CONCLUSIONS

In this chapter, we offer some concluding thoughts on the future of Internet-based surveys, the issues surrounding the use of e-mail and the Web for research surveys, and certain assumptions concerning performance—that is, are Internet surveys faster, better, cheaper, or easier to conduct than surveys that use more-traditional methods? We also explore a few questions that remain unanswered about Internet surveys.

THE FUTURE OF INTERNET-BASED SURVEY METHODS

Internet surveys are here to stay and will become even more commonplace, with Web surveys continuing to dominate over e-mail surveys. Although some experts predict that Web surveys will eventually replace other survey modes altogether, we anticipate that Web surveys will develop into a distinct response mode, with its advantages and disadvantages, which will have to be weighed against more-conventional alternatives.

A major challenge for researchers will be how to distinguish themselves and their surveys from the plethora of commercial and entertainment surveys on the Web. Commercial surveys will proliferate in even greater numbers because the financial and technical entry barriers to the Web are so low. Thus, just as telephone survey response rates have declined because of the flood of telemarketing and commercial surveys, it is likely to become increasingly difficult to achieve superior response rates when using this medium for research.

To date, most Web surveys in the literature have been conducted with convenience samples or within organizations in which a list of individuals in the target population already exists. By comparison, Internet surveys with probability samples can be fielded by using postal mail or the telephone for initial and follow-up contact with respondents, and then using the Web for the actual response.

Currently, there is no equivalent to telephone RDD for e-mail. Even though the fraction of the population having access to e-mail will continue to grow, it is unlikely that anyone will ever be able to construct a e-mail address in the same way a random telephone number is constructed. However, large commercial e-mail lists may yet emerge that are of high-enough quality to be useful in survey research. In any event, Internet surveys are definitely here to stay.

CONSIDERATIONS IN EMPLOYING THE INTERNET FOR RESEARCH SURVEYS

Research on Internet surveys is still in its infancy. Although we expect the research to grow considerably over the next few years, there is currently very little decisive empirical evidence from which to draw definitive conclusions about the optimal design and employment of Internet surveys.

In research surveys, the quality of the survey process is at least as important as the number of surveys fielded. Therefore, traditional survey methods, including the use of probability samples, formal contact, and follow-up methodologies, and the continuing effort to achieve high response rates (for example, through follow-up and incentives) also apply to Web surveys used for research purposes.

The most important question facing any researcher is whether to make an inference about some larger population based on a survey sample. If the answer to that question is yes, then a probability sample is needed; otherwise, a convenience sample may suffice. If the researcher has established that a probability sample is required, he or she must then determine how to contact the surveyed population or how to develop a sample frame. On-line advertising is not an option for generating probability samples.

In closed populations (see Chapter Four), it is often possible to contact potential respondents by e-mail. If so, it may also be possible to conduct the survey entirely over the Internet, in which case it may be conducted in a very timely manner at relatively low cost. Internet-based surveys of closed populations, particularly employee populations, seem to result in higher response rates than other Internet surveys. This may be because (1) employers are likely to have access to an accurate and complete list of e-mail addresses; (2) completing the survey may be considered part of the respondent's job and thus less of an imposition; and (3) the subject matter may be of direct relevance to the employee or the employee's job, or otherwise considered official business.

For general populations, it is usually impossible to contact potential respondents by e-mail because e-mail lists of the target populations do not exist. This limitation implies that respondents must be initially contacted in a traditional way, such as by U.S. mail, which would then reduce the cost savings and timeliness benefits one achieves with an Internet survey. Furthermore, until the Internet has more-thorough media penetration into the average household, Internet surveys of general populations will typically require a second response mode for sufficient coverage.

Unfortunately, concurrent mixed-mode surveys using both the Web and postal mail tend to result in minimal use of the Web response mode. Further, there is no evidence that this approach increases response rates in any appreciable way (Quigley, 2000). In fact, in two studies we reviewed, the mixed-mode approach marginally decreased the response rates in comparison with the response rates for control groups that only received mail surveys (see, for example, the discussion on the American Community Survey in Griffin et al., 2001).

