There's no such thing as cheap talk:
A machine learning analysis of pre-play communication on Golden Balls

Ethan Bevington, Class of 2019

Motivation

In game theory, "cheap talk" refers to communication between players that does not directly affect the payoffs of the game, no matter what the players actually know. That is, a message in a game theory model is cheap talk if the player can freely lie. Game theorists have shown that even cheap talk can be informative if players' interests are aligned (Crawford and Sobel, 1982) but cheap talk should not contain any information, and should therefore not be correlated with actions, if the players' interests are directly opposed. However, modern behavioral economists have questioned this prediction. One reason that it may not be true is that unconscious biases may affect the content of messages, even when players do not intend this.

Testing the information content of cheap talk in real-world situations is difficult. Our project tests this hypothesis by analyzing transcripts from the final round of the British game show "Golden Balls." On this show, contestants play a game similar to the classic Prisoner's Dilemma