The State of Survey Research as a Research Tool in American Politics

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Abstract and Keywords

Survey research is one of the most common types of quantitative research methodologies in the social sciences. Today, it is a widely used tool to study many different kinds of questions in political science and across many subfields. Therefore, it is important because it provides a systematic way to explore vital questions about society and democracy by connecting the citizen to government. Although the method of survey research often relies on correlational studies to evaluate theories, other methods are also used. As the new millennium approached, survey response rates began to rapidly decline across all formats due, in part, to significant changes in technology. Alternatives to traditional survey research modes may include internet and mixed-mode surveys, and non-probability samples. It is important for the academic community to carefully consider the different survey methods used and their strengths and weaknesses.

Keywords: survey research, American politics, society, democracy, internet, mixed-mode surveys, non-probability samples

SURVEY research is one of the most common types of quantitative research methodologies in the social sciences. It is a straightforward primary data collection technique that usually involves the selection of a sample of respondents from a population of interest and solicits their responses to standardized questionnaires. It dates back to the 1930s (Elinson 1992) and was primarily conducted through the mail or personal visits to households. However, the administering of the survey instrument can come in multiple formats or modes and over the past eighty years the number of modes available has increased. The expansion of survey modes and the use of mixed-mode surveys, especially over the last decade, is, in part, due to the prohibitive costs associated with face-to-face (FTF) interviewing, the introduction of new technology (the web, Interactive Voice Response (IVR), the Personal computer, fax machines, cell phones, etc.), and the interaction of technology with (p. 10) population demographics. These changes, along with rapidly declining response rates and new theoretical interpretations of the survey environment, have created a critical moment in the field of survey research. The field is exploding with new opportunities for theory advancement and methodological innovation.

Methodologically survey research has offered a rich source of data for scholars, journalists, market-researchers, government agencies, and others to understand the preferences, opinions, and motivations of the American electorate. Prior to the Second World War and the behavioral revolution in political science, survey research was primarily the purview of marketing firms (Gallup, Roper, and Crossley). But a heavy reliance on self-administered surveys in the Second World War, especially the *Studies in Social Psychology in World War II: The American Soldier* (Stouffer et al. 1949), which lent its name to the later *American Voter* (Campbell et al. 1960), led to it becoming a primary research technique within the discipline.

Overview and Application

Today, it is a widely used tool to study many different kinds of questions in political science and across many subfields. However, for the study of voting, public opinion, and more broadly political participation and engagement, the survey research methodology is the dominant methodology applied to answer primary questions about individual-level political behavior. These questions include voter decision-making, political participation, political change, the influence of campaigns and major events in shaping public opinion, individual political knowledge, comprehension of the political world, and the importance of social context and social dynamics in influencing public opinion and political participation. Fundamental to these questions are normative issues about the functioning of democracy, how political elites respond to and are influenced by elections and public opinion, and issues of representation. Without survey research methods it would be nearly impossible to understand the public and its role and value in democratic governing (although see Ginsberg 1986 and Herbst 1993).

Survey research is, therefore, important because it offers a systematic way to examine fundamental questions about society and democracy by connecting the citizen to government. In a recent article, Brady (2000, 48) convincingly argues that survey research is a particularly powerful empirical method because of its range of applicability, linkage to theory, conceptual richness, capacity for confirming theories about politics, and policy relevance.

(p. 11)

For example, the American National Election Studies (ANES), planned around presidential and midterm elections since 1952, has provided cross-sectional, panel, and time series data for over sixty years. For some theoretical questions simple cross-sections suffice, but for others, particularly when issues of causality are difficult, short-term panels over the campaign period or longer-term panels in which the same respondents are interviewed repeatedly are necessary. The ANES database provides rich descriptive and comparative data in a single election context and over time yielding a variety of ways to test theories and learn about the social world.

