9 Our Inquisitive Nature: The Questionnaire

Your next trip to the supermarket can provide a good gauge of our dependence on one basic tool for knowing. While waiting in the checkout line, take a look around at the tabloids and you'll find yourself adrift in a sea of questions. Will the latest Hollywood love-match last? Will Madonna reinvent herself yet again? When will Oprah and Stedman finally get hitched? Similarly, a sampling of morning, afternoon, and evening talk shows remind us that "inquiring minds" want to know the answers to many, many questions. Posing and answering questions seems to be at the heart of our popular mass media culture.

Finding out by asking questions is not the exclusive domain of news tabloids and talk shows. It is also the heart of survey research – the primary data collection tool of the social sciences. Simply put, the **survey** is a research instrument that allows us to gather critical information by posing questions. In general, we follow one of two paths in survey research. We ask our questions via an **interview**, or we ask our questions via a **questionnaire**. An interview is the more personal form of survey research – questions are posed in a face-to-face or telephone exchange between the interviewer and the respondent. (The interview technique will be the focus of the next chapter.) A questionnaire is a self-contained, self-administered instrument for asking questions. While the questionnaire lacks the personal touch of the interview, it can nonetheless be an extremely efficient data collection tool. Indeed, the self-sufficiency of questionnaires makes them the most popular survey option. A good questionnaire can "stand on its own" and enable a researcher to collect data without requiring any personal contact with the respondent. This trait means that questionnaires can transcend most barriers of time and space. By utilizing the mail system (snail mail or email), a researcher can execute a national survey of Americans without ever "leaving home."

And as news tabloids and talk shows reveal, there is hardly any limit to what it is we can find out by asking questions. Indeed, the survey is a popular tool for data collection precisely because it is so versatile. Any one of the several goals of research (exploration, description, explanation, or evaluation) can readily be pursued via survey research. Similarly, there is no limit to the *kinds of information* we might obtain via questions. We can ask questions to find out objective facts and conditions (What is your age? Where were you born?). We can ask questions about behaviors (Do you smoke? Do you participate in any team sports?). We can ask questions to learn people's attitudes, beliefs or opinions (Do you support term limits for members of Congress? Do you favor a mandatory waiting period for the purchase of handguns? Is the president doing a good job with the economy?). We can ask about people's future hopes and expectations (What's the highest educational degree you plan on obtaining? How many children do you see in your future?). We can ask questions about knowledge (In your state, is it possible to legally charge husbands with raping their wives? Are there any age restrictions for the office of President of the United States?). Indeed, as long as we pay careful attention to how we phrase our questions, there is virtually no limit to what we might find out via surveys.

For many, survey research is a natural and familiar way of gathering information, as second nature to us as talking and writing. This familiarity causes some to think that survey research is easy. Many adopt an "anyone can do it" attitude. As we will see in this chapter, however, such an attitude is extremely naive. Much thought must be given to the exact wording of our questions, the structure of our questions, and the way we sequence and format our questions. This holistic approach is mandated by the fact that survey research has a terribly vulnerable Achilles heel. The fact is that we can ask great questions and still fail at survey research! How so? Above all else, successful survey research requires that we secure respondents' *cooperation*. We must convince potential respondents that our questionnaire is worth their time and effort and we must convince them that the questions are worthy of honest, accurate answers.

Neither of these tasks is easy. In general questionnaires suffer low **response rates** – i.e., the percentage of potential respondents who actually return the questionnaire. It is not unusual for questionnaires to initially generate very low response rates – less than 30%. Such low response rates are extremely worrisome for the havoc they can cause on our sampling strategies. The fact is a researcher might do *all* the work required for securing a representative sample (i.e., constructing an accurate sampling frame, stratifying on essential variables, using a random

selection process) only to see this work defeated by a low response rate. When only a minority of those sampled return a questionnaire, we must consider the possibility that the few who elected to respond are significantly different from the majority of non-respondents. In short, response rates are taken as proxy measures for response *bias* (Hager et al. 2003); low response rates should raise concerns about a "self-selection" bias that undermines the generalizability of survey findings.

