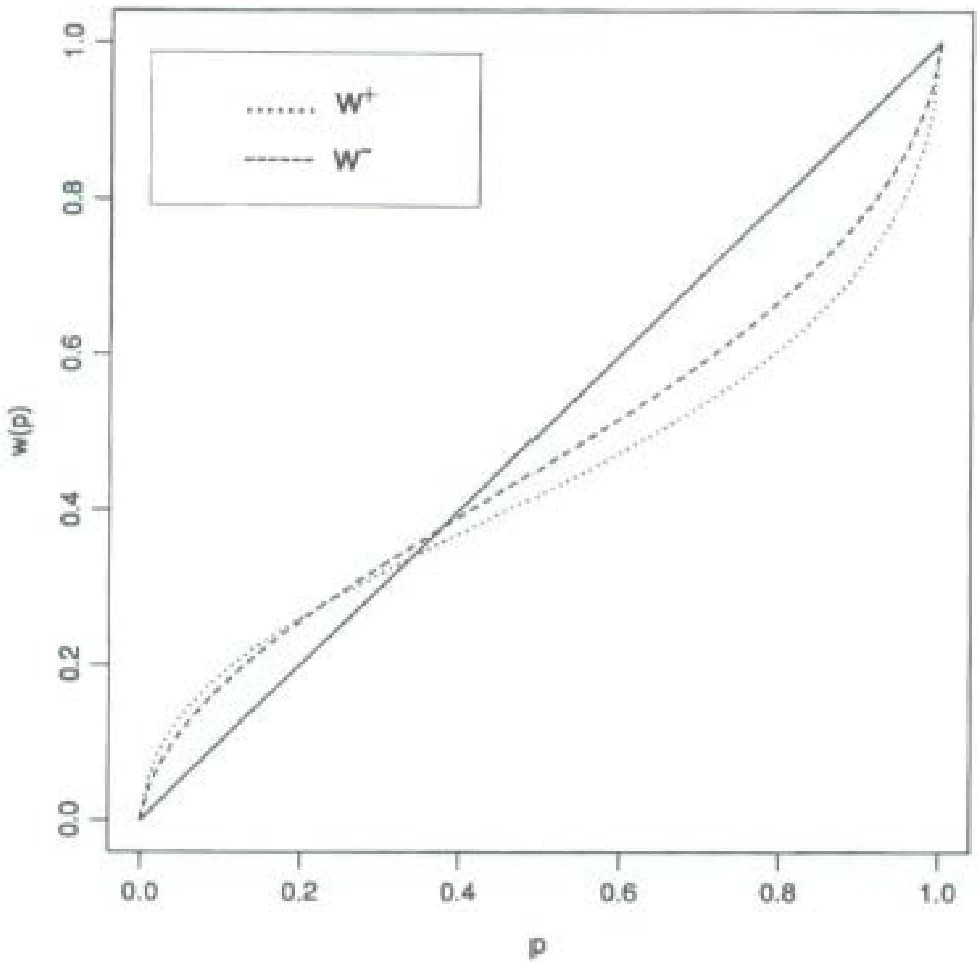


Figure 3. Weighting functions for gains (w^+) and for losses (w^-) based on median estimates of γ and δ in equation (12).

