viewer and the respondent. They also allow the interviewer to ask follow-up questions; but they have some major disadvantages. Many people don't have publicly listed telephone numbers; some don't have telephones; people often don't like the intrusion of a call to their homes; and telephone interviews have to be relatively short or people will feel imposed upon. Additionally, cell phone interviews are relatively more expensive than a traditional landline survey (Pew Research Center, 2013). Another complication with cell phone surveys is that unlike a landline, cell phones are used virtually anywhere. For example, there might be legal and safety implications if an interviewee is reached while driving. Finally, if cell phones are more likely to be used in public places where respondents don't have enough privacy, there is a concern about the veracity of responses received through such a survey. However, because more and more people are moving exclusively to cell phones these days, it is common for researchers to include them in their sample along with landline phone surveys.

## 7.3 Selecting the Survey Method

Selecting the type of survey you are going to use is one of the most critical decisions in many social research contexts. Decisions regarding what type of survey method to use usually depend on the target population, the kind of information that is being sought, and the availability of resources—including budget and time. It's hard to compare the advantages and disadvantages of the major different survey types. Even though each type has some general advantages and disadvantages, there are exceptions to almost every rule. Table 7.1 shows our general assessment. A few simple rules will help you make the decision; you have to use your judgment to balance the strengths and weaknesses of different survey types. Here, we want to give you a number of questions you might ask to guide your decision.

### 7.3a Population Issues

The first set of considerations has to do with the population and its accessibility.

- ***Can the population units be identified?*** For some populations, you have a complete listing of the units to be sampled. For others, such a list is difficult or impossible to compile. For instance, there are complete listings of registered voters or persons with active drivers' licenses; but no one keeps a complete list of homeless people. If you are doing a study that requires input from homeless persons, it's likely that you'll need to go and find the respondents personally. In such contexts, you can pretty much rule out the idea of mail surveys or telephone interviews.
- ***Is the population literate?*** Questionnaires require that your respondents read. While initially this might seem like a reasonable assumption for most adult populations, recent research suggests that the instance of adult illiteracy is alarmingly high (National Assessment of Adult Literacy, 2014, http://nces.ed.gov/naal/index.asp). Even if your respondents can read to a certain degree, your questionnaire might contain difficult or technical vocabulary. Clearly, you would expect some populations to be illiterate. Young children would not be good targets for questionnaires.

**Table 7.1** Advantages and disadvantages of different survey methods.

| | Questionnaire | | | | Interview | | |
|---|---|---|---|---|---|---|---|
| Issue | Group | Mail | Electronic | Drop-Off | Personal | Phone | Focus Group |
| *Are visual presentations possible?* | Yes | Yes | Yes | Yes | Yes | No | Yes |
| *Are long response categories possible?* | Yes | Yes | ??? | Yes | ??? | No | ??? |
| *Is privacy a feature?* | No | Yes | Yes | No | Yes | ??? | No |
| *Is the method adaptable on the spot?* | No | No | No | No | Yes | Yes | Yes |
| *Are longer, open-ended questions feasible?* | No | No | No | No | Yes | Yes | Yes |
| *Are reading and writing needed?* | ??? | Yes | Yes | Yes | No | No | No |
| *Can you judge quality of response?* | Yes | No | No | ??? | Yes | ??? | Yes |
| *Are high response rates likely?* | Yes | No | No | Yes | Yes | No | Yes |
| *Can you explain the study in person?* | Yes | No | No | Yes | Yes | ??? | Yes |
| *Is it low cost?* | Yes | Yes | Yes | No | No | No | No |
| *Are staff and facilities needs low?* | Yes | Yes | Yes | No | No | No | No |
| *Does it give access to dispersed samples?* | No | Yes | Yes | No | No | No | No |
| *Does respondent have time to formulate answers?* | No | Yes | Yes | Yes | No | No | No |
| *Is there personal contact?* | Yes | No | No | Yes | Yes | No | Yes |
| *Is a long survey feasible?* | No | No | No | No | Yes | No | No |
| *Is there quick turnaround?* | No | Yes | Yes | No | No | Yes | ??? |

- ***Are there language issues?*** We live in a multilingual world. Virtually every society has members who speak a language other than the predominant language. Some countries (like Canada) are officially multilingual, and our increasingly global economy requires us to do research that spans countries and language groups. Can you produce multiple versions of your questionnaire? For mail instruments, can you know in advance which language your respondent speaks, or do you need to send multiple translations of your instrument? Can you be confident that important connotations in your instrument are not culturally specific? Could some of the important nuances get lost in the process of translating your questions? Do you need to include pictures to facilitate an easier interpretation of your questions? If so, a web-based interview may be a better option than an email survey.

- *Will the population cooperate?* People who do research on illegal immigration have a difficult methodological problem. They often need to speak with illegal immigrants or people who may be able to identify others who are. Why would those respondents cooperate? Although the researcher may mean no harm, the respondents are at considerable risk legally if information they divulge should get into the hands of the authorities. The same can be said for any target group that is engaging in illegal or unpopular activities.
- *What are the geographic restrictions?* Is your population of interest dispersed over too broad a geographic range for you to study feasibly with a personal interview? It may be possible for you to send a mail or an electronic instrument to a nationwide sample. You may be able to conduct phone interviews with them; but it will almost certainly be less feasible to do research that requires interviewers to visit directly with respondents if they are widely dispersed.

## 7.3b Sampling Issues

The sample is the actual group you will have to contact in some way. When doing survey research you need to consider several important sampling issues.

- *What data is available?* What information do you have about your sample? Do you have current addresses? Current phone numbers? Are your contact lists, such as email addresses, up to date?
- *Can respondents be found?* Can your respondents be located? Some people are very busy. Some travel a lot. Some work the night shift. Even if you have an accurate phone, address, or email, you may not be able to locate or make contact with your sample.
- *Who is the respondent?* Who is the respondent in your study? Let's say you draw a sample of households in a small city. A household is not a respondent. Do you want to interview a specific individual? Do you want to talk only to the head of the household (how is that person defined)? Are you willing to talk to any member of the household? Do you decide that you will speak to the first adult member of the household who opens the door? What if that person is unwilling to be interviewed but someone else in the house is willing? How do you deal with multifamily households? Similar problems arise when you sample groups, agencies, or companies. Can you survey any member of the organization? Or do you want to speak only to the Director of Human Resources? What if the person you would like to interview is unwilling or unable to participate? Do you use another member of the organization? If so, how do you decide who to survey?
- *Can all members of the population be sampled?* If you have an incomplete list of the population (sampling frame) you may not be able to sample every member of the population. Lists of various groups are extremely hard to keep up to date. People move or change their names. Even though they are on your sampling frame listing, you may not be able to get to them. It's also possible they are not even on the list.
- *Are response rates likely to be a problem?* Even if you are able to solve all of the other population and sampling problems, you still have to deal with the issue of response rates. Some members of your sample will simply refuse to respond. Others have the best of intentions, but can't seem to find the time to send in your questionnaire by the due date. Still others misplace the instrument or forget about the appointment for an interview. Low response rates are among the most difficult of problems in survey research. They can ruin

an otherwise well-designed survey effort. Often, electronic surveys are used to improve response rates.

- ***Will incentives for participation help?*** In addition to following the guidelines for effective survey construction, you may be able to increase your response rate by using carefully chosen incentives. An incentive is a way of increasing motivation of your respondents to complete the survey. Incentives may be very concrete rewards such as money, gift cards, or lottery chances. Other kinds of incentives might be apparent if you carefully consider your population and what might be most meaningful to them. For example, if you are conducting research on pets, you might be able to offer to make a donation to the SPCA in an amount that corresponds to the survey completion rate.

## 7.3c Question Issues

Sometimes the nature of what you want to ask respondents determines the type of survey you select.

- ***What types of questions can you ask?*** Are you going to be asking personal questions? If so, group interviews are probably not going to be appropriate. Are you going to need to get lots of detail in the responses? Are the questions on the survey complex and technical? If so, it may be better to conduct an interview so that you can provide explanations if needed, rather than send out a questionnaire and risk receiving answers based on improperly understood questions. Can you anticipate the most frequent or important types of responses and develop reasonable closed-ended questions?
- ***Will filter questions be needed?*** A filter question may be needed to determine whether the respondent is qualified to answer your question(s) of interest. For instance, you wouldn't want to ask for respondents' opinions about a specific computer program without first screening to find out whether they have any experience with the program. Sometimes you have to filter on several variables (for example, age, gender, and experience). The more complicated the filtering, the less likely it is that you can rely on paper-and-pencil instruments without confusing the respondent.
- ***Can question sequence be controlled?*** Is your survey one in which you can construct a reasonable sequence of questions in advance? Or, are you doing an initial exploratory study in which you may need to ask follow-up questions that you can't easily anticipate? If you need to ask follow-up questions, then interviews are a more appropriate survey method.
- ***Will lengthy questions be asked?*** If your subject matter is complicated, you may need to give the respondent some detailed background for a question. Can you reasonably expect your respondent to sit still long enough in a phone interview to listen to your question?
- **Will long response scales be used?** If you are asking people about the different computing equipment they use, you may have to have a lengthy response list (tablets, smartphones, laptops, netbooks, desktop computers, and so on). Clearly, it may be difficult to ask about each of these in a short phone interview.

