We begin that process with Chapter 2, where we answer the question of why people do and do not respond to sample surveys and provide suggestions for how to increase response rates. In Chapter 3 we focus on issues related to sampling and coverage, or finding and choosing who to survey, for each of the survey modes and for mixed-mode designs. Chapters 4, 5, and 6 are devoted to the topic of designing survey questions and questionnaires. Specifically, in Chapter 4 we cover issues common to all questionnaires; in Chapter 5 we provide guidance for designing specific types of questions; and in Chapter 6 we discuss the differences between aural and visual questionnaires and provide specific guidance for how to design for visual surveys. Chapter 7 is focused on how to order questions in the questionnaire and how to pretest them. These first seven chapters contain information that applies broadly to multiple survey modes.

We then turn to strategies for designing and implementing surveys for specific survey modes: Chapter 8 discusses telephone surveys, Chapter 9 web surveys, and Chapter 10 mail surveys. These chapters will be very useful to readers who are trying to design and carry out single mode surveys but also to those who are using these modes in mixed-mode designs. Chapter 11 then discusses designing questionnaires, contacts, and implementation strategies for mixed-mode surveys, building upon each of the individual mode chapters. Finally, in Chapter 12 we look ahead to how surveyors might respond to technological and societal changes in pursuit of conducting better sample surveys.

Reducing People's Reluctance to Respond to Surveys

Survey sponsors and the people they ask to respond to their surveys often have contrasting views of the situation. Designing quality surveys requires understanding those differences and how to reconcile them.

For many recipients of survey requests, the invitations come as annoying intrusions into their lives, such as unwanted phone calls, postal letters, or junk e-mails. "Why me?" and "How do I make this go away?" are common quick and decisive reactions from sample members, resulting in a hang-up, a toss into the wastebasket, or a deletion.

If the recipient should begin to study the invitation, these feelings may be amplified by thoughts such as disinterest in the topic, uncertainty about who is making the request, or concern about opening an electronic link from an unknown source that could infect his computer. If a survey request survives these initial perils, other considerations are likely to arise, with individuals wondering, how long is this survey going to take to complete, will the results be useful, do the questions—especially the first ones—make sense, is this request legitimate, and will my name be placed on a mailing list that produces even more annoyances?

The survey sponsor, on the other hand, often sees herself as facing a huge task of contacting hundreds or thousands of individuals and getting them to answer burdensome questions. She also wants to do it quickly, efficiently, and at minimal cost. The surveyor's thinking is often focused on what kind of communications can be written that cover all possible information that someone in the sample might like to know and how all the contacts can be produced in the least costly way. This thinking often leads to practices such as sending only two or three requests by e-mail, only using bulk rate postal mail, or repeating word-for-word in follow-ups the same information that was provided earlier. The content of these communications often focuses on the survey problem as the survey sponsor sees it, even to the point of becoming defensively prepared messages such as "My agency is required to find out what the health improvement needs of people are, and therefore I must ask you to tell us your concerns."

The questionnaire may include dozens of questions, with the list continuing to grow as new possibilities are created. The most critical questions for the planned analyses may be asked first, especially in web surveys, in case people decide to quit after answering only a few questions. This kind of reasoning sometimes results in starting with open-ended questions, such as "How much was your total household income last year?" The sponsor asks for the exact amount, to the last dollar, instead of offering broad categories, because it is deemed essential to the survey's purpose that measurement be as precise as possible. When only a few people respond to these requests, surveyors are often disappointed, concluding, "People just aren't

interested in helping with important surveys." At times, the sponsor's perspective on surveys appears to be, "It's all about me."

It is sometimes hard to know who is most annoyed with follow-up phone calls that are made one after another, over a period of days and weeks: the recipient of the call, who has learned to avoid them, or the surveyor, who cannot understand why those calls are not getting answered. Figure 2.1 provides a few examples of what surveyors sometimes do, and common respondent reactions to what is read

FIGURE 2.1 Why respondents may not complete surveys.

What surveyors sometimes do ...	... and what the respondent may think or do
Send a brief e-mail from an unknown organization; it gets to the point quickly by asking recipients to click on a link to complete a survey about crime in their community.	How do I know this is legitimate? There is no address or telephone number, and I wonder if this link will connect me to some malware that will infect my computer.
Send a letter emblazoned with "Survey enclosed. Respond immediately."	This is advertising. I'm not interested.
"This is Jane calling for the Smithfield Polling Company. I am not selling anything and I only need to ask you a few questions."	Uh, oh. She hasn't said *why* she is calling, and I think I need to be really careful here. The easiest thing for me to do is hang up … click!
Include a lengthy consent form at the beginning of a web survey that requires an *x* to indicate that the respondent has agreed to complete the survey.	I have not yet seen the questions. I don't know if I am willing to complete all of the questions. What is so worrisome about this survey that this kind of consent is needed?
Write in the invitation to respond: "I have included $5 to pay for your time in completing this brief survey."	My time is worth more than this. This is a paltry amount to be paid.
Start the survey request with "My agency is required to report types of individuals we serve, so please answer the demographic questions so we can fulfill that requirement."	Just because an agency is required to do something does not mean that I am required.
Include "To unsubscribe click here" at the end of an e-mail request.	Oh, this is spam and I can just un-subscribe so I do not get the same e-mail tomorrow and the next day.
Program the web survey to require an answer to every question.	None of these answer categories fit me; I don't know what to do. Should I quit or just make something up?

or heard. These negative reactions are often in response to quite specific aspects of the survey invitation materials or questionnaire.

These behaviors on the part of the surveyor may individually or collectively produce incomplete answers or no response at all. In addition, if responses come only from those especially interested in talking about a particular topic—for example, views about abortion, a particular election outcome, or climate change—the survey cannot accomplish its intended purpose. When we examine surveys in this way, it is easy to understand why survey response rates are frequently quite low—sometimes in the single digits—with considerable nonresponse error regardless of survey mode.

How to obtain acceptable response rates and response quality from a sample that will allow the precise estimation of characteristics in the population of interest is the focus of this chapter. We describe specific steps that can and should be taken by survey designers to develop respondent-friendly questionnaires and implementation procedures that accommodate the concerns and interests of potential respondents to help them find reasons for responding. To do this we develop a perspective that considers what happens when an organization or individual asks a randomly sampled stranger to complete a survey and how multiple communication attempts can be utilized to encourage a positive response when the first request falls short.

We are guided in our design efforts by a sociological perspective on what causes humans to behave as they do in normal daily life, known as social exchange theory. The basic idea is that surveyors need to consider potential benefits and costs that accrue as a result of responding (or not responding), and work to create trust that these benefits will be realized by the respondent during the response process and afterward. Although this perspective has been utilized in previous editions of this book, the specific recommendations for survey design presented here go well beyond those introduced earlier, taking into consideration the massive changes in technology and how people communicate with others that are occurring all around us.

In light of these changes, mixed-mode surveys are increasingly needed and are emphasized here. The use of multiple modes to make contact provides surveyors with additional opportunities to present the survey request and reasons for responding to it. Offering alternative modes for providing the response also becomes possible. Together these possibilities increase the opportunities for multiple efforts at communication that are comfortably within societal norms for interaction, and that allow a surveyor to improve the balance of rewards and costs as well as enhance feelings of trust. To begin introducing this framework, we consider results from a recently completed mixed-mode survey.

EXAMPLE OF A SURVEY WITH A HIGH RESPONSE RATE

A recent survey was conducted to obtain responses from nearly 600 doctoral students at Washington State University (WSU) about their dissertation work and graduate training. The study was targeted toward students who had successfully completed their required preliminary examinations and had only to finish the dissertation in order to meet their degree requirements. Data collection needed to be completed within about a month. After learning that we could obtain both

e-mail and postal contact information for the sampled individuals, we proposed the following implementation design:

- *Day 1:* Send a postal letter asking students to respond over the web. Enclose a $2 incentive with this request.
- *Day 4:* Send an e-mail that builds upon the information contained in the invitation letter, while emphasizing that the sender is following up by e-mail to provide an electronic link to the survey with the hope that this will make responding easier.
- *Day 10:* Send a second e-mail request.
- *Day 18:* Send a postal letter offering the option of responding via mail. Include a paper questionnaire and an addressed and stamped return envelope.
- *Day 22:* Send a final e-mail follow-up.

Our initial proposal elicited some hesitation. A faculty member reminded us, "These are graduate students. They are all highly skilled with computers, have e-mail and check it all or most days. Why would you even consider starting with a postal contact and offering a paper questionnaire as a follow-up?" He suggested that it would be just as effective to use only e-mails. Also, $2 sounded like a waste of money; it would barely buy a cup of coffee. Why not save money by giving $5 only to those who responded? He also argued that if we insisted on using web as well as mail, that we should give people a choice of response modes in the first contact to improve the initial response. After considering these objections, we decided to proceed as planned.

Figure 2.2 shows the cumulative response rate over the course of the study. The figure highlights the increase in response achieved after each of the

FIGURE 2.2 Cumulative response rate by day and mode for the 2013 WSU Doctoral Student Experience Survey, showing contribution of each contact to final response rate.
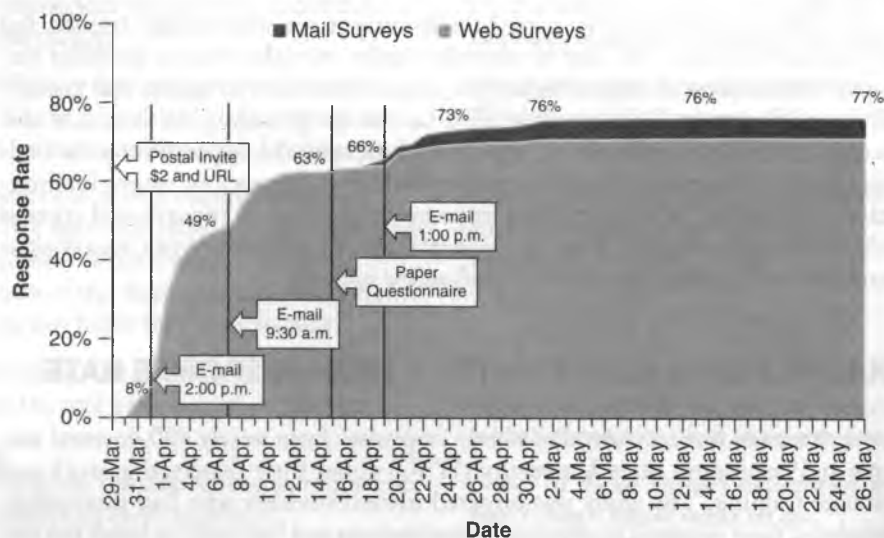
five contacts. Importantly, each contact produced an additional increment of response. Most striking perhaps is the effect of the quick e-mail follow-up sent a few days after mailing the initial postal contact. The response rate from the initial postal mail-out had reached 8% by 2 p.m. on Day 4 when the first e-mail contact was sent. From then until midnight, a period of only 10 hours, the response rate jumped to nearly 30% and continued to climb over the next few days so that at the time of the next contact on Day 10 it had already reached 49%. The e-mail sent on Day 10 produced a smaller increase, with total response reaching 63% the day the paper questionnaire was mailed.

The combined effect of the second postal contact and the final e-mail follow-up pushed the overall response up to 77%. About half of the additional responses came in the form of paper questionnaires, and the rest were additional Internet returns stimulated primarily by the quick follow-up by e-mail. To put this final rise of 14 percentage points in context, nearly a third of the approximately 200 students who were sent the follow-up contacts containing the paper questionnaire responded by paper or the web.

We expected this approach to be effective as earlier research suggested that combining these implementation elements would produce a good response (Millar & Dillman, 2011). This previous research showed that offering people an initial choice of survey modes (which we had been encouraged to do but did not) tends to decrease final response rates, perhaps because it makes the response decision more complex, and leads to individuals delaying response.