Cummulative Prospect Theory

from Tversky& Kahneman, 1992

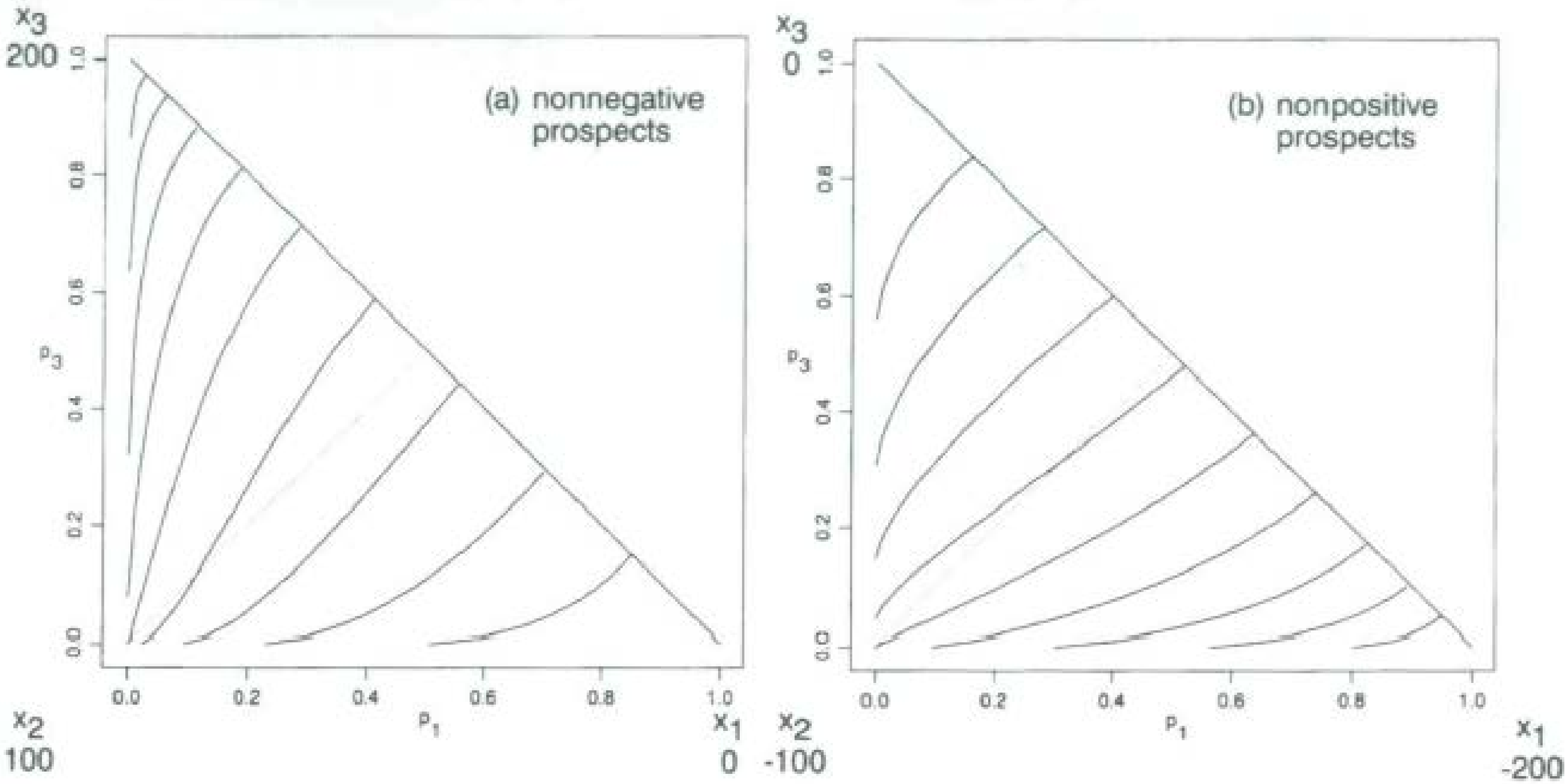


Figure 4. Indifference curves of cumulative prospect theory (a) for nonnegative prospects ($x_1 = 0, x_2 = 100, x_3 = 200$), and (b) for nonpositive prospects ($x_1 = -200, x_2 = -100, x_3 = 0$). The curves are based on the respective weighting functions of figure 3, ($\gamma = .61$, $\delta = .69$) and on the median estimates of the exponents of the value function ($\alpha = \beta = .88$). The broken line through the origin represents the prospects whose expected value is x_2.

Cummulative Prospect Theory

from Tversky& Kahneman, 1992