

Joel Sobel

Economics of Lying and Deception

Organization:

The class meets from October 17 through November 7. It meets on Mondays and Wednesdays from 1:30–3:00, with one exception: There is no meeting on October 31. This class is rescheduled for Friday, November 4 at 1:30.

Prerequisites

First year micro and a tolerance for theory.

Requirements:

The formal requirements are subject to negotiation. (I will try to make them comparable to other parallel courses. I will provide information during the first week.)

Outline and Overview

This outline is tentative. I will start at the beginning, but I will make changes based on how things are going.

1. Basic Model

I'll assume knowledge of "standard" Spence signaling. We need to augment this with models of disclosure (Grossman [20], Hagenbach, Koessler, and Perez [21], Milgrom [29], with a survey from Milgrom [30]) and cheap talk (Crawford and Sobel [13]). Sobel [36] is an overview.

2. Multiplicity

Standard models of communication have multiple equilibria. There are many reasons for this, but one of them is that abstract models of communication do not provide unambiguous meaning to words. I plan to demonstrate the existence of multiple equilibria, show ways in which one (might) resolve the problem and argue that incorporating "natural language" into models is one approach.

Farrell [14] and [15] provides an early treatment. The literature has separate treatments of communication about intentions and communication about information. Rabin [33] is an early contribution to the first literature. Lo [26], Schlag and Vida [35], and Sobel [37] are more recent approaches.

The selection literature on games of information transmission includes Chen, Kartik, and Sobel [11], Gordon [19], and Kartik and Sobel [23].

Frequently one can think about equilibrium selection as a kind of convention. Lewis [25] discusses conventions in the context of communication. The author of the book is a philosopher, but the treatment is sophisticated from a game-theoretic point of view and contains ideas that are important to economists.

3. Bayesian Persuasion

Emir Kamenica and Matthew Gentzkow [22], building on Aumann and Maschler [7] and Brocas and Carillo [10], develop one way to avoid the multiplicity problem. They give the informed agent the right to commit to a communication structure. This approach has attracted a lot of attention recently. I do not view it as directly related to the study of lying, but studying the basic ideas may be more useful than my agent. Some recent additions to the literature include: Alonso and Câmara [2], Galperti [17], Kolotilin, Li, Mylovannov, and Zapechelnyuk [24], and Rayo and Segal [34].

4. Defining Lies

One of my objectives is to come up with an operational defining of lying and identify some properties. Since “everyone” knows what lying is, this should be easy. The problem is that “everyone” does not agree. I do not think that it is necessary to come up with a definition that your parents would recognize, but here I must pay respects to research from other disciplines. Philosophers have their ideas (Mahon [27] is a survey, Bok [9] is an accessible mix of scholarly and popular.¹ Anthropologists know the answer (Coleman and Kay [12]). Augustine [6] is a saint, so he knows eight different kinds of lie. Even computer scientists have an opinion. The best treatment may come from a movie director (Morris [31] and [32]). Surprisingly, I am not aware of any formal definition and modeling in economics, but perhaps I am searching too narrowly.²

5. Defining Deception

Deception (according to my formulation) is a broader term than lying. The literature contains many examples, but no systematic treatment. I hope to invent the systematic treatment this term. Akerlof and Shiller [1] is a popular treatment of deception.

6. Evidence

Time permitting, I will discuss recent experimental work on the topic. Some examples of the research in this area are: Andreoni and Bernheim [3], Battigalli, Charness, and Dufwenberg [8], Fischbacher and Föllmi-Heusi [16], Gneezy [18], Mazar, Amir, Ariely [28], and Vanberg [38].

¹Bok is a philosopher, but the daughter of a Nobel-prize winning economist (and, in addition, the daughter of a winner of the Nobel peace prize).

²Ariely, who has written many articles and two books (Ari [4] and [5]) probably has a better right to claim he is an economist than I do.

References

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