PSCI 370: Attitudes and Measurement
Course Syllabus – Fall 2011

Instructor: Dr. Efrén O. Pérez
Class Meetings: Thursdays, 1:10–3:40pm
Office: Commons 345
E-mail: efren.o.perez@vanderbilt.edu
Phone: 615-322-6222
Office Hours: Thursdays, 3:45 - 6pm

Course Description

While central to political science, the study of political attitudes is vexing, to say the least. That is because researchers never actually observe the very thing they are interested in understanding: Namely, attitudes toward politics. This feature of public opinion research means that measurement error looms large in any research design whose object of inquiry is attitudinal phenomena. In this course, students will learn why researchers should care about measurement error and how one can minimize it in applied research. To this end, students will learn about the interface between the conceptualization and implementation of attitudinal measures. They will also learn the language, logic, and implementation of several psychometric models to test the performance of attitudinal measures. In these ways, the course aims to sensitize graduate students to the perils and promise that inhere in applied public opinion research.

Course Structure and Objectives

This course is an applied course; which is to say, there is a strong emphasis on actual practice with the theories and tools encountered. By training you to diagnose and test the quality of measurement instruments, my main goal is to impart to you a set of skills that is sometimes benignly neglected in major political science PhD programs, yet generally valued throughout the discipline. This course, however, is in no way exhaustive. Rather, it is only one important building block toward your methodological training at Vanderbilt. Nevertheless, by learning to converse intelligently about measurement, your grasp of other methodological issues in political science research will be enhanced (and vice versa).

Each class will largely be conducted in seminar format (i.e., thorough interrogation and discussion of readings). However, as the weeks progress, the material will become more technical, at which point the course will rely more on instructor-led lectures in order to facilitate learning for graduate students.

In light of the preceding, this course strives toward the following objectives:

a) familiarize graduate students with the language, logic, and implementation of measurement models, particularly confirmatory factor analysis;

b) teach criteria associated with decisions that must be made in evaluating measurement models;

c) consider the philosophical and statistical criticisms of measurement models as an approach to research design and data analysis;

d) provide firsthand experience reviewing research reports that showcase measurement models and writing up the results of such analyses.
**Expectations and Grading**

This is an intensive graduate seminar designed to train students in the thoughtful critique, crafting, and testing of measures of political constructs. At minimum, this requires a deep engagement of the material each week, as well a series of practical exercises aimed at challenging your grasp of the material. Your grade in the course, therefore, will be based on the following:

1. **Participation (10%)** – Constructive engagement and critiques of each week’s readings. At minimum, this means you come to class having read and thought about the material for each week’s module.

2. **Discussion Leadership (10%)** – Each student is responsible for preparing and leading discussion of two topics from weeks 2 through 7. This entails reading all of the assigned readings and preparing discussion questions that force students to critically analyze the encountered readings, draw out the implications of the theories presented, and to create synergy between bodies of work. Individual selection of the topics is on a first-come, first-serve basis.

3. **Two (2) Applied Homework Assignments (20% each)** – There will be two homework assignments, each focusing on design and analysis, respectively. The first homework assignment (due 9/22) is meant to challenge your critical skills by asking you to evaluate an existing survey question (or battery of survey questions) and identify plausible ways to enhance its quality. The second assignment (due 10/20) asks students to analyze latency data from implicit measures of attitude—a growing and increasingly controversial area of research within public opinion and political psychology. Both assignments are aimed to push students toward the cutting edge of theory and measurement in the study of political attitudes.

4. **Class Presentation (15%)** -- You will give a presentation (no more than 20 minutes) in which you describe and evaluate a published application of confirmatory factor analysis (CFA). You are to choose an article published since 1990 in a major political science, psychology, or sociology journal that suits your substantive interests (the more recent the article, the better). The article you choose to present must be approved by the course instructor. In the presentation, you are to do the following:

   1. State the primary research question addressed by the researcher(s).
   2. Describe the data (e.g., N, measures, missing data problems, distributions)
   3. Describe how CFA was used to address the primary research question.
   4. Critique the presentation of the results (e.g., tables, figures, details about the analyses).
   5. State whether, in your opinion, CFA was appropriately chosen and why. Note any alternative analyses not described in the article that might shed additional light on the primary research question.

5. **Final Project (25%)** – Students will produce a paper in which they develop and test a measurement model for a construct(s) that is typical of research in their area. The goal of the paper (maximum 10 pages) is to provide full information regarding an actual item analysis of data of your choosing. This will require, at minimum, that you identify a suitable dataset. By the end of the semester, it is my goal to have the graduate computer lab equipped with Mplus to facilitate your analyses. Each paper should include the following four (4) components in the order outlined below. All papers will be due by 5pm on Thursday, December 15.