In the final analysis, the survey researcher cannot afford to be nonchalant about response rates. Part of good survey design is considering those factors that impact on response rates – i.e., compelling cover letters and/or introductions, appealing layouts and coherent organization, judicious use of open-ended questions, systematic follow-ups, etc.[1] Indeed, given the right planning and follow-through, it should be possible for the survey researcher to achieve rates that are in line with recommended minimal response levels of 50–60 percent (Babbie 2001) or even 70 percent and higher (Bailey 1987; Dillman 2000).[2]

The issue of respondent honesty is more difficult to assess and control. Perhaps it's just human nature, but many of us like to present ourselves in the most favorable light. (This tendency to answer questions in a "socially appropriate way" is referred to as a social desirability bias.) Surely this explains respondents' tendency to overreport "good things": e.g., the amount they give to charity and the happiness they derive from their marriages. We also tend to underreport our negatives. Americans, for instance, "fudge" a bit when it comes to self-reporting our eating habits:

> Forty pounds of white bread, 32 gallons of soft drinks, 41 pounds of potatoes and a couple of gallons of vegetable oil in which to fry them. No, it's not a roster of provisions for the troops on the Fourth of July. It's a sample of what the average American eats in a year.
>
> Bear in mind, that's only what consumers admit to eating. If there is one thing researchers have learned while surveying the nation's gastronomic habits, it is that, whether from modesty or sheer denial, Americans are prodigious liars about how much they really eat. (Winter 2002)

1 These factors will be addressed later in this chapter. For a thorough discussion of still more strategies for improving survey response rates, see Dillman 2000.

2 Even the Census Bureau, an organization rich in resources and know-how, only obtained a 67 percent response rate on the 2000 Census. On the other hand, this rate was a noticeable improvement over earlier census efforts and marked a reversal of declining Census cooperation (http://rates.census.gov/).

In short, survey research in general and questionnaire development in particular are *not* "no brainers." This kind of research requires a lot of attention to many different details.

The Way We Word

In survey research, the exact questions we ask are our operationalizations (see Chapters 3, 4, and 5). That is, the concepts we are interested in studying (e.g., fear of crime) are measured via the questions or statements we pose to respondents (e.g., to measure fear of crime, the GSS asks, "Is there any area right around here where you would be afraid to walk alone at night?" Yes/No). Given that questions are our measures, the assessment of measurement validity and reliability demands that we give careful attention to the exact wording of our questions. We must choose our words wisely. An early experiment on question wording by Donald Rugg found that Americans' support for freedom of speech was drastically altered by different wordings of the following questions:

- Do you think the United States should *forbid* public speeches against democracy?
- Do you think the United States should *allow* public speeches against democracy?

(Schuman 2002, my emphasis)

The "forbid" question generated a much lower agreement rate (54%) than the "allow" question (75%) Similarly, several decades later, Smith (1987) found that respondents to the GSS responded more negatively to the term "welfare" than the term "poor." When asking questions about the public's attitudes toward abortion, might it make a difference if the words "end pregnancy" were substituted for the word "abortion"? Sociologist Howard Schuman (2002) suspected the switch would lead to an increase in support for legalized abortions but was surprised to find no difference between the two wordings. Rugg's "public speech" example clearly shows us that wording *can* matter. And while the "abortion" example runs counter to the researcher's expectations, his findings nonetheless yield some valuable insight into the measurement process. *Both* examples reveal the importance of considering and evaluating the impact of the words we use in our measures.

The rules

Survey data is only as good (i.e., as valid and reliable) as the questions posed and all too often these questions leave much to be desired. Quality survey data require us to follow certain rules for asking questions. The rules that follow might strike you as common sense. Faithful adherence to them, however, is not so common.

The questions we pose should be clear in meaning and free of ambiguity. This rule sounds simple enough. A moment's reflection, however, will reveal how our everyday speech is laden with ambiguity. Consider the following questions.

- Do you exercise on a regular basis?
- What is your total financial worth?

At first glance these questions may strike you as perfectly adequate for "finding out" some key information about the respondent. Both questions, however, are plagued by ambiguity. How, for instance, should the respondent interpret the phrase "regular basis" in the exercise question? Does regular mean that someone exercises daily or simply that they exercise several times a week? If respondents faithfully jog every Saturday morning, should they answer this question in the affirmative? In general, frequency terms like "regularly," "often," and "seldom" are inherently vague and contribute imprecision to the measurement process. We should think twice about freely using them in our questions. Similar observations can be made about the financial worth question. Will the respondent know to include *all* income (earned and unearned) as well as assets such as property and stocks? Is the question asking about personal worth or family worth? Should the respondent adjust figures for any outstanding debt? The critical point is this: Ambiguous questions produce ambiguous data. The more ambiguity we leave in our questions, the more ambiguity we will encounter in our findings. The survey researcher is obligated to remove as much guess work from questionnaire items as possible.

Survey questions should use common everyday language; the use of specialized language such as jargon, abbreviations, or acronyms should be avoided. This rule is especially noteworthy for those of us trained in the social sciences as well as for those doing research on behalf of special interest groups.

