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USING THE AMERICAN NATIONAL ELECTION STUDY SURVEYS TO TEST SOCIAL PSYCHOLOGICAL HYPOTHESES

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Since 1948, the American National Election Study (ANES) has been collecting huge data sets, allowing social scientists to study the psychology of voting behavior, political attitudes and beliefs, stereotyping, political socialization, the effects of social networks, the impact of the news media on the political process, and much more. Every 2 years, representative samples of more than 1,000 Americans have been interviewed in-depth after the national elections. In presidential election years, these respondents have been interviewed in-depth before the election as well. Panel studies have been conducted to track changes in people's attitudes, beliefs, and behavior, and pilot studies have been conducted to develop new measurements to be used later in the interviews.

The ANES was conceived at the University of Michigan's Institute for Social Research by Angus Campbell, Philip Converse, Warren Miller, and Donald Stokes. Some of the most widely cited books on the psychology of voting were written by these scholars using ANES data (e.g., Campbell, Converse, Miller, & Stokes, 1960; Converse, 1964; Miller, 1974), and the data have been used by numerous other researchers to test hypotheses and produce thousands of books and articles. In 1977, the National Science

Foundation (NSF) established the ANES as a national research resource for use by scholars around the world, and the NSF has provided funding with long-term grants for the project ever since. The most recent grant, for 2006–2009, marks the first time that the University of Michigan has collaborated with another university (Stanford University) to run the project jointly. In addition to traditional preelection and postelection in-depth interviews and pilot studies, this cycle marked implementation of an ambitious panel study to track large representative national samples of citizens monthly from January 2008 through May 2009. In addition, the ANES is collaborating with the National Longitudinal Survey of Youth to include political questions in their ongoing long-term panel studies tracking huge representative samples of cohorts of Americans.

The ANES is a common and collaborative research instrument of the scientific community. The data are offered publicly and for free shortly after the data collection concludes, and the principal investigators, board of overseers, and staff are barred from making personal use of the data before the data are publicly released. Conducting nationally representative, face-to-face interviews is expensive and is essentially impossible for individual researchers with conventionally available funding. The ANES provides many opportunities for researchers in social psychology, personality psychology, cognitive psychology, and other subdisciplines who wish to investigate the psychology of political thinking and action using nationally representative data.

In this chapter, we offer an overview of the ANES and describe the sorts of measurements that have been made in the surveys, how to obtain the data, and how to conduct analysis of the data using common statistical software. We also briefly describe some other large-scale data sources that might be of value to psychologists.

THE VALUE OF SURVEY DATA TO PSYCHOLOGISTS

From its inception, social psychology has been especially focused on experimental methods for theory testing. Laboratory experimentation has enabled researchers to isolate causal effects and claim strong internal validity by controlling confounding factors. But the generalizability of laboratory-based findings is limited. Replicating findings using the same methodology over time enhances confidence in their reality but leaves uncertain the extent to which the phenomena are relevant to explaining events outside the lab.

Therefore, in the spirit of methodological pluralism, the value of evidence from experiments can be enhanced by coordinated investigation of

the same phenomena through survey data (Kinder & Palfrey, 1993). Surveys allow tracking changes in attitudes, beliefs, and behavior over time, either in individual respondents or in the aggregate of the general population. Such data allow for sophisticated statistical analyses to bolster confidence in the directions of causal relations (Finkel, 1995), and researchers can embed experiments in surveys to simultaneously enhance internal and external validity (Piazza & Sniderman, 1998; Visser, Krosnick, & Lavrakas, 2000). Doing so with general population samples allows researchers to explore the impact of a wide array of possible individual difference moderators of effects, when such investigation is more difficult with more homogeneous conventional lab studies with college student participants (Sears, 1986).

SURVEY METHODOLOGY

The core of survey methodology is probability sampling. In probability sampling, all elements of the population have a known probability of being selected. By using scientific sampling approaches and appropriate statistical methods, researchers can produce results that describe the population with a great deal of confidence. In contrast, conducting a study with a so-called convenience sample, whereby large parts of the population have no chance of participation and other probabilities of selection are unknown, a researcher can know only that some effect occurs but not with what prevalence and magnitude in the population.

