Wentz Semester Research Grant Proposal

Gender Perception in a Game of Chicken

I am examining how gender perception impacts the equilibrium solution achieved in a game of chicken. In game theory, the game of chicken has two equilibrium solutions. The equilibrium solutions are when one player chooses the weak strategy and the other player chooses the tough strategy. The player who plays tough is the winner. However, if both players choose the tough strategy, the outcome is deemed catastrophic as both players lose significantly. Therefore, there is always tension in a game of chicken over which player will be able to choose the tough strategy and not be challenged. Each player's estimation of their opponent contributes to the strategy chosen.

For the purpose of my study, I will use a financial game of chicken in investing where the strategies are going in (tough) or staying out (weak). Subjects in the study will have the scenario described to them on a survey and will be asked which strategy they would choose. The study will have three different treatments, one where the opponent is gender-ambiguous, one where the opponent is described as female, and one where the opponent is described as male. Each subject would experience one of the treatments. In addition to their choice of strategy, I am also collecting data on the subject's gender and their attitude towards risk. Attitude towards risk will be gauged by asking their reservation price for a lottery ticket and then calculating an Arrow-Pratt Coefficient to quantify their decision. I am looking for a correlation between gender perception and the strategy chosen by our subjects while controlling for their own gender and risk attitude. For instance, given common gender stereotypes, I believe that subjects may be more likely to play "tough" against a female player since they are more likely to believe that she would play "weak".

Data will be collected in ECON 2103 classrooms this semester, pending IRB approval. I am expecting a maximum of 400 responses collected in October and November. From this data, I will create a preliminary analysis of the correlations to submit at the end of the fall semester. I will likely use R for my statistical analysis. Full and final interpretation, with broader implications, will be presented in my honors thesis in spring of 2016.

Acknowledging how far gender impacts our decision-making is a key to overcoming the negative aspects of gender bias. Unconscious reliance on gender perception, when taken to an extreme, can be discriminatory. The results of this study could prove valuable for showing how we separately consider male and female behavior in negotiating salaries, participating in politics, and other strategy-based areas. Game theory revolves around the information that we have on our opponents. It is important to know how much weight we place on gender as part of that decision-maker.