

survey design and analysis

PSCI 7108.002
SPRING 2016
THURSDAYS, 3:30 - 6 PM
MUENZINGER E114

JENNIFER WOLAK
242 KETCHUM
wolakj@colorado.edu
OFFICE HOURS: Wednesdays, 11 A.M. – 12 P.M., 1-2 P.M.

This course focuses on the design and analysis of surveys. We will explore the construction and implementation of surveys, including the design of survey questionnaires, sample selection, choice of survey mode, and survey administration. We will also consider a variety of analytical tools useful to survey analysis (and applications beyond survey data), including multiple imputation, selection models, and seemingly unrelated regression. We will explore matters of measurement, including evaluations of the validity and reliability, the construction of scales, factor analysis, and item response theory. We will also study mediation as a tool to investigate the mechanisms by which factors influence political outcomes.

Our course will not be mathematics-intensive, but you should have a basic familiarity with probability, statistics, and the classic linear regression model. If you have successfully completed PSCI 7085 and PSCI 7095, you should have sufficient background for the topics covered in this course.

reading assignments

Readings for the course will be drawn from several texts as well as journal articles. Journal articles are accessible through the library's website, while book chapters can be found on the course website. In addition, you should acquire the following required texts. The recommended texts are also excellent references that will be useful additions to your bookshelf.

required texts

Converse, Jean M., and Stanley Presser. 1986. *Survey Questions: Handcrafting the Standardized Questionnaire*. Thousand Oaks, CA: Sage Publications. (Available as an e-book from the website of the University Libraries).

DeVellis, Robert F. 2011. *Scale Development: Theory and Applications*. 3rd ed. Thousand Oaks, CA: Sage.

Weisberg, Herbert F. 2005. *The Total Survey Error Approach: A Guide to the New Science of Survey Research*. Chicago: University of Chicago Press.

recommended texts

MacKinnon, David P. 2008. *Introduction to Statistical Mediation Analysis*. New York: Psychology Press.

Mclver, John P., and Edward G. Carmines. 1981. *Unidimensional Scaling*. Thousand Oaks, CA: Sage.

culearn is your friend

This syllabus, assignments, data sets, and other exciting material can be accessed on the class website on culearn.colorado.edu.

requirements

survey topic presentation and memo (15% of your final grade)

You will be asked to give a ten minute presentation on a specialized topic in survey design and implementation, as described in a separate memo. You will also prepare a short memo to accompany the presentation and share with the class.

homework and participation (45% of your final grade)

You are expected to attend and actively participate in class.

It is recommended that you complete each week's readings before that week's class session.

Most weeks, you will also be responsible for a homework assignment designed to help you practice the skills learned in class. Some of these assignments will be written memos while others will be designed as problem sets. While you are welcome to consult with your classmates on the homework assignments, the final work that you turn in must be your own. Late homework assignments will not be accepted.

research paper (40% of your final grade)

You will also develop a research paper that incorporates one of the methods discussed in class. In style, this paper should resemble the journal articles you have read in your classes. The research paper will be due the last week of the class. Additional guidelines are detailed in a separate handout.

special accommodations

If you qualify for accommodations because of a disability, please submit to me a letter from Disability Services in a timely manner so that your needs may be addressed. You can contact the Disability Services office for more information at www.colorado.edu/disabilityservices.

some important comments on academic integrity

Plagiarism and other academic dishonesty will not be tolerated. If you are not familiar with the rules of citing sources in written work or what constitutes plagiarism, you should contact me or refer to the University Honor Code at honorcode.colorado.edu. Academic dishonesty will result in an F in the course and referral to the Honor Court for additional non-academic sanctions.

All papers are expected to be original work, not previously or simultaneously handed in for credit in another course (unless prior approval of all instructors involved is obtained).

survey design and analysis

COURSE SCHEDULE

1. introduction to the course

Thursday, January 14

2. why we use surveys. the psychology of survey response

Thursday, January 21

- Zaller, John, and Stanley Feldman. 1992. "A Simple Theory of the Survey Response: Answering Questions versus Revealing Preferences." *American Journal of Political Science* 36(3):579-616.
- Feldman, Stanley. 1995. "Answering Survey Questions: The Measurement and Meaning of Public Opinion." In Milton Lodge and Kathleen McGraw, eds., *Political Judgment: Structure and Process*. Ann Arbor: University of Michigan Press.
- Weisberg, Chapters 1 and 2.