The most common survey modes used today are face-to-face interviewing, telephone interviewing, mailed self-administered questionnaires, and questionnaires administered on computers through the Internet. Each of these modes has advantages and disadvantages. Face-to-face interviewing yields high response rates and accurate reporting (Holbrook, Green, & Krosnick, 2003), and sensitive questions can be asked by having an interviewer give his or her laptop computer to the respondent, who puts on headphones, listens to questions being read aloud to him or her, and answers the questions privately by typing answers directly into the computer. Interviewers' laptops can implement complex experimental designs embedded within the questionnaires as well. However, face-to-face interviewing is time-consuming and therefore expensive, because interviewers often have to spend much time traveling to contact the respondents and conduct interviews.

Telephone interviewing has been a major source of data collection in recent decades, and telephone methods such as random digit dialing make it relatively straightforward to draw and contact a probability sample of a population by telephone. As with face-to-face interviewing, telephone interviewers

use computers that guide them through a questionnaire and implement experimental manipulations in a survey when desired.

Self-administered paper-and-pencil questionnaires, often mailed to respondents, have been used for large-scale survey operations but yield low response rates in general population surveys unless particular methods are used to enhance response rates (Dillman, 2000). Paper-and-pencil questionnaires are not well suited to complex skip patterns, whereby answers to early questions determine which later questions a person should answer. Some studies have shown that telephone interviewing can produce more accurate results than self-administered paper-and-pencil questionnaires (Silver & Krosnick, 2001), but there have also been cases in which mail surveys provided excellent results (Visser, Krosnick, Marquette, & Kurtin, 1996).

Self-administered questionnaires can also be completed through computers and the Internet, and this methodology is now increasingly popular. Internet surveys combine many of the positive features of other survey modes: No interviewers are needed, which saves money; complex filtering and experimental manipulations can be implemented; visual presentation of response options is routine, perhaps reducing respondent burden; and audio and video material can be practically presented. However, Internet access is not universal among the general population (DeBell & Chapman, 2006), which presents challenges in the use of web-based surveys. Some commercial firms in the United States and other countries have recruited representative samples of adults and given computer equipment and Internet access to households without it, thus yielding accurate data through this mode (Chang & Krosnick, 2001a, 2001b).

Regardless of the mode selected, respondent recruitment procedures should be designed to minimize nonresponse bias and maximize the response rate. *Nonresponse bias* occurs when a sample is systematically different from the population. *Response rates*—defined as the percentage of eligible sample members who complete a survey (American Association for Public Opinion Research, 2006)—are of interest to survey researchers because they indicate the degree of risk that a survey sample might be unrepresentative. If nearly all sampled individuals complete a survey, and if the survey is designed and implemented optimally, then the potential for nonresponse bias is low. Conversely, if the response rate is low, there is increased potential for nonresponse bias to affect estimates. However, low response rates per se are not evidence of nonresponse bias; they merely indicate the possibility of bias, and an accumulating body of studies indicates that if a probability sample is drawn from a population and serious efforts are made to collect data from as many sampled individuals as possible, results appear to be minimally affected by response rates (Curtin, Presser, & Singer, 2002; Holbrook, Krosnick, & Pfent, 2008; Keeter et al., 2000).

COMPONENTS OF THE AMERICAN NATIONAL ELECTION STUDY

The ANES consists of three major components: pre- and postelection surveys, panel studies, and pilot studies. We discuss each of these components in the following subsections.

Pre- and Postelection Surveys

These surveys provide long-term time-series measures. In every presidential election year since 1948, the ANES has interviewed a representative sample of American adult citizens before Election Day and has reinterviewed most of the preelection participants after Election Day. In years of congressional elections through 1998, the survey implemented only postelection interviews; in 2002, pre- and postelection interviews were conducted. Respondents were usually interviewed face-to-face in their homes, although some telephone interviewing was done to test the viability of that method. Preelection interviewing usually started right after Labor Day, and postelection interviewing was usually initiated right after the election and continued in December and January. The pre- and postelection interviews yield the core of the ANES, and many questions have been asked repeatedly in many or every election year to generate a long time-series of measurements of Americans' attitudes on many issues; party identifications; political efficacy; trust in government and the political system; political participation; mass media use; ideology; evaluations of parties, candidates, and the president; and much more.