## 7.3d Content Issues

The content of your study can also pose challenges for the different survey types you might use.

- ***Can the respondents be expected to know about the issue?*** If respondents do not keep up with the news (for example, by reading the newspaper, watching television news, or talking with others), they may not even know of the news issue you want to ask them about. Or, if you want to do a study of family finances and you are talking to the spouse who doesn't pay the bills on a regular basis, he or she may not have the information to answer your questions. In such cases, a mail survey seems like an inappropriate choice. A personal interview might work the best here. You could also try a phone interview where you first ascertain whether you have the right kind of respondent before beginning the survey.
- ***Will the respondent need to consult records?*** Even if the respondents understand what you're asking about, you may need to allow them to consult their records to get an accurate answer. For instance, if you ask them how much money they spent on food in the past month, they may need to look up their personal check and credit card records. In this case, you don't want to be involved in an interview where they would have to go look things up while they keep you waiting (and they wouldn't be comfortable with that either). So, a mail or an electronic questionnaire seems like a better option.

## 7.3e Bias Issues

People come to the research endeavor with their own sets of biases and prejudices. Sometimes, these biases will be less of a problem with certain types of survey approaches.

- ***Can social desirability be avoided?*** Respondents generally want to look good in the eyes of others. None of us likes to look like we don't know an answer. We don't want to say anything that would be embarrassing. If you ask people about information that may put them in this kind of position, they may not tell you the truth, or they may spin the response so that it makes them look better. This may be more of a problem in a face-to face interview situation or a phone interview.
- ***Can interviewer distortion and subversion be controlled?*** Interviewers may distort an interview as well. They may not ask difficult questions or ones that make them uncomfortable. They may ask the question in a way that distorts the meaning of the question. They may not listen carefully to respondents on topics for which they have strong opinions. They may make the judgment that they already know what the respondent would say to a question based on their prior responses, even though that may not be true. If you are using multiple interviewers, you might also face interrater reliability bias (see topic on reliability in Chapter 5, "Introduction to Measurement").
- ***Can false respondents be avoided?*** With mail surveys, it may be difficult to know who actually responded. Did the head of household complete the survey or someone else? Did the CEO actually give the responses or instead pass the task off to a subordinate? Are the people you're speaking with on the phone actually who they say they are? At least with personal interviews, you have a reasonable chance of knowing to whom you are speaking. In mail surveys or phone interviews, this may not be the case. Similarly, while emails are usually personal, respondents may forward any electronic surveys they receive to others to complete on their behalf.

### 7.3f Administrative Issues

Last, but certainly not least, you have to consider the feasibility of the survey method for your study.

- *Costs.* Cost is often the major determining factor in selecting survey type. You might prefer to do personal interviews, but can't justify the high cost of training and paying for the interviewers. You may prefer to send out an extensive mailing but can't afford the postage to do so. So, you might consider sending out an electronic survey or doing a group survey or interview to cut down on the costs.
- *Facilities.* Do you have the facilities (or access to them) to process and manage your study? In phone interviews, do you have well-equipped phone surveying facilities? For focus groups, do you have a comfortable and accessible room to host the group? Do you have the equipment needed to record and transcribe responses?
- *Time.* Some types of surveys take longer than others. Do you need responses immediately (as in an overnight public opinion poll)? Have you budgeted enough time for your study to send out mail surveys and follow-up reminders, and to get the responses back by mail? Have you allowed for enough time to get enough personal interviews to justify that approach?
- *Personnel.* Different types of surveys make different demands of personnel. Interviews require well-trained and motivated interviewers. Group-administered surveys require people who are trained in group facilitation. Some studies may be in a technical area that requires some degree of expertise in the interviewer.

Clearly, there are lots of issues to consider when you are selecting which type of survey to use in your study, and there is no easy way to make this decision in many contexts because it might be that no single approach is the best. You may have to make trade-offs and weigh advantages and disadvantages of each approach. There is judgment involved. Two expert researchers might, for the same problem or issue, select entirely different survey methods; but, if you select a method that isn't appropriate or doesn't fit the context, you can doom a study before you even begin designing the instruments or questions themselves.

## 7.4 Survey Design

Before you begin constructing your survey, it is useful to reflect on the full list of issues that need to be explored through this instrument. Be very specific and clear regarding the purpose of the survey. Remember, it is important to focus on what you "need to know," as opposed to what is "nice to know." It is also important to have some idea about the kind of analysis you will perform on the survey responses—this will indicate, up-front, the level of detail that is required from the survey instrument. Finally, you should also research prior publications to see if there is an existing questionnaire already available that can be used to serve your purpose, or at least one that can be partly used as the basis for your survey.

Constructing a survey instrument is an art in itself. You must make numerous small decisions—about content, wording, format, and placement—that can have important consequences for your entire study. Although there's no one perfect way to accomplish this job, it is possible to increase your chances of developing

a better final product by following the guidelines detailed below. There are three primary issues involved in writing a question:

- **Determining the question content, scope, and purpose**
- **Choosing the response format that you use for collecting information from the respondent**
- **Figuring out how to word the question to get at the issue of interest**

After you have your questions written, there is also the issue of how best to place them in your survey. You'll see that although many aspects of survey construction are just common sense, if you are not careful, you can make critical errors that have significant effects on your results.

## 7.4a Types of Questions

Survey questions can be divided into two broad types: *structured* and *unstructured*. While unstructured questions are open-ended, where the respondents need to create their own answer, structured questions are laid out with various response options, and the respondent simply has to choose or circle an option. For instance, if you were to simply ask, "What type of new meal options would you like to see in the future?" you would be asking an unstructured question. On the other hand, if you were to ask the same question and provide the respondent with a number of response options, like "Vegetarian, Asian, Mexican, Indian," or if you were to only ask, "Would you like to see any new meal options in the future?" with "yes" or "no" as response options, you would be asking a structured question.

From an instrument design point of view, structured questions pose the greater difficulties (see the section "Response Format" later in this chapter). From a content perspective, it may actually be more difficult to write good unstructured questions. Here, we'll discuss the variety of structured questions you can consider for your survey. (We discuss unstructured questioning more in the section "Interviews" later in this chapter.)

### Dichotomous Response Formats

**dichotomous response format** A question response format that allows the respondent to choose between only two possible responses.

When a question has two possible responses, it has a **dichotomous response format.** Surveys often use dichotomous questions that ask for a Yes/No, True/False, or Agree/Disagree response (see **Figure 7.3**). There are a variety of ways to lay these questions out on a questionnaire:

Do you believe that the death penalty is ever justified?

____ Yes

____ No

Please enter your gender:

☐ Male ☐ Female

**Figure 7.3** Dichotomous response formats for a survey question.

### Questions Based on Level of Measurement

We can also classify questions in terms of the level of measurement used in the question's response format. (The idea of level of measurement is covered in

Chapter 5, "Introduction to Measurement.") For instance, you might measure occupation using a nominal response format, as in Figure 7.4. In a **nominal response format**, the number next to each response has no meaning except as a placeholder for that response; the choices in the example are a 2 for a lawyer and a 1 for a truck driver. From the numbering system used you can't infer that a lawyer is twice something that a truck driver is. The primary reason you might number responses in this manner is to make data entry more efficient. The person entering the data from this survey would only need to enter a single number rather than a longer category name like "truck driver."

Occupational class
1 = Truck driver
2 = Lawyer
3 = etc.

**Figure 7.4** A nominal-level response format for a survey question.

When you ask respondents to rank-order their preferences, you are using an **ordinal response format.** For example, in Figure 7.5 the respondent is asked to rate their dessert preferences by ranking them.

Rank the desserts in order of personal preference, from your most favorite (1) ...to your least favorite... (4).
____ Ice cream
____ Cookies
____ Cake
____ Candy

**Figure 7.5** An ordinal-level response format for a survey question.

In this example, you want the respondent to put a 1, 2, 3, or 4 next to the dessert, where 1 is the respondent's first choice. Note that this could get confusing. The respondents might check their favorite dessert instead of entering a number, or assign higher numbers to desserts they prefer more instead of understanding that you want rank ordering where a higher number means a lower rank. Notice, in the example, we stated the prompt (question) explicitly so the respondent knows that we want a number from 1 to 4 and we indicated that a 1 meant the dessert was more favored than a 4.

You can also construct survey questions using an **interval level response format.** One of the most common of these types is the traditional 1-to-5 rating (or 1-to-7, or 1-to-9, and so on). This is sometimes referred to as a **Likert-type response scale.** In Figure 7.6, you see how you might ask an opinion question using a 1-to-5 bipolar scale. (It's called bipolar because there is a neutral point, and the two ends of the scale are at opposite positions of the opinion.) You should note that just because you use equal-spaced intervals doesn't automatically mean that you are measuring on an interval scale. For instance, in a traditional Likert response scale (1 = Strongly Disagree, 2 – Disagree, 3 = Neutral, 4 – Agree, 5 = Strongly Agree) we cannot assume that the distance between "Strongly Agree" and "Agree" is equal to the distance between "Agree" and "Neutral" even though the intervals between there respective numbers are equal.

