Hand-out week 7

This week: 4. General Equilibrium
                     Exchange economy
                     Robinson Crusoe economy
                     Pareto Efficiency
                     Welfare Theorems
                 5. Extensions
                     Monopoly

Readings: Varian 29, 30, and 24 (28, 29, 23 in the old edition).

Practice Problems:

1. There are 100 units of x and 100 units of y available in a 2 person exchange economy. Draw the Edgeworth box and a few well behaved generic indifference curves for each person. Depict all the Pareto efficient points. Suppose the endowment point is not among them. Starting from the endowment point (simply choose one) depict the area of mutually beneficial trades. What will be the outcome of the market mechanism starting from the endowment point - is it mutually beneficial, Pareto-efficient, what about the individual MRSs and the relative price at that point?

2. Again consider a 2 person exchange economy. Suppose person A has preferences à la U = x + 2y and person B's preferences can be represented by U = 2x + y. Depict the set of Pareto efficient points. Choose an endowment point in the interior. Depict the mutually beneficial trades. What will be the outcome of the market mechanism - is it unique or are there several possible outcomes? What about MRSs and relative price at this point/these points?

3. Instead of spending the summer on the farm, you have chosen a remote, deserted island in the South Pacific. You can use your time to collect coconuts or recover from a hard year at Stanford. If you work you end up with coconuts according to a concave production function. In a time-coconut diagram, depict this production function and your preferences. What is your optimal point? Now suppose the intense sunshine, the loneliness, and that ... micro class you took during your year at Stanford render you schizophrenic. One part of you plays price-taking consumer, the other price-taking producer. Visualize each parts' optimum as a function of relative price (real wage). Can you think of the above optimal point as a market equilibrium?

4. Discuss Pareto efficiency - do you think economic policy can achieve it, are there Pareto efficient outcomes you would find inacceptable?

5. What's the relation between market equilibria and Pareto-efficiency - are market equilibria Pareto-efficient? Can any Pareto efficient allocation be reached as a market equilibrium, if yes how?