Such data have allowed psychologists to test a wide range of theory-driven hypotheses. For example, Krosnick and Kinder (1990) studied news media priming using the ANES by focusing on the Iran/Contra scandal. On November 25, 1986, the American public learned that members of the National Security Council had been funneling funds (earned through arms sales to Iran) to the Contras fighting to overthrow the Sandinista government in Nicaragua. Although there had been almost no national news media attention to Nicaragua and the Contras previously, this revelation led to a dramatic increase in the salience of that country in the American press during the following weeks. Krosnick and Kinder suspected that this coverage might have primed Americans' attitudes toward U.S. involvement in Nicaragua and thereby increased the impact of these attitudes on evaluations of President Ronald Reagan's job performance.

To test this hypothesis, Krosnick and Kinder (1990) took advantage of the fact that data collection for the survey conducted after the 1986 election was underway before November 25 and continued after that date. They split the survey sample into one group of respondents who had been interviewed

before November 25 and others who had been interviewed afterward. As expected, overall assessments of presidential job performance were based much more strongly on attitudes toward U.S. involvement in Nicaragua in the second group than in the first group.

Abelson, Kinder, Peters, and Fiske (1982) used ANES data collected in 1980 to investigate the affective component of political candidate evaluation. Respondents were asked to say whether various specific politicians had ever made them feel a certain emotion (e.g., being afraid, angry, sad, proud, hopeful). An exploratory factor analysis revealed that negative and positive emotions loaded on two distinct factors, and the impact of these underlying emotional dimensions on candidate evaluations and preferences was investigated. Evaluations of candidates have been measured in the ANES with so-called feeling thermometers, which ask the respondents to indicate how "warm or favorable" or "cold or unfavorable" they feel toward particular politicians on a scale ranging from 0 to 100. Using these measures, Abelson et al. found that both dimensions contributed to overall evaluations of and preferences among politicians, thus enhancing confidence in the notion that positive and negative reactions to people can have partially independent impact on attitudes.

Holbrook, Krosnick, Visser, Gardner, and Cacioppo (2001) used another set of questions in the ANES to investigate how perceived positive and negative features of candidates contribute to overall evaluations. The ANES surveys have often asked respondents to list attributes of the major parties' candidates running for president that might make the respondent want to vote for or against each person. Holbrook et al. (2001) analyzed these data from all presidential elections between 1972 and 1996 to compare two models of the process by which people use candidate attributes to yield overall evaluations. The symmetric linear model (SLM) posits that the difference between the number of positive and negative attributes a candidate is perceived to possess directly predicts overall evaluations. In contrast, the asymmetric, nonlinear model (ANM) proposes a more complex reasoning process, whereby positive and negative attributes contribute differently to the overall evaluation, with negative attributes having more impact and each additional belief having a decreasing marginal effect. The ANM was found to be superior to the simpler SLM.

Panel Surveys

Panel surveys interview the same respondents two or more times to investigate individual-level change over time.¹ Analyses of panel data have often investigated stability of attitudes and beliefs and how they develop.

¹Although the preelection and postelection waves of the face-to-face ANES studies constitute two-wave panels, few questions have been asked identically in both interviews, thus limiting the study's ability to track changes over time in individuals.

Some ANES panel studies have tracked respondents over longer time periods spanning several elections (1956–1958–1960, 1972–1974–1976, 2000–2002–2004). Other ANES panels have tracked changes over 1-year periods, such as from 1990 to 1991 to 1992, or changes during a single election campaign season, such as in 1980, when data were collected in January, June, September, and November–December.

