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CHAPTER 6

The Causes of No-Opinion Responses to Attitude Measures in Surveys: They Are Rarely What They Appear to Be

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6.1 INTRODUCTION

When survey researchers ask respondents about their attitudes, we usually presume that their answers reflect information or opinions that they previously had stored in memory, and if a person does not have a preexisting opinion about the object of interest, the question itself presumably prompts him or her to draw on relevant beliefs or attitudes in order to concoct a reasonable, albeit new, belief or evaluation (see, e.g., Zaller and Feldman, 1992). Consequently, whether based upon a preexisting judgment or a newly formulated one, responses presumably reflect the individual's beliefs about or orientation toward the object.

What happens when people are asked about an object regarding which they have no knowledge and no opinion? We hope that in such cases, respondents would say that they have no opinion or aren't familiar with the object or don't know how they feel about it (in this chapter, we refer to all such responses as *no-opinion* or *NO* responses). But when respondents are asked a question in such a way as to suggest that they ought to have opinions on the matter, they may wish not to appear foolishly uninformed and may therefore give arbitrary answers. In order to reduce the likelihood of such behavior, some survey experts have recommended that no-opinion options routinely be included in questions (e.g., Bogart, 1972; Converse and Presser, 1986; Payne, 1950; Vaillancourt, 1973). In essence, this tells respondents that it is acceptable to say they have no belief or attitude on a matter.

Do no-opinion filters work? Do they successfully encourage people without meaningful opinions to admit that? Might they go too far and discourage people

who have meaningful opinions from expressing them? These are the focal questions considered in this chapter.

6.2 THE NONATTITUDE HYPOTHESIS

Although earlier work on the stability of opinions had been published in various social science disciplines, Converse's (1964) was to become the most frequently cited and widely influential. He happened upon data patterns that raised grave concerns: many of the opinions people expressed on well-known public issues shifted apparently haphazardly from one interview to the next. Converse dubbed these *nonattitudes* and suggested that they were answers masquerading as real opinions, generated by mentally flipping coins and selecting among the offered response alternatives purely randomly. Converse asserted that respondents feel pressure to appear opinionated in surveys even when they are not, and they respond to this pressure by fabricating.

How are we to minimize reporting of nonattitudes? Remarkably, only one method has thus far been proposed: no-opinion filtering. The notion here is that respondents may report nonattitudes partly because survey question wording encourages them to do so. As Schuman and Presser (1981) pointed out, respondents generally "play by the rules of the game" (p. 299), meaning that they choose among the response alternatives offered by a closed question rather than offering reasonable answers outside the offered set. If a question does not explicitly include a NO option, that might imply to respondents that they are expected to have opinions and therefore encourage them to report nonattitudes. Thus, when such a response option is explicitly legitimated via a filter, significantly larger proportions of respondents might admit having no opinion.

The logic underlying this perspective is that when people have a real opinion toward an object, they know it and can readily report it, and whenever people say they do not have an opinion, they truly do not. In situations where people feel pressed to offer an opinion and discouraged from saying they have none, they will make up an answer. But simply legitimating a no-opinion response is enough to eliminate most or all nonattitude reporting, and all or most people who say they have no opinion indeed have none. The division between having an opinion and not having one is presumed to be clear to people, and people are presumed to use knowledge of it to decide when to report opinions and when to say they have none. Therefore, offering a no-opinion response option should increase the number of respondents who say they have no opinion, and saying so should be largely accurate.

Many studies have reported evidence consistent with the first of these two expectations (e.g., Schuman and Presser, 1981). For example, in a relatively early study, Ehrlich (1964) had undergraduates complete 29-item self-administered questionnaires measuring stereotypes of various nationalities and ethnic groups. Respondents were randomly assigned to one of two forms of the questionnaire, one of which explicitly offered "no opinion" and "can't decide" response options, and the other of which did not. The proportion of NO's increased from 0 for the first form to a mean of 22% (range 5–57%) for the filtered items. For all 29 of the items, the proportion of respondents who offered substantive opinions dropped significantly when the filters were included.