   1. a brief statement of the research question and hypotheses,
   2. a detailed method section,
   3. a detailed results section,
   4. a brief conclusion section.
Note: My strong preference is that you attempt an analysis of actual data. However, I understand that data suitable to your interests may not be available. If this is your case, you will be expected to produce a proposal for a future analysis of data. This proposal (i.e., research design) should describe the pending analysis using the components outlined above.

Course Books (required)

To keep down the costs of books for graduate students, you are expected to purchase the following books via a preferred internet vendor.


Course Schedule

Week 1 (8/25): Validity and Reliability in Attitudinal Research

- No assigned readings this week.

Week 2 (9/1): Attitudes – What are They? How Do We Know They Exist? How Do They Work?


**Themes:** Latent processes and measurement; attitude-behavior link; attitude importance; attitude accessibility.

**Week 3 (9/8): Theorizing the Survey Response**


**Themes:** Belief-sampling; measurement error; method artifact.

**Week 4 (9/15): Designing Questions**


**Themes:** Memory and attitude retrieval; factual constructs and attitude reports; measurement validity and reliability.
Week 5 (9/22): Explicit Attitudes – Self-report as Measurement


**Themes:** Attitudinal reports and contextual effects; Social desirability pressures and response editing; “Don’t know” responses; Language, culture, and measurement.

- **Homework #1 due:** Using the readings up to now, identify and critique a survey question (preferably a scale of items) that is relevant to your line of research. What are the theoretical and conceptual limitations of these item(s) and why? How can one systematically enhance the quality of these item(s) (maximum 5 pages, double-spaced)?

Week 6 (9/29): Implicit Cognition – Nonverbal Reports of Attitudes


Optional readings:


**Themes:** Subliminal priming; Implicit Association Test (IAT); Affect Misattribution Procedure (AMP); automaticity; response latencies as data.

- **ENJOY FALL BREAK!!!**

**Week 7 (10/13): Measures of Implicit Attitude – Controversies, Critiques, and Extensions**


**Themes:** Empirical, philosophical, and theoretical critiques of implicit attitude measures. Predictive and construct validity of implicit attitude measures.

**Week 8 (10/20): Item Analysis: An Introduction to EFA, CFA, and IRT**


**Optional readings:**


**Themes:** Exploratory and Confirmatory Factor Analysis; Item Response Theory. The interface between measurement model varieties.

• **Homework #2 due:** Using Greenwald et al. (2003) as a guide, create *IAT D* scores out of individual response latencies from an Implicit Association Test (furnished by the instructor). Describe the magnitude of the IAT effect. How does it compare with the earlier, “quick-and-dirty” approach employed by IAT researchers? What is the nature of the relationship between the *IAT D* scores and the self-reported analog for this implicit measure you have created (maximum 3 pages)?
Alternatively, you can take the Payne et al. (2010) article, which uses the AMP in the 2008 ANES panel study. Based on this article and data, you would describe the magnitude of the AMP effect in that sample and describe its relationship to the measure of explicit prejudice reported in this study (maximum 3 pages).

Week 9 (10/27): The “Nuts and Bolts” of Measurement Models: CFA in Practice


- Little, Todd D., Ulman Lindenberger, and John R. Nesselroade. 1999. On Selecting Indicators for Multivariate Measurement and Modeling With Latent Variables: When “Good” Indicators are Bad and “Bad” Indicators are Good. *Psychological Methods* 4: 192-211.


Optional readings:


Themes: Theoretical foundations of Confirmatory Factor Analysis (CFA); empirical applications of CFA. Evaluation of CFA model parameters.

Week 10 (11/3): Diagnosing and Modifying Measurement Models


*Optional readings:*


• Browne, Michael W., Robert C. MacCallum, Cheong-Tag Kim, Barbara L. Andersen, and Ronald Glaser. When Fit Indices and Residuals are Incompatible. *Psychological Methods* 7: 403-421.


**Themes:** Revision of poor-fitting CFA solutions. Pitfalls of model modification.


Optional readings:


Themes: Measurement invariance; modeling method effects; second-order factor analysis.


Themes: Non-responses and measurement models; sample size requirements; model equivalence and inference.

- **ENJOY THANKSGIVING!!!**

Week 13 (12/1): First Batch of Presentations

- No assigned readings.

Week 14 (12/8): Second Batch of Presentations

- No assigned readings.