## Homework #3, Due September 27, 2007 Individual Assignment

The primary purposes of this assignment is to analyze the Electoral College voting system that is used to elect the President of the United States. You will also make a recommendation for modification of the weights assigned to each state in order to correct some of the "flaws" of the Electoral College. Of course, you must first identify these "flaws".

In this assignment, use the electoral votes and populations derived from the 2000 census and assume that all of the electoral votes from any state go to a single candidate (although this is not the case in Nebraska and Maine).

1. Using the concepts we have discussed so far this semester, analyze the Electoral College voting system. In particular, be certain to calculate the Penrose measure, Banzhaf index, and equitability measure for every state, and calculate the sensitivity and mean majority deficit for the system overall.

Comment on your findings, paying special attention to any "flaws" you see.

- 2. Make a proposal for modifying the weights assigned to the states to address the problems you identified in the first part. Do the same analysis for this system that you did for the Electoral College, compare your results, and make a case that your proposal should be adopted.
- 3. Do you think that your proposal will pass? Do a careful analysis state-by-state to determine the level of support for your proposal and compare to the requirements for amending the US Constitution.

**NOTE:** For your calculations to be valid, we are assuming that the Electoral College represents a yes/no voting system – i.e. there are only two options. While this is not strictly true, it is extremely rare for any candidate other than a Democrat or Republican to receive any electoral votes. We'll talk later in the semester about why our voting system reinforces a two-party structure.

This assignment will be graded out of a total of 45 points.