

# Survey Research

## CHAPTER OVERVIEW

Researchers have many methods for collecting data through surveys—from mail questionnaires to personal interviews to online surveys conducted over the Internet. Social researchers should know how to select an appropriate method and how to implement it effectively.

### Introduction

#### Topics Appropriate for Survey Research

#### Guidelines for Asking Questions

- Choose Appropriate Question Forms
- Make Items Clear
- Avoid Double-Barreled Questions
- Respondents Must Be Competent to Answer
- Respondents Must Be Willing to Answer
- Questions Should Be Relevant
- Short Items Are Best
- Avoid Negative Items
- Avoid Biased Items and Terms

#### Questionnaire Construction

- General Questionnaire Format
- Formats for Respondents

#### Contingency Questions

- Matrix Questions
- Ordering Items in a Questionnaire
- Questionnaire Instructions
- Pretesting the Questionnaire
- A Composite Illustration

#### Self-Administered Questionnaires

- Mail Distribution and Return
- Monitoring Returns
- Follow-Up Mailings
- Response Rates
- Compensation for Respondents
- A Case Study

#### Interview Surveys

- The Role of the Survey Interviewer
- General Guidelines for Survey Interviewing
- Coordination and Control

#### Telephone Surveys

- Computer-Assisted Telephone Interviewing (CATI)
- Response Rates in Interview Surveys

#### Online Surveys

- Online Devices
- Electronic Instrument Design
- Improving Response Rates

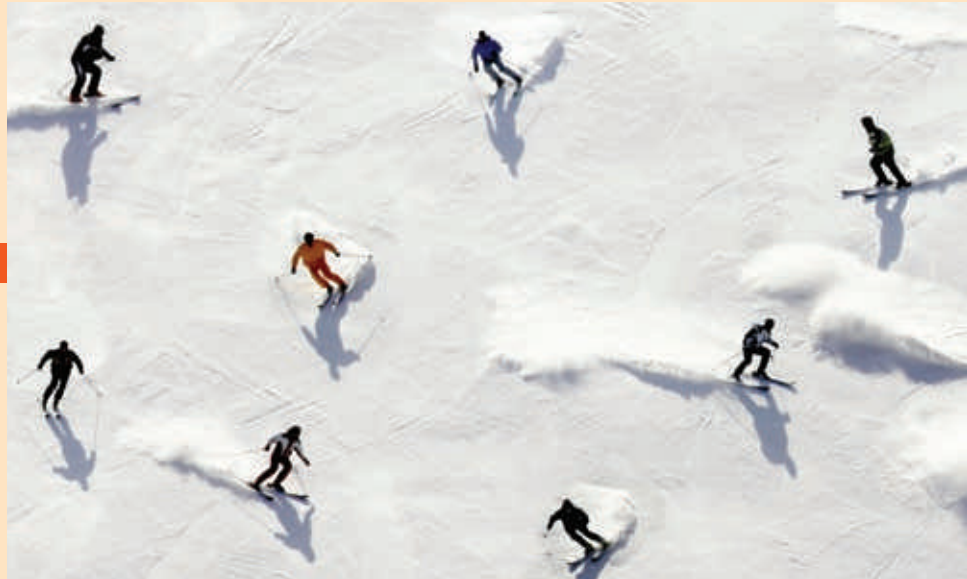
#### Mixed-Mode Surveys

#### Comparison of the Different Survey Methods

#### Strengths and Weaknesses of Survey Research

#### Secondary Analysis

#### Ethics and Survey Research



## Introduction

Surveys are a very old research technique. In the Old Testament, for example, we find the following:

After the plague the Lord said to Moses and to Eleazar the son of Aaron, the priest, “Take a census of all the congregation of the people of Israel, from twenty old and upward.”

*(Numbers 26: 1–2)*

Ancient Egyptian rulers conducted censuses to help them administer their domains. Jesus was born away from home because Joseph and Mary were journeying to Joseph’s ancestral home for a Roman census.

A little-known survey was attempted among French workers in 1880. A German political sociologist mailed some 25,000 questionnaires to workers to determine the extent of their exploitation by employers. The rather lengthy questionnaire included items such as these:

Does your employer or his representative resort to trickery in order to defraud you of a part of your earnings?

If you are paid piece rates, is the quality of the article made a pretext for fraudulent deductions from your wages?

The survey researcher in this case was not George Gallup but Karl Marx ([1880] 1956: 208). Though 25,000 questionnaires were mailed out, there is no record of any being returned.

Today, survey research is a frequently used mode of observation in the social sciences. In a typical survey, the researcher selects a sample of respondents and administers a standardized questionnaire to them. Chapter 7 discussed sampling techniques in detail. This chapter discusses how to prepare a questionnaire and describes the various options for administering it so that respondents answer your questions adequately.

This chapter includes a short discussion of secondary analysis, the analysis of survey data collected by someone else. This use of survey results has become an important aspect of survey

research in recent years, and it is especially useful for students and others with scarce research funds.

Let’s begin by looking at the kinds of topics that researchers can appropriately study by using survey research.

## Topics Appropriate for Survey Research

Surveys may be used for descriptive, explanatory, and exploratory purposes. They are chiefly used in studies that have individual people as the units of analysis. Although this method can be employed for other units of analysis, such as groups or interactions, some individual persons must serve as **respondents** or informants. Thus, we could undertake a survey in which divorces were the unit of analysis, but we would need to administer the survey questionnaire to the participants in the divorces (or to some other respondents).

Survey research is probably the best method available to the social researcher who is interested in collecting original data for describing a population too large to observe directly. Careful probability sampling provides a group of respondents whose characteristics may be taken to reflect those of the larger population, and carefully constructed standardized questionnaires provide data in the same form from all respondents.

Surveys are also excellent vehicles for measuring attitudes and orientations in a large population. Public opinion polls—for example, Pew, Gallup, Harris, Roper, and a number of university survey centers—are well-known examples of this use. Indeed, polls have become so prevalent that at times the public seems unsure what to think of them. Pollsters are criticized by those who don’t think (or want to believe) that polls are accurate (candidates who are “losing” in

**respondent** A person who provides data for analysis by responding to a survey questionnaire.

polls often tell voters not to trust the polls). But polls are also criticized for being too accurate—as when exit polls on Election Day are used to predict a winner before the actual voting is complete.

The general attitude toward public opinion research is further complicated by scientifically unsound “surveys” that nonetheless capture people’s attention because of the topics they cover and/or their “findings.” A good example is the “Hite Reports” on human sexuality. While enjoying considerable attention in the popular press, Shere Hite was roundly criticized by the research community for her data-collection methods. For example, a 1987 Hite report was based on questionnaires completed by women around the country—but which women? Hite reported that she distributed some 100,000 questionnaires through various organizations, and around 4,500 were returned.

Now, 4,500 and 100,000 are large numbers in the context of survey sampling. However, given Hite’s research methods, her 4,500 respondents didn’t necessarily represent U.S. women any more than the *Literary Digest’s* enormous 1936 sample represented the U.S. electorate when their 2 million sample ballots indicated that Alf Landon would bury FDR in a landslide.

Sometimes, people use the pretense of survey research for quite different purposes. For example, you may have received a telephone call indicating you’ve been selected for a survey, only to find that the first question was “How would you like to make thousands of dollars a week right in your own home?” Or you may have been told you could win a prize if you could name the president whose picture is on the penny. (Tell them it’s Elvis.) Unfortunately, a few unscrupulous telemarketers try to prey on the general cooperation people have given to survey researchers.

By the same token, political parties and charitable organizations have begun conducting phony “surveys.” Often under the guise of collecting public opinion about some issue,

callers ultimately ask respondents for a monetary contribution.

Recent political campaigns have produced another form of bogus survey, the “push poll.” Here’s what the American Association for Public Opinion Polling has said in condemning this practice (see also Figure 3-1):

A “push poll” is a telemarketing technique in which telephone calls are used to canvass potential voters, feeding them false or misleading “information” about a candidate under the pretense of taking a poll to see how this “information” affects voter preferences. In fact, the intent is not to measure public opinion but to manipulate it—to “push” voters away from one candidate and toward the opposing candidate. Such polls defame selected candidates by spreading false or misleading information about them. The intent is to disseminate campaign propaganda under the guise of conducting a legitimate public opinion poll.

(Bednarz 1996)

In short, the labels “survey” and “poll” are sometimes misused. Done properly, however, survey research can be a useful tool of social inquiry. Designing useful (and trustworthy) survey research begins with formulating good questions. Let’s turn to that topic now.

## Guidelines for Asking Questions

In social research, variables are often operationalized when researchers ask people questions as a way of getting data for analysis and interpretation. Sometimes the questions are asked by an interviewer; sometimes they are written down and given to respondents for completion. In other cases, several general guidelines can help researchers frame and ask questions that serve as excellent operationalizations of variables while avoiding pitfalls that can result in useless or even misleading information.

Surveys include the use of a **questionnaire**—an instrument specifically designed to elicit information that will be useful for analysis. Although some of the specific points to follow are more appropriate to structured questionnaires than to the more open-ended questionnaires used in qualitative, in-depth interviewing, the underlying

**questionnaire** A document containing questions and other types of items designed to solicit information appropriate for analysis. Questionnaires are used primarily in survey research but also in experiments, field research, and other modes of observation.

logic is valuable whenever we ask people questions in order to gather data.

## Choose Appropriate Question Forms

Let's begin with some of the options available to you in creating questionnaires. These options include using questions or statements and choosing **open-ended** or **closed-ended questions**.

### Questions and Statements

Although the term *questionnaire* suggests a collection of questions, an examination of a typical questionnaire will probably reveal as many statements as questions. This is not without reason. Often, the researcher is interested in determining the extent to which respondents hold a particular attitude or perspective. If you can summarize the attitude in a fairly brief statement, you can present that statement and ask respondents whether they agree or disagree with it. As you may remember, Rensis Likert greatly formalized this procedure through the creation of the Likert scale, a format in which respondents are asked to strongly agree, agree, disagree, or strongly disagree, or perhaps strongly approve, approve, and so forth.

Both questions and statements can be used profitably. Using both in a given questionnaire gives you more flexibility in the design of items and can make the questionnaire more interesting as well.

### Open-Ended and Closed-Ended Questions

In asking questions, researchers have two options. They can ask open-ended questions, in which case the respondent is asked to provide his or her own answers to the questions. For example, the respondent may be asked, "What do you feel is the most important issue facing the United States today?" and be provided with a space to write in the answer (or be asked to report it verbally to an interviewer). As we'll see in Chapter 10, in-depth, qualitative interviewing relies almost exclusively on open-ended questions. However, they are also used in survey research.

In the case of closed-ended questions, the respondent is asked to select an answer from among a list provided by the researcher. Closed-ended questions are very popular in survey

research because they provide a greater uniformity of responses and are more easily processed than open-ended ones.

Open-ended responses must be coded before they can be processed for computer analysis, as we'll see in Chapter 14. This coding process often requires the researcher to interpret the meaning of responses, opening the possibility of misunderstanding and researcher bias. There is also a danger that some respondents will give answers that are essentially irrelevant to the researcher's intent. Closed-ended responses, on the other hand, can often be transferred directly into a computer format.

The chief shortcoming of closed-ended questions lies in the researcher's structuring of responses. When the relevant answers to a given question are relatively clear, there should be no problem. In other cases, however, the researcher's structuring of responses may overlook some important responses. In asking about "the most important issue facing the United States," for example, his or her checklist of issues might omit certain issues that respondents would have said were important.

The construction of closed-ended questions should be guided by two structural requirements. First, the response categories provided should be exhaustive: They should include all the possible responses that might be expected. Often, researchers ensure this by adding a category such as "Other (Please specify: \_\_\_\_\_)." Second, the answer categories must be mutually exclusive: The respondent should not feel compelled to select more than one. (In some cases, you may wish to solicit multiple answers, but these may create difficulties in data processing and analysis later on.) To ensure that your categories are mutually exclusive, carefully consider each combination of categories, asking yourself whether a person could reasonably

**open-ended questions** Questions for which the respondent is asked to provide his or her own answers. In-depth, qualitative interviewing relies almost exclusively on open-ended questions.