The various disciplines of the social sciences are replete with their own special language, a language that helps identify us as members of our respective fields. Sociologists, for instance, speak of families of orientation vs. families of procreation. They speak of our anomic society and the collective conscience. These terms, while meaningful to sociologists, are clear examples of the rather mystifying jargon of a discipline. It would be a serious mistake for a sociologist to use these terms when posing questions to respondents (e.g., What was the size of your family of orientation?). Similarly, it would be a mistake to use terms that assume respondents' knowledge of abbreviations or acronyms associated with special interest groups. Questions about the respondent's support for the NRA may find them focusing on the right to bear arms, but it is also possible that some respondents will simply not know the letters stand for the National Rifle Association and give you their thoughts about protecting redheads (National Redheads Association).

Survey questions should use neutral language; emotional or leading language should be avoided. All of us know the power of words. Words can cut, sting, placate, or motivate. The power of words doesn't disappear in survey research. Emotional language can produce biased responses by "pushing our buttons" and encouraging respondents to react to the *language used* in a question rather than to the issues raised by a question. Consider the following question found in a recent national survey about marine mammals:

> On December 31, 1992, a United Nations ban on the use of high seas driftnets, the modern monstrosities of plastic filament that trap and kill any living creature that enters their paths: dolphins, seals, marine birds, even whales, went into effect. Presently there is no way to ensure that the ban is working or that driftnets are no longer being used. Would you support an international system to monitor and enforce the UN driftnet ban?

As you read this question, if you found yourself having an emotional reaction to the idea of monstrous nets trapping and killing defenseless marine life, you experienced first hand the influential power of language.

Typically, emotional language is used to lead respondents to the desired response. Leading questions suggest to the respondent that one response is better than or preferred over another. Clearly, the above question on the use of driftnets is not neutral. The question is trying to lead the respondent to a stand that supports the banning of driftnets. To

avoid leading questions, the survey researcher must phrase questions in such a way as to make respondents feel that all answers are equally legitimate. Consider how the following questions violate this principle:

- What do you find offensive about flag burning?
- Why do you think hitting children is wrong?

Both of these questions lead the respondent by suggesting a desired response: flag burning is offensive and hitting children is wrong. As presently phrased, the questions are telling the respondent that alternate views of flag burning (i.e., an act of free speech) or of hitting children (i.e., an acceptable disciplinary tactic) are not appropriate *regardless of how the respondent may actually feel.*

Survey questions should be simple and easy for respondents to answer

Again, this rule may strike you as so obvious that it need not be stated. Still, it is a rule that is frequently violated. For instance, surveys often pose "double-barreled" questions – questions that are not easy to answer. Double-barreled questions are those that ask the respondent two (or more) questions under the guise of one question. Consider the following item that appeared on a recent survey on community policing:

- How do you rate police response time to emergency and non-emergency calls?

Respondents were provided with just one set of response alternatives (answers ranging from adequate to inadequate) despite the fact that they were really being asked to assess two different kinds of police activity: emergency and non-emergency calls. Respondents who had different experiences for emergency and non-emergency encounters with the police would find this question impossible to answer as currently phrased.

Questions can also prove difficult to answer when they ask respondents to perform unreasonable calculations. A medical researcher may want to know about respondents' health risks. Asking how many cigarettes the respondent smokes in a year (or even in a month) is not a good way to get this information. Years and months are not the usual timeframes smokers use to quantify their smoking habits. (Smokers usually characterize their habit in terms of daily consumption: e.g., a pack a day.) Similarly, a researcher may be interested in obtaining information about

household spending. Asking respondents about their annual expenditures for food, however, would not be a user-friendly question. In fact, the calculations required to answer this question would encourage a high non-response rate – i.e., respondents would be tempted to skip the question altogether. The researcher would be better advised in this situation to ask a question about respondent's average food bill for a typical time period (e.g. a weekly order). Once this basic information is obtained, the researcher can then do the calculations needed to estimate yearly food expenses.

Questions that don't follow rules of good grammar can also prove difficult for respondents. Particularly troublesome are questions that employ a double negative. Double negatives *don't make no good sense in our writing or in surveys.* (See what I mean?) If the respondent is forced to re-read a question in an attempt to figure out what it's really asking, then the question isn't an acceptable one. Consider the following double-negative question that was used in a recent Roper survey of Americans' beliefs about the Holocaust:

➢ Does it seem possible or does it seem impossible to you that the Nazi extermination of the Jews never happened?