6.3 THE VALIDITY OF NO RESPONSES

Are the NO answers that respondents provide to survey interviewers valid? That is, do people who say NO in fact have no opinions on the issues in question? One useful way to address this matter is to examine the correlates of NO responding. If this behavior is more common among people who, a priori, seem less likely to have opinions, that would attest to the validity of these reports, and indeed, there is a good deal of such evidence. This evidence comes from two sorts of studies: nonexperimental (correlating the frequency with which people said NO in answering a single question) and experimental (manipulating the presence or absence of a NO filter in a question and assessing the predictors that could identify individuals most susceptible to the filter's effect).

Among the factors that can identify individuals least likely to say NO are education, knowledge about a question's topic, interest in the topic, exposure to information on the topic, affective involvement in the topic, confidence in one's ability to form an opinion on the topic, and perceived utility of forming an opinion on the topic. Specifically, NO responses are least commonly offered by people who have more formal education (Bishop, Oldendick, and Tuchfarber, 1980; Schuman and Presser, 1981), who are higher in cognitive skills (Colsher and Wallace, 1989; Sigelman et al., 1982), who know more about the topic in question (e.g., Converse, 1976; Faulkenberry and Mason, 1978; Rapoport, 1981; 1982), who are more interested in the topic (Krosnick and Milburn, 1990; Rapoport, 1982; Wright and Niemi, 1983), who are more exposed to information on the topic (Krosnick and Milburn, 1990; Wright and Niemi, 1983), among people with more behavioral experience relevant to the topic (Durand and Lambert, 1988; Krosnick and Milburn, 1990), who feel they have a greater ability to understand the topic (Krosnick and Milburn, 1990), and who feel others are interested in knowing their opinions on the topic (Francis and Busch, 1975; Krosnick and Milburn, 1990).

In experimental studies manipulating the presence or absence of NO options, attraction to such options is greatest among respondents with the lowest levels of education and cognitive skills (Bishop, Oldendick, and Tuchfarber, 1980; Bishop, Oldendick, Tuchfarber, and Bennett, 1980; Narayan and Krosnick, 1996). And people who consider a particular issue to be less of personal interest or importance are more attracted to NO filters (Bishop, Oldendick, and Tuchfarber, 1980; Schuman and Presser, 1981, pp. 142–143). Similarly, NO filters are most likely to attract respondents who otherwise would express moderate attitudes (Ehrlich, 1964).

One final bit of evidence attesting to the validity of NO rates was reported by Converse and Schuman (1984), who compared the percentages of NO responses to various questions asked at approximately the same time by two different survey firms: the Gallup Organization and the National Opinion Research Center (NORC).

Although Gallup generally found higher NO rates than NORC, the correlation between the rates obtained by the two houses across items was a remarkable 0.67. Thus, these rates do appear to reveal something stable and meaningful instead of being wholly arbitrary. Another set of evidence attesting to the validity of NO responses treats them as indicators of the strength of public opinion on issues. Dodd and Svalastoga (1952) proposed that issues that have high rates of NO responses are likely to be ones on which the substantive opinions that are offered are particularly weak. This could occur when, for example, the public has little information about an issue, so many people are reluctant to express opinions at all, and the opinions that are expressed are not especially grounded in confidence, personal importance, or any other aspect of strength. In support of this notion, Dodd and Svalastoga (1952) reported that the percentage of respondents saying NO to each item in a set was strongly and negatively correlated with the consistency over time of the substantive opinions offered by other respondents: $r = -0.91$. Eisenberg and Wesman (1941) also found that for items with higher NO rates, substantive opinions offered were less consistent over time. And Bishop, Oldendick, and Tuchfarber (1980) found that the larger the proportion of people who volunteered a NO response on an unfiltered opinion question, the greater the proportion of respondents attracted by a NO filter when it was included in the question. Also, Page and Shapiro (1983, p. 181) found greater correspondence between public opinion and public policy when smaller proportions of the public declined to report preferences on an issue, although Brooks (1990) found no such relation.