**closed-ended questions** Survey questions in which the respondent is asked to select an answer from among a list provided by the researcher. Popular in survey research because they provide a greater uniformity of responses and are more easily processed than open-ended questions.

choose more than one answer. In addition, it's useful to add an instruction to the question asking the respondent to select the one best answer, but this technique is not a satisfactory substitute for a carefully constructed set of responses.

## Make Items Clear

It should go without saying that questionnaire items need to be clear and unambiguous, but the broad proliferation of unclear and ambiguous questions in surveys makes the point worth emphasizing. We can become so deeply involved in the topic under examination that opinions and perspectives are clear to us but not to our respondents—many of whom have paid little or no attention to the topic. Or, if we have only a superficial understanding of the topic, we may fail to specify the intent of a question sufficiently. The question “What do you think about the proposed peace plan?” may evoke in the respondent a counter question: “Which proposed peace plan?” Questionnaire items should be precise so that the respondent knows exactly what the researcher is asking. The possibilities for misunderstanding are endless, and no researcher is immune (Polivka and Rothgeb 1993).

One of the most established research projects in the United States is the Census Bureau's ongoing “Current Population Survey” or CPS, which measures, among other critical data, the nation's unemployment rate. A part of the measurement of employment patterns focuses on a respondent's activities during “last week,” by which the Census Bureau means Sunday through Saturday. Studies undertaken to determine the accuracy of the survey found that more than half the respondents took “last week” to include only Monday through Friday. By the same token, whereas the Census Bureau defines “working full-time” as 35 or more hours a week, the same evaluation studies showed that some respondents used the more traditional definition of 40 hours per week. As a consequence, the wording of these questions in the CPS was modified in 1994 to specify the Census Bureau's definitions.

Similarly, the use of the term *Native American* to mean American Indian often produces an overrepresentation of that ethnic group in surveys. Clearly, many respondents understand the term to mean “born in the United States.”

## Avoid Double-Barreled Questions

Frequently, researchers ask respondents for a single answer to a question that actually has multiple parts. These types of queries are often termed *double-barreled questions* and seem to happen most often when the researcher has personally identified with a complex question. For example, you might ask respondents to agree or disagree with the statement “The United States should abandon its space program and spend the money on domestic programs.” Although many people would unequivocally agree with the statement and others would unequivocally disagree, still others would be unable to answer. Some would want to abandon the space program and give the money back to the taxpayers. Others would want to continue the space program but also put more money into domestic programs. These latter respondents could neither agree nor disagree without misleading you.

As a general rule, whenever the word *and* appears in a question or questionnaire statement, check whether you're asking a double-barreled question. See the Tips and Tools box, “Double-Barreled and Beyond,” for some imaginative variations on this theme.

## Respondents Must Be Competent to Answer

In asking respondents to provide information, you should continually ask yourself whether they can do so reliably. In a study of child rearing, you might ask respondents to report the age at which they first talked back to their parents. Quite aside from the problem of defining *talking back to parents*, it's doubtful that most respondents would remember with any degree of accuracy.

As another example, student-government leaders occasionally ask their constituents to indicate how students' fees ought to be spent. Typically, respondents are asked to indicate the percentage of available funds that should be devoted to a long list of activities. Without a fairly good knowledge of the nature of those activities and the costs involved in them, the respondents cannot provide meaningful answers. Administrative costs, for example, will receive little support although they may be essential to the programs as a whole.

One group of researchers examining teenagers' driving experience insisted on asking an



## Tips and Tools

### Double-Barreled and Beyond

The “Arab Spring” uprisings of 2011 drew world attention to several countries in the Middle East. One of the more dramatic changes culminated with the overthrow of Libya’s Colonel Muammar Gaddafi in August. This was not the first time American concerns were focused on Libya.

Consider this question, asked of U.S. citizens in April 1986, at a time when the country’s relationship with Libya was at an especially low point. Some observers suggested that the United States might end up in a shooting war with the small North African nation. The Harris Poll sought to find out what U.S. public opinion was.

If Libya now increases its terrorist acts against the U.S. and we keep inflicting more damage on Libya, then inevitably it will all end in the U.S. going to war and finally invading that country, which would be wrong.

Respondents were given the opportunity of answering “Agree,” “Disagree,” or “Not sure.” Notice the elements contained in the complex statement:

1. Will Libya increase its terrorist acts against the U.S.?
2. Will the U.S. inflict more damage on Libya?
3. Will the U.S. inevitably or otherwise go to war against Libya?
4. Would the U.S. invade Libya?
5. Would that be right or wrong?

These several elements offer the possibility of numerous points of view—far more than the three alternatives offered to the survey respondents. Even if we were to assume hypothetically that Libya would “increase its terrorist attacks” and the United States would “keep inflicting more damage” in return, you might have any one of at least seven distinct expectations about the outcome:

	<i>U.S. Will Not Go to War</i>	<i>War Is Probable but Not Inevitable</i>	<i>War Is Inevitable</i>
U.S. will not invade Libya	1	2	3
U.S. will invade Libya but it would be wrong		4	5
U.S. will invade Libya and it would be right		6	7

The examination of prognoses about the Libyan situation is not the only example of double-barreled questions sneaking into public opinion research. Here are some questions the Harris Poll asked in an attempt to gauge U.S. public opinion about then Soviet General Secretary Gorbachev:

He looks like the kind of Russian leader who will recognize that both the Soviets and the Americans can destroy each other with nuclear missiles so it is better to come to verifiable arms control agreements.

He seems to be more modern, enlightened, and attractive, which is a good sign for the peace of the world.

Even though he looks much more modern and attractive, it would be a mistake to think he will be much different from other Russian leaders.

How many elements can you identify in each of the questions? How many possible opinions could people have in each case? What does a simple “agree” or “disagree” really mean in such cases?

Sources: Reported in *World Opinion Update*, October 1985 and May 1986, respectively.

open-ended question concerning the number of miles driven since receiving a license, even though consultants argued that few drivers could estimate such information with any accuracy. In response, some teenagers reported driving hundreds of thousands of miles.

### Respondents Must Be Willing to Answer

Often, we would like to learn things from people that they are unwilling to share with us. For example, Yanjie Bian indicates that it has often been difficult to get candid answers from people in China.

[Here] people are generally careful about what they say on nonprivate occasions in order to survive under authoritarianism. During the Cultural Revolution between 1966 and 1976, for example, because of the radical political agenda and political intensity throughout the country, it was almost impossible to use survey techniques to collect valid and reliable data inside China about the Chinese people’s life experiences, characteristics, and attitudes towards the Communist regime.

(1994: 19–20)

Sometimes, U.S. respondents say they’re undecided when, in fact, they have an opinion but

think they're in a minority. Under that condition, they may be reluctant to tell a stranger (the interviewer) what that opinion is. Given this problem, the Gallup Organization, for example, has used a "secret ballot" format, which simulates actual election conditions, in that the "voter" enjoys complete anonymity. In an analysis of the Gallup Poll election data from 1944 to 1988, Andrew Smith and G. F. Bishop (1992) have found that this technique substantially reduced the percentage of respondents who said they were undecided about how they would vote.

This problem of nondisclosure is not limited to survey research, however. Richard Mitchell (1991: 100) faced a similar problem in his field research among U.S. survivalists:

Survivalists, for example, are ambivalent about concealing their identities and inclinations. They realize that secrecy protects them from the ridicule of a disbelieving majority, but enforced separatism diminishes opportunities for recruitment and information exchange. . . .

"Secretive" survivalists eschew telephones, launder their mail through letter exchanges, use nicknames and aliases, and carefully conceal their addresses from strangers. Yet once I was invited to group meetings, I found them cooperative respondents.

## Questions Should Be Relevant

Similarly, questions asked in a questionnaire should be relevant to most respondents. When attitudes are requested on a topic that few respondents have thought about or really care about, the results are not likely to be useful. Of course, because the respondents may express attitudes even though they've never given any thought to the issue, you run the risk of being misled.

This point is illustrated occasionally when researchers ask for responses relating to fictitious people and issues. In one political poll I conducted, I asked respondents whether they were familiar with each of 15 political figures in the community. As a methodological exercise, I made up a name: Tom Sakumoto. In response, 9 percent of the respondents said they were familiar with him. Of those respondents familiar with him, about half reported seeing him on television and reading about him in the newspapers.

When you obtain responses to fictitious issues, you can disregard those responses. But when the issue is real, you may have no way of telling which responses genuinely reflect attitudes and which reflect meaningless answers to an irrelevant question.

Ideally, we would like respondents to simply report that they don't know, have no opinion, or are undecided in those instances where that is the case. Unfortunately, however, they often make up answers.

## Short Items Are Best

In the interests of being unambiguous and precise and of pointing to the relevance of an issue, researchers tend to create long and complicated items. That should be avoided. Respondents are often unwilling to study an item in order to understand it. The respondent should be able to read an item quickly, understand its intent, and select or provide an answer without difficulty. In general, assume that respondents will read items quickly and give quick answers. Accordingly, provide clear, short items that will not be misinterpreted under those conditions.

## Avoid Negative Items

The appearance of a negation in a questionnaire item paves the way for easy misinterpretation. Asked to agree or disagree with the statement "The United States should not recognize Cuba," a sizable portion of the respondents will read over the word *not* and answer on that basis. Thus, some will agree with the statement when they're in favor of recognition, and others will agree when they oppose it. And you may never know which are which.

Similar considerations apply to other "negative" words. In a study of support for civil liberties, for example, respondents were asked whether they felt "the following kinds of people should be *prohibited* from teaching in public schools" and were presented with a list including such items as a Communist, a Ku Klux Klansman, and so forth. The response categories "yes" and "no" were given beside each entry. A comparison of the responses to this item with other items reflecting support for civil liberties strongly suggested that many respondents gave the answer "yes" to indicate willingness for such a person to teach, rather than to indicate

that such a person should be prohibited from teaching. (A later study in the series using the answer categories “permit” and “prohibit” produced much clearer results.)

In 1993 a national survey commissioned by the American Jewish Committee produced shocking results: One American in 5 believed that the Nazi Holocaust—in which 6 million Jews were reportedly killed—never happened; further, 1 in 3 Americans expressed some doubt that it had occurred. This research finding suggested that the Holocaust revisionist movement in America was powerfully influencing public opinion (“1 in 5 Polled Voices Doubt on Holocaust” 1993).

In the aftermath of this shocking news, researchers reexamined the actual question that had been asked: “Does it seem possible or does it seem impossible to you that the Nazi extermination of the Jews never happened?” On reflection, it seemed clear that the complex, double-negative question could have confused some respondents.

A new survey was commissioned and asked, “Does it seem possible to you that the Nazi extermination of the Jews never happened, or do you feel certain that it happened?” In the follow-up survey, only 1 percent of the respondents believed the Holocaust never happened, and another 8 percent said they weren’t sure (“Poll on Doubt of Holocaust Is Corrected” 1994).

## Avoid Biased Items and Terms

Recall from our discussion of conceptualization and operationalization in Chapter 5 that there are no ultimately true meanings for any of the concepts we typically study in social science. *Prejudice* has no ultimately correct definition; whether a given person is prejudiced depends on our definition of that term. The same general principle applies to the responses we get from people completing a questionnaire.

The meaning of someone’s response to a question depends in large part on its wording. This is true of every question and answer. Some questions seem to encourage particular responses more than other questions do. In the context of questionnaires, **bias** refers to any property of questions that encourages respondents to answer in a particular way.

Most researchers recognize the likely effect of a leading question that begins, “Don’t you agree

with the president of the United States that . . .” No reputable researcher would use such an item. Unfortunately, the biasing effect of items and terms is far subtler than this example suggests.

The mere identification of an attitude or position with a prestigious person or agency can bias responses. The item “Do you agree or disagree with the recent Supreme Court decision that . . .” would have a similar effect. Such wording may not produce consensus or even a majority in support of the position identified with the prestigious person or agency, but it will likely increase the level of support over what would have been obtained without such identification.

