

# The Palgrave Handbook of Survey Research

David L. Vannette • Jon A. Krosnick  
Editors

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# Overview

For more than thirty years the National Science Foundation has supported data for research on a wide variety of topics by making awards to three major long-term survey efforts, the American National Elections Studies (ANES), the Panel Study of Income Dynamics (PSID), and the General Social Survey (GSS). In February 2012, the Advisory Committee for the Social, Behavioral and Economic Sciences (SBE) was asked to provide advice about future investments in these surveys and others. The Advisory Committee then charged a subcommittee to provide that advice. The Subcommittee on Advancing SBE Survey Research is comprised of Jon Krosnick (Stanford University, chair), Janet Harkness (University of Nebraska, deceased), Kaye Husbands-Fealing (University of Minnesota), Stanley Presser (University of Maryland), and Steven Ruggles (University of Minnesota).

This book provides guidance for researchers, funding agencies, and organizations engaged in survey research as to how best use their resources to support research through survey data collection. Specifically, the book addresses the following questions, as requested:

1. What are the challenges facing survey-based data collection today (e.g., falling participation rates, rising costs, or coverage of frames)?
2. What innovations in survey methodology have taken place or are on the horizon?
3. How should researchers and organizations think about survey data in the context of the explosion of new digital sources of data? Are there opportunities for blending data or mixed source methods that integrate existing

administrative, commercial, or social media data with existing surveys to answer social science questions?

4. Given current challenges faced by survey research as well as the potential opportunities presented by new approaches to survey research, what types of questions will we be able to address with surveys in the future?

The book addresses these four questions—which are about the current and future status of survey research in general (as opposed to uniquely about NSF funded surveys)—by drawing on the results of research content that we commissioned from leading experts.

We assembled a group of leading scholarly experts to generate rich content on topics that fit into four broad areas. First, challenges being faced in conventional survey research were covered across a broad landscape, including key topics such as: probability versus non-probability sampling methods; multi-mode survey techniques; optimizing response rates and how nonresponse affects survey accuracy; use of incentives in survey collection; survey design, visual displays and cognitive evaluation of survey instruments; proxy reporting; interviewing techniques and challenges; confidentiality, respondent attrition and data attrition; and computation of survey weights.

The second category of exploration focuses on opportunities to expand data collection, including: paradata; the use of leave-behind measurement supplements and biomarkers; and specialized tools for measuring past events. Third, several methods of linking survey data with external sources are studied, specifically: improving government, academic and industry data-sharing opportunities; linking survey data to official government records or with the Catalist Commercial Database; linking knowledge networks web panel data with external data; and the use of election administration data with other datasets. Lastly, there is an emphasis on improving research transparency and data dissemination, with a focus on: data curation; evaluating the usability of survey project websites; and the broader topic of the credibility of survey-based social science. Throughout the book we highlight steps that can be taken to enhance the value of survey methodology to a wide range of users, in academia, government, and the private sector.

This book provides several useful outputs, including: (1) insights about how surveys should be done today to maximize data quality (thereby specifying how major infrastructure surveys should be designed and carried out), (2) important challenges facing the methodology, (3) best practices in data dissemination and data collection procedure documentation, (4) approaches

that would be most desirable for large-scale infrastructure surveys to implement, and (5) research questions that merit future investigation.

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# Introduction

Survey research is at a crossroads. The need for information to track the public's behaviors, experiences, needs, and preferences has risen dramatically in recent years. Government agencies, businesses, academics, and others make decisions and create policies based on knowledge of populations, and a great deal of such information is collected via surveys. The unemployment rate, the inflation rate, and many other national indicators used widely in America are generated in this way. Thus, the need for high-quality survey research is great and rising.

At the same time, the challenges of conducting high-quality surveys are substantial. The U.S. federal government remains committed to implementing face-to-face interviewing for many of its most important surveys, and in many countries around the world, face-to-face interviewing is the only way to reach a probability sample of the population without incurring substantial noncoverage. Furthermore, research to date suggests that face-to-face interviewing may be the method most likely to generate the highest response rates, the greatest trust and rapport between the researchers/interviewers and the respondents, the most cognitive effort from respondents in generating answers accurately, and the most honestly when providing reports regarding sensitive topics. But face-to-face interviewing is extremely expensive, and the costs of implementing such efforts well have been rising quickly.

In that light, alternative methods of data collection for surveys are appealing. Although telephone interviewing rose in popularity greatly in the 1970s as a more practical alternative to face-to-face interviewing, this method's response rates have been dropping in recent years, and costs have been rising. Remarkably, the accuracy of random-digit dial telephone surveys appears to remain high, but respondents are less likely to

be cognitively effortful and honest when being interviewed over the phone than when being interviewed face-to-face.

The rising costs of telephone interviewing set the stage for Internet data collection to become popular. And it has become so. Indeed, billions of dollars are spent annually around the world collecting survey data via the Internet. And some comparison studies have suggested that answering questions via a computer enhances cognitive performance and honesty relative to oral interviewing by telephone. When done with probability samples, Internet surveys seem to be a very promising avenue for effective and efficient data collection.