We return to this example at the end of this chapter with a full discussion of why and how social exchange concepts, as described in the next section, were systematically applied to all aspects of the survey design to achieve such high response, which was well beyond the 20% to 30% range that student surveys conducted at this university typically achieve.

USING SOCIAL EXCHANGE CONCEPTS TO MOTIVATE POTENTIAL RESPONDENTS

There is no shortage of theory and research suggesting how respondents might be motivated to respond to surveys. Among those efforts are these:

Cognitive Dissonance Theory: Approach people in a way that encourages cognitive consonance with a previous behavior, expecting that people who responded to other surveys will feel the need to respond to your survey (Festinger, 1957).

Reasoned Action Theory: Appeal to people's positive attitudes toward surveys and the existence of subjective norms that favor responding, both of which produce behavioral intentions that are likely to encourage a positive response (Ajzen & Fishbein, 1980).

Adult-to-Adult Communication Style: Use an adult-to-adult style of communication rather than an adult-to-child interaction style that potential respondents will find demeaning, for example, "You must respond to this request today!" (Comley, 2006).

Influence Theory: Communicate scarcity of opportunity to respond, emphasize consistency with previous behavior, facilitate reciprocation for a favor already performed, focus on enjoyment of task and social proof,

and describe what other people have done or are perceived as doing in the face of similar opportunities (Cialdini, 1984).

Leverage–Saliency Theory: Be attentive to the fact that survey features can have a positive effect on the response decision for some sample members and a negative effect for others (leverage). Make positive features more salient and negative features less salient in follow-ups to increase the likelihood of obtaining a response (Groves, Singer, & Corning, 2000).

Cost–Benefit Theory: Focus explicitly on respondent costs and benefits. Reducing costs of responding is desirable but insufficient; people choose to act when, in their subjective calculus, the benefits of doing so outweigh the costs (Singer, 2011).

Gamification Theory: Make responding to surveys fun by making them appear like games with awards like badges or points that can be earned by engaging in certain behaviors (Lai, Bristol & Link, 2012), graphics that make questions more visual, and other elements that appeal to people's emotions and desire to have an enjoyable experience (Puleston, 2012a, 2012b).

Each of these theories provides us with different concepts and tools to use in thinking about survey response. One thing they have in common is that they all place an emphasis on what appears to be going on in the potential respondent's head as she weighs whether or not to respond. That is, they are psychological in nature. There is less emphasis on how well the survey materials fit with the general culture in a way that affects response behavior, something that cannot easily be articulated by the recipient of the survey request. Because of this, these theories do not provide guidance about how multiple features of each survey such as the mode(s) of contact and response, content of communications, questions asked, question order and presentation, and the timing of contacts should be designed to create a holistic data collection protocol that will improve response rates and data quality. That is, these theories do not tell us much about how to connect response-encouraging elements together into a comprehensive design. In particular, they have not addressed how surveyors might use multiple modes of contact and response modes to increase the likelihood that recipients of survey requests will attend to those requests and respond.

The first edition of this book (Dillman, 1978) introduced social exchange as a means of connecting multiple design issues, some of which are dealt with in isolation by the aforementioned theories, in order to obtain high survey response rates, but did so primarily in a single-mode context. In this edition, we apply social exchange theory to the mixed-mode context that characterizes much of survey research today.

The concept of social exchange is quite simple. It is that people are more likely to comply with a request from someone else if they believe and trust that the rewards for complying with that request will eventually exceed the costs of complying. Social exchange was developed by Blau (1964), Homans (1961), and Thibaut and Kelley (1959) as a general model for understanding how people behave in their interactions with one another, and to understand how social norms develop to guide those interactions. This framework was used to explain how people realize their self-interests as well as achieve effective interaction with others in social groups, from communities to the society in which they live. Social exchange concepts provide a means of reconciling philosophical views of the human desire

to find meaning through interactions with others and the human desire to achieve self-interests (e.g., Roloff, 1981) from which they also draw satisfaction.

Social exchange is not the same as economic exchange. Social exchanges are different from economic ones because there is only a general expectation of a positive return. The exact nature of benefits and why they will be provided are often not specified in advance; instead, they are left open, based upon trust that they will be delivered. As noted by Stafford (2008), social exchanges involve trust in a likely outcome, rather than relying on explicit bargaining, and are more flexible. In addition, social exchanges involve various types of as-yet undelivered benefits (e.g., social, psychological, etc., in addition to economic benefits) as well as any immediate ones. In contrast, economic transactions rely only on assigning a monetary value to the service or product to be transferred in the exchange.

Social exchange is also not a rational behavior model. It does not assume that individuals are balancing only benefits and costs to determine what action to take to maximize their personal advantage (Friedman, 1953). Reciprocity, trust, and altruism are not usually a part of rational behavior models, but all three are central to social exchange theory and how social behavior occurs.

Applying social exchange to survey response encourages us to think about multiple aspects of how a request from a stranger is viewed, and what features of that request, which may be communicated in different ways over time, influence whether a questionnaire is completed and returned. We assume that for most people the decision to participate in a survey (and to continue their participation) involves multiple considerations that take into account perceived benefits, perceived costs, and trust that in the long run the benefits will outweigh the costs.

However, it is a mistake to think that all of the decisions people make about social interactions or whether to respond to a questionnaire are always, or even mostly, the result of a lengthy, careful consideration of dozens of features. Social interaction decisions are sometimes made quickly while considering only a few of many potential issues. So are survey decisions; for example, an individual may simply think "The interviewer seems sincere" or "This questionnaire looks like it could be interesting." Quick decisions to respond or not might also get made because one is trying to be helpful to someone else, supporting a good cause, wanting to experience something interesting, wary of the size of the request, or for a number of other reasons that can be triggered by something embedded in the request or related to the person's background and interests.

The decision to respond to a self-administered web or mail survey is typically made in the first day or two with many sample members deciding almost immediately whether to respond. The decision to respond to a telephone survey is also immediate, in the first seconds or minute of the interaction. These decisions are often spur-of-the-moment and based on quick impressions. It is certainly not the norm to prepare a detailed list of reasons to respond or not respond to a survey in order to balance all of the pros and cons. But at the same time, people generally do not look at a questionnaire printed on pretty green paper or a dynamically constructed web page and decide to respond regardless of other considerations such as what questions are asked or who is asking. Rather, the spur-of-the-moment decision is generally based on quick impressions of multiple aspects of the survey request. Thus, the chances of eventually convincing sample members to respond are higher when many aspects of the survey request work together to encourage response. Our use of social exchange recognizes that cultural influences, respect

for the requestor, spending one's time in interesting ways, and many other issues intertwine to influence the behavior of people asked to become respondents.

Does Social Exchange Still Apply in Today's Asynchronous and Rapid-Fire Communication Environment?

When the social exchange perspective on human behavior was developed in the mid-20th century, the way that people behaved and interacted was considerably different than it is today. People's lives were more likely to be focused on communities and organizations that contributed to the maintenance of societal-wide norms. They were also more likely to communicate by phone or through postal mail and make many decisions in a slower manner. As just one example, having dinner out with friends was usually the result of a very deliberate decision-making process and then making the arrangements to do so took considerable planning.

Nowadays we have more technology at our disposal that allows short and quick communications to happen instantly. The in-depth communications of the past have been largely supplanted by brief e-mails, text or voice messages, tweets, or posts that get read and responded to very quickly, often while the recipient is engaged in other activities like walking down the street, waiting in line, or during pauses in work and play activities. Our social interaction has also become more spontaneous, with meetings and activities being based upon spur-of-the-moment decisions. For many, deciding to go out to dinner with friends is now done spontaneously, arrangements are made within minutes, and behavior may be modified immediately (e.g., I was on my way home when I decided to head across town to meet Kris for dinner).

We can now socially interact with people hundreds or thousands of miles away as easily, and in some cases even more easily, than with someone sitting next to us on a city bus or living in our same neighborhood. In addition the messages we receive in any given day include requests from close friends as well as from complete strangers. We often decide whether to ignore, delete, postpone, or respond to these requests based on quick assessments of only a few written words. And we do so with the understanding that answering or forwarding some unsolicited messages can have unanticipated disastrous consequences. For example, one might accidentally share a private message, picture, or privileged digital address with strangers, making previously private information public. Or one might inadvertently click on one of the many links in a message disguised as legitimate that is really intended to steal their identity, such as in this message that one of us recently received in an e-mail from a sender claiming to be our bank: "Your credit card has been used by someone else. Click here to confirm your receipt of this message and help us protect your credit rating."

It is in this environment of rapid-fire communications with messages from multiple sources (some less scrupulous than others) that surveys are now undertaken to assess public opinion, identify employment practices and rates, and gather knowledge on a host of public policy issues, ranging from education access to overt discrimination. The critical question this raises for surveyors is how to create effective communication that will reach sampled individuals, be processed by them, create an understanding of why they are being asked to respond to a particular survey, and motivate them to comply with the request and offer thoughtful honest answers to survey questions.

In sum, our methods of social interaction are now much more quick and asynchronous and much of the content of that interaction has changed significantly. These changes have altered our behavior in many important ways. Given these substantial changes, it is reasonable to ask whether social exchange still applies to predicting and understanding the reasons for human behavior, including survey response decisions. Some may wonder if it is an outdated way of looking at things.

Individuals are as likely to make decisions based on considerations of cost, benefits, and trust in today's environment as in times past. In fact, with more decisions to make, less time to make them, and, in many cases, serious consequences at stake, social exchange concepts may be even more important in today's decision-making processes than in earlier times. For example, the potential costs of decisions are a frequent concern in a world where the information one shares has the potential to exist and be easily accessible in digital space seemingly forever. Likewise, with so many requests that require decisions to be made, the immediate benefits of taking a particular action may be particularly important in deciding which requests to process and respond to. As these examples demonstrate, the costs and benefits of doing some things and not others are as much a part of our daily environment as they ever were.

Perhaps more importantly though, trust, which has received little to no direct attention in the theories discussed earlier, has likely become even more salient than it was in the past. In earlier times, when lives were more constrained to the immediate geography, people learned who they might trust and not trust through personal interaction and accumulated experiences. Institutions developed reputations that, once created, were slow to change. A misspoken word in a conversation or letter was typically slow to reach others. Technology, especially the Internet, did not provide the immediate access to one's past that is now available. Sharing of one's words could not be done so quickly and effortlessly, making the types of misinterpretation that results from the information becoming increasingly removed from the source as people tell and retell it less common. In addition, in the past people were not typically asked to make decisions in a quick response environment with individuals or organizations whose characteristics and intent were being communicated through digital media.

It is against this background that we must think about perceptions of cost, benefits, and trust associated with responding to a survey request. Costs, benefits, and trust affect both whether people attend to the survey request at all and, once they do, whether they are persuaded to respond.

Increasing the Benefits of Survey Participation

The benefits of responding to a survey have been, and are likely to remain, limited. Responding is usually voluntary and can easily be disregarded. But, this does not mean that benefits are completely absent and will not be provided. Many of the things that humans do in life, and from which they feel satisfaction, involve helping others. These actions are particularly satisfying if the beneficiaries are individuals or groups (school, community, country) to which someone belongs, or from which they receive long-term benefits. People also seek to have personal, and perhaps selfish, interests realized.

In their development of social exchange principles, Blau (1964) and Homans (1961) indicated that many people feel a sense of reward from knowing they have helped others. Showing positive regard for others can also be rewarding.

Thibaut and Kelley (1959) proposed that time-consuming assistance is often appropriately repaid simply by verbal appreciation or returning a small favor later. Being able to provide requested consultation is also something that many people consider rewarding, and people enjoy doing tasks that they find interesting. Individuals also have a tendency to reciprocate when people make a special effort to provide benefits, even if they are of a token nature. There are many specific ways that a survey design can take advantage of these characteristics to increase the modest benefits some people may feel from responding to survey requests. These include the following.

