

Data Collection Methods

Fall 2007

Course Numbers and Class Time

University of Michigan: SURVMETH 623

University of Maryland: SURV 623

Mondays, 3:00 – 5:40 PM (UMi: 300 Perry; UMd: 1208 LeFrak)

Instructors: Mick P. Couper and Frederick Conrad

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Overview and Goals of Course

This course will present research work which attempts to understand the effect of data collection decisions on survey errors. This is not a “how-to-do-it” course on data collection, but instead presents material that reviews effects of survey design decisions on data quality. It is designed to sensitize students to alternative design decisions and their impact on the data obtained from surveys.

The course will review alternative modes and methods of data collection used in surveys. It concentrates on the impact modes of data collection have on the quality of survey data, including measurement error properties, levels of nonresponse and coverage error. Methods of data collection will focus on advances in computer assisted methodology and comparisons among various methods (e.g. telephone versus face to face, paper versus computer assisted, interviewer administered versus self-administered). The statistical and social science literature on interviewer effects will also be examined, including literature related to the training and evaluation of interviewers. With respect to nonresponse, we will review the literature on the reduction of nonresponse and the impact of nonresponse on estimation.

Office Hours and Access to Instructor

This course will be taught using compressed video technology, allowing two-way interaction between College Park and Ann Arbor. The instructors are based in Ann Arbor, but will travel to College Park on designated days. Office hours are available by appointment; students are encouraged to communicate by e-mail and telephone as needed.

Readings

Required readings for each week are listed below. The readings will be available online for downloading and printing by students. The URL will be provided in class.

Evaluation

Grading will be based on:

- Participation in class discussion and submission of weekly questions via e-mail demonstrating understanding of the required readings (10% of grade).
- Four short exercises (3-5 pages each) reviewing specific aspects of the material covered (60% of grade). Exercise 1 will be worth 24% and the remaining exercises 12% each.
- A final in-class exam (30% of grade)

Dates of when exercises will be handed out and when they are due are indicated in the syllabus. Late assignments will not be accepted without prior arrangement with the instructor.

Course Outline and Readings

Note: The first class will meet on September 17th, and class will meet during the Michigan Fall break and on Columbus Day.

September 3: No class (Labor Day)

September 10: NO CLASS

September 17: Overview of course; introduction to errors in surveys; methods of data collection (Conrad)

Readings:

Groves, R.M. *et al.* (2004), "Methods of Data Collection." Chapter 5 in *Survey Methodology*, New York: Wiley.

Biemer, P.P. and Lyberg, L.E. (2003), "The Survey Process and Data Quality." Chapter 2 in *Introduction to Survey Quality*, New York: Wiley, pp. 26-62.

September 24: Major modes of data collection (Couper)

Readings:

Biemer, P.P. and Lyberg, L.E. (2003), "Data Collection Modes and Associated Errors." Chapter 6 in *Introduction to Survey Quality*, New York: Wiley.

Groves, R.M. (1990), "Theories and Methods of Telephone Surveys." *Annual Review of Sociology*, 16: 221-240.

Dillman, D.A. (1991), "The Design and Administration of Mail Surveys." *Annual Review of Sociology*, 17: 225-249.

October 1: Other data collection modes; mode comparisons (Couper)

Readings:

De Leeuw, E.D. (2005), "To Mix or Not to Mix Data Collection Modes in Surveys." *Journal of Official Statistics*, 21 (2): 233-255.

Silberstein, A.R. and Scott, S. (1991), "Expenditure Diary Surveys and Their Associated Errors." Chapter 16 in P.P. Biemer *et al.* (eds.), *Measurement Errors in Surveys*, New York: Wiley, pp. 303-326.

Fowler, F.J., Roman, A.M. and Di, Z.X. (1998), "Mode Effects in a Survey of Medicare Prostate Surgery Patients." *Public Opinion Quarterly*, 62 (1): 29-46.

October 8: Mode of data collection and survey errors (Couper)

Exercise 1 Handed Out

Readings:

De Leeuw, E.D. and van der Zouwen, J. (1988), "Data Quality in Telephone and Face to Face Surveys: A Comparative Meta-analysis." Chapter 18 in R.M. Groves *et al.* (eds.), *Telephone Survey Methodology*, New York: Wiley.

Tourangeau, R. and Smith, T.W. (1996), "Asking Sensitive Questions: The Impact of Data Collection Mode, Question Format, and Question Context." *Public Opinion Quarterly*, 60: 275-304.

October 15: Respondent selection; the role of the interviewer in survey data collection (Conrad)

Exercise 1 Due

Readings:

Gaziano, C. (2005), "Comparative Analysis of Within-Household Respondent Selection Techniques." *Public Opinion Quarterly*, 69 (1): 124-157.

Moore, J.C. (1988), "Self/Proxy Response Status and Survey Response Quality: A Review of the Literature." *Journal of Official Statistics*, 4: 155-172.

Collins, M. (1980), "Interviewer Variability: A Review of the Problem." *Journal of the Market Research Society*, 22 (2): 77-95.

October 22: Interviewer effects; interviewer training (Conrad)

Readings:

Groves, R.M. and Magilavy, L.J. (1986), "Measuring and Explaining Interviewer Effects

in Centralized Telephone Facilities.” *Public Opinion Quarterly*, 50 (2): 251-266.

Groves, R.M., and McGonagle, K. (2001), “A Theory-Guided Interviewer Training Protocol Regarding Survey Participation.” *Journal of Official Statistics*, 17: 249-266.

Johnson, T.P., Fendrich, M., Shaligram, C., Garcy, A., and Gillespie, S. (2000), “An Evaluation of the Effects of Interviewer Characteristics in an RDD Telephone Survey of Drug Abuse.” *Journal of Drug Issues*, 30 (1): 77-102.