A study by Bannon, Krosnick, and Brannon (2006) used the specific structure of the ANES Panel Study of 1990–1992–1994 to address the occurrence of media priming in election campaigns. It also tested an alternative explanation for the priming effect of media coverage on how issues are used by citizens in their overall evaluations of political candidates. Media priming theories postulate that citizens form the evaluations on the level of issues and then combine those into an overall candidate evaluation. However, past research has shown that sometimes respondents engage in *rationalization strategies* (Rahn, Krosnick, & Breuning, 1994), that is, forming an overall evaluation and then inferring the lower level issue evaluations from that overall evaluation. During the 1990–1992–1994 election cycle, the researchers used the change in public attention from the Gulf War to the state of the economy to check how individuals in the panel study changed their evaluation of the economic policies of the president and how those evaluations translated into changes of the overall evaluation. Using structural equation modeling, the researchers used the panel data to isolate the direction of causality. They found that although both rationalization and traditional media priming do occur, priming has a much stronger effect. In fact, previous studies might have underestimated the media priming effect because it was counterbalanced by the presence of unmodeled rationalization effects.

Pilot Studies and Other Special Studies

ANES pilot studies have been conducted to test new measurement methods or to evaluate the effectiveness of questions used in the past. Some of these have focused on methodological research questions. For example, in 1982, a special study was conducted to compare face-to-face interviewing with telephone interviewing and to evaluate whether a switch to telephone interviewing would allow for continued high quality data collection at a reduced price (Shanks, Sanchez, & Morton, 1983). Others have focused more specifically on matters of traditional interest to psychologists.

The 1998 pilot study included questions investigating two personality attributes: need for cognition and need to evaluate. Bizer and colleagues (Bizer et al., 2004; Bizer, Krosnick, Petty, Rucker, & Wheeler, 2000) found that need for cognition and need to evaluate helped in many ways to illuminate processes of political cognition and action. Respondents high in need for

cognition and need to evaluate were more interested in politics and more engaged in the campaign. Those high in need to evaluate had more extreme attitudes, and those high in need for cognition were less likely to be dissatisfied with the experience of taking the survey. Although need for cognition has usually been measured with 18 questionnaire items (Cacioppo, Petty, & Kao, 1984) and need to evaluate has been measured with 16 (Jarvis & Petty, 1996), the ANES implemented two optimally formatted questions measuring need for cognition and three optimally formatted questions measuring need to evaluate, which yielded remarkably effective measurements.

The 2006 pilot study addressed many topics of interest to psychologists: character judgments, defensive confidence, need for closure, belief in a just world, self monitoring, interpersonal trust, basic values, optimism–pessimism, social networks, tolerance, and many others. More than 20 initial reports on many of these topics can be seen on the ANES website (<http://www.electionstudies.org>). This is more than for any prior pilot study, but much work remains to be done with the 2006 data set.

USING THE DATA FROM THE AMERICAN NATIONAL ELECTION STUDIES

All ANES data sets are available through the Internet at no cost from the ANES website. Each data file is accompanied by documentation of the study's design. Many ANES data files provide information about the interviewers and their assessments of the respondents and the interview situations, which can be used to investigate methodological issues. The website also provides a great deal of other information about the ANES and maintains a bibliography that documents many of the thousands of articles, books, and papers that have used its data.

Of course, the ANES is only beneficial to the researcher provided the questions he or she is interested in were actually asked in the surveys. There is a bit of a chicken-and-egg problem here: A researcher does not know whether the ANES offers measures suitable to address his or her hypotheses until he or she learns what measures are available, but the task of learning about all available measures administered during many hours of interviewing over many years seems daunting if he or she does not know in advance that suitable measures will be found there. An efficient solution to this problem is for researchers to get familiar with one of the traditional preelection–postelection survey questionnaire pairs. Many of the same sorts of items are asked across many years, so becoming familiar with one questionnaire is a good first step toward becoming familiar with many.

