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Researchers and practitioners alike frequently survey consumers to gain insights into their attitudes, preferences, and beliefs. The authors propose a potentially pervasive, but as of yet unidentified, source of bias in survey responding. Specifically, they propose that respondents' answers to questions might sometimes reflect attitudes that respondents want to convey but that the researcher has not asked about, a phenomenon termed "response substitution." The authors examine this proposition in a series of three experiments that demonstrate the phenomenon, provide support for the process account, and identify boundary conditions. They also discuss general theoretical, methodological, and practical implications as well as specific implications for research on attitudes and contingent valuation.

Keywords: response substitution, survey bias, attitudes, self-expression, contingent valuation

Answering the Unasked Question: Response Substitution in Consumer Surveys

Researchers and practitioners frequently rely on surveys to gain insights into consumers' attitudes, preferences, and beliefs. These results have important implications ranging from theory building to the decision to invest in a million-dollar rebranding effort. As such, separating noise and bias from the survey is of paramount importance. In this article, we examine a novel, and potentially pervasive, bias in survey responding. We propose that respondents often provide answers to questions that reflect attitudes or beliefs they want to convey but the researcher has not asked about, a phenomenon we term "response substitution."

To illustrate, consider a consumer, Sherry, who receives poor service at a restaurant. That experience might lead Sherry to dislike the restaurant. If Sherry is subsequently asked whether the restaurant has good food, she might use this question as an opportunity to convey her negative attitude toward the restaurant, even if she believes that the restaurant actually has good food. Because the question does not ask about the service at the restaurant, the only

means to voice her general disapproval of the service is by being negative toward the food. That is, she is not responding simply to the question whether the food is good but perceives the question also as an opportunity to express her negative attitude toward the restaurant due to the service.

However, if Sherry is first asked whether the restaurant provides good service and then is asked whether the restaurant has good food, expressing a negative attitude in the case of the good food would be redundant. Instead, having had the opportunity to voice her attitude toward the service, she might now be more likely to respond to the specific attribute being asked about rather than using the question as a substitute for providing her attitude toward the service.

As this example illustrates, researchers and marketing practitioners might misconstrue the meaning of respondents' answers to their questions if respondents attempt to express attitudes or beliefs that the researchers have not asked about. Moreover, because all surveys are constrained in the number of questions that can be asked, questions that individual respondents view as relevant to the topic being surveyed might often be omitted from surveys, indicating that response substitution could be a pervasive phenomenon. For example, conjoint analysis surveys necessarily limit the number of attributes that respondents are asked to rate, suggesting that attributes that individual respondents view as relevant are often omitted. We discuss the theoretical background to this issue in the context of prior research on consumer response to surveys and the need for self-

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expression and then examine the possibility of response substitution in a series of three experiments.

THEORETICAL BACKGROUND

Sources of Survey Bias

Consumer responses to surveys are often not a bona fide pipeline to consumers' true attitudes or beliefs. Early research found that self-reports were susceptible to motivated responding, including demand characteristics (Orne 1962) and impression management (Tedeschi, Schlenker, and Bonoma 1971). More recent research has reinforced the findings of survey susceptibility to impression management, finding, for example, that respondents often fail to report that they engaged in uncouth behavior, such as cheating on social security—even if their responses are anonymous and there is no threat of penalty (Cruyff et al. 2008).

Failure to interpret questions correctly is another source of survey bias. Interpretation error is likely to arise when question wording or scale labeling violates the norms of everyday conversation (Krosnick, Li, and Lehman 1990; Schwarz 1996). To illustrate, Krosnick, Li, and Lehman (1990) find that respondents tend to assume that researchers provide less important background information at the beginning of a question and more important foreground information at the end of a question, leading them to place more weight on the latter part of the question to conform to their perception of the researchers' intentions.

"Satisficing" also compromises survey responding. Satisficing refers to strategies that respondents use in an attempt to minimize their response effort (Krosnick 1991). Satisficing might manifest in less reflection about a question's meaning, a less exhaustive search for relevant information in memory, more heedless synthesis of information, and more careless response selection (Krosnick 1991, 1999). More severely, respondents might expend no effort at all toward question comprehension, information retrieval, or evaluation and instead might simply respond to wording cues or even arbitrarily.

Response Substitution

As we noted, response substitution refers to respondents' providing an answer to a question that reflects attitudes or beliefs that they want to convey but that the researcher has not asked about (i.e., the attitudes or beliefs that respondents want to share are substituted for the question response). The notion of response substitution introduces a markedly different source of bias than those previously mentioned. In contrast with interpretation error, response substitution reflects an understanding of the question but a tendency to use the question to convey additional information that is not requested. Furthermore, in contrast with sources of bias that involve a lack of motivation to engage in effortful responding (i.e., satisficing), people engaging in response substitution might actually be motivated to engage in effortful responding, just not solely to the question being asked. Finally, in contrast with other forms of motivated responding (e.g., impression management, demand effects), people engaging in response substitution are not motivated to provide more normatively "appropriate" answers to the questions being asked but rather to address questions or share information they view as more "relevant."

Need for Self-Expression

Why would response substitution occur? A large body of literature suggests that people have a need to express themselves. This is particularly true in individualist cultures, such as the United States (Kim and Markus 2002). Consistent with a need for self-expression, consumer research literature shows that people seek to express their identity through the products and brands they buy and own (Aaker 1999; Belk 1988; Berger and Heath 2008; Rucker and Galinsky 2008). Research has also found that consumers seek to express themselves through the choices they make (Aaker and Schmitt 2001; Kim and Drolet 2003). For example, Kim and Drolet (2003) find that people who valued uniqueness chose to express this through greater variety seeking in choice. Conversely, research has found that suppressing emotions and thoughts, particularly those related to anger or distress, can lead to aversive emotional, physiological, and health outcomes (Goldin et al. 2008; Pennebaker 1997).