With this wording of the question, 22 percent of respondents indicated that they thought it possible the Holocaust never happened! Jewish leaders were shocked by these findings. Researchers reconsidered the actual phrasing of the question and determined that the use of a double negative (impossible and never) in the original question was the culprit behind the surprising findings. The question was asked again without the confusing double-negative phrasing:

➢ Do you doubt that the Holocaust actually happened or not?

This time the proportion of respondents who thought the Holocaust probably didn't happen fell to less than 3 percent.

The Structure of Questions: Closed- and Open-Ended Questions

In addition to carefully considering the exact wording or phrasing of our questions, the survey researcher must also decide the amount of freedom she or he wants to give respondents when answering the

questions posed. This freedom issue is addressed by the researcher's use of closed- or open-ended questions. With **closed-ended** questions, the researcher provides a set of pre-determined (fixed) response alternatives for the respondent to use when answering the question. With **open-ended** questions, respondents are free to devise their own unique answers to the questions posed. You have probably encountered these two versions of questions in a typical classroom exam. The multiple-choice questions on an exam illustrate closed-ended questions. The essay portion of an exam illustrates the open-ended style of questions.

There are a number of considerations that should influence the use of closed- or open-ended questions. Providing a pre-determined set of responses is advisable when it is possible to anticipate the full range of possible responses and when these responses are relatively few in number. Questions about respondents' marital status, political affiliation, or favorite fast food restaurants would all be good candidates for closed-ended questions. Open-ended questions are advisable when posing a complex question that defies any ready or apparent answer. The open-ended approach is also recommended when we are interested in obtaining the respondent's unique views on an issue or topic. Questions about respondents' hopes for the future or about their views on charging adolescent law offenders as adults would be good candidates for open-ended questions.

In deciding on closed- or open-ended questions, the researcher should also consider the advantages and disadvantages of each style of questioning. As you probably know from experience, closed-ended questions are easier to answer. (When was the last time you intentionally skipped circling an answer on a multiple-choice exam because it was just too much trouble?) Since closed-ended questions are easy to "answer" they tend to cut down on non-responses. They also carry a clear benefit for the researcher: They reduce the time and effort needed to code responses for data entry and analysis. "Coding" decisions are achieved via the pre-determined response alternatives. These advantages, however, can also alert us to some disadvantages of closed-ended questions. Because closed-ended questions are "easy" to answer, they may encourage respondents to circle or check a response even when the responses don't really "ring true" for the respondent. (Again, think about your experiences with multiple-choice exams. Any time you "guess" at an answer you are pretending to know something you don't really know.)

Closed-ended questions can also misrepresent or obscure true differences or similarities in respondents' answers. Consider, for instance, the following question about a person's height:

➢ What is your height?

1. Above average
2. Average
3. Below average

One respondent may be 6′9″ tall and select option 1 (above average) to describe him- or herself. Another person may be 5′9″ tall and also select option 1. There is a foot difference in these respondents' heights yet both appear the same in their closed-ended responses. Conversely, we can imagine a scenario where respondents of the exact same height (e.g., 6′2″) might choose different options with one person reporting average height and the other reporting above average height. Here we have the "same" traits appearing as different responses in our closed-ended question. You can imagine how these obfuscations can confound the researcher's data analysis.

The clearest advantage of open-ended questions is that they don't put words in respondents' mouths. This feature means that open-ended questions may do a better job than closed-ended questions at measuring what respondents actually think or do (and not just measure what the *researcher believes* respondents think or do). Open-ended questions also allow researchers to find out something unanticipated. The freedom offered with open-ended questions means that respondents may report something the researcher would never have thought of including in a closed-ended set of responses. Once again, however, these advantages foreshadow some of the disadvantages of open-ended questions. Giving respondents total freedom to supply their own answers means that the researcher will have to work harder at coding responses. Indeed, it's possible that responses will be widely different from one person to the next. Open-ended questions are also "harder" for respondents to complete. Open-ended questions require respondents to work harder in the sense that they have to "write" something in order to provide an answer. Consequently, open-ended questions suffer a lower response rate than do closed-ended questions. (Again, think about your typical exam. Essay exams are usually more work for students since they actually have to write out answers and not just select a listed option. Consequently, it is not so unusual to find students leaving essay questions blank. Writing an answer to a question you don't know may be more trouble than it's worth.)

Closed- vs. open-ended questions and levels of measurement

Our selection of closed- or open-ended questions carries implications for the level of measurement we achieve in our survey items. As we change the response alternatives we offer in our closed-ended questions, we can change the level of measurement achieved. Consider the following questions:

➢ Do you rent videos?

1. yes
2. no

➢ In a typical month, how often do you rent videos?