Therefore, the most effective use of the Web at the moment seems to involve a sequential fielding scheme in which respondents are first encouraged to complete a survey via the Web and then nonrespondents are subsequently sent a paper survey through the mail. This approach has the advantage of maximizing the potential cost savings from using the Internet while maintaining the population coverage and response rates of a mail survey. The drawback is that little is known about the mode effects of Web surveys and the potential

difficulties arising from merging data collected via the Web and by mail.

We have argued that for Internet surveys of general populations a second response mode is required to overcome the potential coverage problem. The only exception to this argument is the approach taken by the Web survey firm Knowledge Networks, which has overcome the coverage problem in the United States (see Chapter Three). The only drawback is that Knowledge Networks currently averages response rates of about 25 to 30 percent. Another Web survey firm, Harris Interactive, takes another approach and also claims it is possible to make inferences to general populations, but these claims have not been convincingly demonstrated. It is unclear how the potential problems stemming from low response rates (as with Knowledge Networks) and from using a cleverly weighted convenience sample instead of a probability sample (as with Harris Interactive) trade off. That is, it is not clear whether one approach is preferable to the other.

ADDRESSING CLAIMS ABOUT THE CURRENT PERFORMANCE OF INTERNET SURVEYS

Many assertions have been made about Internet-based surveys that should be qualified. The most common are that Internet surveys can be conducted more quickly, more effectively, and more cheaply than surveys using more-conventional methods. Also, because creating Web pages is a relatively simple process, it is often assumed that Web surveys are easier for researchers to field and easier for respondents to complete. As we discuss in this report and summarize here, these assumptions are not universally true.

Are They Faster?

Web surveys are thought to be much faster than conventional survey modes. This is true when respondents are contacted initially via e-mail, but if respondents are contacted initially through the U.S. mail or by phone there is, at best, only a marginal improvement in overall response times.

When a probability sample is required for a general population, an e-mail sample frame is usually not available. However, once a panel of respondents has been built, such as Knowledge Networks and Harris Interactive have done, Web surveys can, in fact, be conducted very quickly.

Are They Better?

In this report, we discuss difficulties with Web surveys that relate to coverage and response rates and how to overcome them. Here, we point out applications in which Web surveys have advantages over traditional survey modes.

Respondents' answers in interviewer-assisted modes tend to be biased toward socially acceptable answers (de Leeuw, 1992). Web surveys are not interviewer-assisted and therefore, like postal mail surveys, are well suited to surveys with especially sensitive questions (for example, those concerning risky sexual practices).

Subpopulations that represent only a small fraction of a general population (for example, college dropouts) usually cannot be reached efficiently with traditional survey modes. This lack of efficiency translates into high cost. However, the subpopulations of interest may be easily found in the prerecruited panels of commercial Web survey companies. Moreover, because commercial Web survey companies usually charge per completed survey, targeting subpopulations is no more expensive than targeting the same number of respondents in a general population.

If open-ended questions are numerous and important to the survey results, Web surveys are desirable because no coding of the answers is required. There is weak evidence that respondents provide longer open-ended answers to Internet surveys than to traditional surveys. Furthermore, certain interactive tasks can be either programmed for the Web or accomplished in person, but are not easily accomplished over the phone or by postal mail. For example, the respondent may be asked to peruse a Web site as part of the survey and then reply to questions about his or her experiences or what he or she may have learned. The responses may enable the researcher to gain insights into how to construct Web sites more effectively.

Are They Cheaper?