Although consumer researchers have examined consumers' need to express their self-concept through possessions, surprisingly little empirical work has examined people's need to express their attitudes and the consequences of this. Traditionally, attitudes have been thought of as functional, acting as guides for information processing, perception, and behavior (Fazio and Petty 2007). That is, attitudes provide a framework that eases a person's decision making. However, the literature also highlights that the attitudes people hold serve to define (Eagly and Chaiken 1993; Olson and Zanna 1993; Shavitt 1990) and protect (Herek 1987; Shavitt 1990) their self-concept. For example, a person might hold a positive attitude toward volunteerism to define his or her self-concept (Olson and Zanna 1993) or a negative attitude toward minority groups to enhance his or her self-concept (Herek 1987).

Given the importance of attitudes and their relationship to the self-concept, we propose that consumers may have a need to express themselves through their attitudes just as they have a need to express themselves through their possessions. We further propose that people might have a need to explicitly express their attitudes—even when they are not asked about them. This is consistent with prior research showing that as the importance of an attitude increases, people are more likely to engage in attitude-expressive behaviors (Visser, Krosnick, and Simmons 2003). In summary, people might engage in response substitution, in which they use questions that do not explicitly ask about attitudes that are important to them as an opportunity to express those attitudes. We examine this proposition in a series of three experiments in the context of consumers' responses to surveys.

EXPERIMENT 1: ANSWERING THE UNASKED QUESTION

Experiment 1 examines our proposed response substitution effect, in which people attempt to express attitudes or beliefs that they are not asked about in response to questions that they are asked about. In particular, Experiment 1 examines whether providing respondents with information depicting a person as wasteful affects their evaluation of that person's intelligence as a function of whether they have previously been asked about the person's wastefulness.

Recent research has found that people are averse to waste even when that waste can be justified in terms of obtaining desired utility (Bolton and Alba 2008). For example, a person who spends \$250 on a fondue set that is used for an enjoyable dinner party and then is never used again is perceived as wasteful, whereas a person who spends the same amount of money at a restaurant for the same amount of enjoyment is not perceived as wasteful.

Of relevance to the current research, Bolton and Alba (2008) also find that people who are perceived as wasteful are rated as less intelligent, an effect mediated by the perceived wastefulness. However, a question arises as to whether the intelligence rating is due to perceptions of intelligence being affected by perceptions of wastefulness or whether people are engaging in response substitution in which they are attempting to convey a negative attitude toward a wasteful person by saying that they are not intelligent. Indeed, in Bolton and Alba's studies, intelligence was always rated before wastefulness was rated. This suggests that people could have been expressing a negative attitude toward a wasteful person by rating them as less intelligent because they did not have an opportunity to express their negative attitude about the person or their wastefulness before rating intelligence.

To the extent that people are engaging in response substitution, we predicted that respondents would evaluate a person depicted as wasteful to be less intelligent when they had not previously rated the person's wastefulness, consistent with Bolton and Alba's (2008) study. In contrast, if respondents are first given the opportunity to express that they have a negative attitude toward the person's wastefulness, there should be no need for response substitution. That is, respondents would have already conveyed their attitude and thus could focus on answering only the question asked in subsequent questions. Consequently, if wastefulness is assessed first, there should be no effect of wastefulness on perceived intelligence.

Method

Experiment 1 was a pen-and-paper-based study and had a 2 (scenario: waste versus no waste) \times 2 (question order: intelligence first versus wastefulness first) between-subjects design. One hundred thirty-seven undergraduate students at a large U.S. university were randomly assigned to conditions. Participants in the waste scenario condition read the following depiction of a person as wasteful (adopted from Bolton and Alba 2008):

Anne has a dinner party for some friends. She buys a fondue set and ingredients for a fondue dinner. The dinner party costs her \$250. Her friends enjoy the meal and have a good time. She never uses the fondue set again.

Participants in the no-waste scenario condition read a depiction of a person as not wasteful (also adopted from Bolton and Alba 2008):

Jane has a dinner party for some friends. She reserves dinner at a fondue restaurant. The dinner party costs her \$250. Her friends enjoy the meal and have a good time.

All participants then rated the person depicted in the scenario on the attributes of intelligence and wastefulness. For the intelligence rating, participants read the phrase "Jane/

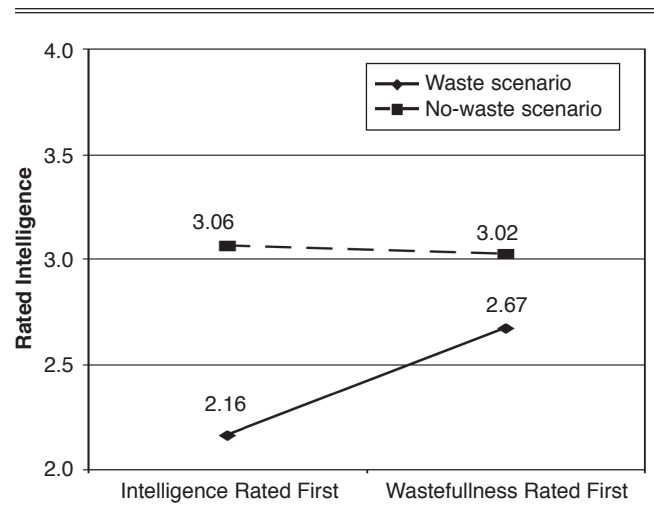
Anne is intelligent" and provided their rating on a five-point scale (1 = "disagree," and 5 = "agree"). For the wastefulness rating, participants read the phrase "Jane/Anne is wasteful" and provided their rating on a similar scale. Participants in the intelligence-first conditions rated the person's intelligence and, on the next page, rated the person's wastefulness. Participants in the wastefulness-first conditions instead rated the two attributes in the opposite order.

