Assertion Versus Interrogation Format in Opinion Surveys: Questions Enhance Thoughtful Responding

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ASSERTION VERSUS INTERROGATION FORMAT IN OPINION SURVEYS QUESTIONS ENHANCE THOUGHTFUL RESPONDING

RICHARD E. PETTY
GREG A. RENNIER AND JOHN T. CACIOPOPO

Abstract Two surveys on ostensibly new consumer products were administered in order to assess the impact of presenting opinion items in an interrogation versus an assertion format. In addition to manipulating the format of the opinion item, the background information about the product was varied so that it presented either a strong or a weak product attribute. In both surveys, opinions in response to the interrogation items were more polarized than those in response to the assertion items. These results suggest that the interrogation opinion format elicits more thoughtful responses than the assertion format.

Scholars of public opinion polling methods have long known that seemingly minor modifications in question wording and format could alter the pattern of responses. For example, in an early review of opinion methodology, McNemar (1946) concluded that

a variety of percentage variations can be produced by changing the wording and form of the question and by altering the response setup. Enough is now known concerning the possible variations associated with question-answer format to justify the conclusion that the typical poll results are subject to a variety of possible errors. (P. 367)

Although by the 1950s research had clearly shown that different question and response formats affected the distribution of opinions (see

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Cantril, 1944; Payne, 1951), few attempts were made to replicate the early findings or to understand the consequences of them. Recently, Schuman and Presser (1981) have reported an extensive and systematic program of research on question form, wording, and context. One of the key goals of this research program has been to identify some of the major variables that modify opinion poll results and to assess the reliability of the effects obtained. The work of Schuman and Presser and other contemporary researchers (e.g., Kalton, Collins, and Brook, 1978) is an important starting point in developing the science of opinion polling methodology. Once the major variables affecting poll results are identified, however, it becomes important to understand why these effects occur. As Schuman and Presser (1981) note in concluding their own series of studies, “What is needed most is theoretically directed research” (p. 313).

Investigators have recently begun to provide explanations for the different results produced by some of the variations in question wording and format. For example, Hippler and Schwarz (1986) studied why people are less likely to endorse survey items indicating that something should be “forbidden” rather than “not allowed.” Their research showed that one reason for the difference in endorsement was that people viewed “forbidding” something as indicating greater opposition (i.e., a more extreme position) than “not allowing” it. In short, Hippler and Schwartz provided a compelling theoretical rationale for a reliable cause of variation in survey results.

The goal of the present investigation is to provide a theoretical account of another reliable source of variation in surveys. Specifically, we employ a conceptual framework from social psychology to understand the effects of varying whether the items in a survey are worded as questions or as assertions. In a typical interrogation (question) format, respondents are provided with some information about an issue and are then asked a specific question. For example, in a January 1985 CBS/New York Times poll, people were asked to respond to the following item about the “star wars” defense program:

Ronald Reagan has proposed developing a defensive nuclear system in space that would destroy incoming missiles before they reach the United States, a system some people call “Star Wars.”

_Do you think such a system could work?_ [italics added for emphasis of interrogation format]

Responses: Yes (62%) No (23%) No Opinion (15%)

In a typical assertion format, respondents are provided with similar background information, but then are asked to indicate the extent to which they agree or disagree with a particular assertion. For example, the survey item above could be transformed into an assertion format by
replacing the final question with the statement "I think this system could work" and then asking respondents to rate their agreement. In a Harris survey of March 1985, for instance, respondents were provided with a brief description of the Reagan "star wars" system and were asked whether they agreed or disagreed with the following assertion.

The only way to avoid a nuclear war is to develop new weapons in space that can shoot down all nuclear missiles.1

Responses: Agree (44%) Disagree (52%) Not Sure (4%)

Of course, it is difficult to compare the results found for the typical assertion and interrogation format surveys because any differences in response to the survey items are not necessarily attributable to the difference in format, since the items differ in the information they convey and in the response alternatives they allow.