1. never
2. 1–3 times a month
3. 4–6 times a month
4. 7 or more times a month

➢ In the last two weeks, how many times did you rent videos? (Please specify an exact number)

The first item reaches the nominal level of measurement. The numbers attached to the various response alternatives merely label two qualitatively different answers: yes and no. The second item with its different set of fixed choices reaches the ordinal level of measurement. The numbers attached to the various response alternatives express a rank ordering – as the numbers increase, so too does the frequency with which one rents videos. A switch from the closed-ended forms to an open-ended question about renting videos enables the researcher to achieve the ratio level of measurement. The "number" attached to the third item above is an actual count of the number of times the respondent rented videos in the last two weeks.

The general rule of thumb is to utilize ratio level measures whenever it is feasible. The ratio level is considered the "highest" level of measurement because of its versatility. With ratio level data, the researcher can always "collapse" data into lower ordinal or nominal level data. The ratio level also offers the most versatility in terms of statistical analysis. For some kinds of information, however, respondents are often reluctant to answer open-ended ratio level questions (e.g., questions

asking for exact yearly income or exact ages). In such instances, lower level closed-ended questions can be the better choice.

Putting It Together

As indicated in the opening pages of this chapter, one of the major obstacles that must be overcome when using questionnaires to gather information is the problem of cooperation. Recall the point made earlier that questionnaires must function as "stand-alone" tools – they must contain everything needed to get respondents to answer the questions posed. This means that the questionnaire is required to do all that it can to persuade potential respondents to cooperate and supply the requested information. Certain questionnaire design and formatting issues are critical to securing this cooperation.

First things first: Persuasive cover letters or introductions

It is a mistake to think that a good survey starts with a good question. Before a respondent will ever look at specific questions, she or he must first be convinced that the survey in hand is a worthy one. The very best questions will never do a good job at collecting information if the entire questionnaire winds up in the respondent's wastebasket. To preclude this cruel (and all too common) fate, a questionnaire must first sell itself to the potential respondent. This sales job is best accomplished with a persuasive introductory statement or cover letter (for mailed questionnaires). The introduction should serve to assure the respondent of the survey's importance and legitimacy. It should convince the respondent that the time they spend filling out the questionnaire will be time well spent. To accomplish this, the researcher is well advised to specifically address the saliency of the research topic. Tell the respondents why your project matters and why their cooperation is so critical. Introductions and cover letters should also directly address the issues of confidentiality or anonymity (see Chapter 2). The researcher should tell respondents how their privacy will be protected. When cover letters are used, they should be personalized – i.e., they should address the respondent by name and they should bear the personal signature of the researcher. Cover letters should also contain phone numbers that the respondent may use to obtain additional information about the study. When possible, it's best for cover letters to be printed on letterhead that will lend credibility to the research project.

Sequencing

The order or sequence of our survey items can greatly influence a respondent's decision to supply the requested information. Getting off on the wrong foot may mean the researcher will never see their survey returned to them. Sequencing can also influence the quality of the information we obtain. Which questions should be placed at the start, at the middle, and at the end of the survey? Is it appropriate to group certain questions together? Will the order or flow of the questions influence people's answers?

Primacy effects After presenting respondents with a persuasive introduction to your project, it is best to open the survey with interesting or pleasant questions that are easy to answer. Remember, you must still be concerned with securing the respondent's cooperation – even a powerful introduction or cover letter will find it hard to overcome a tedious or boring or threatening set of opening questions. For this reason, many experts advise that questionnaires should *not* begin with background or demographic questions. Such questions often strike respondents as either invasive or dull. Similarly, don't go the route of starting with provocative, open-ended questions! While you may think this a good way to grab the attention of your respondents, it is just as likely that they will find this approach presumptuous or offensive. Any questions that might threaten the respondent should really be delayed until *after* you have won the trust of your respondent. Instead, consider starting off the questionnaire with some interesting opinion or attitude questions – such questions will help reinforce the point that the researcher is really interested in hearing what's on the respondent's mind.

Logical flow It is usually a good idea to try to achieve some logical order to the questions you pose in a survey. You might consider grouping questions by time order (e.g., you might first ask questions about the respondent's adolescent years and then ask questions about their young adulthood). Or you might group questions by topics (i.e., put all questions about family together and all questions about work together, etc.). As you move from one group of questions to another, you should try to assist respondents in making any necessary mental shifts demanded by the new group of questions. Transitional statements can help respondents achieve the right mindset for the new set of questions: "Now I want to shift the focus to your high school years . . ."

