Homework 4
Ling495

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Due: November 20, 2018

1. Hand in the homeworks to Nikita.
2. Neatness is good.
3. Avoid late homeworks at all costs!

In this homework, we're going to build a signaling game, although we'll keep it at a rather abstract level.

Irony is the expression of the speaker's meaning by using language that normally signifies the opposite of what it literally says. For example, the chair of my Department comes by my office and asks me to take on an extra committee assignment. My initial response is to say: "Lovely! Just what I wanted." Of course, what I mean is that I don't want to be on another committee.

Notice that I said something that was manifestly false. In fact, the obviousness of its falseness is what allows me to signal my intended meaning. Briefly discuss the following two points. First, why don't I just say what I mean? Shouldn't I just say that being on another committee is exactly what I *don't* want instead of inviting confusion by using irony. Second, have we caught Griceans in an error? Explain how this might be so. Go back to Grice's "Logic of conversation" and look at his discussion of irony. Summarize his point in your own words.

Now, let's build a game for ironic signaling. To help you, take a look at section 4.4 in Schecter & Gintis (pages 91-94), **Buying a Used Car**. Here are some observations:

1. Notice that in their game, Nature has the first move and determines whether the car is good or bad. On analogy, we will let Nature have the first move and determine with probability p that the speaker is using irony and probability $1 - p$ that the speaker is not using irony. In other words:

   (a) Speaker says: "Lovely! Just what I wanted."

   (b) Speaker says: "Oh no! I didn't want that."

   (c) Hearer concludes: "The speaker wants another committee job."

   (d) Hearer concludes: "The speaker doesn't want another committee job."

2. The type of the car in the Schecter & Gintis example subdivides the game tree into two identical subtrees. These subtrees differ only as to the payoffs that are distributed to the players.

   (a) Divide your tree into two subgames; one for the ironic speaker and one for the non-ironic speaker. Both trees should have the same moves, but differ only as to the type of the speaker

   (b) Determine the payoffs for the two subgames. Players get points for coordinating on the same meaning; for obeying the Maxim of Quality; for cleverly flouting Quality and being understood anyway. Players lose points for misunderstanding.

Following the model in the book, work out the payoff matrices for the subgames, then work out the combined matrix. Look for best responses when $p > \frac{1}{2}$ and note any Nash equilibria.