Political Science 501, Baumgartner
Short paper topics/discussion points
Week 2: Scientific Approach

Come to class with a short paper prepared on one of these topics, and ready to discuss all of them.

1. Compare the value of prediction, explanation, and simplification in theory. Is a predictive theory that does not explain well useful? How would you trade off simplification for predictive or explanatory power? Is a theory that leads to no predictions a theory? Use specific examples from the literature or your own research ideas. Discuss specifically how you would make these trade offs.

2. Deductive approaches and inductive approaches to theory building are often seen as opposites. In practice, using specific examples, are they compatible?

3. Discuss the nature of proof, disproof, confirmation, disconfirmation, etc.

4. Discuss the difference between conceptual measures and operational measures. Are there theories with which you are familiar that are testable in theory but where the congruence between the conceptual theory and the operationalizations that researchers use for key variables is faulty? Be specific. Pick a theory and criticize the testing of it.

5. Covariance, time-order, and non-spuriousness are the hallmarks of convincing evidence. Discuss each in turn, using an example. Under the category of non-spuriousness, what is the role of multi-collinearity? How hard is that to avoid? How does one avoid it?

6. What is a Type I error and what is a Type II error? Why do we fear one more than the other? Give examples.

7. Why is replicability a major factor in scientific progress? What impacts does that have?

8. Why would anyone design a study where all the cases have the same value on the dependent variable (see KKV, p. 108)? Does that ever happen? What would be examples? How should this be avoided?

9. Review KKV's rules for establishing causality (pp. 100ff.). Pick one that you believe is often not followed in the literature, or in a particular study, and discuss why it was not followed.