**nominal response format** A response format that has a number beside each choice where the number has no meaning except as a placeholder for that response.

**ordinal response format** A response format in which respondents are asked to rank the possible answers in order of preference.

**interval level response format** A response measured using numbers spaced at equal intervals where the size of the interval between potential response values is meaningful. An example would be a 1-to-5 response scale.

**Likert-type response scale** A response format where responses are gathered using numbers spaced at equal intervals.

The death penalty is justifiable under some circumstances.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Strongly disagree | Disagree | Neutral | Agree | Strongly agree |

**Figure 7.6** A Likert-type scale is an interval level scale.

Figure 7.7 A semantic differential response format for a survey question.

Please state your opinions on national health insurance on the scale below.

| | Very much | Somewhat | Neither | Somewhat | Very much | |
|---|---|---|---|---|---|---|
| Interesting | ☐ | ☐ | ☐ | ☐ | ☐ | Boring |
| Simple | ☐ | ☐ | ☐ | ☐ | ☐ | Complex |
| Uncaring | ☐ | ☐ | ☐ | ☐ | ☐ | Caring |
| Useful | ☐ | ☐ | ☐ | ☐ | ☐ | Useless |

Please check each item with which you agree.

____ Are you willing to permit immigrants to live in your country?
____ Are you willing to permit immigrants to live in your community?
____ Are you willing to permit immigrants to live in your neighborhood?
____ Would you be willing to have an immigrant live next door to you?
____ Would you let your child marry an immigrant?

Figure 7.8 A cumulative response format for a survey question.

Another example of how an interval response format is used is with a measurement approach called the semantic differential, as shown in Figure 7.7. Here, an item is assessed by the respondent on a set of bipolar (two-option) adjective pairs (in this example a 5-point rating interval-level response format is used).

Finally, another type of interval response format used to collect responses in the cumulative or Guttman scale. Here, the respondents check each item with which they agree. The items themselves are constructed so that they are cumulative; if you agree with one item, you probably agree with all of the ones above it in the list (see Figure 7.8), because that's the way such scales are constructed. Each item also has a scale score that is not shown with the item. A respondent's score is the highest scale score of an item with which they agreed.

## Filter or Contingency Questions

Sometimes you have to ask respondents a preceding question to determine whether they are qualified or experienced enough to answer a subsequent one. This is called using a **filter or contingency question.** For instance, you may want to ask one question if the respondent has ever smoked marijuana and a different question if he or she reports they have not. In this case, you would have to construct a filter question to determine whether the respondent has ever smoked marijuana (see Figure 7.9). In another example, suppose you want to know how much the respondent earns, then you need to first ask whether the respondent is currently employed or has any other source of income.

Filter questions can be complex. Sometimes, you have to have multiple filter questions to direct your respondents to the correct subsequent questions. You should keep the following conventions in mind when using filters:

**filter or contingency question** A question you ask the respondents to determine whether they are qualified or experienced enough to answer a subsequent one.

- ***Try to avoid having more than three levels (two jumps) for any question.*** Too many jumps will confuse respondents and may discourage them from continuing on with the survey.
- ***If only two levels, use graphics to jump (for example, an arrow and box).*** The example in Figure 7.9 shows how you can make effective use of an arrow

and box to help direct the respondent to the correct subsequent question.

- ***If possible, jump to a new page.*** If you can't fit the response to a filter on a single page, it's probably best to be able to say something like, *If YES, please turn to page 4,* rather than *If YES, please go to Question 38,* because the respondent will generally have an easier time finding a page than a specific question.

Most web survey systems have built-in capabilities for allowing filtering. The advantage of using filtering in web contexts is that, unlike in paper instruments, the software can only show questions that are appropriate based on responses to one or more filters. In a paper instrument you have to include all responses and help the respondent navigate through the form.

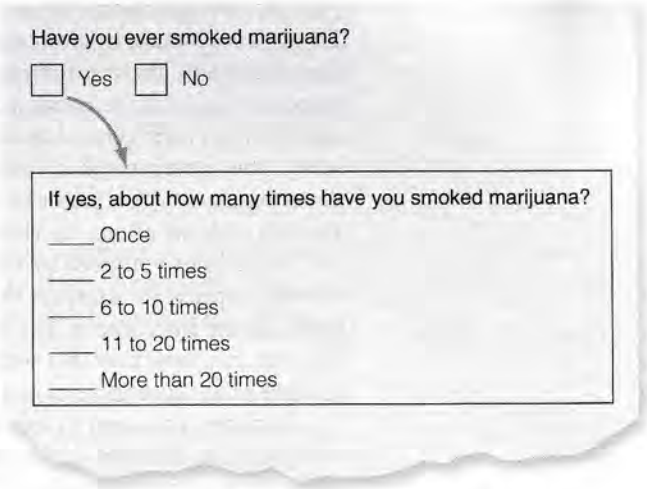


**Figure 7.9** A filter or contingency question.

## 7.4b Question Content

For each question in your survey, you should ask yourself how well it addresses the content you are trying to get at. The following sections cover key content-related issues that you need to consider when writing your questions.

### Is the Question Necessary and Useful?

Examine each question to determine whether you need to ask it at all, and whether you need to ask it at the level of detail you currently have, as in the following examples:

- **Do you need the age of each child or just the number of children under 16?**
- **Do you need to ask income or can you estimate?**

### Are Several Questions Needed?

There might be occasions where additional questions are required. Sometimes we develop a question where we try to ask about too many things at once. For example, consider the following examples:

- **What are your feelings towards African Americans and Hispanic Americans?**
- **What do you think of proposed changes in benefits and hours?**

It's hard, often impossible, for a respondent to answer such questions by providing a single response, because it is likely that some have conflicting opinions about different parts of the question. They may feel very differently about African Americans as compared to Hispanic Americans, or about changes in benefits versus changes in hours. You can often spot these kinds of problem questions by looking for the conjunction *and* in your question. We refer to this classic question-writing problem as the **double-barreled question.** If you realize that your question has multiple subparts, you should split the question into separate ones.

**double-barreled question** A question in a survey that asks about two issues but only allows the respondent a single answer. For instance, the question "What do you think of proposed changes in benefits and hours in your workplace?" asks simultaneously about two issues but treats it as though they are one.

You might also want to use more than one question to cover a single content area when the one question you ask does not cover all possibilities. For instance, if

you ask about earnings, the respondent might end up mentioning only wage income. To get an accurate answer, you might need to include a follow-up probe asking the respondent about other income such as that from dividends or gifts. If you ask respondents if they're in favor of public TV, they might not understand that you're asking about their general opinion. They may not be in favor of public TV for themselves (they never watch it), but might favor it for their children (who watch *Sesame Street* regularly). You might be better off asking two questions: one about their own viewing and one about the viewing habits of other members of their households.

Sometimes you need to ask additional questions in order to provide you with enough context to interpret the respondents' answers on some of the other questions on the instrument. For instance, if you ask about attitudes toward Catholics, can you interpret this without finding out about your respondents' attitudes toward religion in general or toward other religious groups?

At times, you need to ask additional questions because your question does not determine the intensity of the respondent's attitude or belief. For example, if respondents say they support public TV, you probably should also ask whether they ever watch it or if they would be willing to have their tax dollars spent on it. It's one thing for respondents to tell you they support something; but the intensity of that response is greater if they are willing to back their sentiment of support with their behavior.

### Do Respondents Have the Needed Information?

Look at each question in your survey to see whether the respondent is likely to have the necessary information to be able to answer the question. For example, let's say you want to ask the following question:

**Do you think Dean Rusk acted correctly in the Bay of Pigs crisis?**

The respondents won't be able to answer this question if they have no idea who Dean Rusk was or what the Bay of Pigs crisis was (most of you reading this weren't even born when Rusk was alive or the Bay of Pigs happened. Thankfully, your generation has Google!). In surveys of television viewing, you cannot expect the respondent to answer questions about shows they have never watched. You should ask a filter question first (such as, "Have you ever watched the show *Modern Family*?") before asking for opinions about it.

### Does the Question Need to Be More Specific?

Sometimes researchers ask their questions too generally and the information they obtain is difficult to interpret. For example, let's say you want to find out a respondent's opinions about a specific book. You could ask the following question:

**How well did you like the book?**

and offer some scale ranging from Not At All to Extremely Well; but what would the response mean? What does it mean to say you liked a book extremely well? Instead, you might ask questions designed to be more specific:

**Did you recommend the book to others?**

or

**Did you look for other books by that author?**

### Is the Question Sufficiently General?

You can err in the other direction as well by being too specific. For instance, if you ask people to list the television programs they liked best in the past week, you

could get a different answer than if you asked them which show they've enjoyed most over the past year. Perhaps a show they don't usually like had a great episode in the past week, or their favorite show was preempted by another program, but if asked over the course of a year rather than just the past week, you would be able to get at their real preferences.