Sometimes the impact of different forms of question wording is relatively subtle. For example, when Kenneth Rasinski (1989) analyzed the results of several General Social Survey (GSS) studies of attitudes toward government spending, he found that the way programs were identified had an impact on the amount of public support they received. Here are some comparisons:

<i>More Support</i>	<i>Less Support</i>
“Assistance to the poor”	“Welfare”
“Halting rising crime rate”	“Law enforcement”
“Dealing with drug addiction”	“Drug rehabilitation”
“Solving problems of big cities”	“Assistance to big cities”
“Improving conditions of blacks”	“Assistance to blacks”
“Protecting Social Security”	“Social Security”

In 1986, for example, 62.8 percent of the respondents said too little money was being spent on “assistance to the poor,” whereas in a matched survey that year, only 23.1 percent said we were spending too little on “welfare.”

In this context, be wary of what researchers call the *social desirability* of questions and answers. Whenever we ask people for information, they answer through a filter of what will make them look good. This is especially true if they’re interviewed face-to-face. Thus, for

**bias** That quality of a measurement device that tends to result in a misrepresentation of what is being measured in a particular direction. For example, the questionnaire item “Don’t you agree that the president is doing a good job?” would be biased in that it would generally encourage more favorable responses.



example, during the 2008 Democratic primary, many voters who might have been reluctant to vote for an African American (Barack Obama) or a woman (Hillary Clinton) might have also been reluctant to admit their racial or gender prejudice to a survey interviewer. (Some, to be sure, were not reluctant to say how they felt.)

Frauke Kreuter, Stanley Presser, and Roger Tourangeau (2008) conducted an experiment on the impact of other data-collection techniques concerning respondents' willingness to provide sensitive information that might not reflect positively on themselves—such as failing a class or being put on academic probation. Of the three methods tested, respondents were least likely to volunteer such information when interviewed in a conventional telephone interview. They were somewhat more willing when interviewed by an interactive recording, and they were most likely to provide such information when questioned in a web survey.

The best way to guard against this problem is to imagine how you would feel giving each of the answers you intend to offer to respondents. If you would feel embarrassed, perverted, inhumane, stupid, irresponsible, or otherwise socially disadvantaged by any particular response, give serious thought to how willing others will be to provide those answers.

The biasing effect of particular wording is often difficult to anticipate. For example, in both surveys and experiments, researchers sometimes ask respondents to consider hypothetical situations and say how they think they would behave. Because those constructions often involve other people, however, the names used can affect responses. For instance, researchers have long known that male names for such hypothetical people can produce different responses than female names do. Research by Joseph Kasof (1993) points to the importance of what the specific names are: whether they generally evoke positive or negative images in terms of attractiveness, age, intelligence, and so forth. Kasof's review of past research suggests there has been a tendency to use more-positively-valued names for men than for women.

The Center for Disease Control (Choi and Pak 2005) has provided an excellent analysis of various ways in which the choice of terms can bias and otherwise confuse responses to questionnaires. Among other things, they warn against using ambiguous, technical, uncommon,

or vague words. Their thorough analysis provides many concrete illustrations.

As in all other research, carefully examine the purpose of your inquiry and construct items that will be most useful to it. You should never be misled into thinking there are ultimately “right” and “wrong” ways of asking the questions. Moreover, when in doubt about the best question to ask, remember that you should ask *more* than one.

These, then, are some general guidelines for writing questions to elicit data for analysis and interpretation. Next we look at how to construct questionnaires.

## Questionnaire Construction

Questionnaires are used in connection with many modes of observation in social research. Although structured questionnaires are essential to and most directly associated with survey research, they are also widely used in experiments, field research, and other data-collection activities. For this reason, questionnaire construction can be an important practical skill for researchers. As we discuss the established techniques for constructing questionnaires, let's begin with some issues of questionnaire format.

### General Questionnaire Format

The format of a questionnaire is just as important as the nature and wording of the questions asked. An improperly laid out questionnaire can lead respondents to miss questions, confuse them about the nature of the data desired, and even lead them to throw the questionnaire away.

As a general rule, a questionnaire should be adequately spaced and have an uncluttered layout. If a self-administered questionnaire is being designed, inexperienced researchers tend to fear that their questionnaire will look too long; as a result, they squeeze several questions onto a single line, abbreviate questions, and try to use as few pages as possible. These efforts are ill-advised and even dangerous. Putting more than one question on a line will cause some respondents to miss the second question altogether. Some respondents will misinterpret abbreviated questions. More generally, respondents who find they have spent considerable time on the first page of what seemed like a short

questionnaire will be more demoralized than respondents who quickly complete the first several pages of what initially seemed like a rather long form. Moreover, the latter will have made fewer errors and will not have been forced to reread confusing, abbreviated questions. Nor will they have been forced to write a long answer in a tiny space.

Similar problems can arise for interviewers in a face-to-face or telephone interview. Like respondents to a self-administered questionnaire, interviewers may miss questions, lose their place, and generally become frustrated and flustered. Interview questionnaires need to be formatted in a way that supports the interviewer's work, and must include any special instructions and guidelines that go beyond what respondents to a self-administered questionnaire would need.

The desirability of spreading out questions in the questionnaire cannot be overemphasized. Squeezed-together questionnaires are disastrous, whether they are to be completed by the respondents themselves or administered by trained interviewers. The processing of such questionnaires is another nightmare; I'll have more to say about that in Chapter 14.

## Formats for Respondents

In one of the most common types of questionnaire items, the respondent is expected to check one response from a series. For this purpose my experience has been that boxes adequately spaced apart are the best format. Word processing makes the use of boxes a practical technique these days; setting boxes in type can be accomplished easily and neatly. You can approximate boxes by using brackets: [ ]. Even better, a few extra minutes on the computer will let you find or create genuine boxes that will give your questionnaire a more professional look. Here are some easy examples:

Rather than providing boxes to be checked, you might print a code number beside each response and ask the respondent to circle the appropriate number (see Figure 9-1). This method has the added advantage of specifying the code number to be entered later in the processing stage (see Chapter 14). If numbers are to be circled, however, you should provide clear

Did you happen to vote in the last presidential election?

1. Yes
2. No
3. Don't know

Have you ever felt you were the victim of sexual discrimination?

1. Yes
2. No
3. Don't know

FIGURE 9-1

### Circling the Answer

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and prominent instructions to the respondent, because many will be tempted to cross out the appropriate number, which makes data processing more difficult. (Note that the technique can be used more safely when interviewers administer the questionnaires, because the interviewers themselves record the responses.)

## Contingency Questions

Quite often in questionnaires, certain questions will be relevant to some of the respondents and irrelevant to others. In a study of birth control methods, for instance, you would probably not want to ask men if they take birth control pills.

This sort of situation often arises when researchers wish to ask a series of questions about a certain topic. You may want to ask whether your respondents belong to a particular organization and, if so, how often they attend meetings, whether they have held office in the organization, and so forth. Or, you might want to ask whether respondents have heard anything about a certain political issue and then learn the attitudes of those who have heard of it.

Each subsequent question in series such as these is called a **contingency question**: Whether it is to be asked and answered is contingent on responses to the first question in the series. The

**contingency question** A survey question intended for only some respondents, determined by their responses to some other question. For example, all respondents might be asked whether they belong to the Cosa Nostra, and only those who said yes would be asked how often they go to company meetings and picnics. The latter would be a contingency question.

23. Have you ever smoked marijuana?

Yes

No

**If yes:** About how many times have you smoked marijuana?

Once

2 to 5 times

6 to 10 times

11 to 20 times

More than 20 times

FIGURE 9-2

**Contingency Question Format.** Contingency questions offer a structure for exploring subject areas logically in some depth.

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proper use of contingency questions can facilitate the respondents' task in completing the questionnaire, because they are not faced with trying to answer questions irrelevant to them.

There are several formats for contingency questions. The one shown in Figure 9-2 is probably the clearest and most effective. Note two key elements in this format. First, the contingency question is isolated from the other questions by being set off to the side and enclosed in a box. Second, an arrow connects the contingency question to the answer on which it is contingent. In the illustration, only those respondents answering yes are expected to answer the contingency question. The rest of the respondents should simply skip it.

Note that the questions shown in Figure 9-2 could have been dealt with in a single question. The question might have read, "How many times, if any, have you smoked marijuana?" The response categories, then, might have read: "Never," "Once," "2 to 5 times," and so forth. This single question would apply to all respondents, and each would find an appropriate answer category. Such a question, however, might put some pressure on respondents to report having smoked marijuana, because the main question asks how many times they have smoked it, even though it allows for those *exceptional* cases who have never smoked marijuana even once. (The emphases used in the previous sentence give a fair indication of how respondents might read the question.) The contingency question format illustrated in Figure 9-2 should reduce the subtle pressure on respondents to report having smoked marijuana.

24. Have you ever been abducted by aliens?

Yes

No

**If yes:** Did they let you steer the ship?

Yes

No

**If yes:** How fast did you go?

Warp speed

Weenie speed

FIGURE 9-3

**Contingency Table.** Sometimes it will be appropriate for certain kinds of respondents to skip over inapplicable questions. To avoid confusion, you should be sure to provide clear instructions to that end.

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Used properly, even rather complex sets of contingency questions can be constructed without confusing the respondent. Figure 9-3 illustrates a more complicated example.

Sometimes a set of contingency questions is long enough to extend over several pages. Suppose you're studying political activities of college students, and you wish to ask a large number of questions of those students who have voted in a national, state, or local election. You could separate out the relevant respondents with an initial question such as "Have you ever voted in a national, state, or local election?" but it would be confusing to place the contingency questions in a box stretching over several pages. It would make more sense to enter instructions, in parentheses after each answer, telling respondents to answer or skip the contingency questions. Figure 9-4 provides an illustration of this method.

In addition to these instructions, it's worthwhile to place additional directions at the top of each page containing only the contingency questions. For example, you might say, "This page is only for respondents who have voted in a

13. Have you ever voted in a national, state, or local election?

- Yes (Please answer questions 14–25.)
- No (Please skip questions 14–25.)

Go directly to question 26 on page 8.)

FIGURE 9-4

**Instructions to Skip**

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national, state, or local election.” Clear guidelines such as these spare respondents the frustration of reading and puzzling over questions irrelevant to them and increase the likelihood of responses from those for whom the questions are relevant.

## Matrix Questions

Quite often, you’ll want to ask several questions that have the same set of answer categories. This is typically the case whenever the Likert response categories are used. In such cases, it is often possible to construct a matrix of items and answers as illustrated in Figure 9-5.

This format offers several advantages over other formats. First, it uses space efficiently. Second, respondents will probably find it faster to complete a set of questions presented in this fashion than in other ways. In addition, this format may increase the comparability of responses given to different questions for the respondent as well as for the researcher. Because respondents can quickly review their answers to earlier items in the set, they might choose between, say, “strongly agree” and “agree” on a given statement by comparing the strength of their agreement with their earlier responses in the set.

There are some dangers inherent in using this format, however. Its advantages may encourage you to structure an item so that the responses fit into the matrix format when a different, more idiosyncratic set of responses might be more appropriate. Also, the matrix question format can foster a response-set among some respondents: They may develop a pattern of, say, agreeing with all the statements. This would be especially likely if

the set of statements began with several that indicated a particular orientation (for example, a liberal political perspective) with only a few later ones representing the opposite orientation. Respondents might assume that all the statements represented the same orientation and, reading quickly, misread some of them, thereby giving the wrong answers. This problem can be reduced somewhat by alternating statements representing different orientations and by making all statements short and clear.

## Ordering Items in a Questionnaire

The order in which questionnaire items are presented can also affect responses. First, the appearance of one question can affect the answers given to later ones. For example, if several questions have been asked about the dangers of terrorism to the United States and then a question asks respondents to volunteer (open-endedly) what they believe to represent dangers to the United States, terrorism will receive more citations than would otherwise be the case. In this situation, it’s preferable to ask the open-ended question first.

Similarly, if respondents are asked to assess their overall religiosity (“How important is your religion to you in general?”), their responses to later questions concerning specific aspects of religiosity will be aimed at consistency with the prior assessment. The converse is true as well. If respondents are first asked specific questions about different aspects of their religiosity, their subsequent overall assessment will reflect the earlier answers. The order of responses within a question can also make a difference (Bishop and Smith 2001).

17. Beside each of the statements presented below, please indicate whether you Strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD), or are Undecided (U).					
	SA	A	D	SD	U
a. What this country needs is more law and order. . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. The police should be disarmed in America. . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. During riots, looters should be shot on sight. . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
etc.					

