Behavioral Economics

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Homework 6

Due Tuesday April 14th

Question 1 Let p be a lottery with two monetary prizes (for example a 30% chance of winning $10 and a 70% chance of winning $0). Show that an expected utility maximizer is risk averse with respect to this lottery if and only if their utility function is concave.

BONUS: Now let p have more that two prizes. Show that the above statement is still true (Hint: use induction on the number of prizes!)

Question 2 Assume that a decision maker makes choices over lotteries based on the cumulative probability weighting model we introduced in class. Show that, if the probability weighting function is a power function (i.e. $\psi(p) = p^m$ for some m) then the decision maker will look like an expected utility maximizer when faced with the choices used to demonstrate the common ratio effect

Question 3 It is time to start getting organized regarding your research projects. The deadline to hand the project in will be TUESDAY MAY 5th. Over the next two weeks, I want you to do three things

1. Decide who is in your group for the proposal, and send me an email telling me this information

2. Schedule a meeting with John or I to discuss what you are intending to write about

3. Write a 1 page outline of your project (in the same way you did for someone else's paper in homework 5). This is due Tusesday 21st April

As some belated advice, if you are struggling to come up with ideas, I can think of two good starting points

1. Pick an idea that we have covered in class (or will cover in class), and try to understand more about how it works: For example, we discussed in class how the satisficing level should depend on the variance of the value of the options to be searched. Could you think of a way to test this experimentally

2. Think of an economic topic for which you think it is important to take into account one of the forces that we are studying (bounded rationality, temptation and self control, social preferences, etc). Presumably one of the reasons you are taking this class is that you think that the standard model is wrong in some important way. If so, try to think of a specific example of why. For example, do you think that choosing a school for you child is a very complicated choice? If so, maybe we need to make use of a model of bounded rationality. Once you have this intuition, then you can think about which model you might want to use, how to apply it, what the implications might be and how to test it.