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Course blog for INFO 2040/CS 2850/Econ 2040/SOC 2090

Rock, Paper, Scissors and Game Theory

Below are two links, one an article that summarizes the information presented in a video by Numberphile that details the logic humans follow when playing Rock, Paper, Scissors. Rock, Paper, Scissors is normally considered a simple game due to the idea that all three outcomes should be of equal probability. However, the game becomes more complicated due to the introduction of human logic. The video and article reference a study done in which 360 students were paired off to play 300 successive matches of Rock, Paper, Scissors. As a result, the researchers concluded that winners would generally repeat their response while the losers will change their response. Thus, in order to win at Rock, Paper, Scissors, winners should choose the option the loser played in the most recent round while the loser's best option would be to choose whatever option did not show up in the most recent round (i.e. if scissors and rock were played, then paper would be the best option).

This analysis of Rock, Paper, Scissors has basis in game theory that we have touched on in class. The recommended cycle of action for each participant was created in order to give an individual his or her best chance at winning and reaping the most benefit from their choice. Applying game theory becomes a very viable option to increase one's odds of winning the game with this method, unless both participants are cognizant of the strategy. In which case, both participants are stuck in Nash equilibrium because both participants attempt to use their best response to their opponent. As explained in the video, the only way to break from this is to choose one's hand randomly, resetting the whole cycle.

<https://www.youtube.com/watch?t=16&v=rudzYPHuewc><http://nerdist.com/how-to-win-rock-paper-scissors-with-game-theory/>September 8, 2015 | category: [Uncategorized](#)[Leave a Comment](#)

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