**FIGURE 9-5**

**Matrix Question Format.** Matrix questions offer an efficient format for presenting a set of closed-ended questionnaire items that have the same response categories.

The impact of item order is not uniform. When J. Edwin Benton and John Daly (1991) conducted a local government survey, they found that the less-educated respondents were more influenced by the order of questionnaire items than those with more education were.

Some researchers attempt to overcome this effect by randomizing the order of items. This effort is usually futile. In the first place, a randomized set of items will probably strike respondents as chaotic and worthless. The random order also makes it more difficult for respondents to answer, because they must continually switch their attention from one topic to another. Finally, even a randomized ordering of items will have the effect discussed previously—except that you'll have no control over the effect.

The safest solution is sensitivity to the problem. Although you cannot avoid the effect of item order, try to estimate what that effect will be so that you can interpret results meaningfully. If the order of items seems especially important in a given study, you might construct more than one version of the questionnaire with different orderings of the items. You will then be able to determine the effects by comparing responses to the various versions. At the very least, you should pretest your questionnaire in the different forms. (We'll discuss pretesting in a moment.)

The desired ordering of items differs between interviews and self-administered questionnaires. In the latter, it's usually best to begin the questionnaire with the most interesting set of items. The potential respondents who glance casually over the first few items should want to answer them. Perhaps the items will ask for attitudes they're aching to express. At the same time, however, the initial items should not be threatening. (It might be a bad idea to begin with items about sexual behavior or drug use.) Requests for duller, demographic data (age, sex, and the like) should generally be placed at the end of a self-administered questionnaire. Placing these items at the beginning, as many inexperienced researchers are tempted to do, gives the questionnaire the initial appearance of a routine form, and the person receiving it may not be motivated to complete it.

Just the opposite is generally true for interview surveys. When the potential respondent's door first opens, the interviewer must gain rapport quickly. After a short introduction to the

study, the interviewer can best begin by enumerating the members of the household, getting demographic data about each. Such items are easily answered and generally nonthreatening. Once the initial rapport has been established, the interviewer can then move into the area of attitudes and more-sensitive matters. An interview that began with the question "Do you believe in witchcraft?" would probably end rather quickly (though hopefully not in a puff of smoke).

## Questionnaire Instructions

Every questionnaire, whether it is to be completed by respondents or administered by interviewers, should contain clear instructions and introductory comments where appropriate.

It's useful to begin every self-administered questionnaire with basic instructions for completing it. Although many people these days have experience with forms and questionnaires, begin by telling them exactly what you want: that they are to indicate their answers to certain questions by placing a check mark or an **X** in the box beside the appropriate answer or by writing in their answer when asked to do so. If many open-ended questions are used, respondents should be given some guidelines about whether brief or lengthy answers are expected. If you wish to encourage your respondents to elaborate on their responses to closed-ended questions, that should be noted.

If a questionnaire has subsections—political attitudes, religious attitudes, background data—introduce each with a short statement concerning its content and purpose. For example, "In this section, we would like to know what people consider to be the most important community problems." Demographic items at the end of a self-administered questionnaire might be introduced thus: "Finally, we would like to know just a little about you so we can see how different types of people feel about the issues we have been examining."

Short introductions and explanations such as these help the respondent make sense of the questionnaire. They make the questionnaire seem less chaotic, especially when it taps a variety of data. And they help put the respondent in the proper frame of mind for answering the questions.

Some questions may require special instructions to facilitate proper answering. This is especially true if a given question varies from the

general instructions pertaining to the whole questionnaire. Some specific examples will illustrate this situation.

Despite attempts to provide mutually exclusive answers in closed-ended questions, often more than one answer will apply for respondents. If you want a single answer, you should make this perfectly clear in the question. An example would be “From the list below, please check the primary reason for your decision to attend college.” Often the main question can be followed by a parenthetical note: “Please check the one best answer.” If, on the other hand, you want the respondent to check as many answers as apply, you should make this clear.

When the respondent is supposed to rank-order a set of answer categories, the instructions should indicate this, and a different type of answer format should be used (for example, blanks instead of boxes). These instructions should indicate how many answers are to be ranked (for example: all; only the first and second; only the first and last; the most important and least important). These instructions should also spell out the order of ranking (for example: “Place a 1 beside the most important item, a 2 beside the next most important, and so forth”). Rank-ordering of responses is often difficult for respondents, however, because they may have to read and reread the list several times, so this technique should be used only in those situations where no other method will produce useful data.

In multiple-part matrix questions, giving special instructions is useful unless the same format is used throughout the questionnaire. Sometimes respondents will be expected to check one answer in each column of the matrix; in other questionnaires they’ll be expected to check one answer in each row. Whenever the questionnaire contains both formats, it’s useful to add an instruction clarifying which is expected in each case.

## Pretesting the Questionnaire

No matter how carefully researchers design a data-collection instrument such as a questionnaire, there is always the possibility—indeed the certainty—of error. They will always make some mistake: write an ambiguous question, or one that people cannot answer, or commit some other violation of the rules just discussed.

The surest protection against such errors is to pretest the questionnaire in full or in part. Give the questionnaire to the 10 people in your bowling league, for example. It’s not usually essential that the pretest subjects comprise a representative sample, although you should use people for whom the questionnaire is at least relevant.

By and large, it’s better to ask people to complete the questionnaire than to read through it looking for errors. All too often, a question seems to make sense on a first reading, but it proves to be impossible to answer.

Stanley Presser and Johnny Blair (1994) describe several different pretesting strategies and report on the effectiveness of each. They also provide data on the cost of the various methods. Paul Beatty and Gordon Willis (2007) offer a useful review of “cognitive interviewing.” In this technique, the pretest includes gathering respondents’ comments about the questionnaire itself, so that the researchers can see which questions are communicating effectively and collecting the information sought.

There are many more tips and guidelines for questionnaire construction, but covering them all would take a book in itself. For now, I’ll complete this discussion with an illustration of a real questionnaire, showing how some of these comments find substance in practice.

Before turning to the illustration, however, I want to mention a critical aspect of questionnaire design: precoding. Because the information collected by questionnaires is typically transformed into some type of computer format, it’s usually appropriate to include data-processing instructions on the questionnaire itself. These instructions indicate where specific pieces of information will be stored in the machine-readable data files. Notice that the following illustration has been precoded with the mysterious numbers that appear near questions and answer categories.

## A Composite Illustration

Figure 9-6 is part of a questionnaire used by the University of Chicago’s National Opinion Research Center in its General Social Survey. The questionnaire dealt with people’s attitudes toward the government and was designed to be self-administered, though most of the GSS is conducted in face-to-face interviews.

10. Here are some things the government might do for the economy. Circle one number for each action to show whether you are in favor of it or against it.

- 1. Strongly in favor of
- 2. In favor of
- 3. Neither in favor of nor against
- 4. Against
- 5. Strongly against

PLEASE CIRCLE A NUMBER

a. Control of wages by legislation .....	1	2	3	4	5	28/
b. Control of prices by legislation .....	1	2	3	4	5	29/
c. Cuts in government spending .....	1	2	3	4	5	30/
d. Government financing of projects to create new jobs .....	1	2	3	4	5	31/
e. Less government regulation of business .....	1	2	3	4	5	32/
f. Support for industry to develop new products and technology .....	1	2	3	4	5	33/
g. Supporting declining industries to protect jobs .....	1	2	3	4	5	34/
h. Reducing the work week to create more jobs .....	1	2	3	4	5	35/

11. Listed below are various areas of government spending. Please indicate whether you would like to see more or less government spending in each area. Remember that if you say "much more," it might require a tax increase to pay for it.

- 1. Spend much more
- 2. Spend more
- 3. Spend the same as now
- 4. Spend less
- 5. Spend much less
- 8. Can't choose

PLEASE CIRCLE A NUMBER

a. The environment .....	1	2	3	4	5	8	36/
b. Health .....	1	2	3	4	5	8	37/
c. The police and law enforcement .....	1	2	3	4	5	8	38/
d. Education .....	1	2	3	4	5	8	39/
e. The military and defense .....	1	2	3	4	5	8	40/
f. Retirement benefits .....	1	2	3	4	5	8	41/
g. Unemployment benefits .....	1	2	3	4	5	8	42/
h. Culture and the arts .....	1	2	3	4	5	8	43/

12. If the government *had* to choose between keeping down inflation or keeping down unemployment, to which do you think it should give highest priority?

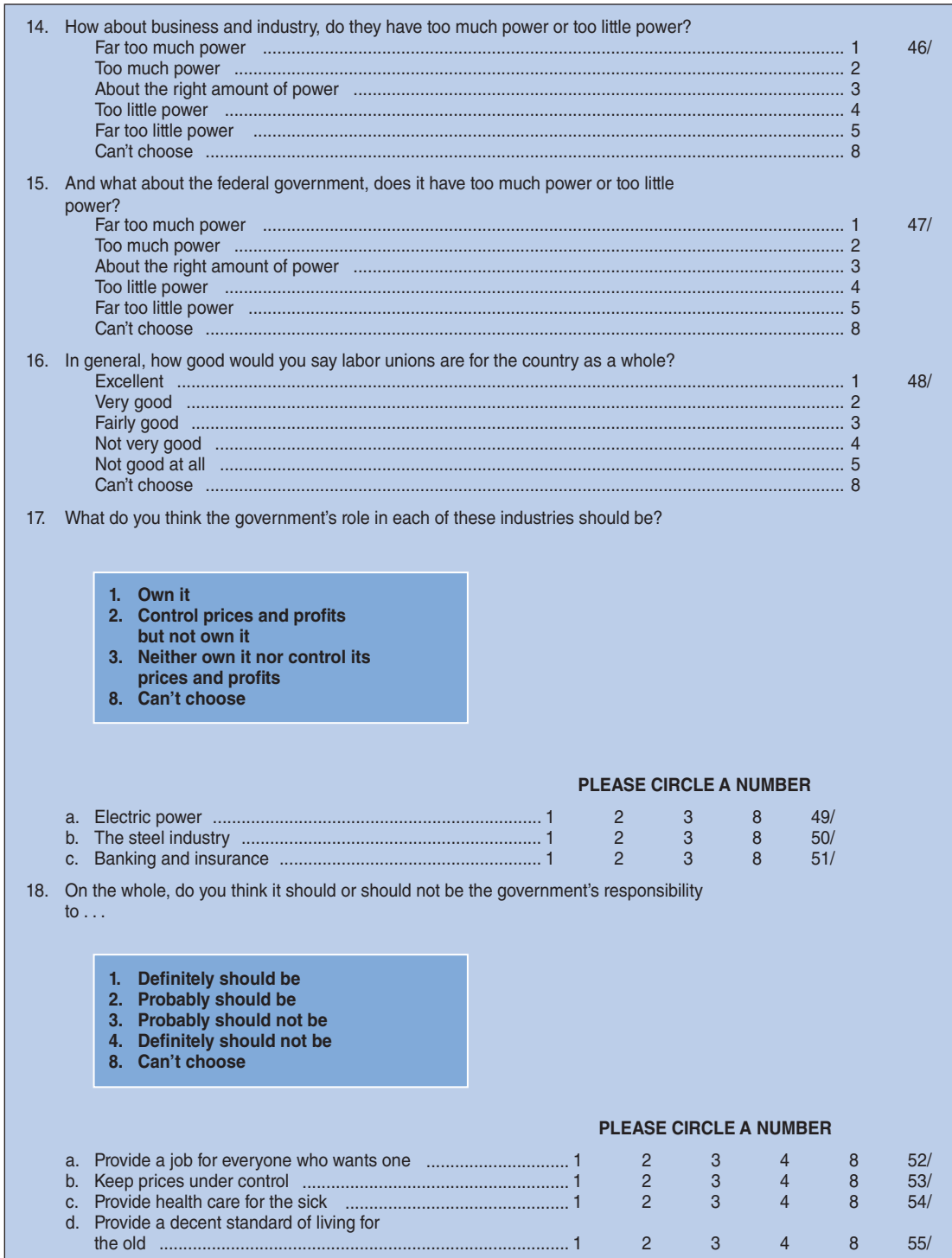
Keeping down inflation .....	1	44/
Keeping down unemployment .....	2	
Can't choose .....	8	

13. Do you think that labor unions in this country have too much power or too little power?

Far too much power .....	1	45/
Too much power .....	2	
About the right amount of power .....	3	
Too little power .....	4	
Far too little power .....	5	
Can't choose .....	8	

FIGURE 9-6

**A Sample Questionnaire.** This questionnaire excerpt is from the General Social Survey, a major source of data for analysis by social researchers around the world.



