**DEPARTMENT OF POLITICAL SCIENCE
AND
INTERNATIONAL RELATIONS
Research Methods Posc 302**

THE RESEARCH PROCESS

I.   TODAY'S SESSION:
        A.   The course website
        B.   Finish discussing parts of research process
                1.   Research design
                2.   Measurement
                3.   Data collection and management
                4.   Statistical analysis
                5.   Interpretation
                6.   Presentation
        C.   Extracting testable hypotheses from articles and newspapers
                1.   Examples and practice.
        D.   Note: I will try to introduce concrete examples as we go along.
                1.   We'll stick with the problem of declining parties for now.
                2.   But we can also talk about public policy such as laws requiring
                        motorcyclists to wear helmets.

II.   COURSE INTERNET SITE:
        A.   The class web page, which is very much under construction at this time, can be
                reached at www.udel.edu/htr/Researchmethods.

III.   RESEARCH PROCEDURES:
        A.   This section repeats Class 1 notes.
        B.   A research design includes what the name suggests, namely a plan for collecting
                and analyzing data in order to test empirical propositions.
        C.   A first decision that one has to make is **how** to collect the data or information
                necessary to explore the hypotheses will be collected.
                1.   Summary of common types:
                        i.   **Secondary analysis** of existing data is the method we're going to
                                use in the course.
                                1)   It involves data (e.g., poll results) collected by some
                                        organization that can be analyzed or re-analyzed.
                        ii.   **Sample attitude and behavior surveys** (of which public opinion
                                polls are a common type): information is elicited from individuals,
                                the units of analysis.
                                1)   If you want to go into consulting, market research, or policy
                                        analysis, you have to be familiar with survey techniques.

            iii.   Aggregate data analysis: analysis of data collected on "aggregates," usually geographical areas such as counties, census or voting tracts, states, or nations.

            iv.   Experiments in which the investigator literally manipulates variables to see what effects they have on other variables.

            v.   Quasi-experiments or naturalist experiments that involve the **statistical** analysis of (usually) aggregate data collected in different time periods.

            vi.   Observation of individuals by the investigator.
                 1)   Quite common in anthropology.

            vii.   Document analysis entails the systematic study of printed or taped or video taped material.

     D.   A second decision is, of course, **what** information or data will be included in the study.
         1.   This choice depends on what one wants to demonstrate.
         2.   For a secondary analysis of survey data one would select questions (variables) that are pertinent to the propositions and ignore those that are not.
         3.   A poll or sample survey requires the investigator to write questions and other indicators of the phenomenon of interest.
         4.   The lesson then is obvious: the research questions determine what information is needed.
            i.   So, always frame your purposes first, then look for information that can give you the answers.
            ii.   Do not work in reverse: don't obtain a poll and then ask "What does it say?"
            iii.   This is an iterative process in that a specific research question may be modified in light of data availability.
     E.   Next, one has to ask **how much** data to collect.
         1.   Samples and sample sizes.
     F.   Then, one must think about what **analysis techniques** will be used once the data have been collected.
     G.   Summary: research design or plan:
         1.   How and how much information to collect and how to analyze and present it.

IV.   MEASUREMENT:
     A.   Measurement is the assignment of names (classification) or numbers (quantification) to particular units (of analysis) according to rules.
     B.   Process:

1.   Think about what key terms, concepts, and variables **mean**.
2.   Then think about (operational) indicators

C.   What kinds of procedures would allow us to distinguish a strong Republican from a weak Republican or an independent or a Democrat?
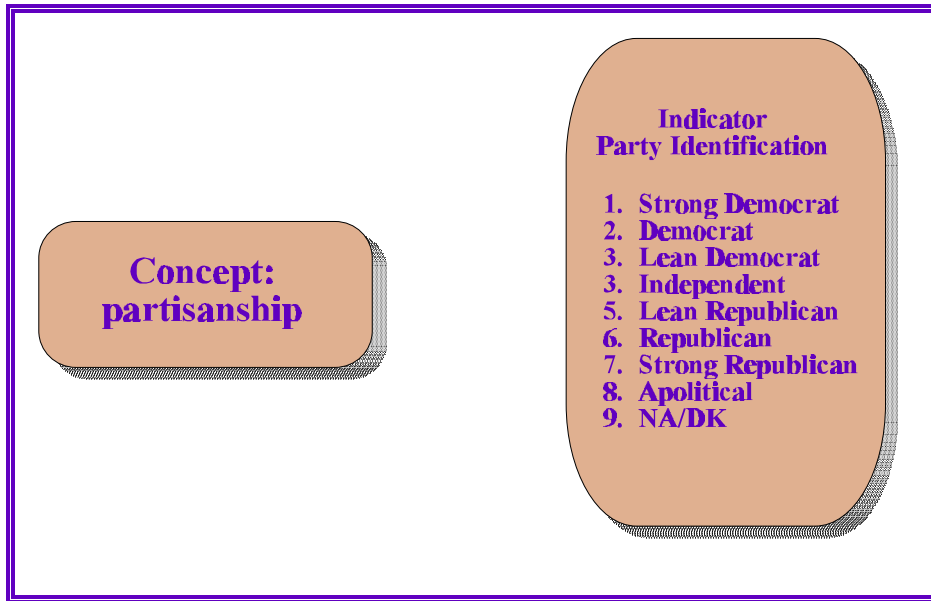

Figure 1 Concept and Measure or Indicator

1.   Or, how can we tell "strict" states from "lenient" ones?
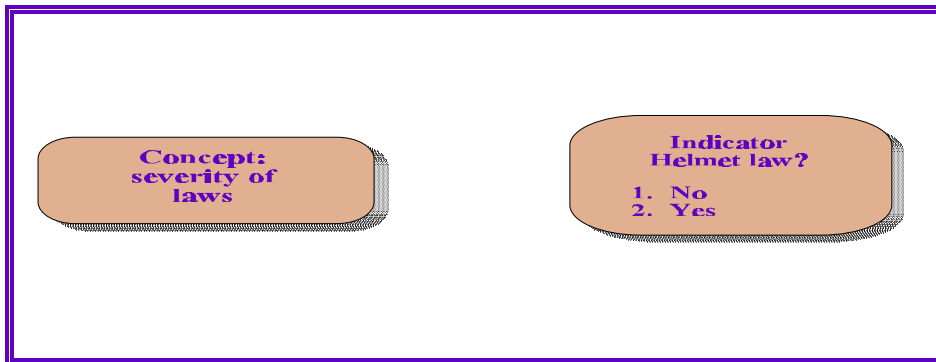   1)   Perhaps use "presence" and "absence" of helmet laws.


Figure 2 Another Concept, Another Indicator

V. DATA COLLECTION:
  A. In this course we're going to have to use data that have already been collected.
    1. A major source at the start is SDA: Survey Documentation and Analysis at the University of California
      i. American National Elections Studies since 1952.
      ii. You might bookmark the SDA
        1) The address is: http://csa.berkeley.edu:7502/
  B. The data obtain from some research procedure such as poll or experiment is "raw."
    1. This process involves among other things
      i. Stored in one or more "formats" so they can be "read" by a computer.
      ii. "Coded": numbers assigned to categories
      iii. "Missing values" indicated
      iv. Errors found and corrected.
    2. We'll discuss some later.

VI. STATISTICAL ANALYSIS:
  A. Statistical analysis involves:
    1. Describing data
      i. Example: a line graph can show changes in partisanship over time.