Although the method of survey research often relies on correlational studies to evaluate theories, other methods are also used. Propensity matching is one such innovative new tool potentially available to survey researchers to determine causality. Panel data also allows for the use of quasi-experimental designs (Campbell and Stanley 1963) to determine how attitudes or behaviors change after an event or crisis. Researchers also have added rich contextual data, such as candidate advertising data, candidate expenditures, congressional voting records, or GIS data, to survey respondents to gain variance across different electoral contexts.

Another innovative tool is the use of experiments embedded in surveys. Survey experiments allow researchers to randomly distribute respondents to treatment and control conditions, thus manipulating the survey environment to determine how various stimuli alter the decision-making process. By comparing respondents from the control and treatment conditions the researcher can determine the causal relationship under question. Researchers often “frame” a particular characteristic or thought to determine whether it influences an attitude, opinion, or behavior. For example, in experiments on the role of gender and race in influencing voter choice in low information contests, McDermott (1998) uses hypothetical male, female, and black candidates to examine her question. Other scholars focus on attitudes, but the underlying method is the same: alter the survey content for some respondents relative to others and compare their opinions (Hurwitz and Peffley 1997; Sniderman and Piazza 1993). For example, Sniderman and Piazza (1993) examine how priming white respondents to think about affirmative action influences their attitudes about blacks.

Although these studies have shown some impressive effects from framing of survey questions, it is unclear whether framing experiments have long lasting effects on people's core attitudes (Druckman and Nelson 2003; Gaines, Kuklinski, and Quirk 2007; Luskin, Fishkin, and Jowell 2002). Nevertheless, the strengths of these designs in determining

causal mechanisms and in internal validity are extremely valuable and political behavior studies will continue to be strengthened by future advancements in survey experimental methodology.

(p. 12) The Changing Nature of Survey Research

Twenty-five years ago, survey research had achieved a broad consensus on technique and methodology. Perfected sampling techniques for both FTF and telephone surveys allowed a small subset of respondents to represent large populations. Although FTF interviews seemed best suited to very long surveys, and to governmental surveys, where very high response rates were expected, telephone surveys were, because of higher costs and efficiency, by far the most commonly used interview technique.

As the new millennium approached, survey response rates began to rapidly decline across all formats due, in part, to significant changes in technology (De Leeuw and De Heer 2002). For example, Curtin, Presser, and Singer (2005) examined how response rates changed over two periods using the University of Michigan's Survey of Consumer Attitudes and Behavior, which has been administered monthly using RDD designs beginning in 1978. From 1979 to 1996 they showed a steady .75 percent drop in response rate annually. But, with the advent of caller-ID, the response rate has plummeted to 1.5 percent annually since 1996. The overall change was from 72 percent to 48 percent over the entire period.

Rapid changes in communication have created a problem for survey researchers because they present serious challenges to the previous paradigm. For example, the advent and growth in popularity of the cell phone and VOIP (voice over internet) has led to larger numbers of people terminating their traditional landlines. The most recent report by the National Health Interview Survey (NHIS) suggests that nearly 17.5 percent of US households or 36 million adults no longer have landline telephones and, instead, rely on cell phones (Blumberg and Luke 2008). When less than 5 percent of the US population did not have landlines, coverage error resulting from their automatic exclusion was insignificant. But now, with one in six adults without landlines and that number growing significantly every six months, the problem is far greater. And, we know that cell-phone-only households are not equally represented throughout the population, ensuring a biased sample. Younger adults, Southerners, non-whites, renters, and poorer adults were much more likely than older adults, non-Southerners, whites, homeowners, and wealthier adults to live in cell-phone-only homes (Blumberg and Luke 2008).

Given survey researchers' huge reliance on and comfort with RDD designs, these changes in telephone use along with increases in refusal rates are highly problematic. Coverage issues lead to potential problems of inference as potential respondents are often not contacted because they are not available using traditional methodologies or once contacted they refuse, also frustrating researchers. These non-respondents are a serious

concern to the survey research community, and especially to scholars who want to understand, explain, and predict political events, as many academic studies rely on RDD designs to address their questions. The (p. 13) primary method for solving problems between survey samples and populations of interest is to weight the survey across several demographic dimensions, especially sex, age, and race. This, however, is not necessarily a panacea because the method assumes that those respondents who are in the sample are representative of the larger underrepresented population, which may not be a valid assumption.