Results

Consistent with our scenario manipulation, ratings of the person's wastefulness were higher in the waste condition ($M = 3.67$, $SD = .96$) than in the no-waste condition ($M = 2.76$, $SD = .86$; $t(135) = 5.89$, $p < .001$). Furthermore, ratings of the person's intelligence were lower in the waste condition ($M = 2.43$, $SD = .78$) than in the no-waste condition ($M = 3.04$, $SD = .75$; $t(135) = 4.66$, $p < .001$). More pertinent to our proposition were the effects of question order on ratings of intelligence. As Figure 1 depicts, there was a significant question order \times waste condition interaction ($F(1, 133) = 4.39$, $p = .04$). The data show that when respondents were asked to rate the intelligence of the person in the waste condition, they rated the person as more intelligent when the intelligence question was asked after wastefulness was rated ($M = 2.67$, $SD = .85$) than when the wasteful question followed the intelligence question ($M = 2.16$, $SD = .73$; $t(65) = 2.76$, $p < .01$). In the no-waste condition, whether intelligence or wastefulness was rated first did not influence respondents' ratings of the person's intelligence ($M = 3.06$, $SD = .70$ versus $M = 3.02$, $SD = .80$; $t < 1$).¹

¹Although these results suggest that some of the influence of wastefulness on ratings of intelligence is due to response substitution, they do not preclude Bolton and Alba's (2008) claim that wastefulness influences perceptions of intelligence. Indeed, ratings of the person's intelligence in the waste condition were lower than those of the person in the no-waste condition regardless of whether intelligence ratings preceded ($M = 2.16$, $SD = .73$ versus $M = 3.06$, $SD = .70$; $t(62) = 5.00$, $p < .001$) or followed ($M = 2.67$, $SD = .85$ versus $M = 3.02$, $SD = .80$; $t(71) = 1.98$, $p = .05$) wastefulness ratings.

Figure 1
INTELLIGENCE RATINGS IN THE WASTE VERSUS NO-WASTE SCENARIO WHEN INTELLIGENCE IS RATED BEFORE VERSUS AFTER WASTEFULNESS (EXPERIMENT 1)



A question arises as to whether respondents rated intelligence more favorably in the waste conditions when intelligence ratings followed wastefulness because of anchoring. That is, did respondents anchor on the high wastefulness rating, thus leading to a high intelligence rating when intelligence ratings followed wastefulness ratings in the waste conditions? If this were the case, we should expect to observe similar effects for question order on wastefulness as we do for intelligence. That is, if anchoring accounts for our findings, wastefulness should be rated lower when it follows ratings of intelligence than when wastefulness ratings precede intelligence ratings in the waste conditions. However, unlike in the case of intelligence, ratings of wastefulness were not affected by whether it followed or preceded ratings of intelligence in either the waste scenario ($M = 3.71$, $SD = .97$ versus $M = 3.64$, $SD = .96$; $t < 1$) or the no-waste scenario ($M = 2.85$, $SD = .87$ versus $M = 2.68$, $SD = .85$; $t < 1$). This suggests that anchoring is less likely to account for the findings of Experiment 1.

Discussion

In Experiment 1, we found that respondents who read a depiction of a wasteful person rated that person to be less intelligent when they rated intelligence before they rated wastefulness. This pattern of data is consistent with response substitution because wastefulness led to more negative perceptions of intelligence when participants did not have an opportunity to provide their attitude toward wastefulness. When wastefulness was asked about first, participants were able to express their attitude and thus had no need to do so when asked about intelligence, thus reducing the negative effect occurring from response substitution.

Of note, our findings cannot be explained by the well-known halo effect—that is, people's tendency to judge an object or person toward whom they hold a general negative attitude more negatively on other attributes (Asch 1946; Kelley 1950; Nisbett and Wilson 1977). For example, Kelley (1950) shows that traits that people evaluate first in other people, such as physical attractiveness, tend to influence their evaluations of seemingly unrelated traits that they judge subsequently, such as intelligence. In contrast, we found that providing a negative evaluation of wastefulness before evaluating intelligence actually leads to a more positive evaluation of intelligence, the opposite of what a halo account would predict.

Although the findings of Experiment 1 provide evidence that people attempt to express attitudes they are not asked about in response to questions, asking participants to rate intelligence before wastefulness might have led participants to infer that we really intended to ask about wastefulness when we asked about intelligence. That is, because the scenario depicting wastefulness did not provide clear diagnostic information about intelligence, participants might have assumed that the survey used intelligence as a comprehensive term that included wastefulness. This would not have been the case when participants rated wastefulness before intelligence, because that question order would have made apparent that we intended to ask about intelligence in addition to asking about wastefulness.

Experiment 2 attempts to rule out an alternative account related to the interpretation of the question in two ways. First, in Experiment 2, we examine whether the moral

behavior of a company influences consumer responses to questions about the company's product quality. Although product quality might be inferred from a company's morality, asking about product quality is unlikely to be viewed as an attempt by the researcher to ask about the company's moral behavior. Second, in Experiment 2, we manipulate participants' motivations to engage in response substitution using a manipulation that is unlikely to affect the interpretation of the question being asked. Specifically, we merely inform (or do not inform) participants that they will have an opportunity to express any additional thoughts they might have.