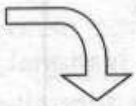
When deciding on the order of questions, the researcher must be cognizant of the fact that earlier questions can influence respondents' answers to later questions. If we first ask respondents if they consider themselves overweight and then ask them about their eating habits, we can expect that their answers to the first question will influence what they say to the second question. Knowing what to do about the effect of question order, however, can be a tricky business. The researcher might follow a number of strategies. The researcher might simply decide to be sensitive to the possibility that question order may influence responses. The "order" effect could then be part of their data analysis. The researcher might pre-test the questionnaire and explore with the "trial" respondents whether or not the order of the questions influenced their responses. A more formal strategy might be to develop two forms of the final questionnaire with different question ordering adopted in each form. This solution would enable the researcher to empirically assess if question order actually influenced responses.

To ask or not to ask

A sure-fire way to discourage respondents' cooperation is to force them to read questions that are not relevant to them or their experiences. Respondents who have no children don't want to be asked a slew of questions about their parenting practices. Respondents who aren't married will not appreciate a series of questions about the division of domestic chores with their nonexistent spouses! We can most effectively spare respondents from questions that are not relevant to them by using filter and contingency questions. A **filter question** is one that determines if it is appropriate or necessary for the respondent to read a subsequent set of questions. **Contingency questions** are a subset of questions that are only answered by those who have been given the "green light" by a preceding "filter" question. For example, if respondents answer "yes" to the filter question of whether or not they have any children, they might then be instructed to go onto a set of questions regarding their interactions with their children. Those who don't have children would be instructed to skip these questions and to move onto the next relevant section of the questionnaire. When setting up filter and contingency questions, it's best to set the contingency questions "apart" from the rest of the questions and use arrows or lines to direct appropriate respondents to these sections of the questionnaire.

➢ Do you currently smoke cigarettes?

1. yes (if yes, please answer question 3)
2. no (if no, please skip to question 4)



3. In the past year, have any family members or close friends tried to get you to stop smoking?
   1. yes
   2. no

The long and the short of it

Not surprisingly, researchers usually prefer long questionnaires (and interviews) to short ones. Long questionnaires are more cost efficient – once we have respondents at hand, we are tempted to get as much information from them as possible. The risk of giving in to the "economy" size questionnaire, however, is great. Generally, as the length of questionnaires increases, the response rate decreases (Smith 1994). Lengthy questionnaires can discourage respondents from starting or completing the survey. While there are no hard and fast rules about questionnaire length, it is generally advised that questionnaires should be designed so that they take no more than 30 minutes to complete (Monette et al. 1998).

Formatting

The way a questionnaire appears on paper (or on a computer screen) is certainly relevant to securing respondents' cooperation. Questionnaires that look unprofessional, sloppy, or cramped will not inspire respondents to put pencil to paper (or finger to mouse). The formatting or presentation of our survey questions is also an important consideration in developing valid and reliable measures. If we don't pay sufficient attention to how our questions appear on paper, we may wind up with some unfortunate surprises. (See Box 9.1.) If you find this hard to believe, just recall the fiasco that developed on Election Day 2000 in Florida! In retrospect, was it really such a good idea to use a "butterfly ballot" –

Box 9.1 Little Things Matter

Tom Smith of the National Opinion Research Center has found that "little things" matter in formatting of surveys. All of the following "simple" mistakes can decrease data quality and undermine replication efforts:

- misalignment of response boxes,
- overly compact (dense) question format,
- faulty placement of filter and contingency questions,
- leaving too little space for answers to open-ended questions.

Smith (1993)

i.e., one that staggered the candidates' names on two separate pages and positioned the selection column down the center? Clearly there were many Florida voters who maintained that the markings on their ballots did not accurately record (measure) their true voting intentions.

Formatting decisions are particularly relevant for closed-ended questions. The most basic question is how many response categories should be listed? For nominal level measures, the number of categories should be exhaustive and they should be mutually exclusive. To offer an exhaustive set of response options, the researcher should include as many options as needed to cover all feasible answers. Mutually exclusive response options are ones that don't overlap. For some variables, these conditions of exhaustivity and mutual exclusivity are easily met. In asking a closed-ended question about the respondent's sex, the researcher only need supply two response options: male and female. These choices are both exhaustive and mutually exclusive. In asking a closed-ended question about the respondent's college major, the challenge of providing an exhaustive list of options is much greater. Some colleges offer hundreds of majors! Here the researcher must figure out an acceptable solution. She or he might list broad categories of majors (e.g., social science major, natural science major, humanities major, etc.) in order to keep the list of options to a manageable size. If the researcher goes this route, it is always wise to include an "other" option (followed by a "please specify" prompt) for the student whose major doesn't fall into any of the conventional categories. (The "other" category allows the researcher to satisfy the condition of exhaustivity.) Rather than trying to provide a full list of options, the researcher might decide the question is better posed as an open-ended one which invites the respondent to write in the name of

their major. The researcher would then face the task of reviewing all the responses and imposing an after the fact coding scheme.