In their program of research on item formats, Schuman and Presser (1981) reported two controlled studies on the effects of the assertion versus interrogation format (i.e., item information was held constant and format was varied). Their hypothesis was that the assertion format would produce greater acquiescence than the interrogation format. In one study, however, the opposite effect was observed, and in the other study no difference was found. These results led them to conclude that "there is nothing special about agree–disagree assertions as distinct from interrogative forms that produces acquiescence" (p. 228).

As noted above, our goal here is to apply a conceptual framework from social psychology in order to better understand the effects of using assertions versus interrogations in opinion surveys. In particular, in the context of analyzing the effectiveness of persuasive communications, social psychologists have studied the effects of summarizing arguments as assertions or as questions. In an important early study, Zillmann (1972) had subjects listen to a trial in which the defense attorney's closing arguments were presented either completely in assertion form or with ten argument-condensing statements transformed to questions (e.g., "Johnny was a peaceful boy" to "Johnny was a peaceful boy, wasn't he?"). In this research, subjects who heard the question version of the speech recommended shorter prison sentences for the defendant than subjects who heard the assertion version. Zillmann argued that among other things, the use of the question format made the arguments appear stronger, and thus they produced greater acquiescence than the assertion format. Recall that Schuman and Presser, in contrast to Zillmann, hypothesized (but did not find) that assertions would produce more acquiescent responses than questions.

In a reanalysis of the use of questions versus assertions in persuasive

1. Both questions on star wars are reported by Graham and Kramer (1986).
communications, Petty, Cacioppo, and Heesacker (1981) hypothesized that the use of questions could motivate people to be more thoughtful in processing the arguments in the message, and that this enhanced elaboration could lead to more or less agreement depending upon the nature of the message arguments. Specifically, they proposed that people are often unwilling to devote much cognitive effort to thinking about many of the messages they receive daily, but that the use of argument-relevant questions in a message could enhance information processing. In order to test the view that the use of questions could enhance message processing, an experiment was conducted in which four different communications were employed. Each message argued that college seniors should be required to pass a comprehensive exam in their major area as a prerequisite for graduation; however, two of the messages contained arguments that were strong and compelling, whereas the other two contained arguments that were weak and spurious. One of the strong and one of the weak messages was an assertion version. In these messages, each of the major arguments ended with a summary statement in the form of an assertion (e.g., Thus, instituting a comprehensive exam would be an aid to those who seek admission to graduate and professional schools). In addition, one of the strong and one of the weak messages was an interrogation version. These messages were identical to the corresponding weak and strong assertion messages with the exception that six of the eight argument-summarizing statements were transformed into questions (e.g., Wouldn’t instituting a comprehensive exam be an aid to those who seek admission to graduate and professional schools?).

If posing the argument summaries as questions enhances thinking about the arguments, then attitudinal responses to the strong and weak messages should be more polarized when the messages contain questions than when they contain assertions. The use of questions should produce more extreme opinions because when the arguments are strong enhanced thinking should lead to a greater realization of the cogency of the message, but when the arguments are weak enhanced thinking should lead to a greater realization of the flaws in the message. The results provided support for this hypothesis. Attitudes on the topic following the communication were more extreme when the message arguments were summarized as questions rather than as assertions. Two replications of this study have been reported and have provided additional evidence for the view that the use of questions can enhance

2. In addition to manipulations of argument cogency and format, the personal relevance of the message was also varied in order to manipulate subjects’ natural motivation to process the message (see Petty and Cacioppo, 1979). As expected, the use of the questions enhanced message processing only when the message was low in relevance and the respondents’ motivation to think about the proposal was therefore rather low.
thinking about a persuasive communication (see Burnkrant and Howard, 1984; Swasy and Munch, 1985).