### Is the Question Biased or Loaded?

One danger in question writing is that your own biases and blind spots may affect the wording (see the section "Question Wording" in this chapter). For instance, you might generally be in favor of tax cuts. If you ask the following question:

**What do you see as the benefits of a tax cut?**

you're only asking about one side of the issue. You might get a different picture of the respondents' positions if you also asked about the disadvantages of tax cuts. The same thing could occur if you are in favor of public welfare and you ask

**What do you see as the disadvantages of eliminating welfare?**

without also asking about the potential benefits.

### Will the Respondent Answer Truthfully?

For each question on your survey, ask yourself whether respondents will have any difficulty answering the question truthfully. If there is some reason why they may not, consider rewording the question. For instance, some people are sensitive about answering questions about their exact age or income. In this case, you might give them **response brackets** to choose from (such as between 30 and 40 years old, or between $50,000 and $100,000 annual income). Sometimes even bracketed responses won't be enough. Some people do not like to share how much money they give to charitable causes. (They may be afraid of opening themselves up to even more solicitations.) No matter how you word the question, they would be unlikely to tell you their contribution rate. Sometimes you can work around such problems by posing the question in hypothetical terms. For example, they might respond if you ask how much money "people you know" typically give in a year to charitable causes, and that may be a reasonable proxy for how much they give (although they could be hanging out with people who are richer or poorer than they are). Finally, you can sometimes dispense with asking a question at all if you can obtain the answer unobtrusively. (This is covered in Chapter 3, "Qualitative Approaches to Research.") If you are interested in finding out which magazines the respondents read, you might instead tell them you are collecting magazines for a recycling drive and ask if they have any old ones to donate. Of course, you have to consider the ethical implications of such deception!

**response brackets** A question response format that includes groups of answers, such as between 30 and 40 years old, or between $50,000 and $100,000 annual income.

**response format** The format you use to collect the answer from the respondent.

**structured response format** Provides a specific format for the respondent to choose their answer. For example, a checkbox question lists all of the possible responses.

## 7.4c Response Format

The **response format** is how you collect the answer from the respondent. Let's start with a simple distinction between what we call *structured response formats* and *unstructured response formats*.

### Structured Response Formats

**Structured response formats** help the respondent to respond more easily and help the researcher accumulate and summarize responses more efficiently; but they can also constrain the respondent and limit the researcher's ability to understand what the

respondent really means. There are many different structured response formats, each with their own strengths and weaknesses. We'll review the major ones here.

Name: _____

Figure 7.10 A common fill-in-the-blank item.

- **Fill-in-the-Blank.** One of the simplest response formats is a blank line which can be used to collect data for a number of different response types. For instance, asking your name, as shown in Figure 7.10, is one of the simplest fill-in-the-blank formats.

Blanks are also used for checking responses in dichotomous questions, as illustrated in Figure 7.11.

Please enter your gender:

____ Male

____ Female

Figure 7.11 A checklist like this is another common structured item.

Here, the respondent would probably put a check mark or an X next to the response. As described earlier in this chapter, this is also an example of a dichotomous response because it only has two possible values. Other common dichotomous responses are True/False and Yes/No. Another common use of a fill-in-the-blank response format is in preference ranking, as described earlier in Figure 7.5, where respondents entered their rank preferences for four desserts into the blank line in front of each category. Notice that in this case you expect the respondent to place a number on every blank, whereas in the previous example, you expect the respondent to choose only one. And there's always the classic fill-in-the-blank test item (see Figure 7.12).

One of President Lincoln's most famous speeches, the _____ Address, only lasted a few minutes when delivered.

Figure 7.12 The fill-in-the-blank test item.

- **Check the Answer.** The respondent places a check next to the response(s). The simplest form would be the example given previously that asks the respondents to indicate their gender. Sometimes, you supply a box that the person can fill in with an X, which is sort of a variation on the check mark. Figure 7.13 shows a check-box format.

Please check the items that you have on the computer you use most:

☐ external hard drive

☐ USB

☐ DVD drive

☐ monitor

☐ printer

Figure 7.13 The check-box format is useful when you want respondents to select more than one item.

Notice that in this example, it is possible to check more than one response. By convention, you usually use the check-mark format when you want to allow the respondent to select multiple items.

This type of question is sometimes referred to as a **multi-option or multiple-response variable.** You have to be careful when you analyze data from a multioption variable. Because the respondent can select any of the options, you have to treat this type of variable in your analysis as though each option were a separate variable. For instance, for each option you would normally enter into a computer either a 0 if the respondent did not check it or a 1 if the respondent did check it. For the previous example, if the respondent had only a smartphone and tablet, you would enter the sequence 1, 1, 0, 0, 0 in five separate variables. There is an important reason why you should code this variable as either 0 or 1 when you enter the data. If you do, and you want to determine what percent of your sample has a printer, all you have to do is compute the average of the 0's and 1's for the printer variable. For instance, if you have ten respondents and only four have a printer, the average would be 4/10 = .40 or 40 percent, which is the percent who checked that item.

**multi-option or multiple-response variable** A question format in which the respondent can pick multiple variables from a list.

The previous example is also a good example of a checklist item. Whenever you use a checklist, you want to be sure that you ask the following questions:

- **Are all of the alternatives covered?**
- **Is the list of reasonable length (not too long)?**
- **Is the wording impartial?**
- **Is the form of the response easy, uniform?**

Sometimes you may not be sure that you have covered all of the possible responses in a checklist. If that is the case, you should probably allow the respondent to write in any other options that apply.

- **Circle the Answer.** Sometimes respondents are asked to circle an item to indicate their response. Usually, you are asking them to circle a number. For instance, you might have the example shown in Figure 7.14.

Capital punishment is the best way to deal with convicted murderers.

| 1 | (2) | 3 | 4 | 5 |
|---|---|---|---|---|
| Strongly disagree | Disagree | Neutral | Agree | Strongly agree |

**Figure 7.14** A circle-the-answer response format.

If respondents are answering questions on a computer, it's not feasible to have them circle a response. In this case, you would most likely use an option button as shown in Figure 7.15.

The death penalty is justifiable under some circumstances.

| ○ | ○ | ○ | ○ | ○ |
|---|---|---|---|---|
| Strongly disagree | Disagree | Neutral | Agree | Strongly agree |

**Figure 7.15** An option button response format on the web.

Only one option at a time can be checked. The rule of thumb is that you ask people to circle an item or click a button when you only want them to be able to select one of the options. In contrast to the multioption variable described previously, this type of item is referred to as a **single-option variable**; even though the respondents have multiple choices, they can only select one of them. You would analyze this as a single variable that can take the integer values from 1 to 5.

## Unstructured Response Formats

A wide variety of structured response formats exist; however, there are relatively few unstructured ones. What is an **unstructured response format**? Generally, it is written text. If the respondent (or interviewer) writes down text as the response, you have an unstructured response format. These can vary from short comment boxes to the transcript of an interview.

In almost every questionnaire, there are usually one or more short text field questions. One of the most frequent is shown in Figure 7.16.

Actually, there's really not much more to text-based response formats of this type than writing the prompt and allowing enough space for a reasonable response. Such questions allow the respondent to answer in detail.

**single-option variable** A question response list from which the respondent can check only one response.

**unstructured response format** A response format that is not predetermined and that allows the respondent or interviewer to determine how to respond. An open-ended question is a type of unstructured response format.

Please add any other comments:

_____

_____

_____

_____

**Figure 7.16** The most common unstructured response format allows the respondent to add comments.

Transcripts are an entirely different matter. In those cases, the transcriber has to decide whether to transcribe every word or only record major ideas, thoughts, quotes, and so on. In detailed transcriptions, you may also need to distinguish different speakers (such as the interviewer and respondent) and have a standard convention for indicating comments about what's going on in the interview, including nonconversational events that take place and thoughts of the interviewer.

## 7.4d Question Wording

One of the major difficulties in writing good survey questions is getting the wording right. Even slight wording differences can confuse the respondent or lead to incorrect interpretations of the question. Here, we outline some key issues regarding the wording of survey questions:

### Can the Question Be Misunderstood?

The survey author always has to be on the lookout for questions that could be misunderstood or confusing. For instance, if you ask a person for his or her nationality, it might not be clear what you want. (Do you want someone from Indonesia to say Indonesian, Asian, or Pacific Islander?) Or, if you ask for marital status, do you want people to say simply that they are either married or not married? Or, do you want more detail (like divorced, widow/widower, and so on)?

Some terms are too vague to be useful. For instance, if you ask a question about the mass media, what do you mean? The newspapers? Radio? Television? Similarly, if you ask the respondent whether they go for *regular* preventive health checkups, it is likely that you will get an answer, but it may not always be useful. An enormous amount of variation might exist in what the respondents mean by their answers because *regular* might mean different things to different people. Here's another one of our favorite questions that is often prone to misunderstandings. Let's say you want to know the following:

**What kind of headache remedy do you use?**

Do you want to know what brand-name medicine respondents take? Do you want to know about home remedies? Are you asking whether they prefer a pill, capsule, or caplet?