In sum, these studies generally support the notion that NO responses are most likely to be reported when individuals are indeed least likely to have meaningful attitudes toward an object.

6.4 EFFECTS OF NO FILTERS ON DATA QUALITY

Given all the above evidence, it seems likely that offering NO options would increase the quality of data obtained by a questionnaire. That is, respondents who might otherwise offer meaningless opinions would be discouraged from doing so by a filter. But do NO filters work effectively in this sense? That is, is the overall quality of data obtained by a filtered question better than the overall quality of data obtained by an unfiltered question? A variety of evidence addresses this issue. I begin by considering a series of nonexperimental studies and then turn to experimental ones that systematically varied the presence of NO options. The criteria used include the impact of filtering on reliability, correlational validity, and susceptibility to response effects.

In one nonexperimental study, Gilljam and Granberg (1993) asked respondents three questions tapping attitudes toward building nuclear power plants. The first of these questions offered a NO option, and 15% of respondents selected it. The other two questions, asked later in the interview, did not offer NO options, and only 3% and 4% of respondents, respectively, failed to offer substantive responses to them. Thus, the majority of respondents who initially said NO offered opinions in answering the later two questions. At issue, then, is whether these later responses reflected meaningful opinions or were nonattitudes.

To address this question, Gilljam and Granberg (1993) examined two indicators: the strength of the correlation between the two latter attitude reports, and their ability to predict people's votes on an actual nuclear power referendum in a subsequent election. The correlation between answers to the latter two items was 0.41 ($p < 0.001$) among individuals who said NO to the first item, as compared to a correlation of 0.82 ($p < 0.001$) among individuals who answered the first item substantively. Similarly, answers to the second two items correctly predicted an average of 76% of subsequent votes by people who initially said NO, as compared to a 94% accuracy rate among individuals who answered the first item substantively. Thus, the filter apparently separated out people whose expressed opinions were, on average, less predictive than others' opinions. However, the filter also separated out people whose opinions were meaningful to some degree as well. Three other nonexperimental studies taking a different investigative approach produced similarly mixed evidence. Andrews (1984) and Alwin and Krosnick (1991) metaanalyzed the correlates of the amount of random measurement error in numerous survey items, some of which offered NO options and others that did not. In a similar study, Bishop et al. (1979) used existing surveys to assess associations between items asked in either filtered or unfiltered forms and other criterion items. Andrews (1984) found less random error when NO options were offered than when it was not, Bishop et al. (1979) found slightly stronger associations between variables when NO options were offered, but Alwin and Krosnick (1991) found more random error in items that offered NO options.

Experimental studies of NO filters have examined five criteria with which data quality can be inferred: reliability, correlational validity, susceptibility to response effects, measurements of knowledge levels, predictive accuracy, and preventing reporting of opinions toward obscure or fictitious objects.

Reliability. Three studies have explored the impact of experimental variations in the presence or absence of NO filters on reliability. McClendon and Alwin (1993) had respondents answer sets of questions measuring an attitude (e.g., toward lawyers) in either a filtered or an unfiltered form. These investigators then estimated the reliability of the items via structural equation modeling and found no greater reliability when NO filters were included in questions than when they were not.

Krosnick and Berent (1990) reported similar results involving longitudinal data. For their study, respondents were asked about various attitudes on two occasions separated by 2 months, using questions either including or omitting NO response options. No significant change in the over-time consistency of attitude reports appeared depending upon whether NO filters were present or absent. Poe et al. (1988) found this same result in a panel survey of factual matters: longitudinal reliability of responses was equivalent regardless of whether NO opinion options were offered or not.