Specify How the Survey Results Will Be Useful

Is it possible or likely that survey results will influence a community or organization decision? Is public policy a likely beneficiary? Many people feel a significant benefit when contributing to something that benefits others, even if they do not believe they will personally benefit directly. Many, but not all, surveys are undertaken specifically in hopes of affecting practical decisions. Other surveys may stop short of that, focusing on why something does or does not happen, but have implications for individual or group decisions that can be emphasized in communications to sampled members. Describing those potential benefits may encourage individuals to respond and carefully answer the survey questions.

Ask for Help or Advice

As noted by both Homans (1961) and Blau (1964), people often feel good when others ask them for advice or assistance that only they can provide. Moreover, because the increased specialization of occupational skills and tasks in today's organizations necessitates collaboration to get work done, asking for and providing assistance or advice is an essential feature of our modern society. In addition, group actions and decisions are a fundamental part of today's school and work culture. When people are asked for assistance or advice, it conveys the value of their contribution to the group activities as much or more today than it ever did.

   This cultural and psychological phenomenon can be applied to the survey context. Most surveys are done because the information being requested is not available from other sources. Thus, it is natural to ask people for help or advice that they are situated to provide. Generally speaking, people will take interest from being asked, and it will not be inconsistent with other social experiences they commonly have.

Ask Interesting Questions

Enjoying a particular activity can be a powerful determinant of human behavior, as suggested by Cialdini (1984). When questions are interesting, and it can be explained in communications that the questionnaire will be interesting, people are more likely to feel they benefit from answering them. However, what is interesting to one person may be of little interest to another. Thus, an essential part of questionnaire design, as discussed later, is contemplating what questions have broad appeal, and which may be of limited interest. This may mean reordering questions so that those with broad appeal and interest appear earlier in the questionnaire,

as discussed in Chapter 7, or even adding interest-getting questions relevant to one's topic to a survey to better engage people early in the questionnaire.

Puleston (2012a, 2012b) suggested following gaming theory by changing the style of asking questions. For example, surveyors could substitute graphical representations for words, and tell respondents from the outset of a survey that they would like them to play a survey game, as opposed to completing a survey. Gamification seems to be a novel way of connecting with some respondents, particularly younger people who enjoy and have extensive exposure to computer games. However, Puleston (2012b) also notes that although response rates are likely to increase, "the impact on the data is not inconsiderable. Often the results can be measurably different." Further, initial results from using gamification techniques, such as badges, to encourage people to respond to an online or mobile TV diary have shown little benefit, and even then only among very young adults, and may actually be confusing to older respondents (Lai et al., 2012).

The gaming approach raises important questions about measurement validity and reliability, but serves as an important reminder of why surveys often do not get answered. There is little doubt that answering interesting questions is seen by respondents as a benefit to answering a survey. Because of our concern with obtaining valid and reliable measurement, rather than using gamification to motivate response, in this book we approach this issue by focusing on the addition of topically relevant questions that may be of particular interest to respondents and strategic ordering of survey questions.

Utilize Sponsorship by a Legitimate Organization

The sponsor of a survey can affect the decision to respond in two ways: by making it more rewarding to do so and by lending legitimacy to the survey and inducing trust (discussed in more detail later in this chapter). To the extent that people want to help an organization, having sponsorship from that organization will increase the likelihood that sample members will respond. In many instances, sponsorship by religious, professional, philanthropic, political, or a number of other types of organizations that have a positive relationship with the population being surveyed can produce a sense of reward in that responding to the survey can be seen as doing something helpful for that group. In these cases, the sponsorship should be emphasized.

One of the challenges associated with today's society is that virtually all organizations can muster the capability to survey nationwide, and even internationally, via e-mail and the web. However, this means that people may increasingly be asked to respond to surveys that come from an organization that is unknown to them. The better known an organization is to potential respondents, the greater the likelihood they will respond, provided the recipients of the request see it as a legitimate organization and do not view it in a negative way.

Stress That Opportunities to Respond Are Limited

Individuals perceive doing something as more valuable when the opportunities to do so are only available to some people (Cialdini, 1984). This is great for sample surveys because they, by nature, ask some people to respond but not others. Telling sample members that only a small number of people have an opportunity to participate can be motivational. This may particularly help those who simply think

someone else, with more time or knowledge of the topic, should respond instead. In addition, explaining—in a friendly and non-patronizing way—that there are relatively few opportunities to respond and that they need to respond soon can also encourage people to participate.

Convey That Others Have Responded

Much of human behavior is normatively oriented, and recognizing that one is behaving in a manner consistent with others in groups they are part of can be seen as rewarding (Cialdini, 1984). Thus, knowing that others have completed a survey can encourage people to participate. The use of social networking sites, such as Facebook or Twitter, to share status updates about what they have done and express their thoughts on the behavior suggests that this normative aspect of influencing others to try something—or avoid it—remains relevant in the information age. Many social networking sites reveal the identities of people engaged in various behaviors to entice others to try them (e.g., Christina reached level 50 on Candy Crush Saga). Revealing the identity of survey respondents in this way is almost always unethical, but statements can be added to contacts to more generally communicate that others have responded (e.g., a number of people have responded to this survey and provided valuable information ...).

Use Cash and Material Incentives to Encourage (but Not Require) Reciprocity

One of the reasons that token cash incentives sent with a survey request have been shown consistently to be one of the most effective ways of improving survey response is that the surveyor has given something to the recipient, and he in turn sees it as appropriate to return the favor by completing the questionnaire, even though it is not required or mandatory.

The social reward value of modest incentives with the request, in comparison to post-survey rewards, was recently shown experimentally in a mail survey conducted in Russia (Avdeyeva & Matland, 2013). A control group received no incentive, a second group received 50 rubles (~$1.65) with the survey request, and a third group was promised 6 times that amount (300 rubles) would be paid if the questionnaire was returned. The response rate for the group receiving 50 rubles was 37% compared to only 24% for the group that received 300 rubles, while the no incentive response rate was only 10%. In addition, a combined social and economic exchange group that received both a prepaid token incentive and the postpaid contingent incentive produced a 48% response rate. This study is noteworthy in that the experimental comparison between the large postpayment and the much smaller token cash incentive sent with the survey request revealed that the smaller advance incentive was considerably more effective. However, the combined effect of both incentives was the largest, leveraging social and economic exchange. These findings are consistent with the social exchange framework, which seeks to combine social and self-interests to explain human behavior.

In a comprehensive meta-analysis, Church (1993) showed that token cash incentives provided in advance produce a substantial positive effect on survey response. Gifts or material incentives (e.g., ball point pens) have a smaller positive effect, and cash payments afterward produce an even smaller effect. In a recent review of the extensive literature on incentive use in surveys, Singer and Ye

(2013) updated the work by Church (1993) by conducting an extensive literature review of incentive studies for all modes. Consistent with Church's findings, they concluded that incentives increased response rates to surveys in all modes, with monetary incentives sent in advance having larger effects than either gifts sent with the request or promised incentives and lotteries that are contingent upon completion of the survey. However, it is important to note that prepaid incentives are difficult to offer in web and telephone surveys.

Singer and Ye (2013) also present evidence that providing incentives can impact the demographic composition of the completed sample by inducing certain demographic groups to participate. In some cases, members of groups that are typically underrepresented in surveys participated at higher rates when incentives were provided, thus reducing the potential for nonresponse error. Further, they found that relatively few studies have examined data quality (i.e., item nonresponse and length of open-ended responses), but the available ones indicate that providing an incentive does not seem to have a substantial effect on data quality. There can be little doubt that token cash incentives are one of the most important ways of providing benefits to individuals asked to complete surveys.

Recognize That Benefits Both Have Additive Effects and Can Reinforce One Another

The strategies discussed here for increasing response rates can have additive effects, meaning that using several of them will increase response rates more than using just one. For example, the Avdeyeva and Matland (2013) study discussed earlier showed that providing the incentive and using stationery and envelopes that conveyed sponsorship by a legitimate organization (a university) each individually contributed to increasing the response rate. That is, the stationery featuring the sponsor increased the response rate in addition to the gains realized from using the incentive. Response also appeared to improve further by the use of multiple contacts.

In addition, certain aspects of survey design can act as gateways for allowing other aspects to have a positive effect. Positive institutional recognition on the outside of envelopes can get envelopes opened. Token cash incentives inside envelopes can get letters that would otherwise be discarded read. Interesting questions pave the way for getting other questions answered. As such, inattention to certain beneficial aspects of completing surveys may reduce other benefits that the surveyor attempts to include.

In mixed-mode studies, one of the ways that cash incentives may be particularly impactful is to get people's attention so they will read cover letters and/or listen to an interviewer's appeal. The small cash incentive used in the Doctoral Student Experience Survey introduced earlier in this chapter undoubtedly had a major impact on response rate, with the effect coming when the e-mail follow-up arrived to reinforce the earlier contact and ease the task of responding by providing an electronic link to the web survey (Millar, 2013). This mixed-mode approach can be used when both postal and e-mail addresses are available to overcome the limitation of sending prepaid cash incentives electronically.

Do Not Deny the Existence of Benefits

On multiple occasions, we have observed surveyors explicitly telling respondents, often at the urging of an Institutional Review Board, "There are no benefits to

you for responding to this survey." Such statements are provided in e-mails, cover letters, or even consent statements that respondents are required to sign. It is unwise to make such statements to survey recipients. To do so denies the possibility, and indeed the likelihood, that some respondents enjoy completing surveys, providing answers to questions they find interesting, and/or contributing to research that may be helpful to others.

Decreasing the Costs of Participation

In contrast to the benefits of survey participation being relatively small and diffuse, the costs of participation are likely to be sharply evident and may be substantial for respondents. Chief among these costs is the burden of responding to surveys that are long and detailed with questions the respondent either does not understand or cannot answer. In addition, surveys often ask for information that the respondent considers inappropriate to provide. Added to this are objections to being surveyed by particular modes, such as telephone—which for many is no longer a normative way to provide information to strangers—and the web, which some still lack access to or the ability to use well. Other costs include frustration with how often the surveyor attempts to contact individuals with a request for participation and the sense that surveyors are not considerate of people's time. In addition, whereas the benefits of someone participating in a survey accrue largely to the survey sponsor, the costs of responding are experienced mostly by the respondent. As with benefits, there are a number of specific ways that the costs of responding can be reduced for respondents.

Reduce the Burden of Length

Survey designers often want enormous detail from respondents, because they consider it essential for their analyses. Instead of asking one or two questions about people's satisfaction with their health care, a surveyor may want to ask a dozen or more items that are part of a previously tested scale that deals with a variety of aspects of health care. We have also observed cases of surveyors asking respondents to complete less than 100 questions, but upon examining the subquestions under them, each of which would require an answer, the survey turned out to ask for 300–400 responses, with the exact number depending upon the specific branching pattern that applied to each respondent.

Length, independent of all other considerations, is a huge cost of being a respondent. The insistence on designing long questionnaires, driven by investigator interests, is often the largest cost experienced by respondents who complete surveys. In addition to questionnaires not being returned, this feature often leads to mid-survey terminations or increased item nonresponse as people skip items. A division of labor sometimes exists in conducting surveys, wherein the survey designers are uninvolved in the actual data collection, so they often are separated from the angst that lengthy questionnaires cause for most respondents.

On occasion we have observed mail surveyors attempt to reduce the impression of length by squeezing questions together on fewer pages. However, this is little more than an attempt to disguise length and it offers no response advantage. For example, research has shown that Decennial Census questionnaires that spread questions out over more pages obtained similar response rates to questionnaires that placed more questions on fewer pages (Dillman, 2000; Leslie, 1997).

