Assignment #9,

This assignment is due in class on 4/10. The questions ask you to solve for the equilibrium of the Ricardian model of trade. Refer to the Excel spreadsheet that I have written for this purpose (on the course web site).

1. On the spreadsheet you type in the price of a jet (in cell E5) and it will calculate what happens. Right now you will see that the price of 75 cars per jet is too high since at that price the world demand for cars exceeds world production of cars. (For this question you will be looking at PRODUCTION CASE I.) Experiment to find the equilibrium price at which world demand is equal to world production. At the equilibrium price, how many jets does the U.S. export and how many cars does the U.S. import?

2. The program lets you calculate what each country would consume of each good if it did not trade: simply type in the price that the Labor Theory of Value would dictate. Calculate how much the U.S. gains by trading with Mexico (measured by how much more the U.S. can consume).

3. You may have noticed that in cell E8 I set the share of each country's income spent on cars to be 0.15. This value is a simple way of depicting preferences for cars versus jets (so you don't have to worry about indifference curves). If you set that share to be 0.50 you will need to consider PRODUCTION CASE II in which the U.S. produces some cars in addition to jets. In this case the Labor Theory of Value for the United States determines the equilibrium price. Calculate how many jets the U.S. exports and how many cars it imports. Show that the U.S. does not either gain or lose by trading with Mexico in this case.

4. From the questions above you know that if 15% of income is spent on cars we are in CASE I and if 50% of incomes is spent on cars we are in CASE II. What is the highest value for the share spent on cars (typed into cell E8) such that the United States still gains by trading with Mexico?

5. Find a value for the share of income spent on cars such that CASE III becomes relevant. Show that in this case Mexico does not gain from trading with the United States.

6. You can try many different experiments with this program. For example you can change the number of workers or the labor input requirements. If you change the labor requirements, however, make sure the United States still has a comparative advantage in jets, otherwise the program will not work correctly. Report on some experiment.