3. questionnaire design

Thursday, January 28

- Converse, Jean M., and Stanley Presser. 1986. *Survey Questions: Handcrafting the Standardized Questionnaire*. Thousand Oaks, CA: Sage Publications.
- Pasek, Josh, and Jon A. Krosnick. 2010. "Optimizing Survey Questionnaire Design in Political Science: Insights from Psychology." In Jan Leighley, ed., *Oxford Handbook of American Elections and Political Behavior*. Oxford: Oxford University Press.
- Weisberg, Chapters 5 and 6.
- *presentations*: Open-ended questions; Asking about facts; Evaluation of survey questions

4. sampling and survey mode

Thursday, February 4

- Weisberg, Chapters 3, 9, 10, and 12.
- Baker, Reg, J. Michael Brick, Nancy A. Bates, Mike Battaglia, Mick P. Couper, Jill A. Dever, Krista J. Gile, and Roger Tourangeau. 2013. "Summary Report of the AAPOR Task Force on Non-probability Sampling." *Journal of Survey Statistics and Methodology* 1(2): 90-143.
- *presentations*: Quota-controlled sampling; Mail surveys; Cell phone samples; Internet surveys; Interviewer effects

5. sampling error and response rates

Thursday, February 11

- Weisberg, Chapter 8.
- Groves, Robert M., and Emilia Peytcheva. 2008. "The Impact of Nonresponse Rates on Nonresponse Bias." *Public Opinion Quarterly* 72(2):167-189.
- *presentations*: The history of election polling; Accuracy of polling; House effects; Big Data and polling

6. sample selection bias and sidebar on selection models

Thursday, February 18

- Berinsky, Adam. 1999. "The Two Faces of Public Opinion." *American Journal of Political Science* 43:1209-1230.
- Berk, Richard A. 1983. "An Introduction to Sample Selection Bias in Sociological Data." *American Sociological Review* 48(3):386-398.

7. nonresponse and sidebar on multiple imputation

Thursday, February 25

- Weisberg, Chapter 7.
- King, Gary, James Honaker, Anne Joseph, and Kenneth Scheve. 2001. "Analyzing Incomplete Political Science Data: An Alternative Algorithm for Multiple Imputation." *American Political Science Review* 95(1):49-69.

8. survey administration

Thursday, March 3

- Weisberg, Chapters 4 and 13.
- *presentations*: Rolling cross-sectional surveys; Survey research in developing countries; Cross-national equivalence of surveys; Surveys in conflict zones; Surveys on sensitive topics

9. measurement, reliability and validity

Thursday, March 10

- DeVellis, Chapters 1-4.

10. item scaling

Thursday, March 17

- DeVellis, Chapter 5.
- *Recommended*: Mclver, John P., and Edward G. Carmines. 1981. *Unidimensional Scaling*. Thousand Oaks, CA: Sage Publications.

spring break

Thursday, March 24

11. factor analysis

Thursday, March 31

- DeVellis, Chapter 6.
- Dillon, William R., and Matthew Goldstein. 1984. *Multivariate Analysis: Methods and Applications*. New York: Wiley. Chapter 3.
- Tarman, Christopher, and David O. Sears. 2005. "The Conceptualization and Measurement of Symbolic Racism." *Journal of Politics* 67:731-761.

12. item response theory

Thursday, April 7

- DeVellis, Chapter 7.
- Delli Carpini, Michael X., and Scott Keeter. 1993. "Measuring Political Knowledge: Putting First Things First." *American Journal of Political Science* 37(4):1179-1206.
- Treier, Shawn, and Simon Jackman. 2008. "Democracy as a Latent Variable." *American Journal of Political Science* 52:201-217.

13. mediation and path analysis

Thursday, April 14

- Baron, Reuben M., and David A. Kenny. 1986. "The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations." *Journal of Personality and Social Psychology* 51(6):1173-1182.
- Malhotra, Neil, and Jon A. Krosnick. 2007. "Retrospective and Prospective Performance Assessments during the 2004 Election Campaign: Tests of Mediation and News Media Priming." *Political Behavior* 29(2): 249-278.

14. mediation through the lens of causal inference

Thursday, April 21

- Imai, Kosuke, Luke Keele, Dustin Tingley, and Teppei Yamamoto. 2011. "Unpacking the Black Box of Causality: Learning about Causal Mechanisms from Experimental and Observational Studies." *American Political Science Review* 105:765-789.

15. seemingly unrelated regression

Thursday, April 28

- Simon, Dennis M., Charles W. Ostrom, and Robin F. Marra. 1991. "The President, Referendum Voting, and Subnational Elections in the United States." *American Political Science Review* 85(4): 1177-1192.