It is worthwhile at this point to discuss whether an attempt at punishment can provide an alternative explanation for the findings of Experiment 1. That is, it is possible that respondents provided negative responses to the intelligence question when they perceived the person as wasteful because they believed their answers might lead the recipient of the responses to punish the person whose traits were being evaluated. To address this explanation, in Experiment 2, we explicitly informed participants that their responses would have no consequences for the company being evaluated. Furthermore, we examined the response substitution effect in the context of both positively and negatively valenced attitudes.

Finally, in Experiment 2, we provide additional process insight into response substitution by examining whether the degree to which participants were motivated to express their attitudes might moderate the effect. Consistent with our account that respondents' needs to express their attitudes result in response substitution when the attitude they want to express is not asked about, we posited that participants whose attitude was particularly important to them would be more motivated to express their attitudes (see Visser, Krosnick, and Simmons 2003) and thus would exhibit a greater tendency to engage in response substitution.

EXPERIMENT 2

The main goals of Experiment 2 are to provide additional support for the idea of response substitution and to provide insights into the underlying process. In particular, Experiment 2 examines (1) whether informing participants that they will have an opportunity to provide additional thoughts after answering a survey question might attenuate response substitution effects and (2) the moderating role of participants' motivation to express their attitudes on response substitution.

We posited that explicitly giving participants the opportunity to provide additional thoughts after a survey question would attenuate the effect because it would offer them an alternative outlet to express their attitudes, obviating the need to engage in response substitution. In keeping with our process account of response substitution, if our effects are driven by a person's need to express his or her attitude, we predicted that response substitution would increase among participants whose attitude, and thus its expression, was particularly important to them. To increase the generalizability of Experiment 1's findings, we (1) examined response substitution in the context of both positive and negative attitudes; (2) examined response substitution in the context of a manipulation that influences whether people engage in response substitution when question order is held constant; (3) used a new dependent variable, product quality ratings; and (4) examined response substitution among the general population.

Method

We conducted Experiment 2 online and used a 2 (scenario: moral versus immoral) \times 2 (open-ended thoughts opportunity: present versus absent) \times (attitude importance) design, in which we manipulated scenario and open-ended thoughts opportunity between subjects and measured attitude importance. Six hundred twenty-three participants (74% female, mean age = 35 years) were recruited from an online subject pool of people from throughout the United States. Participants assigned to the moral scenario conditions read the following scenario:

The Heritage Company is a leading producer of toys and confectionary products, such as gum and candy. The company has recently been honored for donating toys to young children in relatively poor urban areas. The company also donates the majority of its profits to children's charities. The [chief executive officer] has personally attended many toy donation drives on his own time without seeking any publicity for his actions and has been heard remarking to friends that he just likes to see kids smile.

Participants assigned to the immoral scenario condition read the following scenario:

The Heritage Company is a leading producer of cigarettes and confectionary products, such as gum and candy. The company has recently been found guilty of marketing cigarettes to children as young as the eighth grade. The company was found to have been particularly aggressive in marketing cigarettes to children in relatively poor urban areas and the [chief executive officer] was caught on tape laughing about how children are stealing their parents' welfare payments to buy cigarettes.

Participants then viewed a picture of candy ostensibly produced by the Heritage Company and evaluated the quality of the candy on a seven-point scale ranging from "extremely low quality" (1) to "extremely high quality" (7). A pretest confirmed that participants interpreted the question to be asking about product quality and not about company moral behavior across all conditions. Before providing their product quality ratings, participants given an opportunity to provide open-ended thoughts about their answers received the following instruction: "There is also space below to provide any additional open-ended thoughts or comments you might have." Participants in all conditions were told that the survey responses were for research purposes only and would not be shared or in any way affect the company. A pretest confirmed that respondents did not believe that the company would be punished on account of their evaluations. After providing their product quality ratings, participants were given the opportunity to provide their open-ended thoughts.

Finally, participants were asked, "When you are aware of it, how important is a company's moral behavior in your decision to buy their products?" We reasoned that the more important a company's moral behavior was to participants, the more they would feel the need to express this attitude (see Visser, Krosnick, and Simmons 2003). Participants responded on a seven-point scale ranging from "not at all important" (1) to "extremely important" (7).

Results

To test the hypothesis of a scenario \times open-ended thoughts opportunity \times importance interaction, we mean-centered participants' importance ratings and dummy-coded the scenario and open-ended thoughts opportunity conditions (Aiken and West 1991; Irwin and McClelland 2003). As we predicted, there was a significant scenario \times open-ended thoughts opportunity \times importance interaction ($\beta = -.53$, $t = -3.89$, $p < .001$). To better understand this interaction, we examine the results separately for the moral and immoral conditions (see Figure 2).

In the moral scenario conditions, participants who were not informed that they would have an opportunity to express any additional thoughts provided a more favorable rating for the quality of the candy ($M = 4.43$, $SD = 1.25$) than participants who were informed that they would have such an opportunity ($M = 3.95$, $SD = 1.26$; $t(313) = 3.43$, $p < .001$), suggesting that they used the question to convey their generally positive attitude toward the company.

This main effect was further qualified by a significant open-ended thoughts opportunity \times importance interaction ($\beta = -.21$, $t = -2.41$, $p = .02$). We decomposed this interaction and performed simple slopes analyses using the procedures Aiken and West (1991) advocate. This resulted in a significant difference: Participants who attached greater importance to a company's moral behavior (i.e., 1 standard deviation above the mean) were more favorable toward the candy when they were not told that they would have an opportunity to express additional thoughts ($M = 5.04$) than when they were told that they would have such an opportunity ($M = 4.19$; $\beta = -.85$, $t = -4.5$, $p < .001$). There was no effect for participants who attached little importance to a company's moral behavior (i.e., 1 standard deviation below the mean) ($M = 3.90$ versus $M = 3.69$; $\beta = -.21$, $t = -1.10$, $p = .27$).

