

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

**MEASURING CONCEPTS
(Conclusion)**

I. TODAY'S SESSION:

- A. Public opinion
 - 1. Research and politics
- B. Measurement
 - 1. Theory
 - 2. Question writing
 - 3. Critical examination
 - 4. Examples from the General Social Survey
- C. **Writing tip of the day:**
 - 1. Make sure you know the difference between “affect” (the verb) and “effect” (the .noun).
 - 2. Example: “Public opinion **affects** decision makers. “One sees the **effects** of public opinion everywhere.”
 - 3. See O’Conner, *Woe Is I*, pages 88 to 89.

II. PUBLIC OPINION:

- A. Why measurement matters.
 - 1. Research
 - 2. Public opinion as a political resources
 - i. Although the public’s preferences may or may not affect decision makers—it usually depends on the issue and context—the **belief** or **myth** of public control exerts a powerful sway in politics.
 - ii. Consequently, combatants in the political arena frequently invoke “public opinion” in to turn the fight in their favor.
 - iii. Citing poll results is by now a standard tool of the trade.
 - iv. Thus, informed citizens need to know what surveys reveal about the “real” world and, more important, what they don’t and can’t reveal.

III. MEASUREMENT:

- A. Based mostly on the last class (Class 12).
- B. Rough definition: assignment of number or label to value of variable according to a rule.
- C. Concepts: abstract terms or definitions or variables.
 - 1. Unmeasured or unobserved.
 - 2. Since they are not immediately observable and their meaning is not entirely



- clear, they must be translated into a words and operations that
- i. can be applied by researchers
 - ii. understood by the community of researchers and their audiences.
- D. Measurements are the steps and results of efforts to define and “operationalize” concepts.
- E. The problem:
1. Measurement almost invariably entails “slippage” or a gap between our understanding of the concept and the measure we actually end up studying.
 - i. See Figure 1.

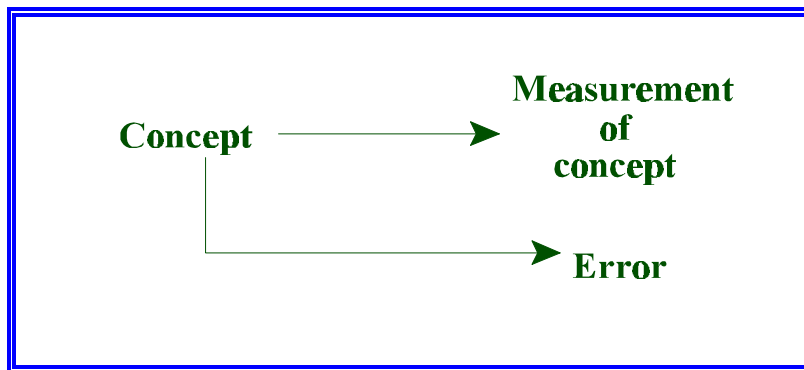


Figure 1: Slippage in Measurement

2. The relationship between a concept and a measure of it is sometimes called an “epistemic correlation.”
- F. Questionnaires as measurement devices.
1. Perhaps the main tool used in public opinion research is simply to ask people to answer questions or respond to “stimuli.”
 2. It is of course the mainstay of public opinion polls.
 3. But as everyone knows the process is fraught with difficulties that can make interpretation very difficult.
- G. Open-ended versus forced choice.
1. Advantages and disadvantages.
- H. Some problems:
1. **Accessibility:** respondents must understand what’s expected and must be able to answer.
 - i. **Recall:** respondents have to be able to understand.
 - ii. **Comprehension:** respondents have to understand terms in the question.
 2. **Reactive** questions: questions state in such a fashion that a particular answer or response is suggested.
 - i. Popularly known as the “loaded question.”



3. **Demand characteristic:** the question is phrased in such a way or asked in such circumstances that the respondent likely feels compelled to answer in a certain way.
4. **Social characteristics:**
 - i. What emotions apart from the substantive intent of the research purpose do the questions evoke?
5. **Motivation:** respondents have to want to answer.
 - i. Respondent **fatigue:** people get tired of answering long lists of questions.