Like nominal level measures, ordinal response options must also be mutually exclusive and exhaustive. This rule, however, doesn't tell the whole story. In creating a ranked list of response alternatives, the researcher has considerable latitude. For instance, she or he must decide the number of ranked alternatives to offer. In measuring the level of agreement with certain views the researcher might provide three alternatives: (agree; neutral; disagree), four alternatives (strongly agree; agree; disagree; strongly disagree), five alternatives (strongly agree; agree; neutral; disagree; strongly disagree), or perhaps six alternatives (strongly agree; mostly agree; agree somewhat; disagree somewhat; mostly disagree; strongly disagree). The choice of response alternatives should be guided by our research needs – how fine-tuned or precise do we want the information? The number of response alternatives also influences how much "hedging" respondents are allowed. An even numbered set of ordinal response categories forces respondents to come down on one side of an issue (e.g., strongly agree; agree; disagree; strongly disagree). An odd numbered set of ordinal response categories allows respondents to take a "middle" position and avoid committing themselves to either side of an issue (e.g., strongly agree; agree; neutral; disagree; strongly disagree). Again, the researcher should be aware of these implications and make an informed decision as to whether an odd or even numbered set of choices is preferable.

The "strongly agree to strongly disagree" format presented above illustrates a **bipolar** or **two-directional** response option. Such closed-ended choices present a range of opposite alternatives for the respondent to consider (e.g., strongly agree to strongly disagree; strongly endorse to strongly oppose; strongly like to strongly dislike, etc.). At times, the researcher may want to present **unipolar** or **one-directional** responses – i.e., alternatives that move in one direction only, thereby avoiding negative or neutral responses. To accomplish this the researcher can resort to asking respondents to evaluate statements on a multiple-point scale (e.g., 1–5 or 1–7 or 1–10) where 1 indicates the lowest rating and the highest number the highest rating. For instance, respondents might be asked to rate their interest in reality television shows on a scale of 1 to 5 where 1 represents the lowest and 5 the highest interest.

What's the best layout for the response alternatives? Should they be listed vertically or horizontally? (Typically, vertical listing of response options is thought to lead to fewer errors.) Should we have respondents

indicate their answers by filling in circles (●) or checking boxes ☑? Should we use letter or number prefixes for identifying the various response alternatives? (Numerical prefixes enable us to "pre-code" response alternatives and thereby facilitate data entry.) These decisions are not irrelevant. The survey researcher must give serious thought to which option will produce the least amount of measurement error.

Frequently we will pose a series of items that all employ the same response alternatives. We might present a series of statements and ask respondents the degree to which they agree or disagree with each statement. Similarly, we might ask them to indicate their level of interest (from low to high) in a series of items. This style of questioning invites the use of **matrix formatting** where statements or items are vertically stacked on the left of the page and the response alternatives are vertically stacked on the right side of the page.

➢ For each of the following statements, please indicate whether you strongly agree (SA), agree (A), disagree (D), strongly disagree (SD), or are undecided (U):

	SA	A	U	D	SD
Children should be seen and not heard	[ ]	[ ]	[ ]	[ ]	[ ]
Children are our most precious commodity	[ ]	[ ]	[ ]	[ ]	[ ]

While matrix formatting is an attractive and efficient use of space, it can also invite trouble: a response set. **Response set** refers to a pattern in the respondent's answers that is not attributable to the actual content of the questions. If, for instance, the respondent strongly agrees with the first few items in a matrix set of questions, they may continue to check the strongly agree response to all the remaining items *without ever actually reading them!* Response sets can greatly undermine the validity and reliability of our survey items. The best strategy for combating a response set is to discourage it by intentionally mixing the "direction" or sentiment of your matrix items. Some items should be stated in a "positive" and some in a "negative" direction. Look again at the above example. The first statement about children can be seen as making a negative assertion about children. The second item is essentially a positive statement about children. Individuals who strongly agree with the first item would be expected to disagree with the second. Juxtaposing contradictory statements in a matrix of questions should discourage respondents from

falling into a response set. To answer an intentionally mixed set of items consistently, respondents would have to agree to some and disagree with others.