All ANES measures are documented in the codebooks and questionnaires available for each data set (go to <http://www.electionstudies.org>). The

questionnaires list all the questions asked, often also documenting instructions given to the interviewers about how to ask the questions. The codebooks list every variable in each data set, showing the responses to the questions and also many additional variables about the interview process, the interviewer, and the respondent. The documentation also includes descriptions of sample designs, experiments embedded in the surveys, and information on the data collection modes. Researchers should bear in mind that coding approaches may differ across variables, waves, or years of data collection, so it is important to carefully read the codebook description of every variable one works with.

Constructs and Measures

The ANES has measured a wide variety of constructs known or hypothesized to be associated with voter turnout or vote choice and has repeated many such measurements over time. These constructs include the following:

- *Identification with political parties and attitudes toward political parties.* Identification with a political party is one of the strongest predictors of voting decisions, so it is among the most widely used variables in public opinion research.² Other questions about partisanship and attitudes toward parties include thermometers measuring warm–cold feelings toward parties, open-ended questions asking what the respondent likes and dislikes about each party, and whether the respondent perceives any differences between the parties in terms of what they stand for.
- *Candidate and incumbent evaluations.* Opinions of candidates and incumbent presidents are measured with feeling thermometers and with questions about perceptions of the candidates' personality traits, approval ratings of politicians' job performance, and questions asking whether the candidate has elicited various emotions from the respondent, including anger, hope, fear, and pride.
- *Issues.* People's attitudes toward various different policy options have been measured in domains such as the economy, the envi-

²ANES measures party identification with a branching question that begins, "Generally speaking, do you think of yourself as a Republican, a Democrat, an independent, or what?" If the respondent answers "Republican" or "Democrat," a follow-up question asks, "Would you call yourself a strong [Republican/Democrat] or a not very strong [Republican/Democrat]?" If the respondent does not answer "Republican" or "Democrat," a follow-up question asks, "Do you think of yourself as closer to the Republican Party or to the Democratic Party?" Responses to these questions can be combined to yield a 7-point summary scale: *strong Democrat, not very strong Democrat, independent closer to the Democratic Party, independent, independent closer to the Republican Party, not very strong Republican, strong Republican.* However, some research indicates that this 7-point scale is not monotonically related to other variables, so analysts should check for monotonicity before computing statistics with it.

ronment, federal spending, foreign relations, racial relations, abortion, gun control, space exploration, capital punishment, social welfare, and much more. Respondents have also been asked open-ended questions about what they view as the country's most important problems.

- *Ideology and values.* Religious values, moral traditionalism, attitudes regarding equality, social trust and altruism, cognitive style, and other values and dispositions have been measured in various years.
- *System support.* ANES surveys have included many batteries of questions about trust in government, political efficacy, government power, patriotism, and other indicators of general attitudes toward the political system, the nation, or the government.
- *Political participation and mobilization.* The ANES has asked people to predict whether they will vote, has measured whether they voted via self-reports, and has in some years validated the turnout measures by checking to see whether official government records indicate that each respondent did or did not vote. In addition to questions about voting behavior, the ANES has regularly asked about political interest, frequency of discussing politics with others, and participation in the election campaigns.
- *Expertise.* The ANES has measured political expertise using quiz questions that asked respondents to identify the jobs or offices held by particular political actors or to answer factual questions (e.g., which political party has the majority of the seats in Congress).
- *Media.* Use of the news media has been measured by asking people how often they have watched television news, read newspapers and magazines, and listened to the radio. Respondents have also been asked how closely they have paid attention to political information in the news.
- *Social groups.* Feeling thermometer questions and other questions have been asked to measure attitudes toward social groups and political institutions, such as Blacks, Whites, Jews, Catholics, farmers, big business, and many others.
- *Personal and demographic data.* An extensive array of background variables is provided with most ANES studies, including age, sex, race, ethnicity, educational attainment, income, employment status, marital status, home ownership status, geographic area of residence, social class, and more.

Weighting and Variance Estimation in the ANES

The ANES does not use simple random samples, so statistical procedures that assume simple random sampling are generally inappropriate for the analysis of ANES data. The extent to which the study design differs from a simple random sample and the extent to which documentation and data files support design-consistent statistical procedures have varied over the decades. In general, specialized statistical steps should be taken when analyzing ANES data. These steps are unfamiliar to most researchers who have not been trained in survey methodology, but they are fairly easy to implement correctly. There are two steps: weight the data and compute design-consistent estimates of variance (including standard errors).