Reducing length takes on increased importance as a way of reducing cost in today's society. With outlets such as text messaging and Twitter, which require packing ideas into very few words, it becomes normative to substitute frequency of messages for length. There may also be a tendency for attention spans to be more limited as people become used to rapid changes in what appears on computer and smartphone screens.

Reduce Complexity

Length is only part of the concern about burden. Complexity is also an enormous source of burden for respondents. In the American Community Survey, instead of asking for the previous year's income in a single question, people are asked for precise income from each of seven sources, with categories ranging from the combined total of "interest, dividends, net rental income, royalty income, or income from estates and trusts" to "veteran's payments, unemployment compensation, child support, or alimony." These questions are asked separately for each member of the household, which in contemporary society is likely to include unrelated adults.

For one person to provide all of that information for each household member is very difficult. In addition to the combination of categories, the request for exact amounts and the need for families to report for each person individually make the question impossible for some to answer. It should not be surprising when a well-intentioned respondent gives up and does not respond to these items or abandons the survey entirely.

The U.S. Census Bureau has the authority of the U.S. government under Title 13 to require people to respond to the American Community Survey, which helps their ability to persuade people to respond. But we once met with a prospective surveyor who wanted to ask these same income questions in a university survey. Requesting this detail would have had a significant negative effect on response rates in this setting where responses cannot be required, something the investigator had difficulty understanding.

As another example, the U.S. Consumer Expenditure Survey asks respondents to recall details of all expenditures for all members of the household during the previous three months. For large expenditures like cars and washing machines it is usually possible to obtain reasonably accurate answers. However, people cannot usually recall the needed level of detail for expenditures on clothing items, household supplies, and other smaller items. Faced with the request from an interviewer for detail they cannot possibly supply, people mentally withdraw from the in-person interview, a fact that should not be surprising (National Research Council, 2013).

Clearly, the time required to answer questions is a significant cost to the respondent, and many do not take the time required to respond. However, the realization by the respondent that he cannot provide accurate answers to questions increases the sense of burden further. The desire of surveyors to obtain answers to increasingly detailed questions needed for complex modeling of attitudes and behaviors appears often to be in conflict with the limitations and patience of respondents for providing answers. It is important to realize that this is happening at a time in which everyday communications seem to be becoming much shorter and quicker and in an environment in which terminating the response requires little more than a simple push of a button or click of a mouse. Finding a balance

between what respondents are asked to provide and what respondents are able to provide is an increasingly necessary way to reduce burden.

We often see surveyors trying to include as many questions as possible, often with each asking for extensive detail, into their surveys. Sometimes the additional questions and detail are included just in case, with no clear plan to use them. This is typically done because the surveyor does not know when or if he will get another opportunity to conduct a survey and wants to get as much information out of the current one as possible. Each of us has had this tendency ourselves and continues to resist it in our own research. The problem with this approach is that the researcher's anxiety is directly translated into increased respondent burden, and thus, probably into decreased response and lower data quality. In addition, in our own experience and from watching others do this as well, more times than not the extra questions go unanalyzed and the detailed responses are aggregated into more general measures because once data collection is finished, there is insufficient time or resources to analyze everything that was collected.

Rather than using this researcher-centric strategy of trying to collect everything at once at the expense of respondents, surveyors should collect only the level of detail that is needed and ask only the questions that are necessary to be able to do the analyses required to answer the research questions that motivated the survey in the first place (with the exception of interest getting questions as discussed in Guideline 7.2). Even then, they may have to compromise to ensure that the questions they ask are ones respondents are actually able to answer. The payoff will be higher response and more thoughtful and accurate answers from respondents.

Use Visual Design Principles to Make Questionnaires Easier to Complete

Internet and mail questionnaires are often much more difficult to complete than they need be because they do not clearly guide respondents in how questions should be answered and in what order. Research has shown that following principles of visual design and layout make it easier for respondents to process and complete questionnaires (e.g., Dillman & Christian, 2005; Jenkins & Dillman, 1997). Extensive experimentation conducted on response rates to U.S. Census questionnaires in the early 1990s showed that visual layout in a respondent-friendly design was 1 of only 5 factors (of 16 total tested) that significantly improved response rates (Dillman, 2000). Thus, designing questionnaires to enhance usability and minimize respondent burden can decrease the costs of responding to the survey. In Chapter 6 we discuss these principles in considerable detail.

Avoid Subordinating Language

People prefer not to feel that they are dependent upon others, and Blau (1964) argued they will expend great effort to avoid feeling subordinated. Yet many surveyors include subordinating language in their communications with sample members. Consider these contrasting statements that might be included in a letter or e-mail to potential respondents:

- "For us to help solve the school problems in your community, it is necessary for you to complete this questionnaire."

- "Will you please be a part of helping to solve the school problems in your community? Your responses can assist this community in fully understanding the issues facing schools here."

The first statement subordinates the respondent to the surveyor using what Comley (2006) might consider an adult-to-child style, whereas the second statement makes the respondent feel that the surveyor is dependent on him or her. Asking a person for help or assistance (discussed here as a benefit) reverses the relationship—subordinating the sponsor to the potential respondent, rather than vice versa—and is a way to decrease the costs (and increase the rewards) to the respondent for her participation.

This concern remains as salient today as at any time in the past. Today's increasingly service-oriented culture places a great emphasis on being respectful of other people. This is often enforced through the increasing use of video and audio recordings of transactions in stores and elsewhere that can be examined to ensure that customers and clients were treated appropriately. In addition, stories and even videos of disrespectful encounters can spread quickly through social media sites, leading to mass public scorn for those who acted inappropriately.

In the past, survey recipients likely felt more compelled to respond regardless of the attitude conveyed in the request. But now that it is culturally acceptable to decline such requests and people are more comfortable doing so, disrespecting and subordinating sample members is even more important to avoid. Sensitivity to this issue may be especially important when surveying hard-to-reach populations and those who are disadvantaged or experience discrimination.

Make It Convenient to Respond

One of the most effective ways of decreasing costs is making it as easy as possible for people to respond to a survey. In mail surveys, this involves sending a business reply or stamped return envelope, the absence of which would certainly lower response (as demonstrated by Armstrong & Lusk, 1987). In today's world this may also entail offering a desired mode of responding that fits the population or, for web surveys, e-mailing people a link that will open their browser and conveniently take them to the survey when clicked, as was done in the WSU Doctoral Student Experience Survey discussed earlier in this chapter.

Avoid Requiring Respondents to Provide Answers in a Survey Mode That Is Uncomfortable for Them

Most people are now capable of responding to mail, web, and/or telephone surveys. However, it is also clear that some people are more comfortable responding to some modes than others (Olson, Smyth, & Wood, 2012). People's comfort with responding over the telephone has certainly decreased over time, as evidenced by low response rates to this mode (Curtin, Presser, & Singer, 2005) and the increasing use of text messages in place of voice calls, especially among certain demographic groups (Lenhart, Ling, Campbell, & Purcell, 2010), yet when asked, some people indicate that they prefer that mode. It is also the case that some individuals have a strong preference for responding over the web, while others have a strong aversion, or even an inability to respond by web. However, those who are averse to the web mode will often respond by telephone (Olson et al., 2012).

In the case of mail, there are increasing numbers of people who indicate that taking a return envelope to a mail box down the street is decidedly inconvenient. Understanding people's mode preferences, the strength of those preferences, and especially barriers associated with each mode of responding is important for understanding the costs some people experience when asked to respond by a particular survey mode. We discuss mode preferences further in Guideline 11.14.

Recognize That Offering a Choice of Response Modes May Lower Response Rates

Concern with eliminating costs of being asked to respond by a particular survey mode could lead one to the conclusion that offering a choice of modes would improve survey response rates. However, a strong body of evidence has emerged that demonstrates that offering people that choice simply does not improve response, and in some instances can even lower response rates (e.g., Gentry & Good, 2008; Millar & Dillman, 2011; Smyth, Dillman, Christian, & O'Neill, 2010). Indeed, a meta-analysis of these and other studies showed in 17 out of 19 previous experimental tests that offering a choice of responding by web or mail resulted in a decline in response rates compared to only offering mail (Medway & Fulton, 2012). Schwartz (2004) provided a possible explanation for these results, suggesting that offering a choice complicates the decision-making process, making it likely that some people will take no action at all. This could also explain why offering a choice of telephone, as is sometimes done, seldom results in more than a handful of recipients calling to request a phone interview. Going from a letter or e-mail to the telephone to make a call to an unknown person also involves significant cost.

The effects of offering choice, when juxtaposed with evidence that people have mode preferences, as described earlier, make it clear that certain ways of reducing respondents' costs to participate might in practice impose other costs. This connection underscores the fact that reducing the costs of responding to a survey is significantly more complicated than simply individually applying each of the considerations we have listed here. We discuss the negative effects of offering a choice of modes further in Guideline 11.15, and suggest specific ways of overcoming them.

Minimize Requests to Obtain Personal or Sensitive Information

Surveys often ask for information that some people do not want to reveal such as their income and other financial information, their health and medical history, and their past sexual behavior or drug use. Asking for sensitive information like this should be avoided whenever possible because it increases costs for respondents, but when obtaining sensitive information is absolutely necessary, there are several things that can be done to reduce the costs to respondents of providing it. These include asking the questions in a self-administered mode that provides more privacy for responding (Tourangeau & Smith, 1996), asking them later in the survey to allow time for trust and rapport to develop, providing simple explanations for why responses to these questions are important and how the information will be protected, and softening the requests for personal information with other modifications to the question wording. We return to this topic in Chapters 7 and 11.

Show Similarity to Other Requests to Which a Person Has Responded

People have a desire to be consistent in their attitudes, beliefs, and actions. There is a psychological cost associated with feeling inconsistent (Festinger, 1957). Therefore, people who have committed themselves to a position may be more likely to comply with requests to do something consistent with that position and less likely to comply with requests to do something inconsistent with that position (Groves, Cialdini, & Couper, 1992). This inclination to behave consistently means that in some cases surveyors can offer arguments that point out how responding to a particular survey is consistent with something one has already done. For example, a survey of members of a particular organization may include the following statement: "We really appreciate your support through the recent payment of dues, and we want to be responsive to your expectations. Completing this web survey will give us guidance on how best to serve you and your fellow members."

The need to be consistent may also explain why, in panel surveys, once people respond to the initial request, it is much easier to get them to respond to subsequent requests (Lynn, 2009; Otto, Call, & Spenner, 1976). Consistency may also explain why the foot-in-the-door technique, where people are more likely to perform a large task if they are first asked to perform a smaller task, is effective (Mowen & Cialdini, 1980). A survey of national park visitors successfully used this technique by first asking people to respond to three short questions upon entering the park, and then asking them to complete a questionnaire at the end of their visit (Dillman, Dolsen, & Machlis, 1995).

Establishing Trust

Perhaps the single most important issue affecting response to questionnaires in today's world, as surveyors attempt to move from telephone and mail to the Internet, is trust. A wrong click can infect one's computer with a virus or other malware, and the consequences may be disastrous, rather than just inconvenient. As people increasingly depend upon computers and smartphones for their social and business transactions, it seems natural for them to receive e-mails from their bank, cable company, credit card provider, parcel delivery service or other businesses or even government agencies that are part of their lives and to provide information to these organizations online. The increasingly conventional use of e-mail and the web for these types of interactions has provided an easy opportunity for imposters to attempt to ascertain sensitive private information by imitating these businesses or organizations.