Trends in Partisanship, 1952 to 1992
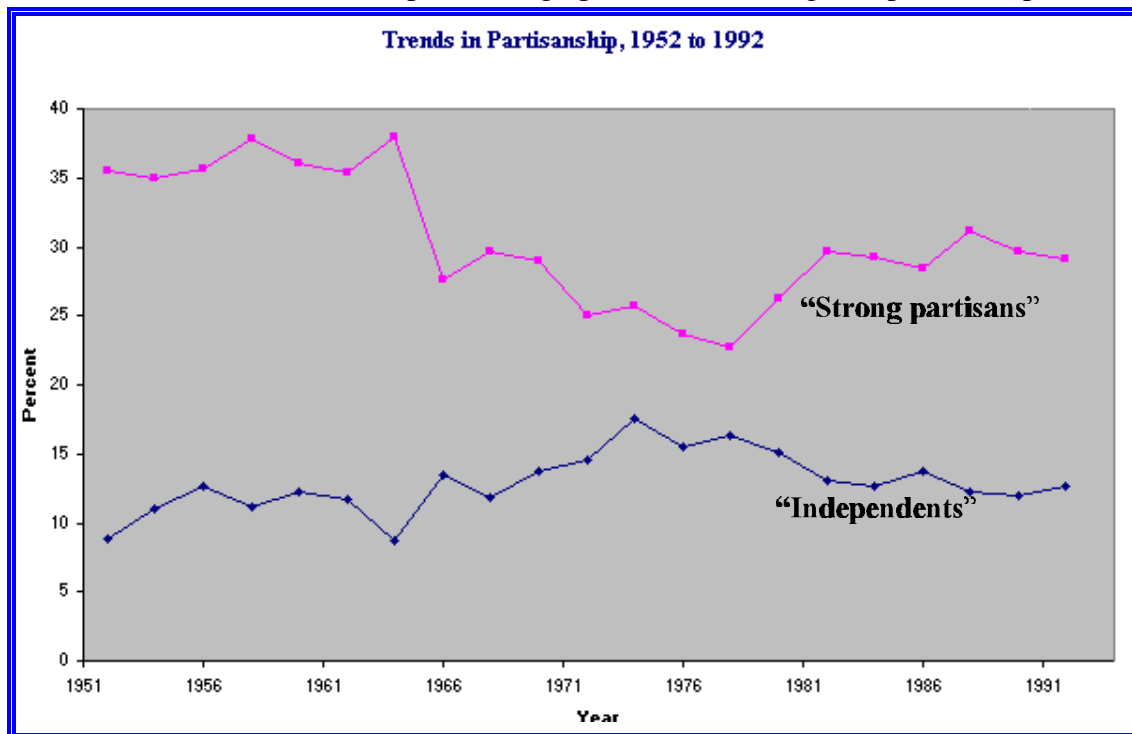
      ii.   We'll construct these soon.

    2.   Modeling relationships among variables

      i.   Example of the relationship between partisan ship and turnout.

Turnout?	Independent	Leaning independent	Weak partisan	Strong partisan
No, did not vote	44.1%	27.3%	25.0%	13.7%
Yes, voted	55.9	72.7	75.0	86.3
Total	100%	100%	100%	100%

      ii.   This table suggests that independents did not vote as frequently in 1996 as did partisans.

      iii.   We'll talk lots more about tables like this one.

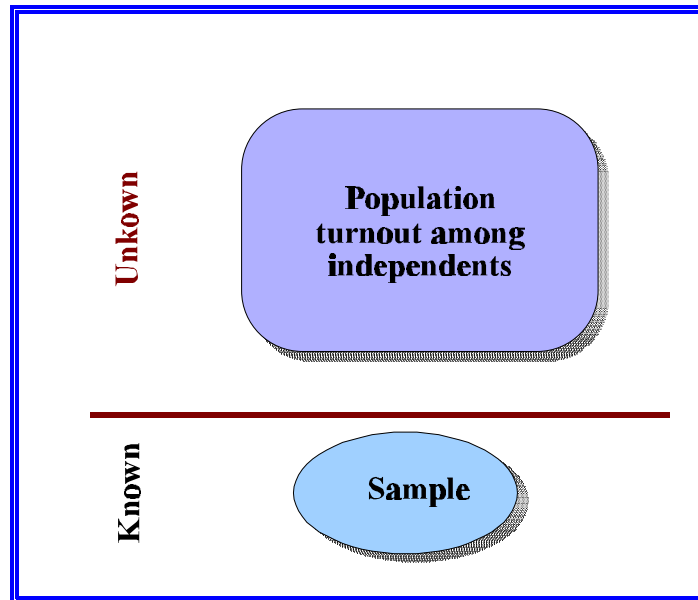   3.   Making inferences about populations on the basis of samples.