### What Assumptions Does the Question Make?

Sometimes you don't stop to consider how a question will appear from the respondent's point of view. You don't think about the assumptions behind the questions. For instance, if you ask what social class someone's in, you assume that they know what social class is and that they think of themselves as being in one. In this case, you may need to use a filter question first to determine whether either of these assumptions is true.

### Is the Time Frame Specified?

Whenever you use the words *will*, *could*, *might*, or *may* in a question, you might suspect that the question asks a time-related question. Be sure that, if it does, you have specified the time frame precisely. For instance, you might ask:

**Do you think Congress will cut taxes?**

or something like

**Do you think Congress could successfully resist tax cuts?**

Neither of these questions specifies a time frame. This causes the question to be vague. You can specify a time frame for the first question, such as:

**Do you think Congress will cut taxes during its current session?**

## How Personal Is the Wording?

By changing just a few words, a question can go from being relatively impersonal to a probing, private one. Consider the following three questions, each of which asks about the respondent's satisfaction with working conditions:

- **Are working conditions satisfactory or not satisfactory in the plant where you work?**
- **Do you feel that working conditions are satisfactory or not satisfactory in the plant where you work?**
- **Are you personally satisfied with working conditions in the plant where you work?**

The first question is stated from a fairly detached, objective viewpoint. The second asks how you feel. The last asks whether you are personally satisfied. Be sure the questions in your survey are at an appropriate level for your context, and be sure that level is consistent across questions in your survey.

## Is the Wording too Direct?

At times, asking a question too directly may be threatening or disturbing for respondents. This might encourage people to skip this question altogether. For instance, consider a study in which you want to discuss battlefield experiences with former soldiers who experienced trauma. Examine the following three question options:

- **How did you feel about being in the war?**
- **How well did the equipment hold up in the field?**
- **How well were new recruits trained?**

The first question may be too direct. For this population, it may elicit powerful, negative emotions based on individual recollections. The second question is a less direct one. It asks about equipment in the field; but, for this population, it may also lead the discussion toward more difficult issues to discuss directly. The last question is probably the least direct and least threatening. The question is likely to get the respondent talking and recounting anecdotes, without eliciting as much stress. Of course, all of this may simply be begging the question. If you are doing a study where the respondents might experience high levels of stress because of the questions you ask, you should reconsider the ethics of doing the study.

## Other Wording Issues

The nuances of language guarantee that the task of the question writer is endlessly complex. Without trying to generate an exhaustive list, here are a few other guidelines to keep in mind:

- **Questions should not contain difficult or unclear terminology.**
- **Questions should make each alternative clear.**
- **Question wording should not be objectionable.**
- **Question wording should not be loaded or slanted. That is, they should not steer the respondent to a particular response (Otherwise, why ask them the question?).**

## 7.4e Question Placement

One of the most difficult tasks facing the survey designer involves the ordering of questions. Which topics should be introduced early in the survey and which later? If you leave your most important questions until the end, you may find that your respondents are too tired to give them the kind of attention you would like. If you introduce them too early, they may not yet be ready to address the topic, especially if it is a difficult or disturbing one. At the same time, you should ensure that the questions asked at the beginning of the questionnaire pique the respondent's interest and motivate them to continue on with the questionnaire.

There are no easy answers to the problems of question placement; you have to use your judgment. Whenever you think about question placement, consider the following potential issues:

- **The answer may be influenced by prior questions.**
- **The question may come too early or too late to arouse interest.**
- **The question may not receive sufficient attention because of the questions around it.**

### The Opening Questions

Just as in other aspects of life, first impressions are important in survey work. The first few questions you ask will determine the tone for the survey and can help put your respondent at ease. With that in mind, the opening few questions should, in general, be easy to answer. You might start with some simple descriptive questions that will get the respondent rolling. You should never begin your survey with sensitive or threatening questions.

### Sensitive Questions

In much of your social research, you will have to ask respondents about difficult or uncomfortable subjects. Before asking such questions, you should attempt to develop some trust or rapport with the respondent. Often, preceding sensitive questions with some easier warm-up ones will help; but, you have to make sure that the sensitive material does not come up abruptly or appear unconnected to the rest of the survey. The respondents will also know that the question is coming if you mention the purpose of the questionnaire clearly in the cover letter or in the introduction, in case you are conducting an interview. It is often helpful to have a transition sentence between sections of your instrument to give the respondent some idea of the kinds of questions that are coming. For instance, you might lead into a section on personal material with the following transition: "In this next section of the survey, we'd like to ask you about your personal relationships. Remember, we do not want you to answer any questions if you are uncomfortable doing so."

### Guidelines for Question Sequencing

The survey-design business has lots of conventions or rules of thumb. You can use the following suggestions when reviewing your instrument:

- **Start with easy, nonthreatening questions.**
- **Put more difficult, threatening questions near the end.**
- **Never start a mail survey with an open-ended question.**

- **For historical demographics, follow chronological order.**
- **Ask about one topic at a time.**
- **When switching topics, use a transition.**
- **Reduce response set (the tendency of respondent to just keep checking the same response).**
- **For filter or contingency questions, make a flowchart.**

### 7.4f The Golden Rule

You are imposing in the life of your respondents. You are asking for their time, their attention, their trust, and often, for their personal information. Therefore, you should always keep in mind the golden rule of survey research (and, we hope, for the rest of your life as well!): Do unto your respondents as you would have them do unto you! To put this in more practical terms, you should keep the following in mind:

- **Thank the respondent at the beginning for allowing you to conduct your study.**
- **Keep your survey as short as possible—only include what is absolutely necessary.**
- **Be sensitive to the needs of the respondent.**
- **Be alert for any sign that the respondent is uncomfortable.**
- **Thank the respondent at the end for participating.**
- **Assure the respondent that you will send a copy of the final results—and make sure you do.**

## 7.5 Interviews

Interviews (McCracken, 1988) are among the most challenging and rewarding forms of measurement. They require a personal sensitivity and adaptability as well as the ability to stay within the bounds of the designed protocol. Here, we describe the preparation you typically need to do for an interview study and the process of conducting the interview itself. Keep in mind that the distinction between an interview and a questionnaire is not always clear-cut. Interviewers typically use a type of questionnaire instrument as the script for conducting the interview. It often has both structured and unstructured questions on it. This type of interview questionnaire would also have instructions for the interviewer that are not seen by the respondent and may include space for the interviewer to record any observations about the progress and process of the interview. These features would not be present in a mailed questionnaire.

### 7.5a The Role of the Interviewer

The interviewer is really the jack-of-all-trades in survey research. The interviewer's role is complex and multifaceted. It includes the following tasks:

- *Locate and enlist cooperation of respondents.* The interviewer has to find the respondent. In door-to-door surveys, this means being able to locate specific addresses. Often, the interviewer has to work at the least desirable times (like immediately after dinner or on weekends) because that's when respondents are most readily available.

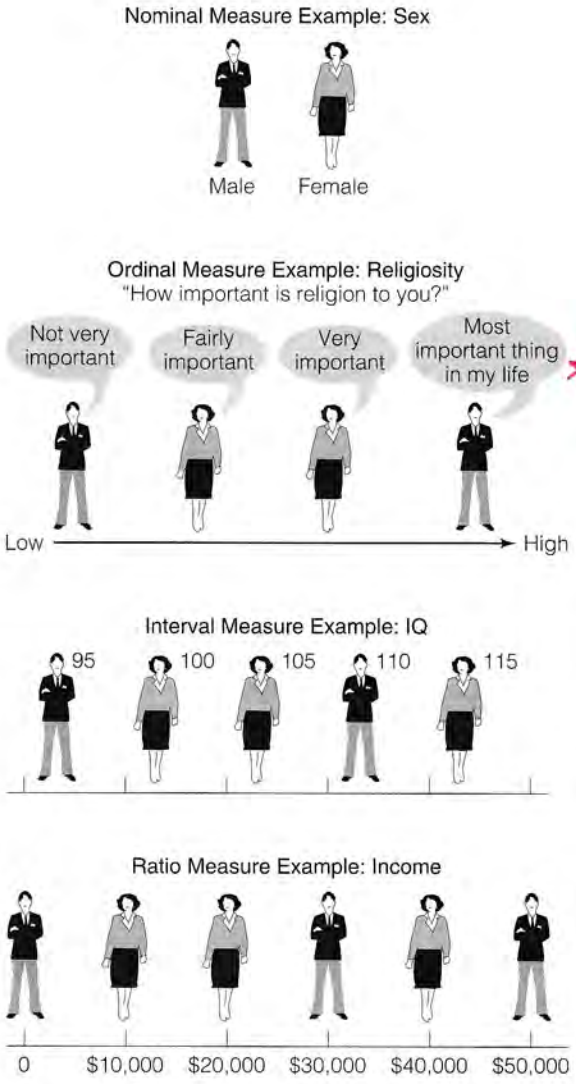


**Figure 6-1** Levels of Measurement

under study (add all of the individual ages and divide by the number of people), but you should not plan on reporting the mean religious affiliation, because it's a nominal variable, and the mean requires interval or ratio-level data. (You could report the *modal*—the most common—religious affiliation.)