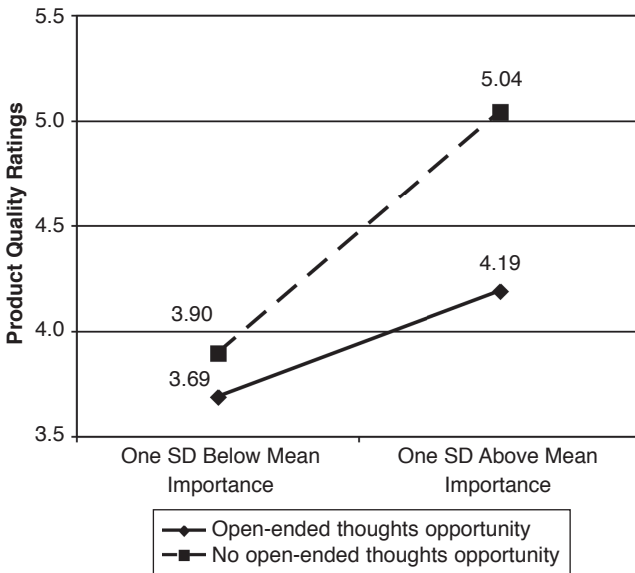
In the immoral scenario conditions, participants who were not informed that they would have an opportunity to express any additional thoughts provided a less favorable rating for the quality of the candy ($M = 2.55$, $SD = 1.19$) than participants who were informed that they would have such an opportunity ($M = 2.97$, $SD = 1.34$; $t(306) = 2.90$, $p < .01$). Furthermore, as in the moral scenario, there was a significant interaction between the opportunity to express additional thoughts and the importance of a company's moral behavior ($\beta = .32$, $t = 3.04$, $p < .01$). We decomposed this interaction and performed simple slopes analyses using the procedures Aiken and West (1991) advocate. Participants who attached greater importance to a company's moral behavior (1 standard deviation above the mean) rated the quality of the product lower when they were not told that they would have an opportunity to express additional thoughts ($M = 2.20$) than when they were told that they would have such an opportunity ($M = 3.04$; $\beta = .84$, $t = 4.17$, $p < .001$). However, no effect emerged for participants who attached little importance to a company's moral behavior ($M = 2.90$ versus $M = 2.93$, at 1 standard deviation below the mean; $\beta = -.03$, $t = -.15$, $p = .88$).

We also examined the content of participants' thoughts. Overall, 62% of respondents provided additional thoughts, with most respondents commenting on the company's moral behavior. Representative responses in the moral scenario condition included "I like the company, but the candy looks

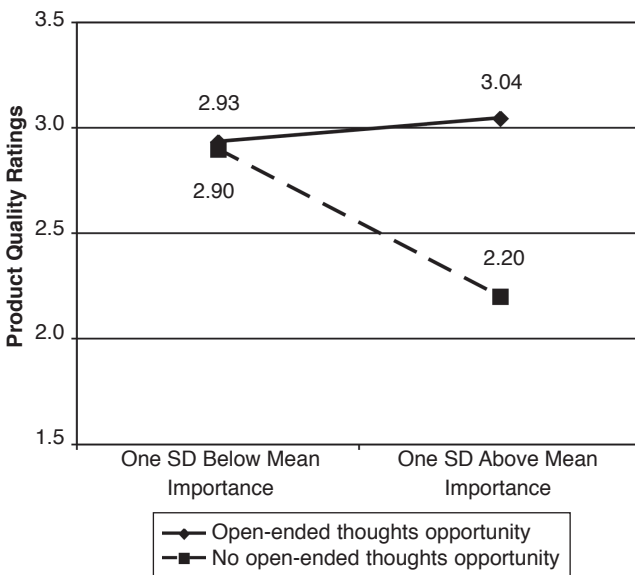
Figure 2

PRODUCT QUALITY RATINGS AS A FUNCTION OF THE MORAL COMPANY (TOP PANEL) AND IMMORAL COMPANY (BOTTOM PANEL) WHEN OPPORTUNITY TO PROVIDE OPEN-ENDED THOUGHTS IS PRESENT VERSUS ABSENT AT ONE STANDARD DEVIATION BELOW AND ABOVE MEAN PERSONAL IMPORTANCE (EXPERIMENT 2)

A: Product Quality Ratings as a Function of Moral Company Behavior



B: Product Quality Ratings as a Function of Immoral Company Behavior



like very typical hard candy” and “I might buy some because i [*sic*] like to support companies that donate their profits to charity.” Representative responses in the immoral scenario condition included “If I know this info about this company, I will not buy from the company. At all” and “I do not like the idea that this company is pushing cigarettes on young people.”

Discussion

The results of Experiment 2 suggest that participants engaged in response substitution by using the question about the product’s quality to express their attitude about the company’s morality. Importantly, consistent with the idea that this was due to response substitution, the effect was eliminated when participants were told that they would have a chance to provide additional open-ended thoughts—and the thoughts expressed by respondents tended to refer to the company’s moral behavior. Furthermore, consistent with the account that a need to express an unasked attitude motivates response substitution, participants who viewed a company’s moral behavior as an important purchase consideration—and thus can be inferred to care about company moral behavior—were more likely to engage in response substitution.

