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Aggressive Poker Play and Its Connection to Economics

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Abstract

As our game knowledge of game theory continues to expand, our understanding of how to optimally play poker also evolves. The original intent of this research paper was to study the change in aggression of the top players over time. I then decided that it was important to search for other factors that could impact how aggressive a player would play and discovered the large impact that economics has on a high-stakes game such as poker. In order to study the change in aggression of top players over time, I collected data that marked each time, professional poker player, Phil Hellmuth called, raised, or folded. Two metrics, VPIP (percentage of hands played) and aggression rating, were then used in order to study how often the player played as well as how much they bet once they had committed to the pot. Over time it was found that Phil's VPIP decreased while his aggression factor increased. When comparing this to the economy it was found that when playing directly after economic downturn Phil played a larger portion of hands but did not bet as much per hand. Rather than assuming the top players tend to play more hands during economic downturn, it is much more plausible to conclude that the average player will play more timid during economic downturn leaving them open to be exploited. The top players then take advantage of this and are allowed to get away with more aggressive play than usual.