Correlational Validity. If NO filers improve data quality, they should strengthen associations between variables. Yet in more than 20 experiments, Schuman and

Presser (1981) found that varying the presence of a NO option altered associations between attitudes significantly in only three cases. In two cases, offering the NO option strengthened an observed relation between attitudes, but in the other case, offering the NO option weakened the observed relation. Furthermore, Schuman and Presser (1981; see also, Presser, 1977) found no cases in which filtering altered relations between attitudes and respondent education, interest in politics, age, or gender. Likewise, Krosnick et al. (1999) found no weakening of relationships between attitudes and various attitudinal and demographic predictors of them when the attitudes were measured with questions not including a NO option as compared to questions including that option. Similar results were reported by Sanchez and Morchio (1992), who examined questions tapping beliefs about factual matters (e.g., "which political party had the most members in the U.S. House of Representatives?"). These investigators compared two sets of interviews that differed in NO rates due to differential interviewer probing: in one set, interviewers had probed NO responses more often, thus yielding a lower final rate of NO's. The probing increased the number of correct and incorrect answers given by respondents about equally (which would be expected if respondents were guessing), but it did not significantly alter the relation between measured knowledge and various predictors (e.g., frequency of exposure to political news). Thus, data quality, as indexed in this fashion, was again not compromised by a technique that decreased NO rates (i.e., interviewer probing).

Susceptibility to Response Effects and Manipulations. If items including NO options yield higher quality data, then responses to them should presumably be less susceptible to response effects caused by nonsubstantive changes in question design. McClendon (1991) investigated this possibility by assessing the magnitude of response order effects and acquiescence when NO options were offered and omitted. Although the NO options did reduce acquiescence for one set of items examined, they did not do so for other items, and they had no impact on the magnitude of response order effects.

Krosnick et al. (1999) examined the impact of NO options on data quality by assessing whether responses were equally responsive to manipulations that should have affected them. Specifically, respondents in their study were told about a program that would prevent future oil spills and were asked whether they would be willing to pay a specified amount for it in additional taxes. Different respondents were told different prices, and one would expect fewer people to be willing to pay for the program as the price escalated. In fact, this is what happened. If pressing NO responses into substantive ones creates nonattitudes, then one might imagine that sensitivity to the price of the program would be less among people pressed to offer substantive opinions than among people offered a NO option. But in fact, sensitivity to price was the same in both groups.

Knowledge Accuracy. If a person is accurate when responding "don't know" to a multiple choice or true/false question assessing accuracy of factual knowledge, then he or she should do no better than chance at answering the question if pressed to do so, but Dunlap et al. (1929) did not find support for this assertion. In their study, respondents answered a set of true/false knowledge questions twice, once when instructed to leave blank any questions to which they did not know the answer, and once when they were instructed to guess when answering such questions. Using the grading method of (number correct – number incorrect), guessing should not improve people's scores if they did not in fact know the correct answer to a question. But in fact, guessing did improve scores, which meant that people had more knowledge than their instincts detected when given the opportunity to leave questions blank.

Yet another context for assessing the accuracy of NO responses is preelection polls designed to forecast election outcomes. In these surveys, many respondents say they don't know which candidate they will vote for. But interviewers can press these individuals to indicate which candidate they lean toward in a race. Visser et al. (2000) compared the accuracy of poll data in predicting the actual outcomes of various Ohio elections when treating the data two ways: (1) treating "don't know" responses as valid, and therefore treating these respondents as having no candidate preferences; or (2) treating respondents' indications of which candidates they lean toward as valid measures of their preferences. Collapsing across a series of races, they found the polls were more accurate when using the latter method than when using the former, suggesting that there was validity to the "leaning" responses provided by people who initially said "don't know."

Taken together, the literature on how filters affect data quality suggests that NO filters do not remove all people without meaningful opinions and only people without such opinions. Thus, we see here reason to hesitate about using such filters.

6.5 REASONS FOR NO RESPONSES

In order to make sense of this surprising evidence, it is useful to turn to studies by cognitive psychologists of the process by which people decide that they do not know something. Specifically, Norman (1973) proposed a two-step model that seems to account for observed data quite well. If asked a question such as "Do you favor or opposed U.S. government aid to Nicaragua?" a respondent's first step would be to search for any information in memory relevant to the objects mentioned: U.S. foreign aid and Nicaragua. If no information about either is recalled, the individual can quickly respond by saying he or she has no opinion. But if some information is located about either object, the person must then retrieve that information and decide whether it can be used to formulate a reasonable opinion. If not, he or she presumably replies "don't know," but the required search time makes this a relative slow response. Glucksberg and McCloskey (1981) reported a series of studies demonstrating that "don't know" responses can indeed occur either quickly or slowly, the difference resulting from whether or not any relevant information can be retrieved in memory.