The conventional wisdom, of course, is that response rates *per se* are a signal of the quality of the survey and its representativeness. Under this view, low response rates lead to non-response bias, which leads to problems of representation and inference. Low response rates make many academics skeptical.

Non-response error is a valid concern. Significant differences between respondents and non-respondents on a sample statistic like the mean can lead to problems in survey inference. Intuitively it seems obvious, and conventional wisdom assumes, that non-response error is a function of response rate. This is based on the theoretical notion that non-respondents differ from respondents in systematic ways (Groves and Couper 1998) and that those from whom we never get responses should resemble those from whom it is difficult to get responses. Therefore, as the response rate increases a more diverse group of respondents, who are more similar to the perpetual non-responders, are included in the survey, enhancing the sample's representativeness. However, non-response error is not necessarily a function of the response rate, but is a function of the response rate interacting with the characteristics of the non-respondent (Curtin, Presser, and Singer 2000). Thus, if survey topic salience, for example, leads to differences in response patterns then non-response error becomes a problem (Groves, Singer, and Corning 2000). But when does response rate become an issue, if at all? Does a 50 percent response rate suggest a better quality survey then one at 30 percent or 15 percent? If so, what should that threshold be?

Response rates, however, appear not to be the core of the problem. Evidence is increasingly being presented suggesting that response rate is not a good measure of representativeness (Atkeson et al. 2008; Curtin, Presser, and Singer 2000; Groves and Peytcheva 2008; Groves, Presser, and Dipko 2004; Keeter et al. 2000; Merkle and Edelman 2002; Pew Research Center for the People and the Press 2004). In several studies now, tests of representativeness have showed little difference between high and low response rates. For example, Keeter et al. (2000), using identical questionnaires and the same survey firm, paid for two RDD studies. The first study was a typical academic study, taking eight weeks and allowing for extended callbacks and attempts to locate individuals in the sample. The second study used a more standard commercial approach of five days. The first study yielded a response rate of 60.6 percent, the second 36 percent. Analysis showed there were few differences across survey items: only fourteen out of ninety-one questions were statistically different. Half of these were on demographic questions, raising an initial red flag, but further examination showed that

the quick survey yielded a sample that was closer to Current Population Surveys (CPS) (p. 14) demographic characteristics than the longer and more academically rigorous one, suggesting that response rates had little effect on survey quality. Thus, the larger question for survey researchers is in understanding non-response bias more than response rates, and more theory and empirical tests in this area are needed.

In addition, the implications of these findings are of particular importance for research. Techniques used to increase response rates such as refusal conversion and repeated callbacks are extremely costly. If, instead, those resources were used to acquire more interviews, sampling error would decline, while non-response error (which is not necessarily affected by response rates) would not change. Such a resource allocation decision would also produce larger subgroups for analysis (the size of which is often a serious problem), which would be very useful to scholarly research.

Alternatives to Traditional Survey Research Modes: The Growth of Internet and Mixed-Mode Surveys, and Non-Probability Samples

Internet Surveys

At the same time that in-person interviewing costs were increasing, making FTF survey prohibitive, and demographic and technological changes were making telephone surveys questionable, the prevalence of PCs and the advance of the Internet created a new survey venue. Internet surveying offers a wide-range of possibilities to the researcher that alternative and more traditional methods of interviewing do not and at a small percentage of the price of those costlier methods. Specifically, the Internet is an interactive and complex media that allows the respondent to view video and audio material and react to that material in real time. It also allows for extended discussion groups, essentially virtual focus groups, from which to obtain qualitative data, which is already in electronic format and essentially ready for analysis.

Internet surveys offer a number of advantages to researchers. For example, similar to Computer Assisted Telephone Interviewing (CATI), Internet surveys offer extensive branching abilities and opportunities to do question validity tests using split halves. Data collection is often very quick in these settings and it is easy to determine when a reminder needs to be provided to non-respondents. Because people tend to begin the survey immediately when it hits their inbox, survey (p. 15) responses surge almost immediately upon receipt of the request and decline shortly thereafter, providing clear time frames for sending out a reminder to non-respondents (Atkeson and Tafoya 2008).