**FIGURE 9-6**

(Continued)



## Self-Administered Questionnaires

So far we've discussed how to formulate questions and how to design effective questionnaires. As important as these tasks are, the labor will be wasted unless the questionnaire produces useful data—which means that respondents actually complete the questionnaire. We turn now to the major methods for getting responses to questionnaires.

I've referred several times in this chapter to interviews and self-administered questionnaires. Actually, there are three main methods of administering survey questionnaires to a sample of respondents: self-administered questionnaires, in which respondents are asked to complete the questionnaire themselves; surveys administered by interviewers in face-to-face encounters; and surveys conducted by telephone. This section and the next two discuss each of these methods in turn. A fourth section addresses online surveys, a new technique rapidly growing in popularity.

The most common form of self-administered questionnaire is the mail survey. However, there are several other techniques that are often used as well. At times, it may be appropriate to administer a questionnaire to a group of respondents gathered at the same place at the same time. For example, a survey of students taking introductory psychology might be conducted during class. High school students might be surveyed during homeroom period.

Some recent experimentation has been conducted with regard to the home delivery of questionnaires. A research worker delivers the questionnaire to the home of sample respondents and explains the study. Then the questionnaire is left for the respondent to complete, and the researcher picks it up later.

Home delivery and the mail can also be used in combination. Questionnaires are mailed to families, and then research workers visit homes to pick up the questionnaires and check them for completeness. Just the opposite technique is to have questionnaires hand-delivered by research workers with a request that the respondents mail the completed questionnaires to the research office.

On the whole, when a research worker either delivers the questionnaire, picks it up, or both, the completion rate seems higher than it

is for straightforward mail surveys. Additional experimentation with this technique is likely to point to other ways to improve completion rates while reducing costs. The remainder of this section, however, is devoted specifically to the mail survey, which is still the typical form of self-administered questionnaire.

### Mail Distribution and Return

The basic method for collecting data through the mail has been to send a questionnaire accompanied by a letter of explanation and a self-addressed, stamped envelope for returning the questionnaire. The respondent is expected to complete the questionnaire, put it in the envelope, and return it. If, by any chance, you've received such a questionnaire and failed to return it, it would be valuable to recall the reasons you had for not returning it and keep them in mind any time you plan to send questionnaires to others.

A common reason for not returning questionnaires is that it's too much trouble. To overcome this problem, researchers have developed several ways to make returning them easier. For instance, a self-mailing questionnaire requires no return envelope: When the questionnaire is folded a particular way, the return address appears on the outside. The respondent therefore doesn't have to worry about losing the envelope.

More-elaborate designs are available also. The university student questionnaire to be described later in this chapter was bound in a booklet with a special, two-panel back cover. Once the questionnaire was completed, the respondent needed only to fold out the extra panel, wrap it around the booklet, and seal the whole thing with the adhesive strip running along the edge of the panel. The foldout panel contained my return address and postage. When I repeated the study a couple of years later, I improved on the design. Both the front and back covers had foldout panels: one for sending the questionnaire out and the other for getting it back—thus avoiding the use of envelopes altogether.

The point here is that anything you can do to make the job of completing and returning the questionnaire easier will improve your study. Imagine receiving a questionnaire that made no provisions for its return to the researcher.

Suppose you had to (1) find an envelope, (2) write the address on it, (3) figure out how much postage it required, and (4) put the stamps on it. How likely is it that you would return the questionnaire?

A few brief comments on postal options are in order. You have options for mailing questionnaires out and for getting them returned. On outgoing mail, your choices are essentially between first-class postage and bulk rate. First class is more certain, but bulk rate is far cheaper. (Check your local post office for rates and procedures.) On return mail, your choice is between postage stamps and business-reply permits. Here, the cost differential is more complicated. If you use stamps, you pay for them whether people return their questionnaires or not. With the business-reply permit, you pay for only those that are used, but you pay an additional surcharge of about a nickel. This means that stamps are cheaper if a lot of questionnaires are returned, but business-reply permits are cheaper if fewer are returned (and there is no way for you to know in advance how many will be returned).

There are many other considerations involved in choosing among the several postal options. Some researchers, for example, feel that using postage stamps communicates more “humanness” and sincerity than using bulk rate and business-reply permits does. Others worry that respondents will peel off the stamps and use them for some purpose other than returning the questionnaires. Because both bulk rate and business-reply permits require establishing accounts at the post office, you’ll probably find stamps much easier for small surveys.

## Monitoring Returns

The mailing of questionnaires sets up a new research question that may prove valuable to a study. Researchers shouldn’t sit back idly as questionnaires are returned; instead, they should undertake a careful recording of the varying rates of return among respondents.

An invaluable tool in this activity is a return-rate graph. The day on which questionnaires were mailed is labeled Day 1 on the graph, and on every day thereafter the number of returned questionnaires is logged on the graph. It’s usually best to compile two graphs. One shows the

number returned each day—rising over time, then dropping. The second reports the cumulative number or percentage. In part, this activity provides the researchers with gratification, as they get to draw a picture of their successful data collection. More important, however, it serves as their guide to how the data collection is going. If follow-up mailings are planned, the graph provides a clue about when such mailings should be launched. (The dates of subsequent mailings also should be noted on the graph.)

As completed questionnaires are returned, each should be opened, scanned, and assigned an identification (ID) number. These numbers should be assigned serially as the questionnaires are returned, even if other identification numbers have already been assigned. Two examples should illustrate the important advantages of this procedure.

Let’s assume you’re studying attitudes toward a political figure. In the middle of the data collection, the media break the story that the politician is having extramarital affairs. By knowing the date of that public disclosure and the dates when questionnaires were received, you’ll be in a position to determine the effects of the disclosure. (Recall from Chapter 8 the discussion of history in connection with experiments.)

In a less sensational way, serialized ID numbers can be valuable in estimating non-response biases in the survey. Barring more-direct tests of bias, you may wish to assume that those who failed to answer the questionnaire will be more like respondents who delayed answering than like those who answered right away. An analysis of questionnaires received at different points in the data collection might then be used for estimates of sampling bias. For example, if the grade point averages (GPAs) reported by student respondents decrease steadily through the data collection, with those replying right away having higher GPAs and those replying later having lower GPAs, you might tentatively conclude that those who failed to answer at all have lower GPAs yet. Although it would not be advisable to make statistical estimates of bias in this fashion, you could take advantage of approximate estimates based on the patterns you’ve observed.

If respondents have been identified for purposes of follow-up mailing, then preparations for those mailings should be made as the

questionnaires are returned. The case study later in this section discusses this process in greater detail.

## Follow-Up Mailings

Follow-up mailings may be administered in several ways. In the simplest, non-respondents are simply sent a letter of additional encouragement to participate. A better method, however, is to send a new copy of the survey questionnaire with the follow-up letter. If potential respondents have not returned their questionnaires after two or three weeks, the questionnaires have probably been lost or misplaced. Receiving a follow-up letter might encourage them to look for the original questionnaire, but if they can't find it easily, the letter may go for naught.

The methodological literature strongly suggests that follow-up mailings provide an effective method for increasing return rates in mail surveys. In general, the longer a potential respondent delays replying, the less likely he or she is to do so at all. Properly timed follow-up mailings, then, provide additional stimuli to respond.

The effects of follow-up mailings will be seen in the response-rate curves recorded during data collection. The initial mailings will be followed by a rise and subsequent subsiding of returns; the follow-up mailings will spur a resurgence of returns; and more follow-ups will do the same. In practice, three mailings (an original and two follow-ups) seem the most efficient.

The timing of follow-up mailings is also important. Here the methodological literature offers less-precise guides, but I've found that two or three weeks is a reasonable space between mailings. (This period might be increased by a few days if the mailing time—out and in—is more than two or three days.)

If the individuals in the survey sample are not identified on the questionnaires, it may not be possible to remail only to non-respondents. In such a case, send your follow-up mailing to

all members of the sample, thanking those who may have already participated and encouraging those who have not to do so. (The case study reported later describes yet another method you can use in an anonymous mail survey.)

## Response Rates

A question that new survey researchers frequently ask concerns the percentage return rate, or the response rate, that should be achieved in a survey. The body of inferential statistics used in connection with survey analysis assumes that *all* members of the initial sample complete the survey. Because this almost never happens, non-response bias becomes a concern, with the researcher testing (and hoping) for the possibility that the respondents look essentially like a random sample of the initial sample, and thus a somewhat smaller random sample of the total population.

Nevertheless, overall **response rate** is one guide to the representativeness of the sample respondents. If a high response rate is achieved, there is less chance of significant non-response bias than with a low rate. Conversely, a low response rate is a danger signal, because the non-respondents are likely to differ from the respondents in ways other than just their willingness to participate in the survey. Richard Bolstein (1991), for example, found that those who did not respond to a pre-election political poll were less likely to vote than were those who did participate. Estimating the turnout rate from just the survey respondents, then, would have overestimated the number who would show up at the polls. Ironically, of course, since the non-respondents were unlikely to vote, the preferences of the survey participants might offer a good estimate of the election results.

In the book *Standard Definitions*, the American Association for Public Opinion Research (AAPOR 2008: 4–5) defines the response rate, and further distinguishes contact rates, refusal rates, and cooperation rates.

- Response rates—The number of complete interviews with reporting units divided by the number of eligible reporting units in the sample. The report provides six definitions of response rates, ranging from the definition that yields the lowest

**response rate** The number of people participating in a survey divided by the number selected in the sample, in the form of a percentage. This is also called the *completion rate* or, in self-administered surveys, the *return rate*: the percentage of questionnaires sent out that are returned.

rate to the definition that yields the highest rate, depending on how partial interviews are considered and how cases of unknown eligibility are handled.

- Cooperation rates—The proportion of all cases interviewed of all eligible units ever contacted. The report provides four definitions of cooperation rates, ranging from a minimum or lowest rate, to a maximum or highest rate.
- Refusal rates—The proportion of all cases in which a housing unit or the respondent refuses to be interviewed, or breaks-off an interview, of all potentially eligible cases. The report provides three definitions of refusal rates, which differ in the way they treat dispositions of cases of unknown eligibility.
- Contact rates—The proportion of all cases in which some responsible housing unit member was reached. The report provides three definitions of contact rates.

While response rates logically affect the quality of survey data, this is not always in fact the case, as Robert Groves (2006) points out. With recent declines in response rates, this is a topic under careful study by survey researchers. At the same time, higher responses are a goal.

As you can imagine, one of the more persistent discussions among survey researchers concerns ways of increasing response rates. You'll recall that this was a chief concern in the earlier discussion of options for mailing out and receiving questionnaires. Survey researchers have developed many ingenious techniques addressing this problem. Some have experimented with novel formats. Others have tried paying respondents to participate. The problem with paying, of course, is that it's expensive to make meaningfully high payment to hundreds or thousands of respondents, but some imaginative alternatives have been used. Some researchers have said, "We want to get your two-cents' worth on some issues, and we're willing to pay"—enclosing two pennies. Another enclosed a quarter, suggesting that the respondent make some little child happy. Still others have enclosed paper money. Similarly, Michael Davern and his colleagues (2003) found that financial incentives also increased completion rates in face-to-face interview surveys (discussed in the next section).

Don Dillman (2007) has spent decades painstakingly assessing the various techniques that survey researchers have used to increase return rates on mail surveys, and he evaluates the impact of each. More important, Dillman stresses the necessity of paying attention to all aspects of the study—what he calls the "Tailored Design Method"—rather than one or two special gimmicks.

Having said all this, there is no absolutely acceptable level of response to a mail survey, except for 100 percent. While it is possible to achieve response rates of 70 percent or more, most mail surveys probably fall below that level. Thus, it's important to test for non-response bias wherever possible.