We argue that response substitution arises when a person wants to convey an attitude to the researcher that the researcher has not asked about. This implies that response substitution is more likely to occur when the respondent believes a response can convey his or her attitude. To illustrate, consider our previous example when a consumer, Sherry, goes to a restaurant and receives poor service. We argued that if Sherry is subsequently asked if the restaurant has good food, she might use this question as an opportunity to convey her negative attitude toward the restaurant—even if she believes that the restaurant actually has good food—because she perceives the question as an opportunity to express her negative attitude toward the restaurant due to the service. However, we propose that response substitution will be moderated by the extent to which Sherry believes that her response regarding the food is likely to be interpreted as a negative assessment of the restaurant. That is, if Sherry is asked a question that she believes has little chance of conveying her general negative attitude toward the restaurant, response substitution should be reduced or eliminated. However, consumers might have different naive theories (e.g., Friestad and Wright 1994) of whether a question offers an opportunity to express their attitude, and thus we examine this issue in Experiment 3.

EXPERIMENT 3

The main goal of Experiment 3 is to provide additional insight into the response substitution effect by examining a posited boundary condition: the degree to which participants believe that their response to the question being asked might be interpreted as expressing the attitude they wanted to convey. We accomplish this by measuring the extent to which they believed that a question could convey information about an unasked attitude. An additional goal of Experiment 3 is to ensure that respondents were correctly interpreting the question being asked. In particular, we gauged whether participants were paying sufficient attention and properly interpreting the question being asked through two procedures: asking participants to rewrite the question being asked and explicitly informing them about the intention of the survey. We again manipulated the inclusion of an open-ended thoughts opportunity, as in Experiment 2.

Method

We conducted Experiment 3 online and used a 2 (open-ended thoughts opportunity: present versus absent) \times 2 (question-rewriting task: present versus absent) \times (perceived

probability of attitude conveyance) design, in which we manipulated the open-ended thoughts opportunity and question-rewriting tasks between subjects and measured perceived response conveyance. We use the term “probability of attitude conveyance” to refer to participants’ naive theory about the degree to which the attitude they want to convey (i.e., their attitude toward the restaurant as a result of the good service) can be inferred by the recipient of the survey. That is, those reporting a high probability of attitude conveyance believe that the question being asked can be used as a substitute for the attitude they want to convey, but those low in probability of attitude conveyance do not believe that the question can be used as a substitute. Response substitution should be more likely to occur when people believe that doing so will allow them to convey their attitude (i.e., those with a high probability of attitude conveyance). One hundred fifty-eight participants (71% female, mean age = 36 years) were recruited from an online subject pool of people throughout the United States. All participants first read the following scenario:

Imagine you go to a restaurant that has recently been updated. You notice the updated decor and lighting of the new restaurant and would rate these as standard among the restaurants you frequent. The lighting fixture by your table is also fairly standard. However, the wait staff is extremely courteous and efficient. When the waiter made a small mistake in your order, he apologized profusely and the manager came to ensure everything was taken care of and that you received a substantial discount on your meal. Also, the food is good.

You later are given a survey from the restaurants’ management because they are interested in customers’ reaction to the updated decor and lighting.

Participants in the opportunity to express additional thoughts condition were then informed that “there is also space to express any additional comments you might have afterwards.”

All participants were then asked, “How would you rate the decor and lighting in the restaurant?” and responded on a seven-point scale ranging from “not at all attractive” (1) to “extremely attractive” (7). A pretest confirmed that participants similarly interpreted the question to be asking about the decor and lighting and not about their overall rating of the restaurant across all conditions. Moreover, the pretest confirmed that respondents did not believe that their ratings of decor and lighting would be used to reward the service employees. Before providing their rating, participants in the question-rewriting conditions were instructed as follows: “Please rewrite the question below (so we know which question you are answering, different versions of this survey have different questions);” they were provided with space to rewrite the question.

Finally, to assess individual differences in respondents’ perceived probability of attitude conveyance, participants evaluated how likely the manager was to interpret a poor or high rating for the decor and lighting as a poor or high rating for the restaurant overall on a seven-point scale ranging from “very unlikely” (1) to “very likely” (7). This served as an individual difference measure of the extent to which participants believed that the question about decor and lighting (i.e., ambience) could adequately be used to convey their positive attitude toward the restaurant on account of the good service.

Results

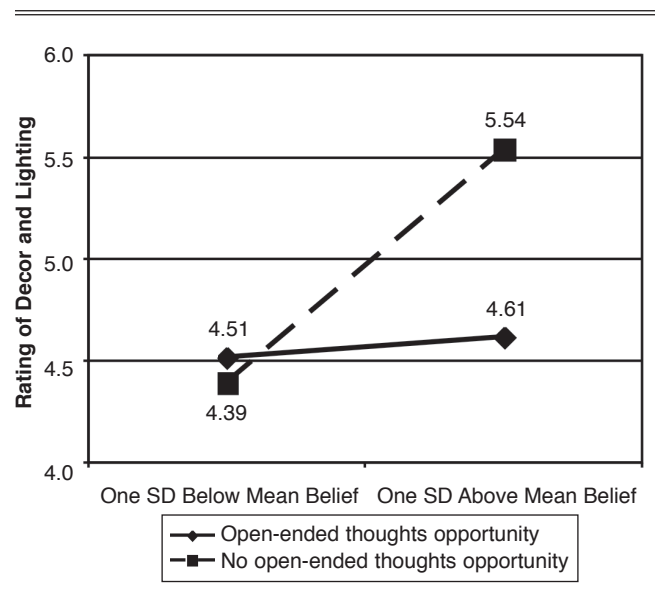
We did not find an effect of asking participants to rewrite the question ($F_s < 1$), and so we collapsed the question-rewriting present and absent conditions for the remainder of the analysis. Consistent with response substitution, participants rated the decor and lighting more favorably when they did not have an opportunity to express any additional thoughts ($M = 4.97$, $SD = 1.13$) than when they did ($M = 4.56$, $SD = .89$; $t(156) = 2.56$, $p = .01$).