Just as people are often unmotivated to think about persuasive communications, so too may they sometimes be unwilling to devote their limited cognitive resources to thinking about the issues raised in opinion surveys. In the present research we test the hypothesis that the use of an interrogation format can enhance thinking about a survey item over that produced by an assertion format. In our study, subjects responded to a consumer survey which asked questions about some new products that were presumably in development. As frequently occurs in opinion surveys, each question provided a sentence or two of background information which was then followed by an assertion or a question (e.g., see the “star wars” question above). Importantly, the background information in the surveys was experimentally varied so that it provided either information that if thought about would tend to produce an agreement response (strong or cogent background statement) or information that if thought about would tend to produce a disagreement response (weak or specious background statement). If the use of the interrogation format increases cognitive deliberation, then opinion (agree/disagree) responses should be more polarized in response to the question than the assertion survey format.

Procedure

OVERVIEW

Ninety-one undergraduate students participated in the research by completing a survey about one of two consumer products. The two products were selected to be representative of products that would be of some relevance to the college student sample employed. On one day, 42 students completed a survey about a new disposable razor product, and on another day 49 students completed a survey about a

3. A consumer survey about new and unfamiliar products was deliberately selected in order to hold constant the amount of specific issue-relevant knowledge that respondents possessed.

4. Strong and weak pieces of background information were selected in pretesting. If the opinion items had been presented without the background statements, it would be difficult to determine if the interrogation format enhanced thinking over the assertion format because in the absence of the strong or weak background information, enhanced thinking could produce either opinion moderation (e.g., Linville, 1982) or polarization (e.g., Tesser and Leone, 1977). Opinion polarization is expected with thought if the dimensions of cognitive structure underlying the opinion are highly correlated, but moderation is more likely if these dimensions are unrelated (Millar and Tesser, 1986). Provision of the strong and weak background information on an unfamiliar topic was therefore a methodological tool that allowed assessment of the relative extent of thinking induced by the interrogation and statement formats (cf. Petty and Cacioppo, 1986).
new calculator. In each consumer survey, two variables were manipulated. First, some of the surveys employed an assertion format and others used an interrogation format. Second, some of the surveys presented strong background statements about the product and others presented weak background statements. Responses to all survey questions were made on 7-point agree–disagree scales. The questionnaires were completed in group sessions in a room that precluded visual and verbal contact. The surveys were distributed randomly to those present, and following completion of the questionnaire the respondents were debriefed, thanked, and dismissed.

CALCULATOR SURVEY

Four versions of the calculator survey were constructed. Each version contained four survey items about the new Yoshiko calculator. Importantly, each item provided a brief background statement about the product that was either strong (e.g., The Yoshiko calculator comes with a lifetime guarantee against any manufacturer's defect) or weak (e.g., Yoshiko calculators come in two colors and are designed with the fashion conscious college student in mind). These statements were followed either by an assertion (e.g., The Yoshiko calculator has desirable features) or a question (e.g., Does the Yoshiko calculator have desirable features?) to which subjects responded on identical agree–disagree scales. In addition to asking about "desirable features," the other questions and corresponding assertions were: (a) "Is the Yoshiko calculator economical?" versus "The Yoshiko calculator is economical"; (b) "Are Yoshiko calculators worth the cost?" versus "Yoshiko calculators are worth the cost"; and (c) "Is the Yoshiko calculator designed with your problems in mind?" versus "The Yoshiko calculator is designed with your problems in mind." Appendix A contains the wording of all survey items.