Figure 4 Inference on the Basis of a Sample

      i.   Again this aspect of analysis will be covered in detail.

VII.   INTERPRETATION AND PRESENTATION:

A.   What do the data mean to our clients and readers.

VIII.   FINDING PROPOSITIONS AND VARIABLES IN TEXT:
    A.   Consider this everyday saying:
        1.   "The death penalty deters crime."
            i.   As commonly spoken as it may be, it actually contains an empirical assertion.
                1)   In your words what is the claim this argument makes?
                2)   More specifically, since the speaker claims this statement expresses a fact, how could one tell if it in fact holds water; that is, if it does actually say something true about the real world?
            ii.   To answer these sorts of questions we have to "decode" the claim.
                1)   Doing so requires one to infer meanings and apply some thought and imagination.
            iii.   One interpretation might be:
                1)   In communities (e.g., states) that enforce the death penalty for capital crimes tend to have lower crime or murder rates than those places that have abolished capital punishment.
                2)   Two "variables""
                    a)   Crime or homicide rate
                    b)   "Severity of laws": death penalty versus no death penalty.
                3)   We could compare places with and without the death penalty.
            iv.   Another might be that crime started to increase after the Supreme Court rule capital punishment unconstitutional in the early 1970s and that it declined when the Rhenquist Court reimposed it.
    B.   A recent issue of the New York Times discussed the growth in income inequality in the last 50 years. The analysis might be summarized in familiar words: "The rich get richer; the poor, poorer"
        1.   What exactly does this claim state? How could one investigate it? What are the "variables?"
    C.   Lots of arguments about public policy have this form.
        1.   Most of the time, however, empirical arguments are embedded in general statements that contain mixtures of normative and other kinds of claims.
            i.   Here's another from the September 6, 1999 edition of the *New York Times:*
                1)   "Bush, regarded as the front-runner for the Republican nomination, described Federal education programs as offering "high hopes and low achievement, grand plans and

unmet goals."""

2)   What do you think about this? To me it means that there is no association between public spending and educational performance.

3)   If this is true, how could one find out.

2.   Another example in the same edition that discusses the politics of President Clinton's power to grant clemency to Puerto Rican nationalists who have been in federal prison for many years on various charges, not all of which involve violence.

i.   "The President's [Clinton's] offer of clemency on Aug. 11 for the Puerto Ricans raised questions about whether he made the offer to help his wife, who seems all but certain to run for the Senate from New York, to curry favor with New York's 1.3 million Puerto Ricans. The offer prompted outrage from a wide range of people, including law enforcement officers and Senator Daniel Patrick Moynihan, the Democrat whom Mrs. Clinton seeks to replace. Clinton's action may have hurt his wife's campaign more than helped it, and on Saturday, she released a statement from Camp David, where the couple was vacationing in private after their more public vacation in New York last week, saying the President should immediately withdraw his offer. That, in turn, set off its own firestorm of criticism today among many of New York City's prominent Hispanic residents.

1)   What is the issue? It should be easy to find some empirical claims in this flap.

2)   What would you advise Ms Clinton to do and why?

IX.   NEXT TIME:

A.   More explanation and practice in identifying empirical research topics and propositions.

B.   Reading:

1.   The *New York Times*: start looking for claims that might contain empirical assertions or arguments, try to refine them as much as possible, and then sketch a method of investigating at least some of the implications.

2.   Johnson and Joslyn, *Research Methods*, Chapter 3.

1)   I think this section may help clarify what is meant by variables..