## Compensation for Respondents

It is fairly common practice to pay experimental and focus group subjects for their participation, though it has been rare in other research methods. Whether to pay survey respondents is sometimes discussed and often controversial.

In addition to cash payments, researchers have sometimes employed gift certificates, contributions to charities, lotteries, and other prize drawings. In a survey of New Zealanders, Mike Brennan and Jan Charbonneau (2009) sent chocolates as an incentive for participation.

Some researchers have provided incentives to all those selected in the sample during the first contact. In the case of cash incentives in mail surveys, this means respondents get the incentive whether they participate or not. In other cases, the researchers have provided or offered incentives in follow-up contacts with non-respondents, though this creates a problem of inequity, with the most cooperative people getting no compensation.

In a 1999 review of studies of this topic, Singer, Groves, and Corning found that with very few exceptions, response rates are increased by the use of incentives in mail surveys, face-to-face interviews, and telephone polls. Also, the authors found no evidence of negative effects on the quality of responses collected. A decade later, Petrolia and Bhattacharee (2009) reviewed past experience with incentives and conducted their own study. They confirmed that incentives increase response rates, and they found that pre-paid incentives had a greater effect than those introduced later in the process.

J. Michael Brick and his colleagues (2012) reported high response rates with a two-stage mail survey. This method began with an address-based sampling (ABS) of households that then received a short demographic questionnaire designed to gather relevant characteristics about their members. Next, a subsample was selected from among those identified as appropriate to the particular survey focus, and a follow-up questionnaire was then sent. Both mailings were accompanied by a \$1 cash incentive, and additional phone calls and postcard reminders were used with non-respondents.

## A Case Study

The steps involved in the administration of a mail survey are many and can best be appreciated in a walk-through of an actual study. Accordingly, this section concludes with a detailed description of how the student survey we discussed in Chapter 7, as an illustration of systematic sampling, was administered. This study did not represent the theoretical ideal for such studies, but in that regard it serves our present purposes all the better. The study was conducted by the students in my graduate seminar in survey research methods.

As you may recall, 1,100 students were selected from the university registration records through a stratified, systematic sampling procedure. For each student selected, six self-adhesive mailing labels were printed.

By the time we were ready to distribute the questionnaires, it became apparent that our meager research funds wouldn't cover several mailings to the entire sample of 1,100 students (questionnaire printing costs were higher than anticipated). As a result, we chose a systematic two-thirds sample of the mailing labels, yielding a subsample of 733 students.

Earlier, we had decided to keep the survey anonymous in the hope of encouraging more-candid responses to some sensitive questions. (Later surveys of the same issues among the same population indicated this anonymity was unnecessary.) Thus, the questionnaires would carry no identification of students on them. At the same time, we hoped to reduce the follow-up mailing costs by mailing only to non-respondents.

To achieve both of these aims, a special postcard method was devised. Each student was

mailed a questionnaire that carried no identifying marks, plus a postcard addressed to the research office—with one of the student's mailing labels affixed to the reverse side of the card. The introductory letter asked the student to complete and return the questionnaire—assuring anonymity—and to return the postcard simultaneously. Receiving the postcard would tell us—without indicating which questionnaire it was—that the student had returned his or her questionnaire. This procedure would then facilitate follow-up mailings.

The 32-page questionnaire was printed in booklet form. The three-panel cover described earlier in this chapter permitted the questionnaire to be returned without an additional envelope.

A letter introducing the study and its purposes was printed on the front cover of the booklet. It explained why the study was being conducted (to learn how students feel about a variety of issues), how students had been selected for the study, the importance of each student's responding, and the mechanics of returning the questionnaire.

Students were assured that their responses to the survey were anonymous, and the postcard method was explained. A statement followed about the auspices under which the study was being conducted, and a telephone number was provided for those who might want more information about the study. (Five students called for information.)

By printing the introductory letter on the questionnaire, we avoided the necessity of enclosing a separate letter in the outgoing envelope, thereby simplifying the task of assembling mailing pieces.

The materials for the initial mailing were assembled as follows. (1) One mailing label for each student was stuck on a postcard. (2) Another label was stuck on an outgoing manila envelope. (3) One postcard and one questionnaire were placed in each envelope—with a glance to ensure that the name on the postcard and on the envelope were the same in each case.

The distribution of the survey questionnaires had been set up for a bulk-rate mailing. Once the questionnaires had been stuffed into envelopes, they were grouped by zip code, tied in bundles, and delivered to the post office.

Shortly after the initial mailing, questionnaires and postcards began arriving at the research office. Questionnaires were opened, scanned, and assigned identification numbers as described earlier in this chapter. For every postcard received, a search was made for that student's remaining labels, and they were destroyed.

After two or three weeks, the remaining mailing labels were used to organize a follow-up mailing. This time a special, separate letter of appeal was included in the mailing piece. The new letter indicated that many students had returned their questionnaires already, and it was very important for all others to do so as well.

The follow-up mailing stimulated a resurgence of returns, as expected, and the same logging procedures continued. The returned postcards told us which additional mailing labels to destroy. Unfortunately, time and financial pressures made a third mailing impossible, despite initial plans to do so, but the two mailings resulted in an overall return rate of 62 percent.

This illustration should give you a fairly good sense of what's involved in the execution of mailed self-administered questionnaires. Let's turn now to the second principal method of conducting surveys, in-person interviews.

## Interview Surveys

The **interview** is an alternative method of collecting survey data. Rather than asking respondents to read questionnaires and enter their own answers, researchers send interviewers to ask the questions orally and to record respondents' answers. Interviewing is typically done in a face-to-face encounter, but telephone interviewing, discussed in the next section, follows most of the same guidelines.

Most interview surveys require more than one interviewer, although you might undertake a small-scale interview survey yourself. Portions of this section will discuss methods for training and supervising a staff of interviewers assisting you with a survey. Here we deal specifically with survey interviewing; Chapter 10 discusses the less-structured, in-depth interviews often conducted in qualitative field research.

## The Role of the Survey Interviewer

There are several advantages to having a questionnaire administered by an interviewer rather than a respondent. To begin with, interview surveys typically attain higher response rates than mail surveys do. A properly designed and executed interview survey ought to achieve a completion rate of at least 80 to 85 percent. (Federally funded surveys often require one of these response rates.) Respondents seem more reluctant to turn down an interviewer standing on their doorstep than to throw away a mail questionnaire.

The presence of an interviewer also generally decreases the number of "don't knows" and "no answers." If minimizing such responses is important to the study, the interviewer can be instructed to probe for answers ("If you had to pick one of the answers, which do you think would come closest to your feelings?").

Further, if a respondent clearly misunderstands the intent of a question or indicates that he or she does not understand, the interviewer can clarify matters, thereby obtaining relevant responses. (As we'll discuss shortly, such clarifications must be strictly controlled through formal specifications.)

Finally, the interviewer can observe respondents as well as ask questions. For example, the interviewer can note the quality of the dwelling, the presence of various possessions, the respondent's ability to speak English, the respondent's general reactions to the study, and so forth. In one survey of students, respondents were given a short, self-administered questionnaire to complete—concerning sexual attitudes and behavior—during the course of the interview. While respondents completed the questionnaire, the interviewer made detailed notes regarding their dress and grooming.

This procedure raises an ethical issue. Some researchers have objected that such practices violate the spirit of the agreement by which the respondent has allowed the interview. Although ethical issues seldom are clear-cut in social

**interview** A data-collection encounter in which one person (an interviewer) asks questions of another (a respondent). Interviews may be conducted face-to-face or by telephone.

research, it's important to be sensitive to them, as we saw in Chapter 3.

Survey research is of necessity based on an unrealistic stimulus-response theory of cognition and behavior. Researchers must assume that a questionnaire item will mean the same thing to every respondent, and every given response must mean the same when given by different respondents. Although this is an impossible goal, survey questions are drafted to approximate the ideal as closely as possible.

The interviewer must also fit into this ideal situation. The interviewer's presence should affect neither a respondent's perception of a question nor the answer given. In other words, the interviewer should be a neutral medium through which questions and answers are transmitted.

As such, different interviewers should obtain exactly the same responses from a given respondent. (Recall our earlier discussions of *reliability*.) This neutrality has a special importance in area samples. To save time and money, a given interviewer is typically assigned to complete all the interviews in a particular geographic area—a city block or a group of nearby blocks. If the interviewer does anything to affect the responses obtained, the bias thus interjected might be interpreted as a characteristic of that area.

Let's suppose that a survey is being done to determine attitudes toward low-cost housing in order to help in the selection of a site for a new government-sponsored development. An interviewer assigned to a given neighborhood might—through word or gesture—communicate his or her own distaste for low-cost housing developments. Respondents might therefore tend to give responses in general agreement with the interviewer's own position. The results of the survey would indicate that the neighborhood in question strongly resists construction of the development in its area when in fact their apparent resistance simply reflects the interviewer's attitudes.

## General Guidelines for Survey Interviewing

The manner in which interviews ought to be conducted will vary somewhat by survey population and survey content. Nevertheless, some general guidelines apply to most interviewing situations.

### *Appearance and Demeanor*

As a rule, interviewers should dress in a fashion similar to that of the people they'll be interviewing. A richly dressed interviewer will probably have difficulty getting good cooperation and responses from poorer respondents; a poorly dressed interviewer will have similar difficulties with richer respondents. To the extent that the interviewer's dress and grooming differ from those of the respondents, it should be in the direction of cleanliness and neatness in modest apparel. If cleanliness is not next to godliness, it appears at least to be next to neutrality. Although middle-class neatness and cleanliness may not be accepted by all sectors of U.S. society, they remain the primary norm and are the most likely to be acceptable to the largest number of respondents.

Dress and grooming are typically regarded as signs of a person's attitudes and orientations. Torn jeans, green hair, tattoos, and razor blade earrings may communicate—correctly or incorrectly—that the interviewer is politically radical, sexually permissive, favorable to drug use, and so forth. Any of these impressions could bias responses or affect the willingness of people to be interviewed.

In demeanor, interviewers should be pleasant if nothing else. Because they'll be prying into a respondent's personal life and attitudes, they must communicate a genuine interest in getting to know the respondent, without appearing to spy. They must be relaxed and friendly, without being too casual or clinging. Good interviewers also have the ability to determine very quickly the kind of person the respondent will feel most comfortable with, the kind of person the respondent would most enjoy talking to. Clearly, the interview will be more successful in this case. Further, because respondents are asked to volunteer a portion of their time and to divulge personal information, they deserve the most enjoyable experience the researcher and interviewer can provide.

### *Familiarity with the Questionnaire*

If an interviewer is unfamiliar with the questionnaire, the study suffers and the respondent faces an unfair burden. The interview is likely to take more time than necessary and be unpleasant.

Moreover, the interviewer cannot acquire familiarity by skimming through the questionnaire two or three times. He or she must study it carefully, question by question, and must practice reading it aloud.

Ultimately, the interviewer must be able to read the questionnaire items to respondents without error, without stumbling over words and phrases. A good model is the actor reading lines in a play or movie. The lines must be read as though they constituted a natural conversation, but that conversation must follow exactly the language set down in the questionnaire.

By the same token, the interviewer must be familiar with the specifications prepared in conjunction with the questionnaire. Inevitably some questions will not exactly fit a given respondent's situation, and the interviewer must determine how the question should be interpreted in that situation. The specifications provided to the interviewer should give adequate guidance in such cases, but the interviewer must know the organization and contents of the specifications well enough to refer to them efficiently. It would be better for the interviewer to leave a given question unanswered than to spend five minutes searching through the specifications for clarification or trying to interpret the relevant instructions.

### **Following Question Wording Exactly**

The first part of this chapter discussed the significance of question wording for the responses obtained. A slight change in the wording of a given question may lead a respondent to answer "yes" rather than "no." It follows that interviewers must be instructed to follow the wording of questions exactly. Otherwise all the effort that the developers have put into carefully phrasing the questionnaire items to obtain the information they need and to ensure that respondents interpret items precisely as intended will be wasted.

While I hope the logic of this injunction is clear, it is not necessarily a closed discussion. For example, Giampietro Gobo (2006) argues that we might consider giving interviewers more latitude, suggesting that respondents sometimes make errors that may be apparent to the interviewer on the spot. As he notes, allowing the interviewer to intervene does increase the possibility that the interviewer will impact the data collected.