Most of us have heard the stories of those who made the mistake of clicking on a fraudulent link and providing the requested information only to have their accounts cleaned out, their credit card bill run up, or new credit accounts opened using their identity. In this environment, the safe response, as we are regularly told in public service messages, is not to respond to any request from an unknown source. That is, we live in a technological environment in which it often pays to be skeptical and suspicious. At the same time, most of the survey requests that one receives are from organizations unknown to them. That means that the safe response to such requests is not to respond at all.

The issue of trust carries over to all survey modes. While much of the public's attention has been focused on online scams, it is not uncommon to hear news of

people being scammed over the telephone by criminals impersonating an official organization or a family member or of people learning when debt collectors start calling that someone has taken personal information from their postal mail and used it to steal their identity for financial gain. In addition, increasingly, people may ask whether surveys they have been told are useful really are, and breeches in confidentiality or other improprieties in the use of survey data can easily be publicized, and made known to all who have the patience to do an Internet or media search.

Sample members need to have confidence that their data will be kept safe and the benefits promised by a survey will be realized. For example, if a surveyor says, "Results of this survey are confidential," steps need to be taken to ensure that they are. When one suggests in a letter that "This survey will help our company do a better job of providing service to its customers," or "This survey will help state legislatures make decisions about how to allocate funding for higher education," there is usually no way to guarantee that the results of the survey will actually deliver the return as expected. Respondents are more likely to complete the survey when they trust that the sponsor will provide the benefits as promised. Trust is critical to believing that in the long run the benefits of completing the survey will outweigh the costs of doing so, as in other social interactions.

Among the actions that can be taken to instill trust that responding to a survey is beneficial and worth the costs of responding, are these:

Provide Ways for Sample Members to Assess the Authenticity of a Survey Request and Ask Questions About It

The Internet is one source of fake surveys that, if answered, can have negative consequences, but fake surveys are not new as a result of the Internet. Marketers have often telephoned people with a request to complete a brief survey as a means of introducing a product they wished to sell. Special interest groups have used survey questions to elicit interest in their purpose before asking for donations or to promote their position during election seasons. One thing many of these fake surveys have in common is that they do not provide contact information or other means for finding out whether the request is real. As such, an e-mail that contains little more than an electronic link and an instruction: "Please help me out by completing this survey. You will enjoy answering these questions" should not be answered, and would not be answered by most people.

Legitimate surveys have sponsors who are willing to identify themselves and answer questions about their survey. Doing this provides a signal to sample members that the survey request can be trusted. There are many ways that a surveyor can provide information that legitimates their survey. One is by providing a physical address where the sponsor is located. Another is by listing a toll-free number that sample members can call to talk to a real person in order to obtain information about the survey. Here it is important that those calling in not be sent down an answering tree to a recorded message. Another option is to include a web address where sample members can find additional information about the sponsor, background on the survey, and even results from previous surveys. Also, a specific e-mail address for asking questions should be made available. Ideally, several of these methods should be used.

Certainly, it is possible to provide a false telephone number or other contact information. However, providing multiple ways for sample members to contact someone to obtain information about the sponsor and the survey gives them

multiple ways to assess the legitimacy of the survey and protects both legitimate surveys and respondents from surveys with nefarious purposes. The more ways that potential respondents have of obtaining information about the survey, its purpose, who is conducting it and the reasons why, the greater the likelihood that trust will be achieved.

Emphasize Sponsorship by a Legitimate Authority

People are more likely to comply with a request if it comes from an authoritative source that has been legitimized by larger society to make such requests and to expect compliance (Cialdini, 1984; Groves et al., 1992). Therefore, it is not surprising that for some time, government-sponsored surveys have achieved higher response rates than those sponsored by marketing research firms (Heberlein & Baumgartner, 1978), and that this trend continues today. In general, it is considered legitimate for government agencies to ask questions that are needed to help the government operate effectively. In contrast, private organizations lack that broad legitimacy. Government organizations also have the resources to make sure that sample members have a way to make sure the request is authentic and to ensure that their data is protected. The fact that employees of government agencies face significant fines and penalties for disclosing survey data may also contribute to the perception that they can be trusted more so than private organizations. In addition, the unique authority that some government agencies have to inform people that their response to a survey is mandatory helps improve response for government surveys of both businesses (Tulp, How, Kusch, & Cole, 1991) and individuals (Dillman, Singer, Clark, & Treat, 1996).

Universities are also authoritative sources that are legitimized by the larger society and as such university sponsorship also tends to increase response rates compared to marketing and private organization sponsorship (Dillman, 1978; Fox, Crask, & Kim, 1988; Groves et al., 2012). However, there is some evidence that the effect of university sponsorship may be more localized than that of government sponsorship. For example, Jones (1979) found that university sponsorship increased response rates in areas near the university, but decreased response rates in areas near a competing university. Similarly, Edwards, Dillman, and Smyth (2013c) found that sponsorship of a survey from an in-state university increased response rates compared with sponsorship by an out-of-state university.

The fact that government and university sponsorship is generally associated with higher response rates does not mean that those who are not associated with the government or a university cannot take advantage of survey sponsorship to help increase response inducing trust. Rather many organizations that can sponsor surveys are seen as legitimate and trustworthy by various populations. If the survey sponsor is generally viewed in a good light, seen as legitimate, and trusted by the target population, that sponsorship should be emphasized. If information is also given to allow sample members to verify the legitimacy of the survey so they can be sure it is legitimate, the sponsorship should have a positive effect on the decision to respond.

Build Upon Previously Established Relationships and Friendships

Most surveys are *not* conducted by government agencies like the U.S. Census Bureau with visibility and legitimacy and are not surveys of the general public. Companies survey their customers, universities survey their students,

and associations often survey their members. In these instances and many others, there is an implicit understanding of who the survey sponsor is, and often this relationship can be leveraged to provide a reason for responding. For example, surveys by professional associations of their members for the purpose of improving the association's service to members have a legitimacy that helps them to be successful because they can build upon their preexisting relationship. Likewise, student surveys with the aim of improving the student experience at the university have a claim for legitimacy that surveys from other sponsors do not have. The Doctoral Student Experience Survey introduced earlier in this chapter had the advantage of being conducted by the university where students were enrolled. The survey protocol was designed to capitalize on the established relationship between the surveyor and students, all of whom were part of the university, to encourage response.

Some organizations have built visibility and legitimacy with the general public. An example is the Gallup Organization, which has for many decades conducted polls of the American public. It has visibility that provides legitimacy with a broad segment of the population. This visibility and legitimacy can be used to encourage response to survey requests.

Provide a Token of Appreciation in Advance

A few dollars included with a survey request increases rewards, as discussed earlier in this chapter, but it also creates value in the social exchange process by helping to establish trust. By providing the incentive with the request, before the survey is completed, the researcher demonstrates trust in potential respondents—who could pocket the money without completing the survey. In addition, emphasizing that the incentive is a "small token of appreciation" is consistent with conveying trust and respect for the respondent. The sending of such an incentive with the request to respond represents a behavioral commitment on the part of the surveyor. As noted by Molm, Takahashi, and Peterson (2000), a behavioral commitment provides a means of reducing the uncertainty of benefits based upon reciprocity.

A factor that makes these token incentives work is that they are neither too small nor too large. To engender trust, incentives need to be commensurate with the request. Research has consistently shown that general populations are far more likely to respond to an incentive of a dollar than no dollars, and may be somewhat more likely to respond to slightly higher incentives, but this effect diminishes quickly (e.g., James & Bolstein, 1990; Trussell & Lavrakas, 2004). An advance incentive that is too good to be true (say, $15 for a two-page questionnaire) is more likely to create suspicion than trust and may become a deterrent to response.

Assure Confidentiality and Protection of Data

Of considerable concern for some survey respondents is how the information they provide will be used, and who will have access to it, particularly if they are disclosing information that is personal or sensitive. The rise of the Internet has also brought increased attention to the security of electronic information, especially with respect to whether surveyors can guarantee that people's responses will remain confidential. The public's increasing concern about information security has been demonstrated recently by the incredible amount of attention

and critique levied at the National Security Administration for secretly collecting people's telephone records and at a large national retailer for a breach of security in which millions of shoppers' electronic financial information was stolen. In light of this increased concern among the public, one way surveyors can establish trust is by explaining the efforts that will be taken to ensure the confidentiality and security of people's survey responses.

At the same time, one needs to be careful not to overdo it. Work by Singer, Hippler, and Schwarz (1992) showed that going to great lengths and detail to explain how confidentiality will be assured when the survey is not terribly sensitive is more likely to raise concerns about the data being collected than to resolve such concerns. In this case, confidentiality assurances can deter response. In later work, Singer, von Thurn, and Miller (1995) showed that strong confidentiality assurances can be beneficial, increasing response, when the survey topic is sensitive. Much like the use of incentives, when assuring confidentiality and data protection, there is a need to achieve optimal levels, but not make respondents suspicious by offering excessive amounts of money or overexplanations of confidentiality and protection.

Design Communications With Professionalism in Mind

Many surveys try to appeal to people on the basis that something important will ultimately happen as a result of the survey. Making each contact appear important can help establish trust in the survey sponsor and trust that the results will have the impact the surveyor says they will. Printing personalized cover letters on letterhead stationery, including a carefully chosen, relevant color picture on the front of the questionnaires, and providing information about the survey project can make the survey appear credible and help establish trust in the survey sponsor. In contrast, form letters produced on copy machines and questionnaires that are poorly designed or contain questions that are difficult to understand suggest that a survey and the sponsor are relatively unimportant. However, balance is needed here too. Information that is too slick, giving a brochure-like look and feel, may have the opposite effect. Communications need to find an appropriate balance between being professional and well done, but not overdone.

It's More Than Just Getting People to Respond

We have provided here considerable guidance on ways to increase the benefits and decrease the costs of responding as well as increase trust in order to encourage people to respond to a survey, but we also want to offer a note of caution that one should always be thinking about both response rates and nonresponse error. It does little good to increase response rates if doing so only brings in a certain type of respondents, thereby biasing estimates. A recent experiment on the effects of sponsorship by Groves et al. (2012), for example, shows that sponsorship by the March of Dimes and the University of Michigan both resulted in an overrepresentation of people who are supportive of the March of Dimes in the completed samples, but that the degree of overrepresentation was more severe when the survey sponsor was the March of Dimes. As a result, estimates of volunteering and fundraising activities were strongly biased upward in this treatment. In this case, the March of Dimes sponsorship appealed more strongly to people who support the March of Dimes and similar organizations than to those who did

not, thus increasing their participation and therefore the amount of nonresponse bias in the estimates related to support for the organization.
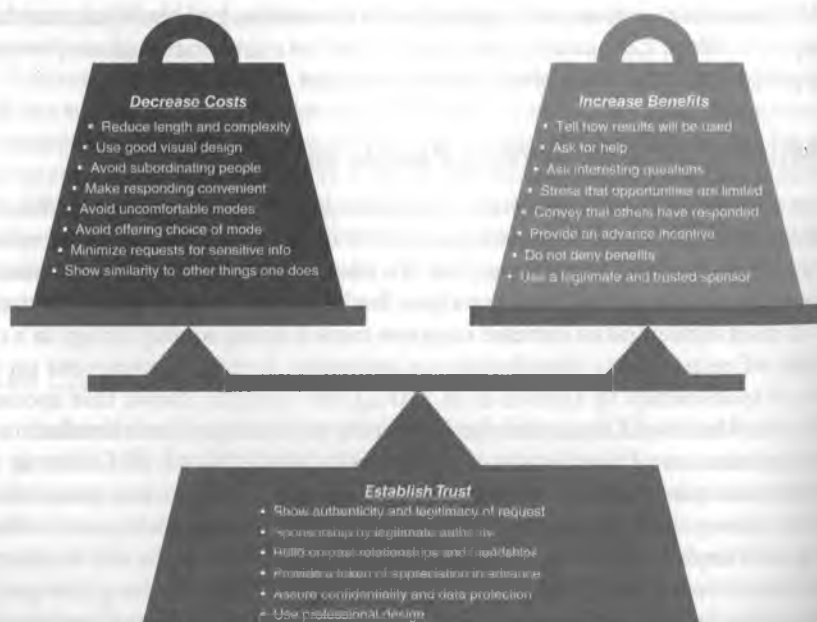
As this example illustrates, it is important to ensure that any steps taken to increase benefits, decrease costs, or build trust do not have differential appeal (or lack of appeal) across different types of sample members in ways that are related to outcomes of interest in the survey. For example, while it might make perfect sense to emphasize March of Dimes sponsorship of a survey focused on how the March of Dimes can better interact with supporters, it would be advisable to deemphasize March of Dimes sponsorship of a survey focused on estimating volunteerism or barriers to volunteerism because in the latter case responses are needed from both those who volunteer and those who do not.