However, although a number of countries in addition to the United States now have commercial firms or academic institutions collecting survey data from probability samples of the population via the Internet (e.g., the Netherlands, Germany, France, Iceland, Norway, Sweden), this methodology has yet to catch on broadly across the world. Instead, most Internet survey data collection is done from nonprobability samples of people who volunteer to complete surveys for money. Alternative vehicles, such as Amazon's Mechanical Turk, allow for such data collection from individuals who have not signed up to join a survey panel, and Google's survey platform allows for survey data collection from people who surf to a newspaper website and wish to continue reading a news story at no cost to them. Studies in the United States and abroad suggest that such data collection does not yield samples that reflect the population as accurately as do standard probability sampling methods.

But nonprobability sample surveys implemented via the Internet have had tremendous appeal to researchers inside and outside of academia because of their practicality, especially their affordability. Thus, modes of data collection are in flux and in a state of tension. On the one hand, traditional, reliable methods are becoming increasingly costly. And on the other hand, new methods have obvious limitations in terms of their potential to produce generalizable results. At the same time, researchers are increasingly aware of another challenge in survey research: questionnaire design. For nearly a century, survey researchers have, for the most part, designed questionnaires in an intuition-driven, *ad hoc* fashion. As a result, there is tremendous heterogeneity in the design of questions across surveys and even within a single survey. Consider, for example, the ubiquitous rating scale, which has been used in countless surveys. The design of rating scales has no standardization across surveys – scales differ in terms of the number of points offered, the number of points that have verbal labels versus numeric labels versus no

labels, the particular labels chosen, and the order in which the points are presented to respondents.

From this heterogeneity, an outside observer might conclude that there is no optimal way to design rating scales or, indeed, to make any other decisions when designing questionnaires. Instead, perhaps all question designs work equally well – as long as respondents can understand a question, they can answer it accurately, one might imagine.

But 70 years of research across the social sciences suggest that this is not true. In fact, hundreds, if not thousands, of studies provide guidance on how to design questions to maximize measurement reliability and validity, how to maximize the uniformity of respondent interpretations of questions, and how to minimize the cognitive demands made of respondents during the process of interpreting questions and answering them. But this information has yet to be disseminated and put into practice consistently across the nation's most important continuing and new surveys. Yet as practitioners' awareness of these best practices grows, so does concern about the value of data collected by questionnaires not conforming to these principles of optimizing measurement accuracy.

Furthermore, as the cost of survey data collection rises, other forms of data are increasingly available in the form of official records that some observers perceive to be potential replacements for survey data. That is, observers ask, "Why ask people whether they were victims of a crime when researchers can consult the electronic records of police departments to assess crime rates?" or "Why ask people how much they paid for milk when researchers can consult scanner data collected and retained by supermarkets?" The answers to these questions are actually quite simple in many cases: as appealing as these uses of official records are, those records are inadequate for many applications where survey data can serve the purpose effectively. For example, many crimes are not reported to the police, and some crimes reported to police officers are not recorded in official records. So efforts to explore the full frequency of crimes require reports from people who experience them. Likewise, although supermarkets track purchases of products and can even link some purchases to the households that made the purchases, many purchases of food items are not made in such settings, and it is not yet possible to link purchasing behavior by a single individual across the full wide array of purchase settings without asking the individual via surveys. Thus, official records do not yet appear to be a viable replacement for all survey data.

Official records do appear to offer potential value in a different way: as a supplement to survey data. Consider, for example, the measurement of voter turnout. Agencies in almost all states in the country make available to

researchers official records of who voted in each election, and some states provide a little additional information about the individuals, such as their gender and age. Furthermore, commercial companies offer services whereby they provide additional, in depth information purportedly about each individual on such lists, which can also be gathered from other publicly available records. These sorts of records are thought to be matchable to data collected from survey respondents to enrich understanding of these individuals with what are presumed to be accurate official records about them.

This accuracy hinges on the accuracy of the process by which a survey respondent is matched to official records purportedly about the same individual. This process of matching is being implemented by a number of commercial firms, but these firms consider the matching processes to be proprietary, so scientists cannot fully observe the process and assess the accuracy of the results. It is possible that this matching process can be accomplished effectively using highly confidential federal government data obtainable via Census Data Centers because individuals can be matched using their social security numbers. Advances in computer algorithms and computing power make this type of sophisticated and resource-intensive research increasingly achievable. However, very little research has actually examined these opportunities. Thus, the notion of enriching survey data with data from official records is both appealing and increasingly possible.

Another growing challenge in the survey research arena is the maintenance of records documenting how survey data were collected. In recent years, survey professionals have become increasingly sensitive to the importance of documenting absolutely all details of the process by which data collection occurs, to allow researchers to understand the data and differences in results obtained by different data collection methods. This includes show cards displayed to respondents, interviewer training manuals, text of open-ended questions, detailed field reports to permit calculation of response rates using various contemporary methods, and much more information collected by survey researchers and often not retained or disseminated in ways that allow for in-depth, accurate understanding by scholars. Recently, the dissemination of survey data and survey data collection documentation has advanced considerably. But most survey research organizations are not collecting and disseminating information about their surveys optimally. As a result, analysts are handicapped, uninformed about important aspects of the process by which data were generated (and therefore unable to tailor analysis accordingly), and unable to explore important design issues that might impact findings.