Pre-Testing

After developing a good solid questionnaire, the researcher should always plan on conducting a pre-test. There is no better way to see what others think about the questionnaire than to ask them. To pre-test, we should administer the questionnaire to a small group of people who closely resemble our research population. (Those involved in a pre-test are no longer eligible for inclusion in your final sample.) A particularly effective pre-test technique is the "think aloud" (Patten 2001). Here we ask respondents to talk out their reactions to each of the items on the survey – how did they understand the questions and the response options? This is a most effective strategy for seeing if both the researcher and the respondent are "on the same wavelength" and for detecting bad questionnaire items. To strike a more technical note, the "think aloud" provides critical feedback for assessing a question's validity and reliability. Pre-testing also allows the researcher to assess the impact of word selection, question sequencing, and various formatting and layout issues.

Return to Sender: The Special Challenge of the Mailed Questionnaire

Throughout this chapter we have made repeated reference to the importance of obtaining respondents' cooperation and securing a high response rate in survey research. All that we have said so far is directed at building a good survey instrument as a way of encouraging high response: pay attention to question content and form, pay attention to formatting and question sequencing. Below are a few more tips that are particularly relevant when using the mail system for the delivery and the return of our surveys.

Cover letter

As indicated earlier, the best strategy for increasing the response rate to a mailed questionnaire is a strong, persuasive cover letter.

Convincing respondents that your research project is a worthy one will go a long way toward encouraging them to complete it and return it to you.

Make returning easy and attractive

You need to stay one step ahead of all the reasons why a respondent won't return your questionnaire. Provide a self-addressed stamped envelope. Resist making the questionnaire any longer than it really needs to be. It's easier to convince someone to fill out a short rather than a long questionnaire. Timing of mailed surveys is also relevant to good response rates. You should avoid sending questionnaires out at "busy times" of the year. Don't expect people to pay attention to your questionnaire request at holidays, at tax time, or at the start of school years. You should also think twice about sending out questionnaires during the height of the vacation season. Questionnaires may languish in mailboxes for two or three weeks while the respondent is off on their annual camping trip.

You might also consider some kind of payment for your respondents. Before you dismiss this idea as beyond your budget, remember that it's the gesture not the amount that seems to count. The payment you offer might be a token or a symbolic one. You might include a few pennies for your respondents' thoughts. You might offer coupons or bookmarks or even a list of useful URLs relevant to the survey's topic. Some suggest treating respondents to "first class" postage for use on a mailing of their choice! The idea is simply to let the respondents know that you are not taking their time and input for granted.

Systematic follow-through

In the interest of securing good response rates, you should also plan on conducting systematic follow-ups with your respondents. If respondents haven't returned their questionnaires by the appointed time, you should be prepared to contact them (either by mail or phone) and address once again the importance of both the study and their input. You should also be prepared to send out a second and even a third copy of the questionnaire. Such systematic follow-ups have been credited with significantly increasing final response rates.

Delivering Questions Electronically

The computer age has opened yet another major avenue for delivering questionnaires to respondents: questionnaires can be delivered via email or launched online via web pages. Proponents of electronic surveys contend that such surveys are the wave of the future. And given the increasing number of homes with computers and Internet connections, it is quite likely that the web page questionnaire may well become the telephone interview of tomorrow. While electronic surveys increase dramatically the ultimate reach of surveys, they don't offer any magic fixes for the inherent problems of questionnaires. Electronic surveys must still grapple with the myriad of challenges presented throughout this chapter: question wording, question sequencing, formatting, survey and item nonresponse, etc. Concerns over issues of anonymity and/or confidentiality will likely loom large given the public's wariness about the Internet's profound potential for privacy abuse (Cole 2001). Furthermore, electronic surveys must confront problems of access. Despite the Internet's rapid growth, electronic surveys systematically "miss" individuals, homes, and businesses without Internet access. Conversely, given the incredible "linking" capacity of the World Wide Web, web page surveys are often accessed by inappropriate respondents who are not part of the intended sample. In short, electronic surveys have a place in survey research and, as issues of restricted access are resolved, that place will likely be a most secure one in the world of market, political, and social research.

Ask and You Shall Receive

In considering the various research options for systematically gathering information, the questionnaire has earned the right to be a perennial favorite. It is the real workhorse of research tools – a frequent choice of researchers because of its versatility, its time and cost efficiency and for its overall ability to get the job done. Still, questionnaires are not foolproof. Indeed, any fool can develop a questionnaire and by now you've probably been subjected to quite a few foolish questionnaires! Hopefully this chapter has convinced you that much care and work must go into questionnaire construction if we're to reach the goal of asking the right questions in the right way in order to obtain valid and reliable information.