At the same time, realize that some variables may be treated as representing different levels of measurement. Ratio measures are the highest level, then follow interval, ordinal, and finally nominal, the lowest level of measurement. A variable that represents a given level of measurement—say, ratio—may also be treated as representing a lower level of measurement—say, ordinal. Recall, for example, that age is a ratio measure. If you wished to examine only the relationship between age and some ordinal-level variable—say, self-perceived religiosity: high, medium, and low—you might choose to treat age as an ordinal-level variable as well. You might characterize the subjects of your study as *young, middle-aged,* and *old,* specifying what age range composed each grouping. Finally, age might be used as a nominal-level variable for certain research purposes. People might be grouped as being born during the Great Depression of the 1930s or not. Another nominal measurement, based on birth date rather than just age, would be the grouping of people by astrological signs.

The analytic uses planned for a given variable, then, should determine the level of measurement you seek. (Remember that some variables are inherently limited to a certain level.) If a variable is to be used in a variety of ways that require different levels of measurement, design the study to achieve the highest level required. (For instance, if the subjects in a study are asked their exact ages, they can later be organized into ordinal or nominal groupings.)

You need not necessarily measure variables at their highest level of measurement, however. If you are sure you have no need for ages of people at higher than the ordinal level of measurement, then you may simply ask people which among several age ranges they belong in: for example, their twenties, thirties, and so forth. Where your research purposes are not altogether clear, however, it is advisable to seek the highest level of measurement possible. Although ratio measures can later be reduced to ordinal ones, converting an ordinal measure to a ratio measure is not possible. More generally, you cannot con-

Systems Tend to Expand to Fill the Known Universe

(GALL, 1975:12–14)

Now let's look at some of the *acceptable* ways you might make use of Gall's work in a term paper.

***Acceptable:*** John Gall, in his work *Systemantics,* draws a humorous parallel between systems and infants: "Systems are like babies: once you get one, you have it. They don't go away. On the contrary, they display the most remarkable persistence. They not only persist; they grow."*

***Acceptable:*** John Gall warns that systems are like babies. Create a system and it sticks around. Worse yet, Gall notes, systems keep growing larger and larger.**

***Acceptable:*** It has also been suggested that systems have a natural tendency to persist, even grow and encroach (Gall, 1975:12).

Note that the last format requires that you give a complete citation in your bibliography, as we do in this book. Complete footnotes or endnotes work as well. See the publication manuals of various organizations such as the APA or the ASA, as well as the *Chicago Manual of Style,* for appropriate citation formats.

Here now are some *unacceptable* uses of the same material, reflecting some common errors.

***Unacceptable:*** In this paper, I want to look at some of the characteristics of the social systems we create in our organizations. First, systems are like babies: once you get one, you have it. They don't go away. On the contrary, they display the most remarkable persistence. They not only persist; they grow. [It is unacceptable to directly quote someone else's materials without using quotation marks and giving a full citation.]

***Unacceptable:*** In this paper, I want to look at some of the characteristics of the social systems we create in our organizations. First, systems are a lot like children: once you get one, it's yours. They don't go away; they persist. They not only persist, in fact: they grow. [It is unacceptable to edit another's work and present it as your own.]

***Unacceptable:*** In this paper, I want to look at some of the characteristics of the social systems we create in our organizations. One thing I've noticed is that once you create a system, it never seems to go away. Just the opposite, in fact: they have a tendency to grow. You might say systems are a lot like children in that respect. [It is unacceptable to paraphrase someone else's ideas and present them as your own.]

Each of the preceding unacceptable examples is an example of plagiarism and represents a serious offense. Admittedly, there are some "gray areas." Some ideas are more or less in the public domain, not "belonging" to any one person. Or you may reach an idea on your own that someone else has already put in writing. If you have a question about a specific situation, discuss it with your instructor in advance.

We've discussed this topic in some detail because, although you must place your research in the context of what others have done and said, the improper use of their materials is a serious offense. Learning to avoid plagiarism is a part of your "coming of age" as a scholar.

## ORGANIZATION OF THE REPORT

Although the organization of reports differs somewhat in terms of form and purpose, a general format for presenting research data can be helpful. The following comments apply most directly to a journal article, but with some modification they apply to most forms of research reports as well.

### Title

→ see more points under "abstract"

At this point in your education you probably don't need to be reminded that your report should have a title. You also probably don't need to be told that your title should closely reflect the main point of your research. Deciding on the best title, however, is not always easy. You should try

*John Gall, Systemantics: *How Systems Work and Especially How They Fail* (New York: Quadrangle, 1975), 12–14.

** John Gall, *Systemantics: How Systems Work and Especially How They Fail* (New York: Quadrangle, 1975), 12.

to give readers enough information without making it too wordy. If it is more than about a dozen words, it probably needs to be shortened. If it has a subtitle, however, it can be a bit longer. Still, it should be as terse as possible.

If possible, you may want to devise a title that is likely to pique the interest of potential readers. For example, earlier in this book we cited two articles with the following titles that probably piqued readers' interest:

> "The Family Preservation Evaluation from Hell: Implications for Program Evaluation Fidelity"
>
> "Is Social Work Effective? A Review"

A catchy title may be a good idea, but be careful not to go overboard. You don't want your audience to think you are being unscholarly in hyping your report in a misleading manner. Some colleagues, for example, might think putting the words "from Hell" in the first title cited above went too far. Perhaps a better title, although less catchy, would have been: "Problems in the Fidelity of Program Evaluation: A Family Preservation Illustration." This is a judgment call. Certainly, however, the nature of the journal to which you are submitting your report should influence your choice of a title. To be on the safe side, you may want to devise several alternative tentative titles and then seek feedback from your colleagues or any coauthors you have as to their reactions to the various titles. Based on their feedback, you might use one of the titles as currently worded or perhaps to modify the wording somewhat.

### Abstract

Immediately after the title page (which will also list all authors, their degrees, organizational affiliations, and so on), reports will include a separate page containing an **abstract** that briefly summarizes the study. Different journals will vary regarding the maximum length of abstracts, with most maximums falling somewhere between 75 and 150 words. Abstracts typically begin with a sentence identifying the purpose of the research. Next, there is usually a sentence or two that summarizes the main features of the research design and methodology. The main findings are then highlighted in one or two sentences, followed by a brief mention of any major implications. Here is an illustrative abstract:

> A randomized experiment tested the effectiveness of adding a psychoeducational group therapy intervention to standard inpatient chemical dependency services for clients dually diagnosed with mental and substance dependence disorders. One hundred clients were randomly assigned to an experimental group and a control group. Outcome variables included drug and alcohol use, incarceration days, psychiatric symptoms, and psychiatric inpatient admissions. No significant treatment effects were found on any of the outcome variables. The tested intervention did not add to the effects of standard treatments for dually diagnosed clients. Practitioners should continue to develop and evaluate alternative treatment approaches that might prove to be more effective than the one tested in this study.

An old forensic dictum says, "Tell them what you're going to tell them; tell them; and tell them what you told them." You would do well to follow this dictum. Your abstract will tell your readers what you are going to tell them. Now let's examine the sections where you go ahead and tell them.

### Introduction and Literature Review

The main narrative of your report should begin with an introduction that provides a background to the problem you have investigated. This section of your report should share some of the same features as the problems and objectives and literature review sections of your research proposal. It should, for example, convey the scope of the problem, the objectives and rationale for the study and the study's importance. It should summarize the previous research as briefly as possible, yet provide enough detail to give readers an adequate overview of the topic and to show them how your study is connected to and builds on the

prior literature. The entire introductory part of your report—including your problem statement, literature review, objectives, and hypotheses—might appear under one subheading called "Introduction." Or it might be broken up under one or more additional subheadings such as "Literature Review," "Hypotheses," and so on. More important than how many subheadings you use is whether your introductory material clearly shows the reader the objectives of your research and their rationale, why your study is timely and important, and how your study connects to and builds upon the prior literature.

Your review of the literature should bring the reader up to date on the previous research in the area, and should point out any general agreements or disagreements among the previous researchers. If you wish to challenge previously accepted ideas, carefully review the studies that have led to the acceptance of those ideas, then indicate the factors that have not been previously considered or the logical fallacies present in the previous research. When you're concerned with resolving a disagreement among previous researchers, you should summarize the research supporting one view, then summarize the research supporting the other, and finally suggest the reasons for the disagreement.

Your review of the literature serves a bibliographical function for readers, indexing the previous research on a given topic. This can be overdone, however, and you should avoid an opening paragraph that runs three pages, mentioning every previous study in the field. The comprehensive bibliographical function can best be served by a bibliography at the end of the report, and the review of the literature should focus only on those studies that have direct relevance to your study. And even when you focus on the most relevant studies, you should report only the most relevant aspects of those studies. Finally, if multiple studies have had similar findings, rather than discuss each study separately you might simply identify the general finding that they agreed upon followed by a citation of the authorship and date of each study in parentheses.