Figure 2.3 provides a summary of the ways we have described here of increasing benefits, decreasing costs, and building trust. As this image suggests, we view trust as the base upon which the decision to respond depends. Obtaining a response will be most likely if sample members can trust that the promised benefits will come to fruition and if the perceived costs have been minimized such that the benefits outweigh the costs.

PUTTING THE PARTS TOGETHER: SOME GUIDELINES FOR APPLYING SOCIAL EXCHANGE

It is one thing to provide a list of actions one might take to offer rewards, reduce costs, and engender trust that responding to a survey request will contribute to a positive outcome, as we have done in the last section. It is quite another to decide which of these to use for a particular survey, and when to use them. A number of considerations need to guide the process of going from these various disparate parts into a meaningful and effective whole survey design.

FIGURE 2.3　Summary of ways to increase benefits, reduce costs, and establish trust.

Decrease Costs
- Reduce length and complexity
- Use good visual design
- Avoid subordinating people
- Make responding convenient
- Avoid uncomfortable modes
- Avoid offering choice of mode
- Minimize requests for sensitive info
- Show similarity to other things one does

Increase Benefits
- Tell how results will be used
- Ask for help
- Ask interesting questions
- Stress that opportunities are limited
- Convey that others have responded
- Provide an advance incentive
- Do not deny benefits
- Use a legitimate and trusted sponsor

Establish Trust
- Show authenticity and legitimacy of request
- Sponsorship by legitimate authority
- Build on past relationships and credibility
- Provide a token of appreciation in advance
- Assure confidentiality and data protection
- Use professional design

Much of this book is devoted to presenting guidelines for writing questions, preparing questionnaires, and deciding on specific implementation procedures. In the remainder of this chapter we present the first of these guidelines, all of which are aimed at applying the social exchange framework in tailored designs in order to improve response rates and data quality.

Guideline 2.1: Use a Holistic Approach to Design

Discussions with hundreds of individuals—from students and community leaders to agency statisticians and corporation executives—suggest to us that one of the major barriers to improving response is a tendency to focus on only a few aspects of costs, benefits, and/or trust, and ignore others. This concern surfaced with one of the authors many years ago when an individual sought a meeting to discuss improving his survey results, and only asked one question, "Will I improve response by putting commemorative stamps on the envelopes I use for the study?" The response was, "Perhaps a little bit," but what was disappointing about this discussion is that it was so singularly focused on one small issue while ignoring other design features.

In today's technological environment it is more common for surveyors to focus on questions such as, "What subject line will get people to read the e-mails I am going to send?" or "Since long e-mails don't get read, what's the shortest message I can send?" Rather than focusing on singular issues such as these, one should consider all features of the survey effort that the sample member is likely to experience and how these features connect with one another and are likely to affect the sample member's combined assessment of costs, benefits, and trust.

The research literature reporting experimental tests of factors that might influence response is often unhelpful in thinking about holistic design of the implementation process. Articles tend to report tests of specific issues, showing whether, for example, an altruistic approach to e-mails is better than an ego-centered approach (Fazekas, Wall, & Krouwel, 2013), whether each dollar of additional incentive produces greater response rates (Trussell & Lavrakas, 2004), or whether shorter electronic messages are better than long ones (Kaplowitz, Lupi, Couper, & Thorp, 2012). This research has been successful in identifying specific design features that tend to have larger versus smaller effects, but generally leaves unanswered how all elements of a design fit together or how the specific design feature being tested works with other aspects of the survey design.

In building a holistic approach it is important to recognize that communication occurs in multiple places within the letters, e-mails, and/or interviewer script, the questionnaire and the individual questions, and any other information provided during the survey process. Envelopes and subject lines affect whether messages are opened, and the first words from an interviewer may be enough to produce a hang-up. In the case of mail surveys, not only the letter requesting a response, but any enclosure that provides background information on the study, the cover page of the questionnaire, the look and feel of the entire questionnaire (color vs. black and white, staples vs. saddle stitch, and apparent length), whether the first questions are understandable and perhaps interesting, and a return envelope with real stamps to return the questionnaire all communicate to respondents. Web survey requests sent by e-mail also include multiple ways that information is communicated to respondents, from the subject line, to the wording of the request, the presentation of a clickable URL, where to enter passwords, the appearance

of additional instructions and/or study information, and the first questions in the survey. Failure to connect the many aspects of a survey's design results in a disjuncture that affects how people perceive the benefits, cost, and trust.

Multiple contacts, which are a critical part of a well-designed survey, provide additional opportunities to communicate the features of a study and reasons for responding so that the same information does not need to be presented in each contact. One does not have to communicate every possible reason for responding, information about how to respond, and details of how confidentiality is protected, in every communication. The more information that one tries to present, the less likely it is to be processed and remembered. Just as different features of each contact provide an opportunity to put the right information in the right place, multiple contacts allow surveyors to divide out information across contacts in a way that does not overwhelm sample members or increase the difficulty of understanding the survey request.

Using a holistic approach also means avoiding the common practice of repeating the same stimulus over and over in the same way. Several years ago we encountered an organization's purchasing officer responsible for placing requests for printed materials who informed the survey designer that the most efficient way to send a follow-up reminder would be to double print the initial request so it could be sent a second time to nonrespondents with "second notice" printed on the outside of the envelopes. This means nonrespondents would have received identical content twice. We have also had organizations tell us that operationally they cannot remove respondents from the list for subsequent requests so all follow-up contacts were mailed to both nonrespondents and those who had already responded. Conversations between individuals do not normally progress well when one of the parties keeps repeating the same argument over and over, and neither do survey requests. Thus, while it is important for respondents to be able to recognize that each new contact is connected to the previous contact (which requires duplication of some information) it is also important to vary the contacts in order to maximize the chances of convincing people to respond. We discuss specific contact designs for single-mode telephone, web, and mail surveys in Chapters 8–10 and for mixed-mode surveys in Chapter 11.

Guideline 2.2: Social Exchange Concepts Should Be Applied Differently Depending on the Survey Population, Topic, Sponsorship, and Survey Mode(s) Available

A holistic approach to applying social exchange concepts does not mean that the same elements will be used in every, or even most, situations. Some surveys require using a particular mode to accomplish their objectives. For example, the U.S. Current Population Survey, which measures the nation's unemployment rate each month, first recruits people at sampled addresses using in-person interviews in order to maximize coverage and response rates. Thereafter, whenever possible, monthly follow-up interviews are conducted by telephone using phone numbers collected during the initial interview to obtain responses more quickly and at a lower cost than in-person interviews. Data collection by mail would be too slow and Internet would likely result in too much coverage and nonresponse error. Moreover, switching from in-person (i.e., an aural mode) to mail or Internet (i.e., visual modes) would likely introduce measurement differences. By comparison, a longitudinal survey we are familiar with measures attitudes using telephone

calls at every data collection wave in order to keep measurement as consistent as possible over time so that changes in attitudes can be examined. As a third example, the Decennial Census and American Community Survey start with a postal contact and employ multiple modes of data collection, the choice and sequencing of which are driven primarily by cost considerations.

Each of these designs provides different opportunities for communicating with sampled members and trying to affect costs, benefits, and trust. When postal contacts and e-mails are used, there tend to be many contact opportunities that can be utilized to appeal in different ways to people. When only telephone contacts can be used, the opportunities to deliver different kinds of appeals may be severely limited, sometimes to only a single contact that ends in a quick hang-up. When written materials are sent, it is possible to deliver certain kinds of information and encouragement that cannot usually be delivered to an uncooperative telephone respondent.

Likewise, for some surveys it is inappropriate or impractical to use cash incentives while for others it is unlikely that reasonable response rates and data quality can be obtained without them. In the early 1990s when the U.S. Census Bureau was searching for ways to turn around response rates for the Decennial Census, one of us was asked to serve on a committee to discuss whether response might be improved by including token cash incentives. The idea was quickly dismissed for multiple reasons including size and security, as well as cultural and political sensitivities, but it contributed to a successful focus on how other techniques might be used to improve response rates.

In another situation, the possibility of sending a token cash incentive to employees of large organizations in the aerospace industry was rejected because of rules within the companies that would have required reporting of those gifts. However, in a survey of another occupational group, farmers, it was concluded that sending a $20 cash card redeemable at an ATM with the survey request was warranted because of survey length (nearly two hours) and because the costs of the incentives would be offset by savings realized as more responses came in by mail and fewer needed to be collected by in-person follow-up (Dillman, Gertseva, & Mahon-Haft, 2005).

Consistent with the tailored design concept introduced in Chapter 1, survey designs need to take into account sponsorship, the population to be surveyed, and other aspects of the survey situation. Bringing together the benefit, cost, and trust elements will need to be done differently for these varying situations. In the remainder of this book, we provide examples from both large and small surveys involving a wide variety of survey populations and sponsors.

Guideline 2.3: Identify and Evaluate Whether to Change or Eliminate Design Constraints That Are Especially Likely to Have a Negative Impact on Response and Data Quality

While our efforts to improve response rates and response quality are focused on multiple aspects of the survey design and implementation processes, it is also the case that certain design features may have singular importance in preventing a survey from obtaining a satisfactory response rate, and ultimately for data quality. Some of these are those that sponsors insist be included in the final design of surveys, but others may also be due to system or operational constraints or simply by inadvertent errors.

Recently one of us was asked to complete a faculty survey being conducted by students at our university. The first question asked was, "Are you 18 years or older?" It's easy to understand why that question was included—the university does not allow students under 18, of which there are some, to be asked to complete surveys without parental permission, and the surveyors thought that would also be required in a faculty survey. But, the question seemed particularly strange to faculty members who saw it, none of whom were under 18, and provided an early signal that the survey may not be worth answering. We have also observed some large-scale surveys, including some national ones, obtain excessively large web cut-offs when the first question asked respondents to read a consent form and agree to complete that survey as well as follow-ups at a later date.

In another example, a friend expressed his frustration with a survey that arrived in the mail, with this item as the first question:

Our records show that you got care at the clinic named below

32005004922

Is that right?

□ Yes
□ No → If No, go to #44

Even if he had received medical care only at one clinic, the presumption that the number provided was sufficiently clear for the respondent to answer this question or others in the questionnaire was strange. That alone resulted in the questionnaire being discarded.

In still other cases, we have observed web surveys that fail because answers were required to every single question, and mail surveys that fail because people were asked to fax their response or provide their own return envelope and postage. We have also observed surveyors who send letters or e-mails to individuals requesting phone numbers, in hopes that most of them will respond, something that is unlikely to happen.

However, the most common feature of surveys that make obtaining satisfactory response difficult is the extremely heavy burden associated with length and complexity. We have been shown surveys that use dozens (and in one case over 300) of attitudinal or belief items. These items are almost always used because they have previously been used and validated in classroom settings; however, it is quite unlikely that one can get people outside of a classroom environment to complete these lengthy surveys.

