Name(s)	Project Number
Zhaohong Jin; Wei Zhou	
	34223

Project Title

Nash Equilibriun: Human Behaviors in Real Life Economics Games

Abstract

Objectives/Goals
The objective of this science project is to discover if the theoretic prediction of the outcomes by using Nash Equilibrium in economic games is valid and accurate in real life cases; if not, what is the Nash Equilibrium in real life.

Methods/Materials
The experiment includes 58 people. They will be paired up and play an economic game and try to win some money from a pool with 16000 dollars. Each person can either choose to play ¡°friend¡± or ¡°foe.¡± If one person chooses ¡°Friend¡± and another choose ¡°foe,¡± the one chooses ¡°foe¡± get 16000 dollars. If they both choose ¡°friend,¡± they each gets 8000. If both choose ¡°foe,¡± they get nothing. In the first try, each person is going to choose an action without communication. In the second try they are going to repeat the game, but this time, they are allowed to communicate with each other. In the third try, we are going to explain to them the concept of Nash Equilibrium; they will repeat the game with the knowledge of Nash Equilibrium. In the Forth Try, they will repeat the game again with communication.

Results
The result of the game shows that people reach a different equilibrium from the theoretic prediction, and it supports the hypothesis that the theoretic prediction of the outcomes is not accurate in real life applications. Based on our result, senior students in BCHS have an approximately 50% chance of choosing ¡°friend¡± and 50% chance of choosing ¡°foe.¡±

Conclusions/Discussion
This project shows that human emotions, the incomplete information, and distrustful of others can greatly affect people¡#s choices in economic games. So when in the real world of business, it is very important to use the legal methods like signing contracts to ensure a win-win situation. We will extend our experiment objects to people in different fields and further discover people¡#s thinking process in economics games. Our ideas are very useful in fields like politics, business, and psychology.

Summary Statement
To research and find the real life equilibrium in economics games

Help Received
None