CALCULATOR SURVEY RESULTS

Responses to the four opinion items on the calculator survey were averaged and subjected to a 2 (background information: strong or weak) × 2 (item format: assertion or interrogation) analysis of variance. The average agreement scores and standard deviations for each condition are presented in the top portion of Table 1. The ANOVA produced main effects for both the background information and item format manipulations as well as a two-way interaction. Subjects indicated greater agreement that the product possessed a desirable feature when the background information was strong rather than weak, $F(1.45) = 86.79$, $p < .001$, and greater agreement in response to the interroga-
Table I. Average Agree/Disagree Responses as a Function of Questionnaire Format and Strength of Background Information

<table>
<thead>
<tr>
<th></th>
<th>Assertion Format</th>
<th>Interrogation Format</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strong Background</td>
<td>Weak Background</td>
</tr>
<tr>
<td>Calculator Survey</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opinions</td>
<td>4.75</td>
<td>2.50</td>
</tr>
<tr>
<td>Std. dev.</td>
<td>1.30</td>
<td>1.29</td>
</tr>
<tr>
<td>N</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>Razor Survey</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opinions</td>
<td>4.73</td>
<td>3.95</td>
</tr>
<tr>
<td>Std. dev.</td>
<td>1.31</td>
<td>0.79</td>
</tr>
<tr>
<td>N</td>
<td>10</td>
<td>11</td>
</tr>
</tbody>
</table>

Note: Opinion scores refer to average responses on four (calculator survey) or three (razor survey) 1-to-7 scales (strongly disagree–strongly agree).

tion than the assertion survey, $F(1,45) = 4.91$, $p < .03$. Of greatest interest, however, was the interaction, $F(1,45) = 4.53$, $p < .04$, which showed that agreement/disagreement responses were more extreme when opinions were elicited by the interrogation rather than the assertion format. Specifically, students expressed greater agreement that the product had a desirable feature in response to the interrogation than the assertion format when the background information was strong, but expressed greater disagreement that the product had a desirable feature in response to the interrogation than the assertion format when the background information was weak.

DISPOSABLE RAZOR SURVEY

The razor survey contained three survey items about the new Edge disposable razor. As in the calculator survey, each item provided a brief strong (e.g., direct comparison tests prove that the Edge razor gave 40% fewer nicks and cuts than the leading competitor) or weak (e.g., direct comparison tests prove that the Edge razor gave no more nicks and cuts than the leading competitor) background statement about the razor and then made an assertion or posed a question to which subjects were to respond on a 7-point agree–disagree scale. The following questions and assertions were employed: (a) "Doesn't Edge have desirable features?" versus "Edge has desirable features"; (b)
“Doesn’t Edge have the safety you want?” versus “Edge has the safety you want”; and (c) “Doesn’t Edge give the closest shave?” versus “Edge gives the closest shave.” Appendix B contains the wording for all survey items.

DISPOSABLE RAZOR RESULTS

As in the calculator survey, responses to the three items on the disposable razor survey were averaged and subjected to a $2 \times 2$ ANOVA. The average agreement scores and standard deviations for each condition are presented in the bottom portion of Table 1. The analysis revealed a main effect for background information and an information $\times$ item format interaction. The main effect, $F(1,38) = 24.91, p < .001$, indicated that, as expected, subjects showed greater agreement that the product possessed a desirable attribute when the background information was strong rather than weak. Importantly, the significant interaction, $F(1,38) = 6.10, p < .02$, replicated the pattern observed in the first survey. Again, opinion responses were more polarized when assessed via the interrogation rather than the assertion format.

Discussion

In two separate consumer surveys, respondents reported more polarized opinions when the questionnaires employed the interrogation rather than the assertion format. Figure 1 presents the data collapsed across surveys and depicts the opinion polarization that occurs with the use of the question format. These results provide additional evidence for the view that opinions in response to interrogation survey items may be different than opinions in response to assertion items even when background information and response format are held constant. Importantly, our results provide some evidence as to why different opinions may be obtained for the interrogation and assertion formats. By systematically varying the background information in setting up the question or assertion, we were able to show that people engaged in greater processing when responding to the interrogation rather than the assertion. When the background information had positive implications for the attitude object, the use of the interrogation format enhanced agreement (favorable) responses relative to the use of assertions. On the other hand, when the background information had negative implications for the attitude object, the use of the interroga-

5. Two different products (calculator and razor) and two different forms of interrogation (i.e., does vs. doesn’t) were employed in the two studies in order to assess the generality of the effects observed. Of course, additional confidence in the generality of our results requires replication on different populations, issues, settings, etc.
Figure 1. Average Opinion Responses to Two Surveys Elicited by an Assertion or an Interrogation Format

Assertion format enhanced disagreement (unfavorable) responses relative to the use of assertions.

