Strategic Communication Games: Theory and Experiments

My thesis focuses on the topic of information design and information exchange between economic agents theoretically and experimentally. In the first chapter of my thesis, I revisit the classic problem of product information revelation using a new theoretical framework developed by Kamenica and Gentzkow (2011). In the second chapter of my thesis, I design an experimental test of the predictions of Kamenica and Gentzkow (2011), the influential paper that provides the theoretical foundations for many models in the information design literature. In my last chapter, I look at the problem of disclosing bias when communicating to a heterogeneous audience.

A firm’s incentive to provide product information is a topic of central importance in industrial organization theory. In my job market paper titled “Controlling Information to Influence Consumer Beliefs,” I take a fresh look at the question of how much information firms are willing to provide consumers using the information design framework developed in Kamenica and Gentzkow (2011). In my model, I show that even without the ability to price discriminate, a firm can influence a rational consumer to change her beliefs and extract full consumer surplus. In contrast to the results of earlier papers such as Lewis and Sappington (1996) and Johnson and Myatt (2006), the firm chooses to provide partial information in equilibrium. In addition, while competition is beneficial in the sense that it forces firms to reveal information in order to differentiate themselves from one another, equilibria in which firms only provide partial information still exist.

In recent years, the number of papers applying Kamenica and Gentzkow’s model of Bayesian Persuasion has expanded rapidly. Kamenica and Gentzkow (2011) show that if both sender and receiver start with the same information, the sender can influence the receiver’s belief and therefore the receiver’s action given the power to manipulate the information environment. The question of whether in reality people can learn to influence other people’s prior beliefs by changing the information environment as predicted by Kamenica and Gentzkow’s model remains unanswered. My second paper attempts to answer this question using data generated from a laboratory experiment on undergraduate students. The paper tests the central hypothesis that laboratory subjects can learn to implement the optimal persuasion mechanism.

The final chapter of my thesis looks at the problem of communicating to a heterogeneous audience. I find that when a sender communicates with a heterogeneous audience consisting of proponents and opponents, it is beneficial for him to not disclose his bias. For example, if a conservative politician wishes to win the support of both conservatives and liberals, it is best for the politician to keep information about his political alignments to himself. Not disclosing bias improves public communication between the sender and the audience.