Earlier in this chapter, we presented a box titled "Improving a Weak Literature Review" that illustrated the points we had made about writing the literature review section of a research proposal. That box also applies to the points we have been making about reviewing the literature as part of the introductory material in a report of completed research.

### Methods

As we've discussed throughout most of the previous chapters of this book, the worth of the findings of a study depends on the validity of the study's design and data-collection procedures. Informed readers will want to read the details of your study's methodological design and execution so they can judge the value of your findings and decide whether to be guided by them. Readers need to be provided with sufficient detail to enable them to know precisely what was done and to replicate your study.

For some studies this section will begin with a specification of your hypotheses and variables. For other studies you might provide that information in the preceding section, showing how your conceptual framework flows from the prior literature. In either case, your methods section should describe in detail how you measured each variable, and should give readers enough information to ascertain whether your measurement procedures were reliable and valid. The same sort of detail is needed regarding your data-collection procedures, the logical arrangements for drawing causal inferences (if that was your study's purpose), and your sampling procedures.

In reporting the design and execution of a survey, for example, always include the following: the population, the sampling frame, the sampling method, the sample size, the data-collection method, the completion rate, and the methods of data processing and analysis. Comparable details should be given if other methods are used. The experienced researcher can report these details in a rather short space, without omitting anything required for the reader's evaluation of the study.

### Results

Having set the study in the perspective of previous research and having described the design and execution of it, you should then present your data. The presentation of data analyses should provide a maximum of detail without being cluttered. You can accomplish this best by continually examining your report to see whether it achieves the following aims.

If you're using quantitative data, present them so the reader can recompute them. In the case of percentage tables, for example, the reader should be able to collapse categories and recompute the percentages. Readers should receive sufficient information to permit them to compute percentages in the table in the opposite direction from that of your own presentation.

Describe all aspects of a quantitative analysis in sufficient detail to permit a secondary analyst to replicate the analysis from the same body of data. This means that he or she should be able to create the same indexes and scales, produce the same tables, arrive at the same regression equations, obtain the same factors and factor loadings, and so forth. This will seldom be done, of course, but if the report allows for it, the reader will be far better equipped to evaluate the report than if it does not.

Provide details. If you're doing a qualitative analysis, you must provide enough detail that your reader has a sense of having made the observations with you. Presenting only those data that support your interpretations is not sufficient; you must also share those data that conflict with the way you've made sense of things. Ultimately, you should provide enough information that the reader might reach a different conclusion than you did—though you can hope your interpretation will make the most sense. The reader, in fact, should be in position to replicate the entire study independently, whether it involves participant observation of people who are homeless, an experiment evaluating the effectiveness of an intervention for abused children, or any other kind of study. Recall that replicability is an essential norm of science. A single study does not prove a point; only a series of studies can begin to do so. And unless studies can be replicated, there can be no meaningful series of studies.

Integrate supporting materials. We have previously mentioned the importance of integrating data and interpretations in the report. Here is a more specific guideline for doing this. Tables, charts, and figures, if any, should be integrated into the text of the report—appearing near that portion of the text discussing them. Sometimes students (as well as authors of manuscripts submitted for publication in journals) describe their analyses in the body of the report and place all the tables in an appendix. This procedure can impede the reader, however. As a general rule, it is best to (1) describe the purpose for presenting the table, (2) present it, and (3) review and interpret it.

In published research reports it is often best to wait until you reach your *Discussion* section, which follows the *Results* section, to present your interpretations of the implications of your results. Interpretations in the *Results* section are usually limited to explaining what the data mean in a technical, factual sense. For example, suppose you have used a relatively new and complex statistical procedure. You'd probably want to briefly explain how to interpret that statistic in your *Results* section. Suppose further that your study finds that an intervention for spouse abusers appears to be effective according to the self-reports of the perpetrators, but ineffective according to the reports of their spouses. You would factually report each of those findings in your *Results*, but might want to delay trying to explain the discrepancy until your *Discussion* section. On the other hand, your report might be more readable if you integrated the presentation of data, the manipulations of those data, and your interpretations into a logical whole. That is, you would do that all in one section, called *Findings*, instead of having separate *Results* and *Discussion* sections. It can frustrate readers to discover a collection of seemingly unrelated analyses and findings in a *Results* section with a promise that all the loose ends will be tied

together later in the report. You could prevent such frustration by explaining every step in the analysis at the time it is initially reported. In your *Findings* section, you could present your rationale for each particular analysis, present the data relevant to it, interpret the results, and then indicate where that result leads next.

### Discussion and Conclusions

The narrative part of your report should conclude with a section that develops explicit conclusions, draws practical implications based on those conclusions, discusses the methodological limitations of your study, and draws implications for future research.

Many studies have findings that can be interpreted in alternative ways. Reasonable people may disagree about the most appropriate interpretations and conclusions to be drawn. You should acknowledge all of the alternative interpretations that may reasonably be made of your data. Then you should identify which interpretations seem the most warranted and explain why. This is not to imply, however, that you should merely editorialize. The conclusions you draw should be warranted by your data. You should carefully note the specific basis for each conclusion. Otherwise you may lead your reader into accepting unwarranted conclusions. Point to any qualifications or conditions warranted in the evaluation of conclusions, including the methodological limitations bearing on each conclusion. Typically, you know best the shortcomings and tentativeness of your conclusions, and you should give the reader the advantage of that knowledge.

Based on your conclusions, you should draw implications for social work practice or social welfare policy. Some studies may yield implications for social work education. You should also develop implications for future research, based on new questions emerging from your findings and perhaps also based on any unanticipated practical or methodological pitfalls you encountered in conducting your study. Many journal articles end with the statement, "It is clear that much more research is needed." This conclusion is probably always true, but it has little value unless you can offer pertinent suggestions about the nature of that future research. You should review the particular shortcomings of your own study and suggest ways those shortcomings might be avoided.

Following the forensic dictum mentioned earlier, at the end of your report you may want to tell your readers what you told them. In summarizing your research report you should avoid reviewing every specific finding, but you should review all the significant ones, pointing once more to their general significance.

### References and Appendices

Immediately following the conclusion of the narrative portion of your report should be a list of all the references you cited in the report. Typically, each reference will be indicated in the narrative by putting the authors' last names and the year of publication in parentheses. For example, if citing the book you are reading we would do this as follows: (Rubin and Babbie, 2005). At the end of the previous sentence, we cited ourselves to illustrate how this is done. We could also cite ourselves as follows: Rubin and Babbie (2005) suggest that when the author's names that you are citing are a normal part of the sentence, you should just put the date in the parenthesis. Your list of references at the end of your report will then display each full citation in the alphabetical order of the first author's last name. An alternative method is to just number each reference as follows,[1] and then list each full citation in your reference list by number, in the order that they appear in the text. Your decision as to which reference format to use should be based on the expectations of those to whom you will be submitting your report. In lieu of such expectations, it's probably best to use the former method because it is used more widely. If you have any tables, figures, or graphs that you opted not to integrate

were not helped by the new intervention. The research you've read may give no indication of the variables that make the intervention more or less successful: gender, age, social class, family situation, and so on. Moreover, the research was not done with survivors of the September 11 attack.

As a social work practitioner, you will be interested in one particular case, and you will want to consider the range of particular characteristics that might influence the intervention's effectiveness. Imagine that your particular case involves a family of two preschool children and their mother, a young woman who immigrated to New York from Puerto Rico and does not speak English fluently. Suppose her husband was a custodian killed in the 9/11 attack and that she also worked as a custodian in the same tower as her husband but was on a lower floor at the time of the attack and feels guilty that she escaped but her husband didn't. One of her two preschool children has a serious learning disability. The mother is exhibiting PTSD symptoms. Both of her children are, too, having viewed televised images of the World Trade Center towers being struck and then collapsing. Suppose the mother was abused as a child. To what extent might that be influencing her PTSD symptoms or the likelihood that the new intervention will succeed with her? Will the likelihood of success also be influenced by her minority and immigrant status, language factors, or socioeconomic stressors? Will it also work with children as young as hers? Will it work with children who have serious learning disabilities? Note, too, that the intervention may not work as well with survivors of the 9/11 attack as it does with other kinds of traumas. This is an example of the idiographic model of causation.

Clearly, all of the contextual variables just discussed in this idiographic example could be and often are examined in nomothetic analyses. Thus, we could study whether the new intervention is effective with a large sample of 9/11 survivors, We also could study whether it is more likely to be effective with adults than with children, with children without learning disabilities, or with people who have not previously been victims of other traumas. The key difference is that the nomothetic approach looks for causal patterns that occur in general, whereas the idiographic approach aims at fully explaining a single case.

You could take an idiographic approach to finding out if the intervention is effective with your particular client by conducting a single-case design evaluation. That approach would entail measuring your client's PTSD symptoms each day for a week or two and graphing the results before implementing the new intervention. Then you would continue to graph the symptoms after the new intervention begins. Whether the graphed data show a clear amelioration in PTSD symptoms that coincide with the onset of the intervention will indicate whether the intervention appears to be effective for your particular client. In Chapter 12 of this book, on single-case design, you will learn more about how to design and conduct idiographic studies like this in your own practice.