The general notion that Web surveys are much cheaper to conduct than traditional mail surveys is not necessarily true. Web and e-mail surveys can save on some or all mailing costs, but these costs may be a relatively small portion of the overall survey costs. Although Web surveys can serve to eliminate data-entry costs, e-mail surveys may not be able to offer similar costs savings because the survey results often require additional manipulation before they can be downloaded into an analytical database. However, even with Web surveys, the data-entry savings may be partially or completely negated by higher programming costs and the cost of additional help-desk staffing. The literature for the most part neglects labor costs, which can be a substantial cost component of Web surveys. Nonetheless, adding a Web survey to a postal mail survey can prove to be cost efficient.

The marginal cost of adding respondents to a survey is much lower for Web surveys than it is for traditional survey modes. Because of substantial fixed costs, it appears that Web surveys become more economical than mail surveys only when the number of responses reaches a certain threshold. In a mixed-mode setting, in which sample members are contacted by mail and may respond by mail or on the Web, the threshold is probably somewhere between a few hundred and a thousand responses.

If respondents can be contacted via e-mail, the number of respondents required to break even in the cost of adding a Web response option to a mail survey is drastically reduced. (This makes Web surveys particularly appealing when survey panels are used because e-mail addresses can be solicited in the initial panel survey.) The break-even number also declines substantially when a standard Web survey is sufficient, as opposed to one that requires considerable customization. However, we suspect that researchers tend to underestimate the amount of customization that will eventually be needed.

In addition, unanticipated technical problems are likely to arise when a surveyor has no prior experience with Web survey programming and these problems can easily eliminate all potential cost benefits.

Are They Easier to Conduct?

The implementation of a Web survey is much more technically involved than that for either a mail or telephone survey. Survey designers need to address many issues related to the technical control of Web surveys (for example, how the respondent will move backward and forward among questions, how input validation will be done, what type of passwords will be used, determining which answers are not optional) that are either much simpler matters with conventional survey modes or are not addressed at all. Web surveys also require more-extensive pretesting than mail surveys to ensure that the questions elicit the desired information and the survey program works properly across various browsers and hardware and software configurations. For survey teams without prior experience with Web surveys, conducting a survey via the Web often implies more work rather than less.

SOME UNANSWERED QUESTIONS ABOUT INTERNET SURVEYS

Although the use of Internet-based surveys is growing and will continue to expand, we found that a few key questions remain unanswered about Internet survey implementation.

What Is the Optimal Instrument Design?

As we noted in this report, little is known about the effects of Web survey instrument design on how survey participants respond to a particular survey question or the survey as a whole, or what sort of design enhances response rates or information accuracy. For example, at the 2001 American Association of Public Opinion Research conference, some anecdotal evidence was presented that suggested that respondents taking surveys on the Web had relatively short attention spans and tended to browse surveys much as they would browse any other Web site. If true, this would suggest that lengthy surveys or surveys with complex questions may not perform as well on the Web as they would if they were sent by postal mail. Although many of the design principles from paper-based surveys might translate well to Internet surveys, more research is required in this area to confirm this hypothesis.

How Effective Are Incentives?

Although Web survey organizations certainly make extensive use of incentives, there is little mention of incentives in the Web and e-mail survey literature. Web survey incentives can differ greatly from traditional incentives and might include items such as electronic cash or various lottery schemes. With traditional survey modes, it has been shown that incentives are more effective when sent with the questionnaire rather than sent later as a reward for completion of the survey. It is not clear how incentives are best used for Web surveys, or whether they affect nonresponse or measurement error.

How Effective Is Weighting?

The two most prominent commercial Web survey companies, Harris Interactive and Knowledge Networks, both make extensive use of weighting. However, the literature contains little mention of statistical adjustments to reduce various forms of bias. In part, this is because many Web surveys in the literature form a census within a well-defined population (for example, company employees) or because probabilities of selection are equal. Other studies use only a convenience sample and ignore weighting.

Whether a propensity-scoring-adjusted convenience sample is preferable to a probability sample with a low response rate is unclear. There is evidence that convenience samples are effective at capturing relative trends over time.