

Game Theory

A Nash equilibrium, also called strategic equilibrium, is a list of strategies, one for each player, which has the property that no player can unilaterally change his strategy and get a better payoff.

(John Nash, "A Beautiful Mind," Ph.D. thesis, 1950, "Non Cooperative Games," Princeton, 26 pages, Nobel Prize Economics, 1994.)

		II	
		<i>c</i>	<i>d</i>
I	<i>C</i>	2	3
	<i>D</i>	0	1

→

C is Cooperation for player 1

c is Cooperation for player 2

D is Defiance for player 1

d is Defiance for player 2

I is Player 1

II is Player 2

→ is direction of movement by a player

Illustrations: Oxford&Cambridge + McDonalds&Burger King.

Miracle On 34th St.

Chamberlain. The Scorpion and The Turtle.

"The Golden Rule"

And as ye would that men should do to you, do ye also to them likewise. Jesus, Luke 6:31 KJV

Treat others the same way you want them to treat you. Jesus, Luke 6:31 NASB

Zero-sum game If one player wins someone else has to lose.

A game is said to be zero-sum if for any outcome, the sum of the payoffs to all players is zero. In a two-player zero-sum game, one player's gain is the other player's loss, so their interests are diametrically opposed.

Payoff What is won.

A payoff is a number that reflects the desirability of an outcome to a player, for whatever reason.

Rationality Does it make sense?

A player is said to be rational if he seeks to play in a manner which maximizes his own payoff. It is often assumed that the rationality of all players is common knowledge.

But God goes one better.

Luke 6: 27, 28, 31, 35a, 36

²⁷ "But I say to you who hear, love your enemies, do good to those who hate you,

²⁸ bless those who curse you, pray for those who mistreat you.

³¹ Treat others the same way you want them to treat you.

³⁵ But love your enemies, ...

³⁶ Be merciful, just as your Father is merciful. NASB

How???????