Next, we examined whether the open-ended thoughts manipulation affected participants’ beliefs about the likelihood of conveying their attitude about the restaurant when rating the decor and lighting. We compared means of this rating across the open-ended thoughts conditions and found that ratings were similar regardless of whether participants did or did not have an opportunity to convey open-ended thoughts ($M = 4.04$, $SD = 1.48$ versus $M = 4.08$, $SD = 1.53$; $F < 1$). This suggests that our manipulation did not affect perceived attitude conveyance.

To test the hypothesis of an open-ended thoughts opportunity \times perceived probability of attitude conveyance interaction, we mean-centered participants’ perceptions of the perceived probability and dummy-coded the open-ended thoughts opportunity condition. We then computed an interaction term by multiplying the open-ended thoughts opportunity dummy variable with the mean-centered perceived probability variable (Aiken and West 1991; Irwin and McClelland 2003). As we predicted, there was a significant open-ended thoughts opportunity \times perceived probability of attitude conveyance interaction ($\beta = -.35$, $t = -3.56$, $p < .001$; see Figure 3). Simple slope analyses revealed that participants who believed that there was a high likelihood that their answer about decor and lighting might convey their

Figure 3

RATING OF DECOR AND LIGHTING WHEN OPPORTUNITY TO PROVIDE OPEN-ENDED THOUGHTS IS PRESENT VERSUS ABSENT AT ONE STANDARD DEVIATION BELOW AND ABOVE MEAN BELIEF THAT ATTITUDE ABOUT RESTAURANT CAN BE CONVEYED BY THE RATING (EXPERIMENT 3)



attitude toward the restaurant (at 1 standard deviation above the mean) provided a more favorable rating when they did not know they would have an opportunity to self-express ($M = 5.54$) than when they did ($M = 4.61$; $\beta = .94$, $t = -4.45$, $p < .001$). There was no such difference ($M = 4.39$ versus $M = 4.51$) among participants who believed that there was a low likelihood of conveying their attitude toward the restaurant (at 1 standard deviation below the mean; $\beta = .12$, $t = .59$, $p = .56$).

Moreover, 67% of respondents provided additional comments. Most comments appeared to reflect happiness with the service and that it was more important to their experience than the decor and lighting, suggesting that participants wanted to express their overall favorable attitude toward the restaurant. Representative comments included “The decor and lighting was alright [*sic*] but the staff was absolutely excellent. They are doing their jobs very well and are very efficient” and “The decor was okay but the service was outstanding. Good service outweighs new decor in my book.”

Discussion

The main finding of Experiment 3 was that participants were more likely to engage in response substitution when they believed that it was likely that their responses would be interpreted to express the attitude they wanted to convey. Moreover, this finding is unlikely to be explained by a failure to correctly interpret the question, because respondents were explicitly informed that the purpose of the question was to evaluate customers’ reaction to the decor and lighting (a supposition we confirmed with a pretest), and the effect was not reduced when participants were forced to pay closer attention to the question by rewriting it. Rather, this finding is consistent with the account that response substitution reflects an attitude that the respondent wants to convey but has not been asked about.

The boundary condition we identified in Experiment 3 can be related to research on the “logic of conversation” (e.g., Grice 1978; Schwarz 1994), which describes the interaction between a speaker and a listener (or recipient). That research distinguishes between the pure semantic meaning of an utterance and the information conveyed (Schwarz 1994). In particular, a message recipient is assumed not just to assimilate the literal meaning of an utterance but also to infer what is implicated. The inferential aspect is related not only to message decoding but also to assessing the speaker’s intentions. Consistent with this logic, our findings suggest that respondents evaluate what others are likely to infer about the attitude the respondent is trying to convey when engaging in response substitution. If they believe that a desired attitude cannot be conveyed by a question, as this study demonstrates, they are less likely to engage in response substitution.

GENERAL DISCUSSION

Key Findings and Implications

Our basic proposition is that consumers often seek to convey their attitudes, even when they are not asked about them, and will take the opportunity to do so in responses that are unrelated to questions. In support of this perspective, across three experiments, we find that people’s responses to questions are affected by whether they have an

opportunity to express their attitude about an unrelated question that they are motivated to answer. In particular, people tend to express attitudes or preferences in response to an asked question that is similar in valence to their attitude to an unasked question about the same person, company, or product. However, this effect is attenuated when people have an opportunity to separately express their attitude, such as when they are informed that they can give open-ended feedback (Experiments 2 and 3).

Our experiments also identify moderators of response substitution that help illuminate the underlying process. Consistent with the account that response substitution reflects an attempt to express an attitude that the respondent wants to convey, Experiment 2 shows that people are more likely to engage in response substitution when the attitude topic is important to them and thus is one that they would be motivated to express. Also consistent with a response substitution account, Experiment 3 shows that people are more likely to engage in response substitution when they believe that their response will be interpreted in line with the attitude they want to convey.

Our findings have several theoretical, methodological, and practical implications. The theoretical implication of our findings is that people have a need to explicitly express their attitudes and preferences when they are not asked about them. Methodologically, our findings suggest that response substitution is an important source of survey bias and provides remedies to address it. In particular, the results of Experiments 2 and 3 suggest that a subtle approach to handling response substitution effects is to simply tell respondents that they will have an opportunity to express any other thoughts in an open-ended format.