This distinction between first-stage and second-stage NO responses suggests different reasons for them. According to the proponents of NO filters, the reason pre-

sumed to be most common is that the respondent lacks the necessary information and/or experience with which to form an attitude. Such circumstances would presumably yield quick first-stage NO responses. In contrast, second-stage NO responses could occur because of ambivalence. That is, some respondents may know a great deal about an object and/or have strong feelings toward it, but their thoughts and/or feelings may be highly contradictory, making it difficult to select a single response.

It also seems possible that NO responses can result at what might be considered a third stage, the point at which respondents attempt to translate their retrieved judgments onto the response choices offered by a question. For example, a respondent may know approximately where he or she falls on an attitude scale (e.g., around 6 or 7 on a 1–7 scale), but because of ambiguity in the meaning of the scale points or of his or her internal attitudinal cues, he or she may be unsure of exactly which point to choose, yielding a NO response. Or a respondent who has some information about an object, has a neutral overall orientation toward it, and is asked a question without a neutral response option might say NO because the answer he or she would like to give has not been conferred legitimacy. A respondent might also realize that the answer implied by the retrieved information will portray an undesirable image of himself or herself, so he or she will choose to say NO instead. Or a respondent may be concerned that he or she does not know enough about the object to defend an opinion toward it, so that opinion may be withheld rather than reported.

Finally, it seems possible that some NO responses occur at a prefirst stage, before respondents have even begun to attempt to retrieve relevant information. For example, if a respondent does not understand the question being asked and is unwilling to answer until its meaning is clarified, he or she might respond "I don't know" (see, e.g., Fonda, 1951). Or if a person is unwilling to expend the cognitive effort required by a memory search, he or she may choose to satisfice by selecting a NO response option (Krosnick, 1991). There is in fact evidence that some NO responses occur for all of these reasons. But as we shall see, NO responses are apparently only very rarely due to complete lack of information and indeed are rarely due to lacking an opinion. So reviewing this literature will show why legitimating NO responses is not a desirable way to improve data quality.

Ambivalence and Question Ambiguity. A number of studies have attempted to identify the reasons for NO responses and have found that genuine lack of opinion apparently predominates. For example, Smith (1984) examined two surveys in which respondents were offered opportunities to say that they had no opinion on a political issue, that they had an opinion but that they were "not sure/it depends," or that they had an opinion but "didn't know" how to express it. Of the responses to 15 items in these categories in one survey, 61% were "no opinion," 34% were "not sure/it depends," and 5% were "don't know." In another survey, the comparable figures were 53%, 41%, and 6%, respectively. Duncan and Stenbeck (1988) found the ratios of "no opinion" to "not sure/it depends" answers in surveys varied significantly across items from 3:1 to 1:1. But "not sure/it depends" never outnumbered

"no opinion" responses. Ehrlich (1964) found that 77% of NOs occurred because of lack of interest in or information or thought about the topic, 7% of nonsubstantive responses indicated ambivalence, and 16% indicated that the survey question was too crude to capture the complexity of respondents' views. And Klopfer and Madden (1980) found that lack of engagement was more commonly responsible for NO responses regarding going to church on Sundays than were ambivalence or uncertainty.

However, in other instances, ambivalence or expression problems apparently generated the most NO responses. For example, Klopfer and Madden (1980) found that ambivalence was more often responsible for NOs regarding capital punishment than were lack of engagement or uncertainty, as did Coombs and Coombs (1976).

Faulkenberry and Mason (1978) found that NO responses can sometimes predominantly reflect lack of understanding of the question being asked. These investigators had interviewers note whether nonsubstantive responses occurred when a respondent either understood or did not understand a question about energy generation. Fully 55% of the NO responses were said to have occurred when respondents did not understand the question. Along similar lines, Schaeffer and Bradburn (1989) found that some respondents gave NO responses to a question (about how stressful it would be for them to put another person in a nursing home) because they could not accept the premise of the question (i.e., they would ever do such a thing). Thus, if questions were written so that respondents could better understand them or if they did not require inappropriate presumptions, NO rates might be decreased.

