MIC: Exercise 3, Oct 2007

1. Consider the alternating offers bargaining model, where the time horizon T is finite. That is, if there is no agreement by the end of period T, both players get zero. Solve the game by backwards induction for T odd and T even, and relate these to the solutions of the infinite horizon bargaining game. You may assume that both players have the same discount factor.

2. Modify the alternative offers bargaining model as follows. Suppose that in each period t, (assuming that no agreement has been reached till that date), nature chooses player 1 to be the proposer with probability p, and player 2 as proposer with probability $(1 - p)$. Assume that players discount payoffs with a common discount factor δ. Solve for a subgame perfect equilibrium, assuming that players are risk neutral. How would your analysis be altered if each player's von-Neumann Morgenstern utility function for money was given by strictly concave function $u_i(x)$?

3. MWG, Question 9.B.11.

4. Question 1 from problem set 3, 2005 (you may leave out the last part of the question, that is the sentence beginning, "how would you solve for an equilibrium of this game", for the moment)