

The Golden Rule Proven

And as you would that men should do to you, do you 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

Nash equilibrium

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.

Ignore the Blonde

John Nash was portrayed in the movie "A Beautiful Mind" by Russell Crowe. While at University Nash was looking for a fresh insight into economic theory. According to the film, one evening Nash and 3 male friends were in a bar when a blonde woman entered with four brunette women.

All of the men were attracted to the blonde and one of them, not Nash, put forth the theory of economist Adam Smith that each man should try to succeed in direct competition with the others in trying to capture the attention of the blonde, or to "get the blonde." After a flash of inspiration, Nash said that the best collective result will not come from each man following his own interest, but rather by each man approaching a brunette. This would produce a better result for the group.

Nash reasoned as follows: "If we all go for the blonde, we block each other and not a single one of us is going to get her. So then we would go for her friends, but they will all give us the cold shoulder because nobody likes to be second choice. But what if no one goes for the blonde? We don't get in each other's way and we don't insult the other girls. That's the only way we win."

Nash implicitly suggested here that aiming at a brunette is surely successful and that getting a brunette is better than getting no girl at all. It is also understood that anyone will get the blonde as long as he is the only one approaching her. Finally, Nash assumes that if several guys approach the blonde simultaneously, they would end up getting no girl at all.

When Nash wrote his Ph.D. thesis in 1950, "Non Cooperative Games" at Princeton University, the dissertation was brief. It ran only 26 pages. His dissertation won the Nobel Prize in Economic Sciences in 1994.

Example: Prisoner's Dilemma

The story behind the name "Prisoner's Dilemma" is that of two prisoners held suspect of a serious crime. There is no judicial evidence for this crime except if one of the prisoners

testifies against the other. If one of them testifies, he will be rewarded with immunity from prosecution (payoff 3), whereas the other will serve a long prison sentence (payoff 0). If both testify, their punishment will be less severe (payoff 1 for each). However, if they both “cooperate” with each other by not testifying at all, they will only be imprisoned briefly, for example for illegal weapons possession (payoff 2 for each). The “defection” from that mutually beneficial outcome is to testify, which gives a higher payoff no matter what the other prisoner does, with a resulting lower payoff to both. This constitutes their “dilemma.”

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

The Prisoner’s Dilemma is a game in strategic form between two players. Each player has two strategies, called “cooperate” and “defect,” which are labeled C and D for player I and c and d for player II, respectively. (For simpler identification, upper case letters are used for strategies of player I and lower case letters for player II.)

The resulting payoffs in this game:

- Player I chooses a row, either C or D,
- And simultaneously player II chooses one of the columns c or d.
- The strategy combination (C; c) has payoff 2 for each player,
- And the combination (D; d) gives each player payoff 1.
- The combination (C; d) results in payoff 0 for player I and 3 for player II,
- And when (D; c) is played, player I gets 3 and player II gets 0.

In layman’s terms it all goes something like this. Let us presume that two merchants who sell similar items are in competition on the same corner or two streets. If they both cooperate with each other as competitors, for instance, they both stock quality goods at fair prices and perhaps even send customers to each other to find what they are seeking, They will both earn of profit of “2,” perhaps \$2,000 a week or a month. If one of them “defects” and betrays the other, then his profits will rise to around “3.” And the other may make close to nothing. The defector might cut prices drastically in an attempt to run the other merchant out of business and/or stock

much inferior goods. This will force the other merchant to defect as well and they will both make a profit of about "1." Then they are both worse off only making half the profit that they made at the beginning. If they meet and purpose to cooperate again their profits will probably double again in time as customers are convinced that they have changed their ways. This scenario has been proven right again and again in actual practice. Nash proved that Adam Smith's theory was not correct.

Another example from the movies is found in "Miracle on 34th Street." In this film the Christmas Santa at Macy's begins sending customers to Gimbel's when they cannot find the article at Macys. At first this is taken as a betrayal of Macy's but the customers are so happy that it actually causes much more sales at Macy's. In turn Mr. Gimbel instructs his employees to reciprocate and both stores do even better.

Another example can be seen in the growth of the university system in Europe between the years 1,000A.D. and 2,000 A.D. The first universities were started by the patronage of the King. The European kings each started one university which then had a monopoly on higher education. However, in England the king supported two universities, Oxford and Cambridge. These universities had sports teams which competed in games as friendly competitors. The students would shout things like, "good play" or "well done" to the opposing side. England was always a little different than the rest of Europe because of the isolation provided by the English Channel.

When the English model came to America it was English "on steroids." Cooperative competition abounded. Now you often see a McDonalds across the street from Burger King. They both do well because Nash's Equilibrium prevails.

Historic example:

Chamberlain and Hitler

"In 1938, Prime Minister Chamberlain signed the Munich Pact with Nazi leader Adolf Hitler, giving Czechoslovakia over to German conquest but bringing, as Chamberlain promised, "peace in our time." In September 1939, that peace was shattered by Hitler's invasion of Poland.

Chamberlain declared war against Germany but during the next eight months showed himself to be ill-equipped for the daunting task of saving Europe from Nazi conquest. After British forces failed to prevent the German occupation of Norway in April 1940, Chamberlain lost the support of many members of his Conservative Party. On May 10, Hitler invaded Holland, Belgium, and the Netherlands. The same day, Chamberlain formally lost the confidence of the House of Commons." Then Winston Churchill became the Prime Minister.

The result was Germany in ruins, London in ruins, millions die between 1939 and 1945. Hitler was not rational because he was not sane. On the (usual) negative side,

Hitler was not rational because he was not sane. The Sin nature makes people not sane. The more degenerate a person is the more insane he is.

The Story of The Turtle And The Scorpion

There is an old story told in Greek mythology about the turtle and the scorpion. The scorpion cannot swim, so he asked the turtle to carry him across a river on his back. The turtle refused and said, "When we are in the midst of the river you will sting me and we will both die."

The scorpion responded, "I will not sting you. That would be insane. I need you to get me to the other side of the river. Would I kill myself as well?" So the turtle saw the reasonableness of that and took the scorpion on his back to cross the river. When they were about halfway across the river the scorpion stung the turtle. The turtle asked, "Why did you sting me? Now we will both die." The scorpion answered, "I could not help it. It is my nature."

It is the nature of unredeemed man to act contrary of his own best interests. That is unreasonable. The sin nature is unreasonable. It will act according to its nature. This is the one thing that secular humanism in all of its many forms cannot comprehend. Man will not of his own free admit that he is insane because of sin. But sometimes he can learn the lesson of the Prisoner's Dilemma game and cooperate for his own benefit. This proves that the Golden Rule is best for all. Furthermore, either hard experience or true spiritual enlightenment, Christian regeneration, will cause us to practice the Golden Rule in this life.

But I Will Show You A Mystery

A new Christian perspective. What Is Rational? What is Irrational?

God is not rational according to human standards, but He has infinite resources. Therefore, rational by His own standards. Since He is sufficient in Himself. He has no personal need to win as a "player in the game." Since Christian believers have access to God's own resources they do not have to win in a game with mortal rules.