The advantage of a quick turnaround time of web surveys allows researchers to collect data during or immediately following an event. Programming web surveys has become very easy with many menu-driven programs (Opinio, Survey Monkey, PHP Surveyor, etc.) allowing each scholar to theoretically engage in survey research from their desktops. This format is particularly useful in capturing attitudes and emotions when they are being formed and in response to specific tragedies, crises, or important political moments in time. Data, of course, is already in electronic form from this method and as such offers a cost-effective and quick turnaround time from response to analysis. Response latency can also be monitored and recorded for future analysis, offering advantages for public opinion researchers who use response time as a key to understanding attitude information and intensity.

Internet surveys also offer other advantages, especially to the respondent. Like other self-administered surveys, Internet surveys provide greater flexibility to the respondent. Because the questionnaire is answered in the privacy of the respondent's home or office, it can be completed whenever the respondent wants and over an extended period of time. Software tools can allow respondents to “save” their data and “return” to the survey later. Reminders can also be sent to respondents, encouraging them to begin, or return to, the survey by simply clicking on a link embedded in an email or typing in a URL to a web browser.

Comparisons with other data collection modes also suggest additional strengths for Internet or Computer-Assisted Self-Interviewing (CASI). Previous research, for example, shows that computer interviewing resulted in fewer completion mistakes and fewer unanswered items, compared to paper-and-pencil respondents (Kiesler and Sproull 1986). Internet designs reduce socially desirable answers compared to interviewer-assisted designs (Chang and Krosnick 2003a, 2003b; Fricker et al. 2005). Other research on data quality across survey modes suggests that FTF research has less satisficing and fewer socially desirable responses[1] than telephone interviews and that telephone respondents are less cooperative and less interested than FTF respondents (Holbrook, Green, and Krosnick 2003). Taken together, the data suggest that in many ways FTF surveys provide the best data quality on a variety of dimensions, followed by the computer-assisted or Internet survey, followed by pencil-and-paper survey, which is followed by telephone surveys. More carefully constructed research designs, however, are needed to identify the strengths and weaknesses of each mode relative to one another and when modes can and cannot be combined.

(p. 16)

Internet surveys also have drawbacks. Using a computer interface to capture interviews may create a bias in respondents. Literacy is key among them. Less literate respondents are less likely to have a computer and less likely to participate. In addition, respondents need familiarity or comfort with the tools required to participate including a computer,

keyboard, a mouse, and how to navigate within the survey window browser (see Dillman 2002).

This leads to perhaps the most important drawback, which is sampling and weighting. Commercial firms participating in this new technology rely on different methods to create their samples. Some firms (e.g. Knowledge Networks) use traditional probability-based RDD sampling to recruit their respondents and then provide them with the hardware, if necessary, to be an ongoing respondent. One potential problem with this method is that the low response rates associated with telephone interviews are compounded by those who are reached, but then refuse to participate in the web panel. However, their very low response rates appear to produce demographically representative samples of US residents (Krosnick and Chang 2001). Other firms (e.g. Polimetrix) build a large list of volunteers from which to sample, producing non-probability samples.

Perhaps the strongest endorsement of probability based web survey as the technology of the future comes from the ANES, which decided to use this methodology for the ANES 2008–09 panel (in addition to the traditional FTF pre-post election panel). The research design is very ambitious, involving six ANES panel waves and fifteen “secondary” panel waves that do not include questions on politics, to reduce panel attrition. The sample is based on an RDD design for identifying respondents, but then respondents will actually answer surveys over the Internet.

