Behavioral Economics

Mark Dean

Homework 7

Due Tuesday April 18th

Question 1 Here is another variant of the Ellsberg paradox: Consider an urn with 90 balls, 30 of which are red and 60 of which are either black or yellow (but you do not know the precise number of each. Consider the following choices

1. Between act f_1 which pays \$10 if the ball drawn is red (and zero otherwise) and act g_1 which pays \$10 if you draw a black ball (and zero otherwise)
2. Between act f_2 which pays \$10 if the ball drawn is red or yellow (and zero otherwise) and act g_2 which pays \$10 if you draw a black or yellow ball (and zero otherwise)

Most people strictly prefer act f_1 to g_1 and strictly prefer g_2 to f_2. Show that an SEU maximizer cannot behave in this way (i.e. figure out the state space for this problem, and show that if an SEU maximizer prefers f_1 to g_1 then they must prefer f_2 to g_2. Show that a MaxMin Expected utility person can exhibit this behavior (for simplicity, assume linear utility and find a set of beliefs that will generate this behavior)

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 2nd. 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 Evan. Zhihan 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 6). This is due Tusesday 25th April