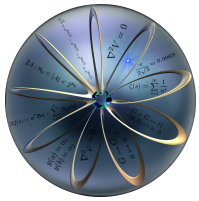

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Nash equilibrium

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A Nash equilibrium of a game is a set of (possibly mixed) strategies $\sigma = (\sigma_1, \ldots, \sigma_n)$ such that, if each player i believes that that every other player j will play σ_j, then i should play σ_i. That is, when u_i is the utility function for the i-th player:

$$\sigma_i \neq \sigma_i' \rightarrow u_i(\sigma_i, \sigma_{-1}) > u_i(\sigma_i', \sigma_{-1})$$

$$\forall i \leq n \text{ and } \forall \sigma_i' \in \Sigma_i$$

Translated, this says that if any player plays any strategy other than the one in the Nash equilibrium then that player would do worse than playing the Nash equilibrium.