Weights

If an ANES data set includes an analysis weight variable, researchers should use it if they wish to project their results to the population of American adult citizens. It is important to use the weights, because weights adjust the data for unequal probabilities of selection and correct for nonresponse bias, making estimates such as percentages, means, and regression coefficients more accurate as parameter estimates for the entire population. In statistical software such as Stata, SAS, and SPSS, researchers can implement simple instructions to tell the software to use a weight. For example, in SPSS, once the 2006 Pilot Study data set has been opened, implementing the syntax command "weight by v06p002" tells SPSS to run subsequent analyses using the pilot study's weight variable, V06P002. The name of the weight variable(s) for each study can be found in the study's codebook.

Design-Consistent Estimates

Running analyses with the weights is sufficient to obtain correct point estimates such as percentages and regression coefficients for the population. However, by default, most statistical software will calculate sampling errors and statistical significance using procedures designed for simple random samples (SRS). The complex sample designs used in most ANES studies differ in important ways from simple random sampling, so standard errors, confidence intervals, and levels of statistical significance reported using SRS assumptions for ANES data are incorrect. Normally, the use of SRS significance statistics will lead to Type I errors (i.e., false rejection of the null, or making differences look significant when they are not).

To avoid these errors, data analysts should always use design-consistent statistical procedures when the data support them. Recent ANES data sets support Taylor series methods (Kish, 1965; Lee & Forthofer, 2006) to estimate standard errors, and many statistical programs, including Stata (<http://www.stata.com>),

SAS (<http://www.sas.com>), SUDAAN (<http://www.rti.org>), SPSS with the Complex Samples option (http://www.spss.com/complex_samples), and AM (<http://am.air.org>), implement these estimation procedures. To use these procedures, the user must specify a stratum variable and a cluster (or primary sampling unit or standard error computation unit) variable in much the same way that analysis weights are defined prior to analysis. For further information about design-consistent estimation, see the software manuals, Lee and Forthofer (2006), and ANES documentation (DeBell et al., 2009).

CODA

As we hope is clear, the ANES offers wonderful opportunities for psychologists to test a wide range of hypotheses using best practices survey methodology and to yield findings of much value to the discipline. We look forward to much more such work in the future.

RECOMMENDED DATA SETS

- *American National Election Study (ANES)*. See <http://www.electionstudies.org>.
- *Comparative Study of Electoral Systems (CSES)*. Election studies from around the world include a common module of survey questions that are merged into a single, free data set. See <http://www.umich.edu/~cses>.
- *European Social Survey (ESS)*. ESS is conducted in more than 30 countries and includes questions on topics including values; political engagement; well-being; health; security; and national, ethnic, and religious identity. See <http://www.europeansocialsurvey.org>.
- *General Social Survey (GSS)*. GSS has administered demographic, behavioral, and attitudinal questions in the United States on a recurring basis since 1972. See <http://www.norc.org/GSS+Website>.
- *International Social Survey Programme (ISSP)*. ISSP consolidates and coordinates survey data from numerous countries on many topics including social inequality, the role of government, gender roles, religion, and national identity. See <http://www.issp.org>.
- *Interuniversity Consortium for Political and Social Research (ICPSR)*. ICPSR archives contain numerous data sets of interest for psychological research. See <http://www.icpsr.umich.edu>.

- *National Annenberg Election Studies (NAES)*. NAES has used very large samples to track changes in public opinion during campaigns, with particular emphasis on media and political communication. See <http://www.annenbergpublicpolicycenter.org>.
- *Roper Center*. The Public Opinion Archives at the Roper Center contain numerous data sets of interest for psychological research. See <http://www.ropercenter.uconn.edu>.
- *World Values Survey (WVS)*. WVS surveys have focused on politics, religion, economic and social life, happiness, and other areas of concern. See <http://www.worldvaluessurvey.org>.