In sum, NOs can sometimes reflect lack of information about or interest in an issue, just as one would hope, but such responses can also occur because respondents have ambivalent feelings on an issue or because the question being asked is not presented sufficiently clearly. Perhaps omitting NO options from questions, thereby compelling people to offer opinions, yields answers that are reasonably stable and meaningful.

Satisficing. Another possible explanation for the fact that NO filters do not consistently improve data quality is satisficing (Krosnick, 1991). According to this perspective, people have many attitudes that are best labeled "latent," meaning that they are not immediately aware of holding those opinions when asked. Instead, the bases of those opinions reside in memory, and people can retrieve those bases and integrate them to yield overall attitude reports (a process called "optimizing"), but doing so requires significant cognitive effort. When people are disposed not to do this work and instead prefer to shortcut the effort they devote in generating answers, they will attempt to satisfice by looking for cues in a question that point to an answer that will appear to be acceptable and sensible but that requires little effort to select. A NO option constitutes just such a cue and may therefore encourage satisficing, whereas omission of the NO option might instead lead respondents to do the cognitive work necessary to retrieve relevant information from memory and report their "latent" opinions.

This perspective suggests that NO options should be especially likely to attract

respondents under the conditions thought to foster satisficing: low ability to optimize, low motivation to do so, or high task difficulty. And consistent with this reasoning, as was discussed above, NO filters attract respondents low in educational attainment (an indirect index of cognitive skills) and low on more direct assessments of cognitive skills, as well as respondents with relatively little knowledge and exposure to information on the issue. Thus, evidence that can be viewed as consistent with the notion that NO responses are valid is also consistent with the notion that NO responses reflect satisficing.

Other evidence reviewed above can also be viewed in this light as well. For example, NO responses are especially common among people for whom an issue is low in personal importance, of little interest, and arouses little affective involvement, and this may be because of lowered motivation to optimize under these conditions. Furthermore, people are especially likely to say NO when they feel they lack the ability to formulate informed opinions (i.e., subjective competence), and when they feel there is little value in formulating such opinions (i.e., demand for opinionation). These associations can be conceived of as arising at the time of attitude measurement: low motivation inhibits a person from drawing on knowledge available in memory to formulate and carefully report a substantive opinion on an issue.

All of this evidence is consistent with the satisficing view of NO responses, but it is also consistent with the notion that these responses reflect optimizing. More difficult to interpret in this way, however, is evidence that NO responses are more likely when questions appear later in a questionnaire, at which point motivation is presumably waning. For example, Ferber (1966), Dickinson and Kirzner (1985), Ying (1989), and Culpepper et al. (1992) found that failure to answer an item increased significantly for later questionnaire items (c.f., Craig and McCann, 1978). Also consistent with this perspective are demonstrations that NO responses become increasingly common as questions become more difficult to answer. Although Nuckols (1949) found that questions that were more difficult to understand (because of language complexity) were no more likely to attract NO responses, Klare (1950) and Converse (1976) did find more NO responses for more difficult questions. Furthermore, Converse (1976) found that questions containing long explanations of an issue or requiring respondents to predict the future had higher NO rates than questions with shorter explanations of the issue and ones requiring descriptions of the past or present, especially for respondents with less education.

Converse (1976) also found that NO rates were higher for dichotomous questions than for politimous questions, presumably because the former did not allow respondents an easy opportunity to describe moderate or neutral opinions. In a study that supported this interpretation, Kalton et al. (1980) asked some respondents dichotomous opinion questions (e.g., "Compared with most other people, do you know more or do you know less about how to treat minor ailments?"), where a middle alternative was sensible (e.g., "about the same as most people") but not offered. Not surprisingly, a notable number of respondents declined to provide substantive opinions, and offering the middle alternative explicitly to other respondents signifi-cantly decreased the frequency of NO responses.