Mixed-mode Designs

One way of dealing with the problems of representativeness of Internet samples is to utilize mixed-mode designs (Dillman 2002). Mixed-mode designs combine different modes of interviewing including phone, mail, Internet, and/or FTF to create a representative sample. Mixed-mode designs can also mix contact method with different survey modes. So, for example, a respondent may be contacted by phone and then sent a mail survey to complete. The basic idea in mixed-mode designs is that different modes of surveying reach different types of individuals and therefore provide many mode options for survey response to increase response rates and the overall representativeness and hence quality of the survey data. Although mixed-mode designs have become more popular outside of the United States (De Leeuw 2005), they are beginning to be used by the United States Government and by academics (Atkeson and Saunders2007; Rosen and Gomes 2004). The increasing costs of survey research and the declining response rates make mixed-mode surveys attractive across both dimensions because these surveys tend to reduce costs and produce higher response rates.

It is unclear what the potential pitfalls are of a mixed-mode design because little data has been collected to assess their strengths and weaknesses. One primary concern is that different modes might lead to different response patterns, leading to serious questions about data quality and its comparability. This is true even when the question wording is identical for both cross-sectional designs and panel design. In the first case, the question

is: do respondents who answer the same questions across different survey modes result in the same distribution of responses? In the second case, the question is: can questions be compared across the same respondent over time when the data were collected using different survey modes?

A series of academic articles suggest that mode of response may influence data quality (de Leeuw and Van Der Zowen 1988; Dillman et al. 1996; Fowler, Roman, and Di 1998). If we imagine that the survey process is similar to a conversation (Schwarz 1996), then the context provided by the survey, either through the interviewer or through the presentation of questions and answer scales, may affect question interpretation and response. If such is the case, then it may be problematic to combine different modes into one variable to obtain an aggregate representation of the cross-section or panel. Indeed, when mode changes over time it could make changes seen in panel data unreliable and therefore make inferences from the data impossible. One example where this is a problem is in the 2000 ANES (Bowers and Ensley 2003), in which respondents were interviewed in person, over the phone, or a combination of both.

Other possibilities for problems associated with survey mode may be due to social desirability, question order, interviewer presence or absence, primacy or recency effects, or the visual layout of questions (Christian and Dillman 2004; Fowler, Roman, and Di 1998; Schuman 1992; Schuman and Presser 1981; Smyth et al. 2006; Sudman, Bradburn, and Schwarz 1996; Tourangeau, Couper, and Conrad 2004). Social desirability, for example, suggests that one cue for survey response is the perceived expectations of those around the respondent during the interview, especially the telephone or FTF survey where an interviewer is involved in the survey conversation. In these cases, the pressure of the interviewing situation leads respondents to answer questions in socially desirable ways. For example, this potential problem is seen consistently in ANES studies where large numbers of respondents indicate they voted, when in fact they did not (Abelson, Loftus, and Greenwald 1992; Silver, Anderson, and Abramson 1986; Traugott and Katosh 1979). But the fact that respondents have spent literally multiple hours with an interviewer in their own home over more than one occasion and talking almost exclusively about politics leads respondents to give the socially desirable response (Presser 1990). Similarly, (p. 18) research on over reporting for the winner suggests the same problem (Atkeson 1999; Wright 1990, 1993).

Given these cross-mode concerns, paying attention to these mode effects is important to researchers' analysis and conclusions. This suggests an important line of future research, which explores the limits of mixed-mode designs. For example, given the similarities in survey environment, mail and Internet mixed-mode design may allow for combining responses, but combining Internet and phone survey data may be more problematic given the significant differences in survey format.

Non-probability Samples

Non-probability Internet Samples

The difficulties involved in traditional survey design and sampling are well known. Chief among them are the skyrocketing costs associated with contacting difficult-to-reach respondents, and for RDD designs the changing nature of the population that researchers have access to through this method. Because of the difficulties and the new opportunities provided by new communication technologies many scholars and researchers are considering the value of non-probability samples in their research. Because many of these are Internet samples, they have many desirable strengths, as discussed above, but they are also fundamentally different because they do not purport to come from a random sample of the population of interest. Instead, they are volunteer samples. Self-selection potentially creates problems for surveys because of response error. Simply put, self-selected individuals are not necessarily going to look like the potential electorate or other populations of interest.