FOR FURTHER READING

- Robinson, J. P., Shaver, P. R., & Wrightsman, L. S. (Eds.). (1991). *Measures of personality and social psychological attitudes*. San Diego, CA: Academic Press.
- Contains the exact wording of numerous sets of questions used to measure dimensions of personality and other psychological constructs.
- Robinson, J. P., Shaver, P. R., & Wrightsman, L. S. (Eds.). (1999). *Measures of political attitudes*. San Diego, CA: Academic Press.
- Contains the exact wording of numerous sets of questions used to measure political attitudes, as well as essays on conceptualization and measurement issues in political survey research.

REFERENCES

- Abelson, R. P., Kinder, D. R., Peters, M. D., & Fiske, S. T. (1982). Affective and semantic components in political person perception. *Journal of Personality and Social Psychology*, 42, 619–630. doi:10.1037/0022-3514.42.4.619
- American Association for Public Opinion Research. (2006). *Standard definitions: Final dispositions of case codes and outcome rates for surveys* (4th ed.). Lenexa, KS: Author.
- Bannon, B., Krosnick, J. A., & Brannon, L. (2006, August/September). *News media priming: Derivation or rationalization?* Paper presented at the annual meeting of the American Political Science Association, Philadelphia, PA.
- Bizer, G. Y., Krosnick, J. A., Holbrook, A. L., Wheeler, S. C., Rucker, D. D., & Petty, R. E. (2004). The impact of personality on cognitive, behavioral, and affective political processes: The effects of need to evaluate. *Journal of Personality*, 72, 995–1027. doi:10.1111/j.0022-3506.2004.00288.x
- Bizer, G. Y., Krosnick, J. A., Petty, R. E., Rucker, D. D., & Wheeler, S. C. (2000). *Need for cognition and need to evaluate in the 1998 National Election Survey Pilot Study*.