October 29: Interviewer evaluation; interviewing style (Conrad)

Exercise 2 Handed Out

Readings:

Dykema, J., Lepkowski, J.M., and Blixt, S. (1997), “The Effect of Interviewer and Respondent Behavior on Data Quality: An Analysis of Interaction Coding in a Validation Study.” Chapter 12 in L.E. Lyberg *et al.* (eds.), *Survey Measurement and Process Quality*, New York: Wiley, pp. 287-310.

Forsman, G., and Schreiner, I. (1991), “The Design and Analysis of Reinterview: An Overview.” Chapter 15 in P.P. Biemer *et al.* (eds.), *Measurement Errors in Surveys*, New York: Wiley.

Conrad, F.G., and Schober, M.F. (2000), “Clarifying Question Meaning in a Household Telephone Survey.” *Public Opinion Quarterly*, 64, 1-28.

November 5: Computer assisted interviewing (Couper)

Exercise 2 Due

Readings:

Couper, M.P., and Nicholls II, W.L. (1998), “The History and Development of Computer Assisted Survey Information Collection.” Chapter 1 in M.P. Couper *et al.* (eds.), *Computer Assisted Survey Information Collection*, New York: Wiley, pp. 1-21.

Nicholls, W.L., Baker, R.P. and J. Martin (1997) “The Effect of New Data Collection Technologies on Survey Data.” Chapter 9 in L.E. Lyberg *et al.* (eds.), *Survey Measurement and Process Quality*, New York: Wiley.

Couper, M.P. (2005), “Technology Trends in Survey Data Collection.” *Social Science Computer Review*, 23 (4): 486-501.

November 12: Computer assisted interviewing (continued) (Couper)

Exercise 3 Handed Out

Readings:

Kinsey, S.H., and Jewell, D.M. (1998), “A Systematic Approach to Instrument Development in CAI.” Chapter 6 in M.P. Couper *et al.* (eds.), *Computer Assisted Survey Information Collection*, New York: Wiley, pp. 105-123.

Ramos, M., Sedivi, B.M., and Sweet, E.M. (1998), "Computerized Self-Administered Questionnaires (CSAQ)." Chapter 20 in M.P. Couper *et al.* (eds.), *Computer Assisted Survey Information Collection*, New York: Wiley, pp. 389-408.

Couper, M.P. (2000), "Web Surveys: A Review of Issues and Approaches." *Public Opinion Quarterly*, 64: 464-494.

**November 19: Nonresponse error; response rates (Couper)
Exercise 3 Due**

Readings:

De Leeuw, E., and de Heer, W. (2002), "Trends in Household Survey Nonresponse: A Longitudinal and International Perspective." Chapter 3 in R.M. Groves *et al.* (eds.) *Survey Nonresponse*, New York: Wiley, pp. 41-54.

Groves, R.M., and Couper, M.P. (1998), "A Conceptual Framework for Survey Participation." Chapter 2 in *Nonresponse in Household Interview Surveys*, New York: Wiley, pp. 25-46.

Beatty, P. and Herrmann, D. (2002), "To Answer or Not to Answer: Decision Processes Related to Survey Item Nonresponse." Chapter 5 in R.M. Groves *et al.* (eds.) *Survey Nonresponse*, New York: Wiley, pp. 71-86.

November 26: Nonresponse error; nonresponse reduction (Couper)

Readings:

Keeter, S., Miller, C., Kohut, A., Groves, R., Presser, S. (2000) "Consequences of Reducing Nonresponse in a National Telephone Survey." *Public Opinion Quarterly*, 64: 125-148.

Groves, R.M., and Couper, M.P. (1998), "How Survey Design Features Affect Participation." Chapter 10 in *Nonresponse in Household Interview Surveys*, New York: Wiley, pp. 269-293.

Redline, C., and Dillman, D. (2002), "The Influence of Alternative Visual Designs on Respondents' Performance with Branching Instructions in Self-Administered Questionnaires." Chapter 12 in R.M. Groves *et al.* (eds.) *Survey Nonresponse*, New York: Wiley, pp. 179-195.

**December 3: Establishment surveys (Conrad)
Exercise 4 Handed Out**

Readings:

Willimack, D., Nichols, E., and Sudman, S. (2002), "Understanding Unit and Item Nonresponse in Business Surveys." Chapter 14 in R.M. Groves *et al.* (eds.) *Survey Nonresponse*, New York: Wiley, pp. 213-228.

Edwards, W.S., and Cantor, D. (1991), "Toward a Response Model in Establishment Surveys." Chapter 12 in P.P. Biemer *et al.* (eds.), *Measurement Errors in Surveys*, New York: Wiley, pp. 211-233.

Biemer, P.P., and Fecso, R.S. (1995), "Evaluating and Controlling Measurement Error in Business Surveys." Chapter 15 in B. Cox *et al.* (eds.), *Business Survey Methods*, New York: Wiley.

December 10: Longitudinal surveys (Conrad)

Exercise 4 Due

Readings:

Kalton, G., and Citro, C. (1993), "Panel Surveys: Adding the Fourth Dimension." *Survey Methodology*, 19 (2): 205-215.

Lepkowski, J., and Couper, M.P. (2002), "Nonresponse in the Second Wave of Longitudinal Household Surveys." Chapter 17 in R.M. Groves *et al.* (eds.), *Survey Nonresponse*, New York: Wiley, pp. 259-273.

Kalton, G., Kasprzyk, D., and McMillen, D. (1989), "Nonsampling Error in Panel Surveys." In D. Kasprzyk *et al.* (eds.), *Panel Surveys*, New York: Wiley.

December 17: Final exam