The methods used to recruit respondents vary across firms, but, in general, commercial firms create large access panels of potential respondents. Panel members are recruited through Internet advertisements, the purchase of electronic mailing lists, recommendations by friends, phone surveys, mail surveys, etc (Barrens et al. 2003). Samples are then generated from panel members, based upon population characteristics, and contacted for survey participation. Periodic tests of sample adequacy use parallel FTF surveys and phone surveys to estimate propensity scores for participation mode (Terhanian 2008). Weighting is applied after survey completion to make the sample representative of the population. For example, Harris interactive uses post stratification weights to adjust their sample to the population based upon the CPS. This method is also used for RDD designs and is common in Internet survey studies.

Many firms are engaging in this new methodology including YouGov (which owns a portion of Polimetrix), Harris Interactive, Zogby Interactive, and others. For political scientists, the firm Polimetrix, founded by political scientist Douglas (p. 19) Rivers, is an important emerging player in this new methodology. In 2006 and 2008, Polimetrix sponsored various Cooperative Election Studies (CES) in which university teams opt in to the Polimetrix pre- and post-election surveys for a $15,000 fee (Vavreck and Rivers 2008). Each team receives data from 1,000 respondents who were asked common content questions and unique content questions provided by the university team. The Polimetrix policy is to embargo the data for one year before it is made available to the larger research community.

Polimetrix uses a unique mechanism called sample matching for sample selection and weighting (Vavreck and Rivers 2008). Sample matching begins by creating a sampling frame that is stratified across a variety of dimensions such as race, age, gender, region, and party registration and then a sample is drawn. But, of course, these individuals are not reachable because Polimetrix has no personal information about these respondents to contact them. Instead these individuals are matched with members of their access panel

who are then invited to participate in the survey. Weight adjustments for non-response can then be made after the fact.

There is a vigorous debate about these non-probability sampling methodologies and whether they, in the end, can be used to make inferences about populations or are primarily an experimental tool. Non-probability samples have always been used in experimental studies where internal validity is maximized at the expense of external validity and have gained acceptance in political science as a viable and useful method (see Sears 1986). But, today, researchers want to consider the viability of non-probability samples in making inferences to populations. On the one hand, Douglas Rivers argues that in essence traditional RDD designs are non-probability samples because so many people are impossible to contact and many respondents once contacted choose not to participate (Rivers n.d.). Thus, RDD designs may be equivalent to volunteer Internet sampling. On the other hand, there are those who feel uncomfortable for many reasons with a method that is not fundamentally based on probability sampling. They tend to argue that since response rates are not a good signal of survey quality, there is no theoretical reason to be disturbed by low response rates, but argue that selection bias in non-probability opt-in studies leads to samples that are distinct from respondents who would result from a probability-based design.

Typical of studies in their infancy, recent research suggests there may be cause for alarm or joy. In Malhortra and Krnosick's comparison (2007) of two ANES FTF probability samples with non-probability samples from YouGov and Harris Interactive, they found striking differences between survey modes. These results appear to be, in part, due to the opt-in sample members being overly interested in politics relative to sample members in the probability FTF design. Across sixteen points of comparison Malhorta and Krosnick (2007, 311) found that the FTF data collection method was more accurate 88 percent of the time. Sanders et al. (2007), however, in an examination of the 2005 British Election Study find just the reverse. They found that the British Election Study, which uses FTF interviewing, **(p. 20)** compared favorably to the YouGov study, which uses a sampling method similar to Harris Interactive. In Polimetrix's own analysis of their 2006 CCES Study, they found some similarities and some differences between their study and other national data sets (Hill et al. 2007). In particular, they found that their respondents were more knowledgeable about politics, stronger partisans, and have more item constraint than those respondents in face-to-face interviews, but demographically the Polimetrix bias seems very similar to the RDD sampling method.