Additional evidence consistent with the satisficing perspective comes from a study by Houston and Nevin (1977). These investigators experimentally manipulated the apparent sponsor of a mail questionnaire, either the University of Wisconsin or a small local market research firm. Also, respondents received one of three different appeals for participation, emphasizing enhanced understanding, helping the sponsor, or personal gain for the respondent. NO responses were equivalently frequent across the conditions except when the sponsor was the University and the instructions emphasized understanding, in which case NO responses were notably less frequent. Thus, the match of a prestigious sponsor and a harmonious purpose apparently enhanced respondent motivation and decreased NO responses.

The use of incentives (money or a pen) to enhance response rates for mail questionnaires has also been found to enhance NO rates (Hansen, 1980). Hansen reasoned that when the incentives were not provided, respondents believed that they were intrinsically motivated to complete the questionnaire, whereas people who received the incentives felt they were completing the questionnaire only because they had been given the gifts. A study by McDaniel and Rao (1980) suggests that this effect can be eliminated and in fact reversed by a slight shift in the wording of the explanation for the gift. Instead of simply offering it, these investigators emphasized how minimal the gift was: "I know it's not much, but please accept this new quarter as just a small token of my appreciation for your assistance." This approach presumably minimizes a person's ability to attribute completing the questionnaire to the reward, because it is so small and therefore appears to a genuine expression of gratitude.

A final set of evidence consistent with the satisficing perspective involves mode effects. It seems likely that interviewers can motivate respondents to optimize by creating a sense of accountability and by modeling their professional commitment to the task, and this seems more likely to occur during face-to-face interactions than during telephone interviews (where sense of accountability is likely to be lower, and nonverbal modeling is less likely to occur). Therefore, satisficing may be more likely to occur during telephone interviews. Consistent with this logic, various studies found that respondents said "don't know" significantly more often in telephone interviews than in face-to-face interviews (Aneshensel et al., 1982; Aquilino, 1992; Groves and Kahn, 1979; Herzog et al., 1983; Hochstim, 1962; Jordan et al., 1980; Kormendi, 1988; Locander and Burton, 1976; Schmiedeskamp, 1962; Siemiatycki, 1979), though one found no significant mode difference (Rogers, 1976).

Finally, an initially puzzling finding regarding the relation of personality and NO responses is understandable in light of the satisficing perspective. People who are especially trusting of others might seem inclined to conform to the format of a question, offering a NO response only when it is offered. Surprisingly, however, the impact of NO filters is greater for people low in interpersonal trust (Bishop, Oldendick, Tuchfarber, and Bennett, 1980). This may be because the deceit involved in satisficing (i.e., pretending that a response is meaningful when it is not) is most likely to be comfortable to individuals who generally do not trust others to be honest with them, either.

Intimidation. Another reason why NO filters discourage reporting of real attitudes was identified by Hippler and Schwarz (1989). These investigators proposed that strongly worded NO filters might suggest to respondents that a great deal of knowledge is required to answer an attitude question and thereby intimidate people who feel they might not be able to adequately justify their opinions. Consistent with this reasoning, Hippler and Schwarz (1989) found that respondents inferred from the presence and strength of a NO filter that follow-up questioning would be more extensive, would require more knowledge, and would be more difficult. If respondents were motivated to avoid extensive questioning or were concerned that they couldn't defend whatever opinions they might offer, this might bias them toward a NO response.

Further evidence in line with this view was reported by McClendon (1986), who asked respondents how strongly they felt on each of three issues after asking their opinions on these issues using either filtered or unfiltered questions. Offering a NO option lowered reported attitude intensity, suggesting that the filter led people to express more tentative feelings on the issue. This effect carried over to subsequent items in the questionnaire that did not explicitly include a NO option: expressed strength of feeling was weaker for these items as the result of NO options having been offered in previous questions. Furthermore, including NO options in preceding questions increased the number of respondents who selected more tentative substantive opinion options in answering later questions as well (e.g., saying that the state and federal governments should be equally responsible for solving certain problems, instead of choosing one branch of government to have primary responsibility). Thus, NO filters may induce a temporary state of tentativeness in answers that reduces data quality.

