How to Recognize Good Research?

I have based this outline on our discussions during the first two weeks of class. I hope it facilitates our reading and discussion. I begin with the premise that all good research requires a clear statement of *motivation*, a clear and competent *design*, and *execution* consistent with the first two points. The sub-points delineate what we should be looking for under each of these three headings.

I. **Motivation**
   A.   The Research **Question**. Choose a question of Importance
      1.   Important in the real world. [The "grandmother test". You should be able to tell granny in 1-3 sentences why your research topic is important.]
      2.   Make a specific contribution to an identifiable scholarly lit.
         a.   Take an existing claim and apply it to new case(s). i.e., reproduce a study in an area where it *should* apply, but has not yet been examined. Maybe it's *never* been examined empirically! (This happens more often than you think.)
         b.   Find a gap. Fill it. "This important topic has been overlooked." (e.g. Polachek article)
         c.   Focus on a debate in the field. Undertake a study which will shed light on it, if not resolve it (e.g. Powell article on the "gains" debate.)
         d.   Take an assumption in the field, and problematize it. "Space and Time are absolute" --Newton. "Nope. They're relative"--Albert .
         e.   Synthesize. Show how findings in one area can be applied to another, and yield new insights in the process.
         f.   In short, tell us: Whose work informs this effort? Who has contributed to your thinking? How do you expect to contribute to theirs? Why will they be interested in picking up your article to read?
         g.   "A proposed topic that makes no contribution to some [specific and identifiable] scholarly literature should be significantly modified or abandoned."
   B.   Specific statement about what they hope to accomplish in this study.

II. **Design**
   A.   State a claim clearly, and in **falsifiable** language
      1.   Claim may be "theory," hypothesis, hunch...as long as it's explicit.
      2.   Internally consistent. Falsifiable
   B.   State several **observable implications** of this claim.

     C.   **Case Selection**
          1.   Do they have **more observations than variables [hypotheses]**?
          2.   **Unit homogeneity**. No reason to believe that (under controlled conditions) Unit 2 would not behave like Unit 1.
          3.   **No selection bias**. Cases selected should not correlate with either the dependent or independent variables. i.e., the range of possible values for X and Y should be represented in our sample. (e.g., if Y can be high" or "low" we should not limit our study to cases where Y is "high" only.)
     D.   Describe/Select your INDEPENDENT and DEPENDENT variable.
          1.   Is the independent variable really "Independent"? "Conditional Independence" Independent variables do not take on values as f(dependent variable)...[essentially same as Endogeneity.]
          2.   Does this variable actually vary? Can we see the variable taking on *different* values during the spatial-temporal domain of your study?
     E.   Independent variables should *not* move together perfectly. e.g., Imagine two explanatory factors, X1 and X2, each of which may take on values of "low" and "high". Imagine now that each time we observe a case where X1 is "low" we also observe that X2 is "high", and vice versa. It would be impossible to determine independent effects for X1 and X2 in such a study.

III.   **Execution**
     A.   Are the Procedures Used made "Public" [i.e., Reproducibility].
          1.   **Domain of Observation.** Define the class of things to be observed. Tell us how to assemble your observations.
          2.   **Operational Definitions.** How do I know "X" when I see it? Define the categories of observation so the cases can be classified. How to organize the information.
          3.   **Analytical Procedures and Logic of Inference.** Describe the procedures used to examine that information. Describe the *basis* of inferences made.
     B.   Are the Conclusions stated with any indication of confidence or **uncertainty**? [Confidence Intervals] "Inferences without estimates of uncertainty are not science."--KKV
     C.   Do they discuss the implications of their findings for the relevant research community?
     D.   Do they provide clear direction for future research based on their findings?

That's all for now. We should add and revise this as we go along this quarter.