Other Non-probability Samples: Snow Ball Sampling or Respondent-Driven Sampling

Recently, another additional sampling method has been characterized that offers new opportunities for survey research in political science. It is a variation on snowball sampling (Coleman 1958) referred to as respondent-driven sampling (RDS) (Heckathorn 1997, 2002). Recent advances in RDS allows this method to make inferences to the population of interest (Salganik and Heckathorn 2004). This method is appropriate when researchers do not have a sampling frame and the target population is considered rare and difficult to reach (Salganik and Heckathorn 2004). As a methodology in political behavior, this technique could be applied to the study of social movements, political activists, or perhaps other sub-populations that would be difficult to reach using traditional survey methods. For example, this methodology was used to survey American men in Canada who immigrated to avoid the Vietnam War draft (Hagan 2001). It may also be useful in studying populations of displaced persons such as Katrina victims or victims of civil war in other nations. Furthermore, RDS could use any survey mode, depending on what was best to reach the population of interest.

Previously, hard-to-find populations were often unreachable except by the use of snowball sampling, which relies on chain-referral sampling. Studies of social networks (see Huckfeldt and Kuklinski 1995; Mutz and Martin 2001) provide examples of scholarly work using this type of methodology to address political science questions. In these studies, the researcher relies on the social network of existing members of the sample, instead of a sampling frame. Although these methods do an excellent job of reaching hidden populations, they are also problematic. The primary problem is that when they are used to reach hidden populations, as opposed to studies of the influence of social networks, it becomes difficult, if not impossible, to make inferences beyond the sample to the population of interest (Eland-Goosensen et al. 1997; Erickson 1979, Kalton and Anderson 1986; Welch 1975). This is true because all members of the population do not have the same probability of selection, making the sample a non-probability or convenience sample.

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New advances in this methodology, however, make it possible for chain-referral samples to produce unbiased estimates about hidden populations (though see Wejnert and Heckathorn 2008 and Lee 2009). Though this new methodology has not been applied in political science, it has been successfully used in sociology (Hagan 2001; Heckathorn and Jeffries 2001) and public health research (Magnani et al. 2005; Semann, Lauby, and Liebman 2002). The basic premise behind RDS is not to estimate directly to the population as in a traditional sample, but indirectly by making estimates about the social network first and then from the social networks making estimates about the population (Salganik and Heckathorn 2004).

To obtain comprehensive coverage of the target population, so that each individual has a non-zero chance of being selected, it is necessary to have between four and seven waves of referrals. This is based on the principle of “six degrees of separation” (Dodds, Muhamad, and Watts 2003; Travers and Milgram 1969; Watts and Strogatz 1998), which indicates that the distance between individuals is on average quite short. Heckathorn (1997, 2002) has shown that this property of networks means that as the sample expands from wave to wave it eventually reaches equilibrium, such that the demographic characteristics such as age, race, and gender resemble the underlying population of interest. This prevents the bias of homophily (that respondent referrals are similar to the referrers). The sample is then weighted by network relationships (Heckathorn 2006) and provides unbiased population estimates (Salganik and Heckathorn 2004).

The Future of Survey Research

Survey research will continue to be a valuable source of data for scholars in political science. The survey environment, however, is rapidly changing, providing new, alternative, and sometimes cheaper methods to obtain the necessary data to test and advance our theories. It has also created new opportunities for methodological advancement in the field of survey research and therefore many new questions in the field of survey methodology to ask and answer. It is important for the academic community, especially political scientists, to play an important role in its growth and development. Therefore, it is important for the academic community to carefully consider the different survey methods used and their strengths and weaknesses. For example, different designs may offer different strengths for certain populations or questions over others. Therefore, as academics and/or practitioners, we need to be careful as we adapt and adopt these new survey opportunities. We need to think theoretically about what survey design (traditional, mixed-mode, non-probability, RDS) offers the most advantages in terms of our population of (p. 22) interest and question, and how the choices we make influence the answers we get and the inferences we make. Although we need to have a very critical eye—the academy by nature is very conservative—we also need to be open to change and opportunity in this dynamic and rapidly evolving research methodology.

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Notes:

(1) On these concepts, see Krosnick and Pasek, this volume, pp. 31–2.

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