IV. PRACTICAL APPLICATIONS:

A. Measuring concepts for the research projects:

1. Generation gap:
 - i. Background: people's behavior and attitudes reflect not only their chronological age but their cohort experiences.
 - 1) Example: "In an important article in Commonweal (September 27, 1996), University of Notre Dame political scientist David Leege pointed out that older Catholics are mostly Democratic, while their younger coreligionists are more likely to turn to the GOP—a generation gap, if you will. And in fact, age still matters: the oldest cohort of Catholics, those who came of age during the New Deal, voted the most Democratic in 1996. But the modernist/traditionalist divide is clearly evident in this group, with 64 percent of the modernists voting for Clinton, but only 46 percent of the traditionalists. This division drops slightly for the Baby Boom generation, with 50 percent of modernists for Clinton, versus 33 percent of traditionalists, but widens among the Busters, whose modernists gave the President 61 percent, compared with 33 percent among traditionalists."
(<http://www.firstthings.com/ftissues/ft9708/clinton.html>.)
 - ii. Generation: individuals who "came of age" during a particular historical era.
 - 1) Examples:
 - a) "Baby boomers": 36 to 54 years old in 1999.
 - b) "Depression and New Deal generation": born between 1900 and 1925 or 74 to 99 years old in 1999.
 - iii. A measure: determine when group of interest was born, then calculate age, and then group respondents accordingly.
 - 1) In the 1996 National Election Study the age is variable **v960605**.
2. Class gap:
 - i. Define class by reference to social-economic factors that affect "life chances" and "political resources."



- ii. Subjective versus objective class.
 - 1) Education, occupation, family income, or some combination.
- 3. Culture gap:
 - i. Let geographical region summarize culture:
 - 1) The epistemic correlation is no doubt quite low.
 - 2) Still, one can approximate culture by classifying people by place of residence: South, Northeast, West, Border state and so forth.
 - ii. Incidentally, the variable number for region is **v960115**.
- 4. Change over time.
 - i. How has public opinion changed over time.
 - ii. The key term here is easily measured by referring to specific years, as we'll see when we explore the General Social Survey.
 - iii. Note: in the General Social Survey (GSS) variables are listed by mnemonic label; that is, instead of a number the variables are designated with short names.
 - iv. Example:
 - 1) **year** for "GSS YEAR FOR THIS RESPONDENT"
 - 2) **spkath** for "ALLOW ANTI-RELIGIONIST TO SPEAK," a question that asks about allowing an atheist to speak in public.
 - 3) Here, by the way, is how one "controls" for time:

SDA Tables Program
(Selected Study: GSS 1972-1996 Cumulative Datafile)
Help: [General](#) / [Recoding Variables](#)

REQUIRED Variable names to specify

Row: ←

OPTIONAL Variable names to specify

Column: ←

Control: ←

Selection Filter(s): *Example: age(18-50) gender(1)*

Weight:

Percentaging: Column Row Total

Other options

[Statistics](#) [Suppress table](#) [Question Text](#)

[Color coding](#) [Show T-statistic](#)

Figure 2: Dialogue Box for Opinion By Race By Year



- 4) Note that this specification asks for a cross tabulation between opinion on allow atheists to speak in public and race, “controlling” for year. That is, a table between race and opinion will be formed for each year (between 1972 and 1996) in which the question was asked.

V. SAMPLES AND POPULATIONS:

A. Overview:

1. We’ve looked at the relationship between X and Y.
2. But this observation has been based on samples of the public.
3. That is, our analysis rests on 1,000 to 1,500 respondents drawn from the public as a whole.
4. The key question is thus, can we generalize the results to the people. Do the results reflect “reality” or the “luck of the draw.”
5. An analogy: suppose we flip a supposedly fair coin ten times and come up with heads each time. Anyone would ask: is this coin really fair (that is, has heads and tails) or did we get a very unlikely result (10 heads in ten tosses) by chance.
 - i. Is the “sample” result of 10 heads in 10 tosses sufficient for a generalization about the results of an endless number of tosses of this particular coin?

B. **Population:** a well-defined collection of units of analysis such as the American states, the people living in Delaware, the countries in Asia, the students taking this course.

C. **Sample:** a subset of the population drawn in some fashion. We can have, for example, a sample of the states, a sample of Delawareans, or a sample of students taking this class.

D. Purpose: to make inferences about population characteristics based on sample characteristics.

1. Estimation: guessing at the value of a population characteristics using a sample statistic.

E. **Simple Random Sample (SRS):** a sample drawn from the population in such a way that each member has an equal chance of being included.

F. Sample sizes, N.

1. We have briefly discussed samples sizes and will do so in more detail when covering statistical inference.
2. For now note that large samples are not necessarily essential for producing “valid” results. In fact, N probably has more to do with “reliability.”

G. **Parameter:** a statistical characteristic (e.g., mean, standard deviation) of a population. Two major goals of statistics are to estimate population parameters and to test hypotheses about them.

1. Parameters are usually denoted with Greek letters.



- i. Example: the population mean, usually denoted by μ , is a parameter.
- ii. So too is β , a measure of the association or connection between one variable and another.

H. **Sample statistic:** a characteristic of a sample or batch of values that is generally used to make inferences about the corresponding population parameter. (Often called an **estimator**.)

VI. NEXT TIME:

- A. Sampling and statistical inference.
 1. How to test for the “statistical significance” of an observed relationship.
- B. Reading:
 1. Johnson and Joslyn, *Research Methods*, Chapter 7.