### **Recording Responses Exactly**

Whenever the questionnaire contains open-ended questions (ones soliciting the respondent's own answers), the interviewer must record those answers exactly as given. No attempt should be made to summarize, paraphrase, or correct bad grammar.

This exactness is especially important because the interviewer will not know how the responses are to be coded. Indeed, the researchers themselves may not know the coding until they've read a hundred or so responses. For example, the questionnaire might ask respondents how they feel about the traffic situation in their community. One respondent might answer that there are too many cars on the roads and that something should be done to limit their numbers. Another might say that more roads are needed. If the interviewer recorded these two responses with the same summary—"congested traffic"—the researchers would not be able to take advantage of the important differences in the original responses.

Sometimes, verbal responses are too inarticulate or ambiguous to permit interpretation. However, the interviewer may be able to understand the intent of the response through the respondent's gestures or tone. In such a situation, the interviewer should still record the exact verbal response but also add marginal comments giving both the interpretation and the reasons for arriving at it.

More generally, researchers can use any marginal comments explaining aspects of the response not conveyed in the verbal recording, such as the respondent's apparent anger, embarrassment, uncertainty in answering, and so forth. In each case, however, the exact verbal response should also be recorded.

### **Probing for Responses**

Sometimes respondents in an interview will give an inappropriate or incomplete answer. In such cases, a **probe**, or request for an elaboration, can

**probe** A technique employed in interviewing to solicit a more complete answer to a question. It is a nondirective phrase or question used to encourage a respondent to elaborate on an answer. Examples include "Anything more?" and "How is that?"



be useful. For example, a closed-ended question may present an attitudinal statement and ask the respondent to strongly agree, agree somewhat, disagree somewhat, or strongly disagree. The respondent, however, may reply: “I think that’s true.” The interviewer should follow this reply with “Would you say you strongly agree or agree somewhat?” If necessary, interviewers can explain that they must check one or the other of the categories provided. If the respondent adamantly refuses to choose, the interviewer should write in the exact response given by the respondent.

Probes are more frequently required in eliciting responses to open-ended than to closed-ended questions. For example, in response to a question about traffic conditions, the respondent might simply reply, “Pretty bad.” The interviewer could obtain an elaboration on this response through a variety of probes. Sometimes the best probe is silence; if the interviewer sits quietly with pencil poised, the respondent will probably fill the pause with additional comments. (This technique is used effectively by newspaper reporters.) Appropriate verbal probes might be “How is that?” or “In what ways?” Perhaps the most generally useful probe is “Anything else?”

Often, interviewers need to probe for answers that will be sufficiently informative for analytical purposes. In every case, however, such probes must be completely neutral; they must not in any way affect the nature of the subsequent response. Whenever you anticipate that a given question may require probing for appropriate responses, you should provide one or more useful probes next to the question in the questionnaire. This practice has two important advantages. First, you’ll have more time to devise the best, most neutral probes. Second, all interviewers will use the same probes whenever they’re needed. Thus, even if the probe isn’t perfectly neutral, all respondents will be presented with the same stimulus. This is the same logical guideline discussed for question wording. Although a question should not be loaded or biased, it’s essential that every respondent be presented with the same question, even if it is biased.

## Coordination and Control

Most interview surveys require the assistance of several interviewers. In large-scale surveys,

interviewers are hired and paid for their work. Student researchers might find themselves recruiting friends to help them interview. Whenever more than one interviewer is involved in a survey, their efforts must be carefully controlled. This control has two aspects: training interviewers and supervising them after they begin work.

The interviewers’ training session should begin with a description of what the study is all about. Even though the interviewers may be involved only in the data-collection phase of the project, it will be useful to them to understand what will be done with the interviews they conduct and what purpose will be served. Morale and motivation are usually lower when interviewers don’t know what’s going on.

The training on how to interview should begin with a discussion of general guidelines and procedures, such as those discussed earlier in this section. Then the whole group should go through the questionnaire together—question by question. Don’t simply ask if anyone has any questions about the first page of the questionnaire. Read the first question aloud, explain the purpose of the question, and then entertain any questions or comments the interviewers may have. Once all their questions and comments have been handled, go on to the next question in the questionnaire.

It’s always a good idea to prepare specifications to accompany an interview questionnaire. *Specifications* are explanatory and clarifying comments about handling difficult or confusing situations that may occur with regard to particular questions in the questionnaire. When drafting the questionnaire, try to think of all the problem cases that might arise—the bizarre circumstances that might make a question difficult to answer. The survey specifications should provide detailed guidelines on how to handle such situations. For example, even as simple a matter as age might present problems. Suppose a respondent says he or she will be 25 next week. The interviewer might not be sure whether to take the respondent’s current age or the nearest one. The specifications for that question should explain what should be done. (Probably, you would specify that the age as of last birthday should be recorded in all cases.)

If you’ve prepared a set of specifications, review them with the interviewers when you

go over the individual questions in the questionnaire. Make sure your interviewers fully understand the specifications and the reasons for them as well as the questions themselves.

This portion of the interviewer training is likely to generate many troublesome questions from your interviewers. They'll ask, "What should I do if . . . ?" In such cases, avoid giving a quick, offhand answer. If you have specifications, show how the solution to the problem could be determined from the specifications. If you do not have specifications, show how the preferred handling of the situation fits within the general logic of the question and the purpose of the study. Giving unexplained answers to such questions will only confuse the interviewers and cause them to take their work less seriously. If you don't know the answer to such a question when it's asked, admit it and ask for some time to decide on the best answer. Then think out the situation carefully and be sure to give all the interviewers your answer, explaining your reasons.

Once you've gone through the whole questionnaire, conduct one or two demonstration interviews in front of everyone. Preferably, you should interview someone other than one of the interviewers. Realize that your interview will be a model for those you're training, so make it good. It would be best, moreover, if the demonstration interview were done as realistically as possible. Don't pause during the demonstration to point out how you've handled a complicated situation: Handle it, and then explain later. It's irrelevant if the person you're interviewing gives real answers or takes on some hypothetical identity for the purpose, as long as the answers are consistent.

After the demonstration interviews, pair off your interviewers and have them practice on each other. When they've completed the questionnaire, have them reverse roles and do it again. Interviewing is the best training for interviewing. As your interviewers practice on each other, wander around, listening in on the practice so you'll know how well they're doing. Once the practice is completed, the whole group should discuss their experiences and ask any other questions they may have.

The final stage of the training for interviewers should involve some "real" interviews. Have them conduct some interviews under the actual

conditions that will pertain to the final survey. You may want to assign them people to interview, or perhaps they may be allowed to pick people themselves. Don't have them practice on people you've selected in your sample, however. After each interviewer has completed three to five interviews, have him or her check back with you. Look over the completed questionnaires for any evidence of misunderstanding. Again, answer any questions that the interviewers have. Once you're convinced that a given interviewer knows what to do, assign some actual interviews, using the sample you've selected for the study.

It's essential to continue supervising the work of interviewers over the course of the study. You should check in with them after they conduct no more than 20 or 30 interviews. You might assign 20 interviews, have the interviewer bring back those questionnaires when they're completed, look them over, and assign another 20 or so. Although this may seem overly cautious, you must continually protect yourself against misunderstandings that may not be evident early in the study. Moreover, Kristen Olson and Andy Peytchev (2007) have discovered that interviewers' behavior continues to change over the course of a survey project. For example, as time goes on, interviewers speed through the interview more quickly and are more likely to judge respondents as uninterested in it.

If you're the only interviewer in your study, these comments may not seem relevant. However, it would be wise, for example, to prepare specifications for potentially troublesome questions in your questionnaire. Otherwise, you run the risk of making ad hoc decisions, during the course of the study, that you'll later regret or forget. Also, the emphasis on practice applies equally to the one-person project and to the complex funded survey with a large interviewing staff.

## Telephone Surveys

For years telephone surveys had a rather bad reputation among professional researchers. By definition, telephone surveys are limited to people who have telephones. Years ago, this method produced a substantial social-class bias by excluding poor people from the surveys. This was vividly demonstrated by the *Literary Digest*

fiasco of 1936. Recall that, even though voters were contacted by mail, the sample was partially selected from telephone subscribers, who were hardly typical in a nation just recovering from the Great Depression. As we saw in Chapter 7, virtually all American households now have telephones, so the earlier form of class bias has substantially diminished.

Telephone surveys offer many advantages that underlie the popularity of this method. Probably the greatest returns are in money and time, in that order. To conduct a face-to-face, household interview, you may drive several miles to a respondent's home, find no one there, return to the research office, and drive back the next day—possibly finding no one there again. It's cheaper and quicker to let your fingers make the trips.

Interviewing by telephone, you can dress any way you please without affecting the answers respondents give. And sometimes respondents will be more honest in giving socially disapproved answers if they don't have to look you in the eye. Similarly, it may be possible to probe into more-sensitive areas, though this isn't necessarily the case. People are, to some extent, more suspicious when they can't see the person asking them questions.

Interviewers can communicate a lot about themselves over the phone, however, even though they can't be seen. For example, researchers worry about the impact of an interviewer's name (particularly if ethnicity is relevant to the study) and debate the ethics of having all interviewers use bland "stage names" such as Smith or Jones. (Female interviewers sometimes ask permission to do this, to avoid subsequent harassment from men they interview.)

Telephone surveys can allow greater control over data collection if several interviewers are engaged in the project. If all the interviewers are calling from the research office, they can get clarification from the person in charge whenever problems occur, as they inevitably do. Alone in

the boondocks, an interviewer may have to wing it between weekly visits with the interviewing supervisor.

Telephone interviewing presents its own problems, however. For example, the method is hampered by the proliferation of bogus "surveys" that are actually sales campaigns disguised as research. If you have any questions about any such call you receive, by the way, ask the interviewer directly whether you've been selected for a survey only or if a sales "opportunity" is involved. It's also a good idea, if you have any doubts, to get the interviewer's name, phone number, and company. Hang up if the caller refuses to provide any of these.

For the researcher, the ease with which people can hang up is another shortcoming of telephone surveys. Once you've been let inside someone's home for an interview, the respondent is unlikely to order you out of the house in mid-interview. It's much easier to terminate a telephone interview abruptly, saying something like, "Whoops! Someone's at the door. I gotta go." or "Omigod! The neighbors are setting my car on fire!" (That sort of evasion is much harder to fake when the interviewer is sitting in your living room.)

Research has shown that several factors, including voice mail and answering machines, have reduced response rates in telephone surveys. Peter Tuckel and Harry O'Neill (2002) and others have examined the impact of such factors as Caller ID, answering machines, and telemarketing. All these constitute difficulties modern survey researchers must deal with.

## Computer-Assisted Telephone Interviewing (CATI)

In Chapter 14, we'll see some of the ways computers have influenced the conduct of social research—particularly data processing and analysis. Computers are also changing the nature of telephone interviewing. One innovation is **computer-assisted telephone interviewing (CATI)**. This method is increasingly used by academic, government, and commercial survey researchers. Though there are variations in practice, here's what CATI can look like.

Imagine an interviewer wearing a telephone headset, sitting in front of a computer terminal

**computer-assisted telephone interviewing (CATI)** A data-collection technique in which a telephone-survey questionnaire is stored in a computer, permitting the interviewer to read the questions from the monitor and enter the answers on the computer keyboard.

and its video screen. The central computer selects a telephone number at random and dials it. On the video screen is an introduction (“Hello, my name is . . .”) and the first question to be asked (“Could you tell me how many people live at this address?”).

When the respondent answers the phone, the interviewer says hello, introduces the study, and asks the first question displayed on the screen. When the respondent answers the question, the interviewer types that answer into the computer terminal—either the verbatim response to an open-ended question or the code category for the appropriate answer to a closed-ended question. The answer is immediately stored in the computer. The second question appears on the video screen, is asked, and the answer is entered into the computer. Thus, the interview continues.

In addition to the obvious advantages in terms of data collection, CATI automatically prepares the data for analysis; in fact, the researcher can begin analyzing the data before the interviewing is complete, thereby gaining an advanced view of how the analysis will turn out.