What are some of the implications of our analysis for opinion surveys? Consider a June 1980 Roper poll on keeping or removing the income restriction on Social Security recipients. The background information provided to respondents included the following:

Some people say that this [keeping the income restriction] is good because it allows more jobs for younger people and keeps down the cost of Social Security. Others say that this limit on earnings should be removed because a person cannot live on Social Security income alone. (Shapiro and Smith, 1985:567)

In the Roper survey, this information was followed by a specific question, but in other surveys on the same topic an assertion format was used. Since the background information appears to indicate an advantage to young people in keeping the income restriction but a disadvantage to elderly persons, enhanced thinking about the issue induced with

6. See Shapiro and Smith (1985) for further information on the Roper poll and others on the social security issue.
the interrogation format might produce greater differences in opinion between younger and older respondents than would an opinion assessment using the assertion format.

Although the present research clearly suggests that the interrogative format is capable of producing greater item-relevant thinking than the assertion format, our data do not address the specific limitations on this effect. Research in social psychology suggests that the use of questions is most likely to enhance thinking when motivation to think about the issue would normally be low (such as when the issue is relatively low in personal relevance—Petty, Cacioppo, and Heesacker, 1981), but ability and opportunity to think about the issue are relatively high (such as when the questions are posed in print rather than verbally—Burnkrant and Howard, 1984).

A second interesting issue concerns which format, interrogation or assertion, is the more desirable one. On the surface, at least, it might appear that the format that enhances thinking should be preferred. One important reason for this is that thoughtful attitudes are more likely to be predictive of behavior (e.g., Cacioppo et al., 1986; see Petty and Cacioppo, 1986, for a review). A major goal of opinion surveys, of course, is to predict behaviors such as purchasing new products or voting for various candidates and political propositions.

Interestingly, recent social psychological research has suggested circumstances in which thinking about one's attitude can actually reduce attitude–behavior correspondence (Wilson et al., 1984). This phenomenon appears to be most likely to occur when the attitude object has a substantial affective basis, but thinking about the issue occurs primarily along cognitive lines. If opinion expression follows an examination of the cognitive basis of the attitude, the opinion will likely underestimate the affective component and be a poor predictor of behavior. For example, attitudes toward politicians may have both affective components (e.g., does the politician induce happiness, anger, etc.) and cognitive components (e.g., will the politician provide strong leadership, solve economic problems, etc.) (see Abelson et al., 1982). To the extent that typical political polls focus on cognitive rather than affective dimensions, using the interrogative survey format may exacerbate the tendency to minimize the role of affect in evaluations of candidates. This, of course, could produce evaluative responses with reduced power to predict behavior. The consequences of opinions elicited with different question formats is a promising area of future investigation.
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Appendix A: Yoshiko Calculator

Below are four opinion items concerning a new solar powered calculator by Yoshiko. Each item provides some background information about the product and is followed by a statement (question). Please indicate your extent of agreement with each statement (question) on the scale that follows. [Note: A 1-to-7 scale indicating strongly disagree (1)—strongly agree (7) followed each item but is not included here.]

Strong Background Information

1. Since the Yoshiko calculator is solar powered, you’ll never again experience battery rundown if you forget to turn your calculator off. You’ll never have to buy batteries again.
   The Yoshiko calculator is economical.
   or
   Is the Yoshiko calculator economical?

2. The Yoshiko calculator comes with a lifetime guarantee against any manufacturer’s defect. If for any reason any part of the Yoshiko calculator should break or malfunction, just return it to your nearest dealer for an immediate replacement.
   Yoshiko calculators are worth the cost.
   or
   Are Yoshiko calculators worth the cost?

