Youngberg

Econ 304—Bethany College

**Homework 04**

Answer all the following on a ***typed, stapled*** (if applicable)separate sheet of paper. You do not need to type equations or graphs. Make sure that you justify your answers, use your own words, and show your work. All questions are equally weighted.

1. Consider a two player game of a penalty kick in soccer. The two players, the kicker and goalie, move at the same time. Each player may kick/jump to the goalie’s left or right. Economist Ignacio Palacios-Huerta examined over a thousand such kicks (1,417 to be exact) and found the likelihood of success based on the four possibilities. Those values (rounded) are given below. Note that though these values don’t add up to zero, it is still functionally a zero sum game. That’s because all the values add up to 100%; the only way for one player to be better off for another player to be worse off.

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | **Goalie** | |
|  |  | *Left* | *Right* |
| **Kicker** | *Left* | 58%, 42% | 95%, 5% |
| *Right* | 93%, 7% | 70%, 30% |

Palacios-Huerta used this data to estimate the likelihood each player will play left or right employing the same technique we did in class. Then he compared his theoretical results to how often the players actually played each strategy. He was almost exactly on.[[1]](#footnote-1) Calculate the mixed strategy equilibrium for each player with p representing the likelihood the kicker will play Left and q representing the goalie will play Left. Then, look at the paper and record the actual observation (see footnote, page 402). Compare your theoretical result with the actual result. (Keep in mind that because the percents above are rounded you will not get the exact same answer as what Palacios-Huerta estimated but you can use his calculated result as a check to see if yours are right).

1. Sketch your answer to number 1 as we did at the end of Lecture 14, putting *q* on the y-axis and *p* on the x-axis. Make sure to label everything clearly.
2. As discussed, law and economics approaches the law to encourage efficiency. Not only can we explain the result of court cases with this framework, but some of the rules regarding how the laws function. Below are two such rules. Select ***one*** of them and justify its existence on the grounds of economic efficiency.
   1. *Statute of limitations*—for many laws, there is a time limit for being charged with a crime. For example, embezzlement has a statute of limitations is two years after the embezzlement should be detected with reasonable effort. After two years, attempts to sue someone for embezzlement will immediately be dropped. If you address this rule, be sure to consider not just the role of incentives but also the value of certainty when operating in the marketplace.
   2. *Ignorantia juris non excusat*—no justice or jury will find a person innocent because she broke a law she didn’t know about. This applies even though, with so many laws, it is impossible to be informed of every single one of them. This rule does ***not*** apply, however, if the accused had no chance to learn the law before committing the crime.[[2]](#footnote-2) Be sure to justify not only the rule but the exception as well.
3. In *Harris v. Tyson* (1855), the court ruled against the ignorant seller but in *Wilkin v. 1st Source Bank* (1990), the court ruled in favor of the ignorant seller. What are the efficiency grounds for this seemingly contradictory ruling?
4. Is the problem of global warming more like a stag hunt or a prisoner’s dilemma? Of our remedies we discussed in Lecture 15, which, in your opinion, makes the most sense to address global warming? Justify both of your answers.

1. <http://www.palacios-huerta.com/docs/professionals.pdf> [↑](#footnote-ref-1)
2. This comes from Lambert v. California (1957); Wikipedia has an excellent summary of it: <http://en.wikipedia.org/wiki/Lambert_v._California> [↑](#footnote-ref-2)