A final set of evidence consistent with this perspective was reported by Berger and Sullivan (1970). These investigators gave some respondents special instructions intended to induce careful responding, while other respondents received no such instructions. These instructions stressed that respondents had been carefully selected as a part of a representative sample and that it was "very important that you answer each question." Surprisingly, these instructions were actually associated with increased NO rates, presumably because the stressed importance of the study led to greater reluctance to express opinions that might not be fully informed.

Self-Image Protection. Another reason why people might prefer to select NO options rather than offering meaningful opinions is the desire not to present a socially undesirable or unflattering image of oneself. Fonda (1951) found that people who frequently selected "?" responses in answering questions about their own personalities tended to evidence neurotic tendencies in answering Rorschach (1942) inkblot questions. Similarly, Rosenberg et al. (1955) found that people who selected "?" options more often in personality questionnaires characterized themselves as less agreeable, less cooperative, less self-confident, less free from neurotic tendencies, and possessing other more negative qualities on items they did answer substantively. Forty years later, Johanson et al. (1993) reported a comparable finding. Thus, the

self-evaluations respondents declined to make would presumably have been relatively unflattering as well (for similar results, see Chronbach, 1950, p.15; Kahn and Hadley, 1949).

Also consistent with this perspective are studies on mode differences in NO rates. Being interviewed by a person presumably creates a greater sense of social accountability than completing self-administered anonymous questionnaires, and people have been shown in much research to be more willing to disclose embarrassing or undesirable facts about themselves in anonymous self-administered questionnaires. Not surprisingly, then, Newton et al. (1982) found that NO responses were more common when respondents had to answer questions aloud to interviewers than when they could simply write their answers down anonymously. Similarly, Berger and Sullivan (1970) found higher NO rates when respondents were interviewed face-to-face than when they filled out self-administered questionnaires. And in a study by Houston and Jefferson (1975), NOs were more common when self-administered questionnaires identified the name of the respondent than when they did not. These results might have occurred because answering aloud to interviewers or in identified ways on paper would have revealed unflattering or undesirable views.

Taken together, these studies suggest that NO responses often result not from genuine lack of opinion but rather from ambivalence, question ambiguity, satisficing, intimidation, and self-protection. In each of these cases, there is something meaningful to be learned from pressing respondents to report their opinions. NO response options discourage people from doing so under these circumstances. This explains why data quality is not improved when such options are explicitly included in questions.

6.6 CONCLUSION

The essence of Converse's (1964) nonattitudes hypothesis seems unquestionable: Many people who report attitudes in surveys do not have deeply rooted preferences that shape their thinking and behavior. But offering a no-opinion response option does not seem to be an effective way to prevent reporting of weak opinions. In fact, because many real attitudes are apparently missed by offering such options, it seems unwise to use them. This is because the vast majority of NO responses are *not* due to completely lacking an attitude and instead result from a decision not to do the cognitive work necessary to report it, a decision not to reveal a potentially embarrassing attitude, ambivalence, or question ambiguity. This conclusion resonates loosely with a sizable literature in cognitive psychology on the "feeling of knowing" (e.g., Nelson et al., 1984; Schacter, 1983). This phenomenon occurs when a person fails to recall the answer to a question (e.g., "What is the capital of North Dakota?") but claims to be able to recognize the correct answer among an offered set of choices. Indeed, when people have this feeling of knowing, and the related "tip-of-the-tongue" phenomenon (Brown and McNeill, 1977), they indeed of-

ten do possess the required information in memory but temporarily cannot gain conscious access to it (see also Kornat and Lieblich, 1974). Thus, failure to give an answer does not mean people do not possess the answer, just as saying NO in answering a questionnaire often does not mean that the person possesses no information with which to make the required judgment. It therefore seems wise to encourage respondents to report whatever opinions they can.

PART II

Impacts of Survey Design on Nonresponse