Many surveys go through a very long creation-to-implementation process involving dozens or even hundreds of people in different work groups, from those who create the questions to those who do computer programming to make the surveys work. In between are editors, mode specialists, administrative staff, and others, many of whom have little experience with the process of asking and responding to questions. Parts of a survey or questionnaire are sometimes examined in detail and changes made independently from others. It is not surprising to us that many surveys include features that disproportionately affect the cost–benefit–trust evaluations they make. Efforts to find and eliminate, or at lease reduce, these features are a major concern that we return to in later chapters of this book.

MIXED-MODE DESIGNS PROVIDE NEW OPPORTUNITIES FOR APPLYING SOCIAL EXCHANGE

The need to consider mixed-mode survey designs has largely developed out of concern over coverage and low response, but the concept has not been enthusiastically accepted by many because the complexities of designing and implementing such surveys are considerable. Our view of mixed mode designs is that they provide an important and perhaps unprecedented opportunity to more effectively balance surveyor needs and respondent concerns because of the various ways social exchange principles can be applied in mixed-mode designs.

One of the most important things to understand about mixed-mode designs is that modes can be combined in different ways with varying implications for the benefits, costs, and trust calculus as well as for minimizing different sources of error. This will be discussed in considerably more depth in Chapter 11. Here we focus on the two main ways for mixing modes and the rationale for using them.

Guideline 2.4: Use Multiple Modes of *Communication* to Gain More Opportunities to Increase Benefits, Decrease Costs, and Build Trust

The first general way to mix modes to improve response is to use multiple modes of contact in the recruitment phase of the survey. In the late 1980s when the idea of mixing modes to improve survey response was being introduced for mail and telephone surveys (e.g., Dillman & Tarnai, 1988), the mode of response was thought of as synonymous with the mode of contact for most surveyors; mail surveys required postal mail recruitment and telephone surveys required telephone recruitment. This was reinforced by the tendency for mail and interview work to be assigned to different divisions or teams and the related difficulty of passing information back and forth in this era when electronic communication was still in its infancy. Even today, significant cultural and system barriers remain that inhibit the ability of different operational groups and computer systems to work together effectively.

When the web was developing as a survey mode in the late 1990s, it was natural to continue this tradition and think of using e-mails as the means for convincing people to respond over the web. However, the lack of e-mail sample frames for many surveys limited the web surveying possibilities. In addition, the difficulty of getting people to go from e-mails to the web proved to be considerable, so that response rates to web surveys relying only on e-mail contact were low, corresponding in many ways to the low response rates for random digit dial (RDD) telephone surveys.

A distinct limitation of these single-mode designs is that it is difficult to develop trust or convey the benefits of responding and how costs are being minimized when messages sent by e-mail are likely to be ignored or quickly deleted or when telephone calls are abruptly terminated and later calls are not answered. Using multiple modes provides additional opportunities to inform respondents of the benefits of responding, communicate how costs are being minimized, and build trust. In other words, it allows one to build a more holistic implementation protocol, as discussed in Guideline 2.1, in which synergy is developed between modes of contact (e.g., a postal letter on letterhead with an enclosed incentive might be used to provide a reward and encourage trust while a follow-up e-mail

is used to deliver an electronic link to a web survey thereby removing a barrier to response).

Guideline 2.5: Use Multiple Modes of *Response* to Increase Benefits, Decrease Costs, and Build Trust

Providing an alternative response mode is the second way that mixed-mode designs can improve survey response. Some sample members may be unable to respond by one mode but able to respond by another. For example, someone who does not have Internet access cannot complete a web survey and someone who is vision impaired will likely have considerable difficulty completing a mail survey. Others prefer some modes to others and are less likely to answer in modes they do not prefer (Olson et al., 2012), as discussed further in Guideline 11.14. Still others may be able and generally willing to respond by a mode, but object to honestly answering sensitive questions in that mode. Providing an additional mode of response can help overcome these reasons for not responding or for giving inaccurate responses to these questions. In addition, a new mode can provide a different stimulus. For example, some sample members may be reluctant to answer a telephone survey because they do not know what will be asked of them, but after being able to preview the questions in a mail or web version of the questionnaire may decide to respond. We have learned in many instances of people who decide to respond to a web questionnaire only after receiving a paper questionnaire that they can use to preview the questions and as a rough draft. This is especially likely to happen in business surveys where it is necessary for the respondent to gather information from records (Snijkers, Haraldsen, Jones, & Willimack, 2013). In these cases, the paper survey is much easier to use than a web survey that unfolds one question at a time.

Using multiple modes of communication and multiple modes of response are the two most general ways survey modes can be mixed to improve response. In Chapter 11 we return to this theme and present specific strategies for mixing modes of communication and response. For example, in some surveys multiple modes of communication are used with a single response mode, and in others multiple modes of communication are used with multiple response modes. In addition, multiple response modes can be offered simultaneously or in sequence. In Chapter 11 we also include a more thorough discussion of how different mixed-mode designs can be expected to impact different sources of survey error. While these details are incredibly important, our main point here is that using multiple modes of communication and/or response provides surveyors with more ways to apply the social exchange concepts and improve survey response than using a single mode alone.

Guideline 2.6: Utilize Knowledge From Past Research and Feedback From Early Contacts to Adapt Implementation Procedures in Order to Reduce Nonresponse Error

In addition to improving response rates, mixed-mode survey designs may be especially helpful in reducing nonresponse error for a couple of reasons. First, communications that arrive via a different mode from previous communications are less likely to be dismissed than one via the original mode. This provides an opportunity to focus later communications on the types of individuals that did not respond to

the earliest communications to improve the representativeness of the responding sample. Second, different modes of response may appeal to different types of sample members. For example, a series of recent studies have shown for household surveys that when both web and mail modes of response are used, quite different individuals respond to each mode, with mail respondents being older and having less education and income than web respondents (Messer & Dillman, 2011; Rookey, Hanway, & Dillman, 2008; Smyth et al., 2010). These studies suggest that using multiple modes can spread the appeal of the survey to different kinds of respondents, potentially reducing nonresponse error compared to what would be obtained in a single-mode survey. Multiple modes can be used at both the recruitment and response phases to appeal to different types of sample members, thereby reducing the potential for nonresponse error.

Strategies such as these have been discussed to some degree as *adaptive design* or *responsive design*. Adaptive design is a relatively new concept that is gaining a following in many survey design situations (Groves & Heeringa, 2006; Schouten, Calinescu, & Luiten, 2013; Wagner, 2008). It refers to adjusting procedures during the data collection process based upon observations made about the types of individuals who are responding and not responding and the estimates that are being produced. For example, if it is learned that younger people in the population are responding in disproportionately small numbers, procedures can be introduced that are specifically targeted at improving response among that age group.

An example of doing this from an earlier time occurred in the 1990s with a periodic mail survey that involved surveying individuals who had turned in an out-of-state driver's license in order to obtain one in Washington State (Salant & Dillman, 1994). Those records also provided the age and sex of each sampled person. In the first round of surveying, when no incentives were used, the response rate for people under 35 was 40%, compared to between 40% and 50% for 36- to 60-year-olds and 72% for those who were 61+ (Miller, 1996). When the next set of names was provided 3 months later, the surveyor decided that a $2 token cash incentive would be included in hopes of reducing nonresponse error on these characteristics since they were critical to the planned analysis. This incentive resulted in increasing the less than 35 response rate to 60%, while all other groups, including the 61+ respondents, had a response rate of 71%. As a result, the final response rate was increased significantly and the completed sample was more representative of the survey population.

Today's adaptive design goes far beyond simply changing strategies between cohorts. Information about how the characteristics of early respondents compare to those of nonrespondents and to the entire sample is used to identify what kinds of respondents might be specifically targeted later in the field period in order to obtain more representative results. In some instances the information needed for these comparisons comes from auxiliary data on the sample file, such as information from administrative records, for example, of students, customers, or members of an organization. In other instances, such as for public opinion surveys, one might use data collected from other surveys like the American Community Survey to make such comparisons.

One of the reasons that such adjustments can be made is that the technology now used to conduct surveys in all survey modes makes it possible to know quickly who is responding and not responding, and to use that information for targeting follow-up efforts with different communications, different offers of a response mode, and perhaps differential incentives. In addition, the collection of paradata

for the answering process may identify troublesome spots in questionnaires that can be changed, such as questions that are being skipped, answered incorrectly, or taking inordinate amounts of time to answer (Couper, 1998; Kreuter, 2013). Of course, there are some operational constraints to adaptive design. One has to have the time and capability to identify what type of sample members are responding and what type are not as well as if any nonresponse is manifest as error on measures of interest. In addition, one has to have the ability to do this very quickly and to make changes to the implementation protocol that may impact multiple systems (i.e., mail tracking, computer-assisted telephone interviewing (CATI) system, etc.). It is also usually difficult to accommodate major changes in implementation protocols within budget limits, which are typically determined at the start of the project and are often inflexible.

RETURNING TO THE WSU DOCTORAL STUDENT EXPERIENCE SURVEY: WHY IT OBTAINED SUCH A HIGH RESPONSE RATE

The WSU Doctoral Student Experience Survey discussed earlier in this chapter provides an example of connecting the parts of a survey design effectively within the social exchange framework, as well as tailoring the design to the survey situation.

The survey was sponsored by a research center at Washington State University, providing a certain amount of legitimacy (increase benefits and trust), especially since the population of interest was students completing a doctorate degree at that university. The invitation letter asking recipients to respond over the Internet was printed on official university stationery and also provided names and contact information for the study director and office from which the study was being implemented, providing further legitimacy (increase trust). An additional aim was to create trust that something useful to future graduate students would result from the study (a potential benefit because of the identity some students were developing with their department). The inclusion of the $2 bill with the request and referring to it as a "token of appreciation" was aimed at communicating the importance of each response (a benefit) and providing a direct and unconditional benefit to the recipient (increase trust), although this was less of a concern in this survey situation than it might have been in others because the survey originated from within the university.

The immediate e-mail follow-up, that can be thought of as e-mail augmentation of the paper contact in order to provide an electronic link was designed to reduce the effort needed for sample members to transfer the URL and password from the paper letter to the computer (reduce costs). The wording in this e-mail emphasized this attempt to reduce the cost of time and effort by providing an electronic survey link and explaining that it was included to make it easier to respond, as illustrated in Figure 2.4. The additional follow-ups each conveyed new information and discussed the usefulness of the study with different words to spread the appeal (cf. Millar, 2013).

The fourth contact (the second via mail) included a paper questionnaire, the first page of which is presented in Figure 2.5. Its purpose was to appeal to different types of sample members (new benefits) and to cut the costs of responding for those who might find mail more convenient or confidential (decrease costs) than the web mode. This version of the questionnaire was designed to be attractive,

FIGURE 2.4 Initial communications sent to students asked to complete the WSU Doctoral Student Experience Survey (inside addresses have been altered).

**First contact: Postal letter**

WASHINGTON STATE
UNIVERSITY
Social and Economic Sciences Research Center

March 29, 2013

Jane Doe
123 Cougar Road
Pullman, WA 99163

Dear Jane,

I am writing to ask for your help with an important survey we are conducting of WSU doctoral students. I understand that you have successfully completed your preliminary examinations and are now at the stage of needing to complete a dissertation.

My colleague, Morgan Millar, and I have been working with the National Science Foundation to better understand how the needs of doctoral training in the U.S. are changing. We are hoping you could spend a few minutes sharing some of your experiences in your doctoral program. In particular, we are interested in factors that may affect bringing the dissertation writing process to a successful conclusion.

To this end, we would greatly appreciate if you would answer a few questions for us. To do so, simply go to this website: www.opinion.wsu.edu/phdexperience

In order to begin the survey, you will need to enter this access code: «RESPID».

We think it should only take about ten minutes to complete the questionnaire.