## QUANTITATIVE AND QUALITATIVE METHODS OF INQUIRY

The discussions of determinism, reality, and different models for understanding illustrate how complex things can get when we examine the philosophical underpinnings of social scientific inquiry. As we indicated earlier, not all social scientists or social work researchers share the same philosophical assumptions. Some question determinism. Some accept a postmodern view of reality, while others dismiss that view as nonsense. Some social scientists are generally more interested in idiographic understanding, while others are more inclined to the nomothetic view. Moreover, the nature of your professional activities may push you in one direction or in the other. Direct service practitioners, for example, will probably choose an idiographic approach to understanding specific clients, although nomothetic understanding of common causes of social problems may suggest variables to explore in the case of specific clients.

Diff betwn Qualitative & Qty

Sometimes, differences in philosophical assumptions lead to arguments over which approaches to research are more legitimate than others. Two research approaches that have been the center of much debate in the social work literature since the early 1980s are called *quantitative methods* and *qualitative methods*. **Quantitative methods** emphasize the production of precise and generalizable statistical findings and are generally more appropriate to nomothetic aims. When we want to verify whether a cause produces an effect in general, we are likely to use quantitative methods. (Sometimes quantitative methods are also used in studies with idiographic aims—especially in idiographic studies employing single-case designs, as will be discussed in Chapter 12.)

**Qualitative research methods** emphasize the depth of understanding associated with idiographic concerns. They attempt to tap the deeper meanings of particular human experiences and are intended to generate theoretically richer observations that are not easily reduced to numbers.

During the first half of the 20th century, sociologists commonly used qualitative methods. Social work research during that period often involved social surveys—a quantitative method. Of course, direct-service practitioners typically have always relied heavily on a qualitative approach when looking at all the idiosyncratic aspects of a particular client's case. Around the middle of the 20th century, however, the potential for quantitative methods to yield more generalizable conclusions became appealing to social scientists in general. Gradually, quantitative studies were regarded as superior—that is, as more "scientific"—and began to squeeze out qualitative studies.

Toward the end of the 20th century, qualitative methods enjoyed a rebirth of support in the social sciences generally, including social work. In a new swing of the professional pendulum, some scholars even called quantitative methods obsolete and implored the profession to concentrate on qualitative methods (De Maria, 1981; Heineman, 1981; Ruckdeschel and Faris, 1981; Taylor, 1977). Many scholars, however, do not believe that the two contrasting types of methods are inherently incompatible. In their view, despite philosophical differences, quantitative and qualitative methods play an equally important and complementary role in knowledge building, and they have done so throughout the history of contemporary social science. Indeed, some of our best research has combined the two types of methods within the same study. One example of this is an inquiry by McRoy (1981) into the self-esteem of transracial and inracial adoptees. Quantitative measurement used two standardized scales. One scale revealed no differences in levels of self-esteem between the two groups of adoptees, but the other scale revealed differences in the use of racial self-referents.

In light of her inconsistent quantitative findings, McRoy used the qualitative approach of open-ended, probing interviews to generate hypotheses on how families were handling issues of racial identity with their adopted children. The following tentative factors emerged from her qualitative analysis of the interview data that might influence how adoptees adjust to racial identity problems: parental attitudes, sibling and peer relationships, role-model availability, extended family factors, racial composition of school and community, and experience with racism and discrimination.

Thus, whether we should emphasize qualitative or quantitative research methods may depend on the conditions and purposes of our inquiry. Qualitative methods may be more suitable when flexibility is required to study a new phenomenon about which we know very little, or when we seek to gain insight into the subjective meanings of complex phenomena to advance our conceptualization of them and build theory that can be tested in future studies. Qualitative research thus can sometimes pave the way for quantitative studies of the same subject. Other times, qualitative methods produce results that are sufficient in themselves. For example, Elliot Liebow's classic study of street-corner life in *Tally's Corner* (1967) needs no further elaboration by

statistical analysis. If you read this book, you will come away with a sense of really understanding the quality of life among Liebow's subjects, and you are unlikely to feel the need for statistical data to improve that understanding.

In sum, you do not need to choose one camp or the other. Each approach is useful and legitimate. Each makes its unique contribution to inquiry. Each has its own advantages and disadvantages. Each is a set of tools, not an ideology. Researchers need to match the tools they use with the research questions and conditions they face—using quantitative methods for some studies, qualitative methods for others, and both methods in combination for still others.

## OBJECTIVITY AND SUBJECTIVITY IN SCIENTIFIC INQUIRY

A recurrent theme implicit in much of what we have discussed throughout this chapter is the pursuit of objectivity in scientific inquiry. Both quantitative and qualitative methods try to be objective, although they do it in different ways (as we will see in later chapters). It would be misleading, however, to give you the impression that objectivity is easy to achieve or even that its meaning is obvious. (We noted this earlier in our discussion of paradigms.) For example, from a premodern point of view, objectivity means observing what's "really there." In contrast, subjectivity would mean that your observations were distorted by the contents of your own mind. As we've seen earlier, however, the modern view essentially says it's impossible to see what's really there, and the postmodern view questions whether there's anything "really" there at all. Thus, the former suggests we cannot completely escape our subjectivity, while the latter suggests that subjectivity is all that really exists. How then can social workers and other investigators be "objective"?

Ultimately, we have no way of proving whether an objective reality exists beyond our perceptions, or—if it does exist—whether we are observing it accurately at any given moment. Nonetheless, scientists do have a standard to in lieu of a direct pipeline to objective rea agreement. As you'll recall from the earlier cussion, we all use agreement as a standar everyday life; scientists, however, have est lished conscious grounds for such agreement

In a sense, this whole book is devoted to a cussion of the criteria for reaching scient agreements. Whereas many of the agreement everyday life are based in tradition, for exam scientists use standards of rigorous logic careful observation. When several scientists the established techniques of scientific inqu and arrive at the same conclusion, then we ju them all to have been objective and to have covered objective reality.

This is not to suggest that social workers other social investigators always proceed ob tively. Being human, they often fall into the rors of human inquiry discussed earlier.

When social workers devise and test a new tervention approach, for instance, the value their efforts and the recognition they will rece will be far greater when their findings show their intervention is effective than when shown to be ineffective. Sure, a study abou ineffective intervention may be worth publish so that others can learn from and avoid repe ing the "failure," but it is much more gratif to be able to show the field that you have disc ered something that works than it is to disc why things went wrong.

Because of their vested interests in finding tain results, researchers often devise ways of serving phenomena that attempt to prevent th biases from influencing what is observed. T can do this in many ways, as we will see in P 3 and 4 of this book. For example, they mi employ observers who are not given potenti biasing information about the research. T might use paper-and-pencil self-report scales respondents complete outside the researche presence. Perhaps they'll look at existing in mation, such as school records, that were lected by others who know nothing of their search. These are just a few examples; w

**Table 4.1** Summary of sampling methods showing when to use each and their advantages and disadvantages.

| Sampling Method | Use | Advantages | Disadvantages |
|---|---|---|---|
| Accidental, haphazard, or convenience nonprobability sampling | Anytime. | Very easy to do; almost like not sampling at all. | Very weak external validity; likely to be biased. |
| Modal instance nonprobability sampling (purposive) | When you only want to measure a typical respondent. | Easily understood by nontechnical audiences. | Results only limited to the modal case; little external validity. |
| Expert nonprobability sampling (purposive) | As an adjunct to other sampling strategies. | Experts can provide opinions to support research conclusions. | Likely to be biased; limited external validity. |
| Quota nonprobability sampling (purposive) | When you want to represent subgroups. | Allows for oversampling smaller subgroups. | Likely to be more biased than stratified random sampling; often depends on who comes along when. |
| Heterogeneity nonprobability sampling (purposive) | When you want to sample for diversity or variety. | Easy to implement and explain; useful when you're interested in sampling for variety rather than representativeness. | Won't represent population views proportionately. |
| Snowball nonprobability sampling (purposive) | With hard-to-reach populations. | Can be used when there is no sampling frame. | Low external validity. |
| Simple random sampling | Anytime. | Simple to implement; easy to explain to nontechnical audiences. | Requires a sample list (sampling frame) to select from. |
| Stratified random sampling | When concerned about underrepresenting smaller subgroups. | Allows you to oversample minority groups to assure enough for subgroup analyses. | Requires a sample list (sampling frame) from which to select, and variable(s) to stratify by. |
| Systematic random sampling | When you want to sample every *k*th element in an ordered set. | You don't have to count through all of the elements in the list to find the ones randomly selected. | If the order of elements is nonrandom, there could be systematic bias. |
| Cluster (area) random sampling | When organizing geographically makes sense. | More efficient than other methods when sampling across a geographically dispersed area. | Usually not used alone; coupled with other methods in a multistage approach. |
| Multistage random sampling | Anytime. | Combines sophistication with efficiency. | Can be complex and difficult to explain to nontechnical audiences. |