- Retrieved from ftp://ftp.nes.isr.umich.edu/ftp/resources/psreport/98pilot/bizer98.pdf, 01/27/2008
- Cacioppo, J. T., Petty, R. E., & Kao, C. F. (1984). The efficient assessment of need for cognition. *Journal of Personality Assessment*, 48, 306–307. doi:10.1207/s15327752jpa4803_13
- Campbell, A., Converse, P. E., Miller, W. E., & Stokes, D. (1960). *The American voter*. New York, NY: Wiley.
- Chang, L., & Krosnick, J. A. (2001a, May). *The accuracy of self-reports: Comparisons of an RDD telephone survey with Internet Surveys by Harris Interactive and Knowledge Networks*. Paper presented at the annual meeting of the American Association for Public Opinion Research, Montreal, Canada.
- Chang, L., & Krosnick, J. A. (2001b, May). *The representativeness of national samples: Comparisons of an RDD telephone survey with matched Internet surveys by Harris Interactive and Knowledge Networks*. Paper presented at the annual meeting of the American Association for Public Opinion Research, Montreal, Canada.
- Converse, P. E. (1964). The nature of belief systems in mass publics. In D. E. Apter (Ed.), *Ideology and discontent* (pp. 206–261). New York, NY: Free Press.
- Curtin, R., Presser, S., & Singer, E. (2000). The effects of response rate changes on the index of consumer sentiment. *Public Opinion Quarterly*, 64, 413–428. doi:10.1086/318638
- DeBell, M., & Chapman, C. (2006). *Computer and Internet use by students in 2003* (NCES 2006-065). Washington, DC: U.S. Department of Education, National Center for Education Statistics.
- DeBell, M., Howell, D., Krosnick, J. A., Lupia, A., & Luevano, P. (2009). *Methodology Report for the 2006 ANES Pilot Study*. Palo Alto, CA, and Ann Arbor, MI: Stanford University and the University of Michigan.
- Dillman, D. A. (2000). *Mail and Internet surveys: The tailored design method* (2nd ed.). New York, NY: Wiley.
- Finkel, S. E. (1995). *Causal analysis with panel data*. Thousand Oaks, CA: Sage.
- Holbrook, A. L., Green, M. C., & Krosnick, J. A. (2003). Telephone versus face-to-face interviewing of national probability samples with long questionnaires. *Public Opinion Quarterly*, 67, 79–125. doi:10.1086/346010
- Holbrook, A. L., Krosnick, J. A., & Pfent, A. (2008). The causes and consequences of response rates in surveys by the news media and government contractor survey research firms. In J. Lepkowski, C. Tucker, J. M. Brick, E. D. De Leeuw, L. Japac, P. J. Lavrakas, et al. (Eds.), *Advances in telephone survey methodology* (pp. 499–528). New York, NY: Wiley.
- Holbrook, A. L., Krosnick, J. A., Visser, P. S., Gardner, W. L., & Cacioppo, J. T. (2001). Attitudes toward presidential candidates and political parties: Initial optimism, inertial first impressions, and a focus on flaws. *American Journal of Political Science*, 45, 930–950. doi:10.2307/2669333
- Jarvis, W. B. G., & R. E. Petty. (1996). The need to evaluate. *Journal of Personality and Social Psychology*, 70, 172–194. doi:10.1037/0022-3514.70.1.172
- Keeter, S., Miller, C., Kohut, A., Groves, R. M., & Presser, S. (2000). Consequences of reducing nonresponse in a national telephone survey. *Public Opinion Quarterly*, 64, 125–148. doi:10.1086/317759
- Kinder, D. R., & Palfrey, T. R. (1993). On behalf of an experimental political science. In D. R. Kinder & T. R. Palfrey (Eds.), *Experimental foundations of political science* (pp. 1–39). Ann Arbor, MI: The University of Michigan Press.
- Kish, L. (1965). *Survey sampling*. New York, NY: Wiley.
- Krosnick, J. A., & Kinder, D. R. (1990). Altering popular support for the president through priming: The Iran-Contra affair. *The American Political Science Review*, 84, 497–512. doi:10.2307/1963531
- Lee, E. S., & Forthofer, R. N. (2006). *Analyzing complex survey data*. Thousand Oaks, CA: Sage.
- Miller, A. H. (1974). Political issues and trust in government: 1964–1970. *The American Political Science Review*, 68, 951–972. doi:10.2307/1959140
- Piazza, T., & Sniderman, P. M. (1998). Incorporating experiments into computer assisted surveys. In M. P. Couper, R. P. Baker, J. Bethlehem, C. Z. F. Clark, J. Martin, W. L., Nicholls, & J. M. O'Reilly (Eds.), *Computer assisted survey information collection* (pp. 167–184). New York, NY: Wiley.
- Rahn, W. M., Krosnick, J. A., & Breuning, M. (1994). Rationalization and derivation processes in survey studies of political candidate evaluation. *American Journal of Political Science*, 38, 582–600. doi:10.2307/2111598
- Sears, D. O. (1986). College sophomores in the laboratory: Influences of a narrow data base on social psychology's view of human nature. *Journal of Personality and Social Psychology*, 51, 515–530. doi:10.1037/0022-3514.51.3.515
- Shanks, J. M., Sanchez, M., & Morton, B. (1983). *Alternative approaches to survey data collection for the National Election Studies* (ANES Technical Report No. nes010120). Ann Arbor, MI: University of Michigan.
- Silver, M. D., & Krosnick, J. A. (2001, May). *An experimental comparison of the quality of data obtained in telephone and self-administered mailed surveys with a listed sample*. Paper presented at the annual meeting of the American Association for Public Opinion Research, Montreal, Canada.
- Visser, P. S., Krosnick, J. A., & Lavrakas, P. J. (2000). Survey research. In H. T. Reis & C. M. Judd (Eds.), *Handbook of research methods in social and personality psychology* (pp. 223–252). Cambridge, England: Cambridge University Press.
- Visser, P. S., Krosnick, J. A., Marquette, J., & Kurtin, M. (1996). Mail surveys for election forecasting? An evaluation of the Columbus Dispatch Poll. *Public Opinion Quarterly*, 60, 181–227. doi:10.1086/297748