3. One of the most annoying problems with regular calculators is that all of the data is lost once the power is switched off. With the Yoshiko calculator, a new “bubble” memory chip will retain specified data in a permanent memory storage area.
   The Yoshiko calculator has desirable features.
   or
   Does the Yoshiko calculator have desirable features?

4. You’re sitting in a classroom taking a test when your calculator stops working. The Yoshiko calculator will never experience battery failure during an important test since it can run off the energy produced by electric lights.
   The Yoshiko calculator is designed with your problems in mind.
   or
   Is the Yoshiko calculator designed with your problems in mind?

Weak Background Information

1. Although the Yoshiko calculator costs more than most other calculators, it possesses many functional features. Included on Yoshiko calculators are addition, subtraction, multiplication, and division keys, and an optional square root key.
The Yoshiko calculator is economical.

*or*

Is the Yoshiko calculator economical?

2. Yoshiko calculators come in two colors and are designed with the fashion-conscious college student in mind. Although these colors substantially increase the manufacturing cost of the Yoshiko calculator, it is well worth the subsequent price increase.

Yoshiko calculators are worth the cost.

*or*

Are Yoshiko calculators worth the cost?

3. In addition to all the attractive features, the Yoshiko company cares about the shipping process. In order to decrease calculator damage, the Yoshiko company ships all of its calculators in high-strength styrofoam.

The Yoshiko calculator has desirable features.

*or*

Does the Yoshiko calculator have desirable features?

4. You're alone and by yourself, but because of the many fantastic features of the Yoshiko calculator, you have an instant conversation piece. Consequently, you'll make new friends and be invited to more parties than ever before.

The Yoshiko calculator is designed with your problems in mind.

*or*

Is the Yoshiko calculator designed with your problems in mind?

**Appendix B: Edge Razor**

Below are three opinion items concerning a new razor by Edge. Each item provides some background information about the product and is followed by a statement (question). Please indicate your extent of agreement with each statement (question) on the scale that follows. [Note: A 1-to-7 scale indicating strongly disagree (1)—strongly agree (7) followed each item but is not included here.]

**STRONG BACKGROUND INFORMATION**

1. Safety is always important when using a potentially dangerous item. With this in mind, direct comparison tests prove that the Edge razor gave 40% fewer nicks and cuts than the leading competitor.

Edge has the safety you want.

*or*

Doesn't Edge have the safety you want?
2. Independent tests prove that Edge is the sharpest and smoothest razor. The Edge razor eliminates 98% of all facial and leg hair stubble, which is 100% more effective than the leading competitor. Edge gives the closest shave.
   
or
   Doesn't Edge give the closest shave?

3. Your body curves are sometimes difficult to shave when using an ordinary razor, but not with Edge. Five different razor head positions and a new improved curved handle make the Edge razor glide easily over those tough-to-shave areas (e.g., chin and knee). Edge has desirable features.
   
or
   Doesn't Edge have desirable features?

WEAK BACKGROUND INFORMATION

1. Safety is always important when using a potentially dangerous item. With this in mind, direct comparison tests prove that the Edge razor gave no more nicks and cuts than the leading competitor. Edge has the safety you want.
   
or
   Doesn't Edge have the safety you want?

2. Independent tests prove that Edge is one of the sharpest and smoothest razors. The Edge razor eliminates 35% of all facial and leg hair stubble, which is at least as effective as the leading competitor. Edge gives the closest shave.
   
or
   Doesn't Edge give the closest shave?

3. Your body curves are sometimes difficult to shave when using an ordinary razor, but not with Edge. The permanently placed razor and straight handle make the Edge razor useful in all but the most difficult to shave areas (e.g., chin and knee). Edge has desirable features.
   
or
   Doesn't Edge have desirable features?