The survey is confidential. Your individual answers will not be linked with your name or department in any reports of the data. Your participation is voluntary and if you come to any question you prefer not to answer, you are welcomed to skip it and go on to the next. Should you have any questions or comments, please contact me (dillman@wsu.edu) or Thom Allen, the study director (509) 335-1722 or ted@wsu.edu.

We very much appreciate your help with this study, and a small token of appreciation is enclosed with this letter as way of saying thank you.

Many Thanks,

Don A. Dillman
Regents Professor and Deputy Director
Social and Economic Sciences Research Center
Washington State University

Research and Administrative Offices, 133 Wilson-Short Hall
PO Box 644014, Pullman, WA 99164-4014 • 509-335-1511 • Fax: 509-335-0116

Public Opinion Laboratory, 1425 NE Terre View, Suite F
PO Box 641801, Pullman, WA 99164-1801 • 509-335-1721 • Fax: 509-335-4688

included communication on the front to link it to the web version (increase benefits), and was sent with a stamped return envelope (decrease costs). The e-mail follow-up to this paper mailing conveyed that a response over the web was also fine.

However, it is not just the judicious mixing of postal and e-mail contacts with a pre-incentive that contributed to the success of the study. The primary purpose of this study was to assess the extent to which students' doctoral dissertations were interdisciplinary in nature. However, we were concerned that focusing only on this topic in the letters and the questionnaire would result in students with interdisciplinary interests being more likely to respond, resulting in nonresponse error. As a result, we included interest-getting questions about satisfaction with the dissertation process and the student's doctoral program in general, how their

FIGURE 2.4 *(continued).*

Second contact: E-mail

From: Don Dillman [don.dillman@wsu.edu]
Sent: Monday, April 1, 2013 2:00 PM
To: Jane Doe [jane.doe23@wsu.edu]
Subject: WSU Doctoral Student Survey

Dear Jane,

Earlier this week we sent you a letter asking for your help with an important survey. We are conducting this study of WSU doctoral students to learn more about the processes they go through to complete their dissertations and finish their degrees.

I am following up with this e-mail to provide you with an electronic link to the survey website. I hope this link makes it easier for you to respond. It should only take a few minutes to complete the questionnaire.
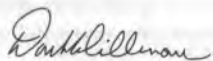
Simply click on this link and you will automatically be logged into the survey:

http://www.opinion.wsu.edu/phdexperience

And enter your personal Access Code in the space provided: <<**RESPID**>>

The results of this study will help us better understand the needs and experiences of students as they work on their dissertation research. Your participation is very important, and we appreciate you considering our request.

Sincerely,

Don A. Dillman

Don A. Dillman
Regents' Professor and Deputy Director
Social and Economic Sciences Research Center

work was supported financially, and the amount of encouragement for their work provided by faculty, all of which are relevant to all doctoral students regardless of interdisciplinary status (increase benefits), and would be of added value to the researchers as well. Some of these questions were placed prominently in the early portion of the questionnaire because they seemed likely to be of great interest to most dissertating students.

We were also concerned that a long questionnaire would produce mid-questionnaire cutoffs, so the questionnaire was kept reasonably short (reduce costs) and limited to 44 questions (about a 10-page paper questionnaire or 47 web screens). The initial page of the paper questionnaire (as shown in Figure 2.5) contained an appealing but vague title, "Understanding the Doctoral Experience at WSU," which gave the questionnaire a localized identity (increase benefits). This same title was also used in the web version of the questionnaire to convey connectivity, should a sample member look at the questionnaire in both modes.

Thus, many aspects of the study design and implementation system were shaped in relation to one another in ways that we hoped would produce positive responses from those asked to participate. These are summarized in Figure 2.6. We were *not* relying on shaping only one or two features as a means of encouraging response while ignoring everything else; rather, we were creating a holistic design.

FIGURE 2.5 First page of the paper version of the WSU Doctoral Student Experience Survey, designed to attract interest.

Understanding the Doctoral Experience at WSU

Thank you for completing this questionnaire. This study will help us better understand the process students go through during the final stages of their doctoral education. As doctoral training in the United States continues to evolve, it is important that we learn more about students' perspectives and identify any obstacles that may stand in the way of successfully completing one's dissertation.

Your participation is voluntary and your responses will be kept confidential. No personally identifiable information will be associated with your responses in any reports of the data. If you have any questions please feel free to contact Thom Allen, the study director, by email at ted@wsu.edu or by phone at (509) 335-1722.

Q1. In what year did you officially complete your preliminary examinations?

Y Y Y Y

Q2. Have you already selected a specific dissertation topic?

O No → **Skip to Q21 on page 5**
O Yes

Q3. If yes, which of the following best describes your current status in the dissertation process?

O Have not yet begun any research or writing for your dissertation → **Skip to Q21 on page 5**
O Working on a dissertation proposal
O Have completed a dissertation proposal
O Are in the early stages of research/writing for your dissertation
O Are about halfway completed with the research/writing for your dissertation
O Are mostly completed with the research/writing for your dissertation
O Have fully completed your dissertation

Q4a. Please write the name of the primary field of your dissertation research.
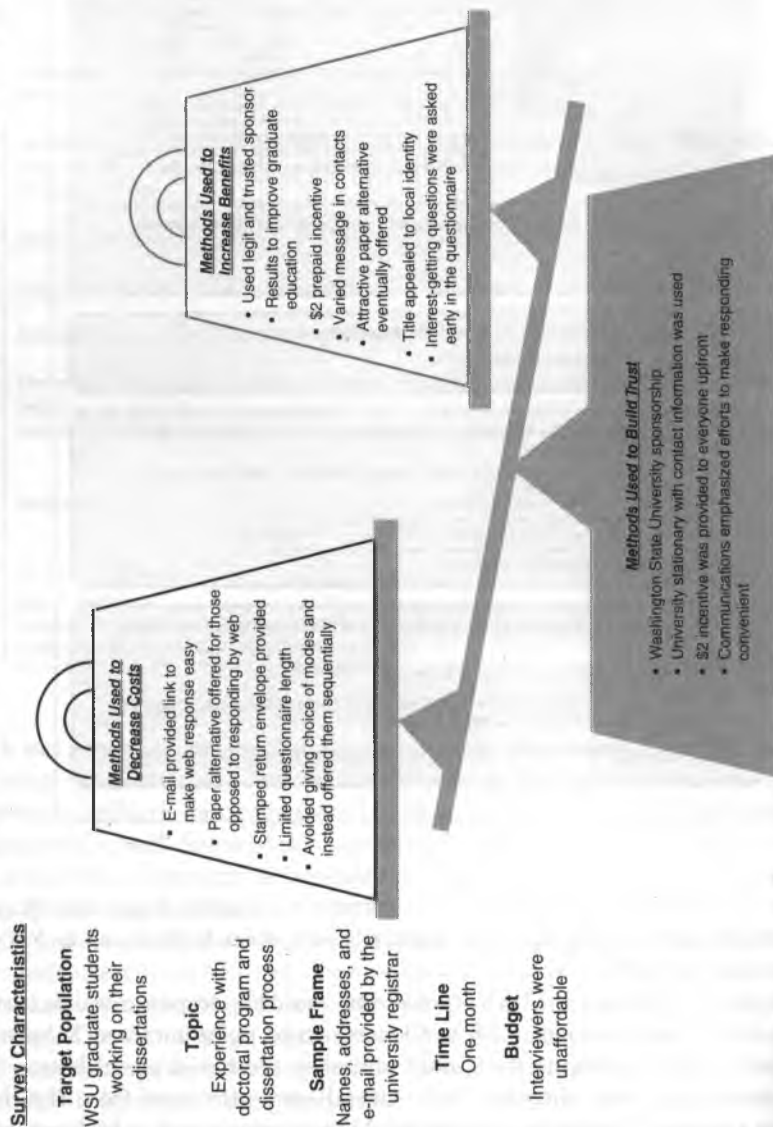
Name of primary field

Now, choose the code from the list on pages 10-11 that best describes the primary field of your dissertation research.

Number of primary field

We were also tailoring our design to the particular situation where the sponsor and the respondents were at the same university and where both e-mail and postal addresses were available.

This survey obtained a 77% response rate—a 63% response was achieved from the initial two contacts, with a 30 percentage point increase happening in a 10-hour period following the e-mail sent after the initial postal letter. The final 14 percentage point increase in the overall response came from the third and fourth contacts. The success of this study in receiving such a high response illustrates how a mixed-mode design can produce results that were unlikely to be achieved by using only postal contacts requesting response to a paper survey or only e-mail contacts requesting a web response. It also produced results quickly, a much desired goal of the study. Doing that was achieved by making many separate decisions and connecting them together in ways suggested by the social exchange framework.

FIGURE 2.6 Summary of elements used to build trust, maximize benefits, and minimize cost in the WSU Doctoral Student Experience Survey.

Survey Characteristics

Target Population
WSU graduate students working on their dissertations

Topic
Experience with doctoral program and dissertation process

Sample Frame
Names, addresses, and e-mail provided by the university registrar

Time Line
One month

Budget
Interviewers were unaffordable

Methods Used to Decrease Costs
- E-mail provided link to make web response easy
- Paper alternative offered for those opposed to responding by web
- Stamped return envelope provided
- Limited questionnaire length
- Avoided giving choice of modes and instead offered them sequentially

Methods Used to Increase Benefits
- Used legit and trusted sponsor
- Results to improve graduate education
- $2 prepaid incentive
- Varied message in contacts
- Attractive paper alternative eventually offered
- Title appealed to local identity
- Interest-getting questions were asked early in the questionnaire

Methods Used to Build Trust
- Washington State University sponsorship
- University stationary with contact information was used
- $2 incentive was provided to everyone upfront
- Communications emphasized efforts to make responding convenient

CONCLUSION

The interests of sample members and of surveyors need not be as oppositional as they often become and were portrayed at the beginning of this chapter. The core idea we have considered here is that social exchange—with its emphasis on increasing benefits, reducing costs, and increasing trust that the benefits will outweigh the costs of responding—remains a useful framework for identifying aspects of surveys that can be shaped to improve response and reduce nonresponse error, even in this new communication era.

An important change in how this framework is applied in this era is the need for placing a greater emphasis on the creation of trust that the research is legitimate and that benefits valued by the respondent will likely come to fruition. Trust is an essential component, now especially threatened by the electronic environment in which most communication occurs, that connects the providing of benefits and reducing costs with increased response.

Although single-mode surveys are often conducted and will continue, we contend that mixed-mode survey designs have the potential to provide new, and much needed, ways for improving the effective application of these social exchange concepts in ways that will improve survey response and data quality. Offering an alternative mode for answering survey questions may encourage certain types of individuals to respond who could not or would not respond by another survey mode. In addition, the use of additional contacts by a second or third mode improves the opportunity to provide sponsor explanations for why each person's response is needed, and to target those appeals more precisely to different types of individuals. Mixed-mode surveys provide new means of attempting to close the gap between the way survey sponsors think about imposing their survey on others and how respondents react when they encounter the survey request and questionnaire.

LIST OF GUIDELINES

Guidelines for Applying Social Exchange

Guideline 2.1: Use a holistic approach to design
Guideline 2.2: Social exchange concepts should be applied differently depending on the survey population, topic, sponsorship, and survey mode(s) available
Guideline 2.3: Identify and evaluate whether to change or eliminate design constraints that are especially likely to have a negative impact on response and data quality

Guidelines for Applying Social Exchange in Mixed-Mode Surveys

Guideline 2.4: Use multiple modes of *communication* to gain more opportunities to increase benefits, decrease costs, and build trust
Guideline 2.5: Use multiple modes of *response* to increase benefits, decrease costs, and build trust
Guideline 2.6: Utilize knowledge from past research and feedback from early contacts to adapt implementation procedures in order to reduce nonresponse error