It is also possible to go a step further than computer-assisted interviews. With the innovation of so-called robo-polls, the entire interview is conducted by a programmed recording that can interpret the spoken answers of respondents. This discussion may remind you of the robo-calls in which a recorded voice presents a political or commercial message once you answer your phone. Robo-polls go a step further through the use of *Interactive Voice Recognition (IVR)*. The computer is programmed to interpret the respondent’s answers, record them, and determine how to continue the interview appropriately.

Clearly this method is cost-effective by cutting out the labor cost of hiring human beings as interviewers. It has been viewed with suspicion and/or derision by some survey researchers, but in its evaluation of the 2008 primary polling, the American Association of Public Opinion Research (AAPOR) reported no difference in the accuracy of results produced by CATI or IVR (AAPOR 2009).

During the 2010 midterm election campaigns, survey-watcher Nate Silver (2010b) found that robo-polls tended to produce results slightly more favorable to Republicans than did conventional methods. Silver also found that

robo-polls might produce different answers to sensitive questions. He looked at California’s Proposition 19, which would have legalized and taxed the personal use of marijuana. Silver found:

The methodologies split in the support they show for the initiative. The three automated surveys all have Prop 19 passing by a double-digit margin. The human-operator polls, meanwhile, each show it trailing narrowly.

(Silver: 2010a)

Ultimately, Proposition 19 failed by a two-to-one margin. The next edition of this textbook may revise the discussion of robo-polls, though it is not clear now what the fate of this technique will be.

## Response Rates in Interview Surveys

Earlier in this chapter we looked at the issue of response rates in mail surveys, and this is an equally important issue for interview surveys. In Chapter 7, when we discussed formulas for calculating sampling error to determine the accuracy of survey estimates, the implicit assumption was that everyone selected in a sample would participate—which is almost never the case. Lacking perfection, researchers must maximize participation by those selected. Although interview surveys tend to produce higher response rates than do mail surveys, interview success has recently declined.

By analyzing response-rate trends in the University of Michigan’s Survey of Consumer Attitudes, Richard Curtin, Stanley Presser, and Eleanor Singer (2005) have sketched a pattern of general decline over recent years. Between 1979 and 1996, the response rate in this telephone survey dropped from 72 to 60 percent, representing an average annual decline of three-quarters of a percent. Since 1996, the rate of decline has doubled. The increased non-responses reflected both refusals and those who the interviewers were unable to contact.

By contrast, the General Social Survey, using personal interviews, experienced response rates between 73.5 and 82.4 percent in the years from 1975 to 1998. In the 2000 and 2002 surveys, however, the GSS completion rate was 70 percent.

Their decline came primarily from refusals rather than being unable to contact respondents, because household interviews produce higher rates of contact than telephone surveys do.

In recent years, both household and telephone surveys have experienced a decline in response rates. A special issue of the *Public Opinion Quarterly* (2006) was devoted entirely to analyzing the many dimensions of the decline in response rates in household surveys. As the analyses show, lower response rates do not necessarily produce inaccurate estimates of the population being studied, but the variations on this issue defy a simple summary.

Former director of the U.S. Census, Robert Groves (2011: 866) detailed some of the factors complicating modern survey research.

Walled subdivisions, locked apartment buildings, telephone answering machines, telephone caller ID, and a host of other access impediments for survey researchers grew in this era. Response rates continued to deteriorate. Those household surveys devoted to high response rates experienced continuous inflation of costs due to increased effort to contact and interview the public. Face-to-face interviews continued to decline in volume, often limited to the first wave of longitudinal surveys.

Many researchers believe that the widespread growth of telemarketing has been a big part of the problems experienced by legitimate telephone surveys, and there are hopes that the state and national “do not call” lists may ease that problem. Further, as we’ve seen, other factors such as answering machines and voicemail also contribute to these problems (Tuckel and O’Neill 2002). Response rate is likely to remain an issue of high concern in survey research.

As a consumer of social research, you should be wary of “surveys” whose apparent purpose is to raise money for the sponsor. This practice had been common in mail surveys, and soon expanded to the realm of “fax surveys,” evidenced by a fax entitled “Should Hand Guns Be Outlawed?” Two fax numbers were provided for expressing either a “Yes” or “No” opinion. The smaller print noted, “Calls to these numbers cost \$2.95 per minute, a small price for greater democracy. Calls take approx. 1 or 2 minutes.”

You can imagine where the \$2.95 went. Undoubtedly, you can give your own examples of similar e-mail “surveys.”

## Online Surveys

An increasingly popular method of survey research involves the use of the Internet, one of the most far-reaching developments of the late twentieth century. Mick Couper and Peter Miller (2008) give an excellent introduction to the timeline of this new face of social research.

Despite their relatively short history, Web surveys have already had a profound effect on survey research. The first graphic browser (NCSA Mosaic) was released in 1992, with Netscape Navigator following in 1994 and Internet Explorer in 1995. The first published papers on Web surveys appeared in 1996. Since then, there has been a virtual explosion of interest in the Internet as a tool for survey data collection.

(2008: 831)

Three years later, Couper (2011) reflected on the probable role of online surveys in the future of social research.

The newer modes have tended to supplement rather than replace existing modes, in part because even though they address some problems (e.g., improvements in measurement, reductions in cost), they may not solve others (e.g., coverage, nonresponse). In other words, there is no one mode that can be all things to all research questions. Multiple modes, and mixes of mode, will continue to be a fact of life for survey research for the foreseeable future.

(2011: 901)

While this section will examine various aspects of online survey research, you should be forewarned that this technique is developing so quickly that new innovations will surely have arisen by the time this book reaches your hands. To stay abreast of these developments, your best single source is the American Association for Public Opinion Research (AAPOR) and two key publications: *Public Opinion Quarterly* (POQ) and the online journal *Survey Practice*. Although

neither of these is solely dedicated to online research, an increasing percentage of their articles addresses that topic. University survey research offices such as those at the University of Michigan, NORC at the University of Chicago, and many other institutions around the globe are very active in developing this new technique. Similarly, commercial research firms such as Pew, Harris, Nielsen, and others are equally involved.

As we saw in Chapter 7 on sampling, one immediate objection that many social researchers make to online surveys concerns representativeness: Will the people who can be surveyed online be representative of meaningful populations, such as all U.S. adults, all voters, and so on? This was the criticism raised previously with regard to surveys via fax or by telephone interviewers.

Early in the development of online surveys, Camilo Wilson (1999), founder of Cogix, pointed out that some respondent populations are ideally suited to this technique: specifically, those who visit a particular website. For example, Wilson indicates that market research for online companies should be conducted online, and his firm has developed software called ViewsFlash for precisely that purpose. Although website surveys could easily collect data from all who visit a particular site, Wilson suggests that survey-sampling techniques can provide sufficient consumer data without irritating thousands or millions of potential customers. As we saw in Chapter 7, much methodological research is being devoted to ways of achieving representative sampling of general populations with online surveys.

Let's turn now to some of the other methodological aspects of online surveys that are currently being examined and experimented with.\*

## Online Devices

At the outset, online surveys were aimed at users of personal computers, most typically desktop models. As the distinction between desktop and

laptop computer capabilities narrowed, both devices were considered proper ways of participating in online surveys. Notice, however, that the growing use of laptop computers for this purpose broadened the variety of environments in which respondents might participate. This was only the beginning, however.

When I attended the first meeting of the Chinese Survey Research Association in Shanghai in 2010, I was struck by the vitality of the researchers reporting on their studies in a country where sociology had been removed from universities from 1949 to 1979. Most of the articles I looked at were in Chinese, which was a problem for me. However, many articles included photographs to illustrate some of the new techniques being used, and I was struck by the number of smartphones and other mobile devices pictured. This interest is hardly limited to Chinese research.

Tablets and smartphones have been rapidly gaining in computing power and are increasingly being used as vehicles for completing online surveys. Respondents have inadvertently compelled researchers to develop survey formats that were compatible with mobile devices: As respondents attempted, sometimes unsuccessfully, to use smartphones and digital tablets to complete questionnaires designed for desktop computers, survey researchers realized the need and potential for adapting their questionnaires to the range of devices that might be used by respondents. Screen size, of course, is a major concern, but so are the varied navigation systems used by different devices.

Researchers are also learning that they must accommodate respondents' device preferences. For example, Morgan M. Millar and Don A. Dillman (2012) conducted an experiment in which they attempted to encourage respondents to participate in a survey using their smartphones while still allowing the use of other devices such as tablets or laptops. The researchers reported only a slight increase in smartphone usage by respondents who were urged to use the device, compared with those who were given no encouragement.

This line of methodological research will continue, but consider this: We will surely see the development of new devices, some we can't currently imagine, that will have to be accommodated in the future.

\*In beginning this section of the chapter, I want to acknowledge Michael Link of the Nielsen Company, for his excellent, online seminar, "Leveraging New Technologies," conducted as part of AAPOR's Webinar Series on December 5, 2012. While I have not quoted directly from the seminar, I have benefited greatly from the overview and detailing of variations it provided.

## Electronic Instrument Design

Over the years, members of industrialized nations have become familiar with the format and process of self-administered questionnaires, but, as just mentioned, the web presents a new challenge for many. Leah Christian, Don Dillman, and Jolene Smyth provide a wealth of guidance on the formatting of web surveys. Their aim is, as their article title suggests, “helping respondents get it right the first time” (2007).

The initial temptation, of course, is to simply import the digital file for the mail questionnaire into a web survey framework. However, there are two problems with this. First, the mail format doesn’t necessarily fit on a computer screen, let alone onto that of a tablet or smartphone. On the other hand, the e-devices offer possibilities unattainable with words on paper. I am unable to list those possibilities for you now, because they are still being developed, but I can connect you with some of the options and challenges currently underway or on the radar.

For example, researchers like Roger Tourangeau, Mick P. Couper, and Frederick G. Conrad (2013) were concerned about whether the placement of answers in a list would affect respondents’ choices. Their conclusion, based on the review of several studies, is that “up means good.” When several opinion choices are arranged vertically, respondents are more likely to select the topmost choice.

Jason Husser and Kenneth Fernandez (2013) examined whether it was better to have an online respondent enter numerical answers by clicking the answer, typing it, or drag along a scale to indicate the answer. With a limited number of responses, clicking radio buttons was fastest, but a long list of possible answers makes dragging the sliding scale more practical.

Those regularly using the Internet are familiar with emoticons such as the “smiley face.” While these graphics could be printed in a mail questionnaire, they seem more at home online. Matthias Emde and Marek Fuchs (2012) undertook an experiment to determine the possibility of using a range of faces (sad to happy) in place of radio buttons labeled from bad to good. They concluded that this format change did not affect responses. Thus, these types of formatting options may be

chosen on purely aesthetic grounds. There is no reason not to make surveys appealing.

Malakhoff and Jans (2011) explore some of the more advanced possibilities for online survey research. While the survey interview involves a person showing up on your doorstep or a voice coming over your phone, they suggest that an animated avatar might be used to conduct an online interview, and they have begun experimenting with gender and other differences for the animated interviewer. The avatar interviewer can be programmed to change facial expressions based on the respondent’s answers. Going one step (or several) further, it would be possible to use the respondents’ webcams to monitor their facial expressions and log that data along with the answers provided verbally.

The relative youth of online surveys makes them a fertile ground for innovation and experimentation. For example, survey researchers have often worried that respondents to self-administered questionnaires may spend more of their attention on the first responses in a list, skipping quickly over those farther down. To test this possibility, Mirta Galesic and colleagues (2008) employed a special eye-tracking computer monitor that unobtrusively followed respondents’ eye movements as they completed an online survey. The result: Respondents did, in fact, spend more time on the early choices, sometimes failing to read the whole list before clicking their choice on the screen. We may expect to see more such experimentation in the future.

## Improving Response Rates

Online surveys appear to have response rates approximately comparable to mail surveys, according to a large-scale study of Michigan State University students (Kaplowitz, Hadlock, and Levine 2004), especially when the online survey is accompanied by a postcard reminder encouraging respondents to participate. While producing a comparable response rate, the cost of the online survey is substantially less than that of a conventional mail survey. The cost of paper, printing, and postage alone can constitute a large expense.

In another study of ways to improve response rates in online surveys, Stephen Porter and Michael Whitcomb (2003) found that some