Sunk cost

Dana has bought a $40 ticket to attend a rock concert. On the same day, she is invited to a party to welcome a friend returning from abroad. She cannot attend both the concert and the party at the same time. If she had known about the party before buying the ticket, she would have decided to go to the party. *True or false:* if she is rational, should she still go to the party? Explain your answer.

Solution

False. We cannot ensure that Dana should go to the party because we don't have enough information about her current preferences.

- **Before buying the ticket:**

  If Dana had known about the party **before** buying the concert ticket, she would have compared:

  $$U(\text{party}) > U(\text{concert}) - \$40$$

  This means that the net benefit of attending the concert (after paying \$40) is less than the benefit of going to the party. Therefore, she would have chosen the party.

- **After buying the ticket (with \$40 as a sunk cost):**

  Now that she has already bought the ticket and the \$40 cost is a **sunk cost**, she should compare:

  $$U(\text{party}) \quad \text{vs.} \quad U(\text{concert})$$

  But here's the issue: We don't have enough information to know if $U(\text{party}) > U(\text{concert})$ or vice versa. We only know that:

  $$U(\text{party}) > U(\text{concert}) - \$40$$

  Without the \$40 cost, it is possible that the benefit of attending the concert is greater than that of the party.

We cannot say for sure that Dana should go to the party because we don't know if $U(\text{party}) > U(\text{concert})$. Without additional information about the absolute utilities of both options, we cannot determine what the rational decision is for Dana.