Practically, our findings suggest that surveys must be interpreted with a critical eye toward possible response substitution. To illustrate, two-thirds of respondents to a February 2009 *USA Today* poll expressed support for President Obama’s decision to send another 17,000 troops to Afghanistan (Page 2009). However, the previous month, three separate polling organizations found that only one-third of respondents supported increasing troop levels (Bowman 2009). These divergent results might be explained by response substitution: Respondents in the *USA Today* poll likely wanted to register support for their new president rather than express support for sending troops to Afghanistan. Indeed, had respondents separately been asked about their views of the president (or their views about a series of other policy issues that they supported), they might have been more likely to express their “true” opinion of the military deployment.

In addition to general theoretical, methodological, and practical implications, our findings also have potential implications for specific areas of research. We discuss these next.

Attitude Certainty, Ambivalence, and Indifference

The importance of attitude certainty has received increasing recognition in the social judgment literature (Rucker and Petty 2004; Tormala and Petty 2004; Wan et al. 2010). Among other things, the degree of certainty with which attitudes are held has been found to affect attitude–behavior correspondence (Rucker and Petty 2004), resistance to persuasive attacks (Tormala and Petty 2002), and attitude persistence (Bassili 1996).

An important feature of attitude certainty is that it is a metacognitive aspect of attitudes, in that it involves the attachment of a secondary cognition (e.g., “I am certain I like X”) to a primary one (e.g., “I like X”). An implication of our findings related to attitude certainty is that people who are asked about their attitudes toward an object, but not about the certainty with which that attitude is held, might engage in response substitution. In particular, people might attempt to express the certainty with which they hold an attitude in response to a question that only asks about the primary attitude. For example, people might believe that they like a particular product a lot after a first impression, but they might be uncertain of this evaluation. Thus, if they are asked only to indicate how much they like the product, they might provide a relatively moderate answer to express their lack of certainty. However, if they are also asked about their certainty, they might express a relatively more extreme positive evaluation but separately indicate that they are uncertain of this evaluation.

Recent research has also recognized the importance of ambivalence, or holding two seemingly conflicting cognitions or emotions at once (Aaker, Drolet, and Griffin 2008; Nowlis, Kahn, and Dhar 2002; Williams and Aaker 2002). Measuring ambivalence has historically been neglected, with most attitudes “largely treated as unidimensional summary statements” despite being multidimensional in nature (Thompson, Zanna, and Griffin 1995, p. 362). However, researchers have recognized that such unidimensional scales can lead to an inability to differentiate ambivalence from indifference because both may be reported at the midpoint on a bipolar scale (Cacioppo, Gardner, and Berntson 1997). Our findings suggest that providing respondents with a unidimensional scale (whether unipolar or bipolar) when they have ambivalent feelings or attitudes could lead to a manifestation of response substitution. For example, when a person who feels both sad and happy is asked how happy he or she is, this person might report feeling less happy if he or she is not given the opportunity to separately express sadness.

Contingent Valuation

Our findings also have potential implications for research on contingent valuation. Contingent valuation refers to a survey-based methodology for valuing nonmarket goods, such as the damage caused by environmental contamination or the value of a beautiful lake (Ciriacy-Wantrup 1971; Huber, Viscusi, and Bell 2008). Although contingent valuation methodology has multiple variations, typically a sample of people affected by the good are surveyed for their stated willingness to pay for the good (e.g., having a beautiful lake in the community) and the mean response is extrapolated to the population. Such contingent valuation surveys are used extensively and have important real-world consequences, such as the valuation of damage caused by the Exxon Valdez oil spill (Diamond 2000).

The contingent valuation methodology has been criticized from several sources. Most notably, Kahneman and his colleagues (Kahneman and Knetsch 1992; Kahneman, Ritov, and Schkade 1999) argue that people’s stated preferences in contingent valuation surveys are not reflective of their true willingness to pay for the good but are an expression of their attitudes toward the good. They primarily base their conclusion on (1) high correlations between stated

willingness-to-pay measures and attitudes toward the good and (2) the insensitivity of stated willingness to pay to scope.

However, economists have argued that a mere correlation between attitudes and willingness to pay is perfectly consistent with the basis for contingent valuation theory because economic theory posits that willingness to pay is a function of anything that gives people utility, including paying more for things toward which they hold positive attitudes (Harrison 1992). Moreover, as Simonson (2008) notes, insensitivity to scope for public goods (i.e., similar willingness to pay to protect 100 or 1000 birds) might arise because people have no meaningful reference point for evaluating a quantity in an absolute sense. Thus, people’s true willingness to pay—not merely their stated willingness to pay—might indeed be unaffected by scope. However, if people express a higher willingness to pay for a good as a means of expressing an attitude that they are not asked about (e.g., their love of a lake, their anger at the destruction of a historic site), our findings suggest that their stated willingness to pay is likely to decrease if they are provided with a separate opportunity to express that attitude.

Future Directions

We argue that constraints imposed by survey design might lead respondents to attempt to convey information that they have not been asked about in response to a question being asked. A relevant question is whether the effect of response constraints on responding can actually affect respondents’ subsequent attitudes and behavior.

Research on cognitive dissonance (Elliot and Devine 1994) and self-perception (Bem 1967) suggests that explicitly expressing attitudes that a person does not hold can lead to adoption of the expressed attitude. Similarly, extending our example from the beginning of the article, if Sherry is asked to rate the food at a restaurant that has poor service but is not told up front that she will also be asked to rate the service, she might rate the food to be of lower quality than, for example, Jill, who is told in advance that she will also be asked about the service. However, after Sherry expresses a negative attitude toward the food to convey her negative attitude about the service, this response might affect her actual attitude toward the food, rendering it less positive than Jill’s. In turn, Sherry and Jill might differ in their subsequent behavior, such as the likelihood of patronizing the restaurant again. Thus, it is possible that survey designs that differentially affect response substitution can induce people with similar initial attitudes to diverge in their subsequent attitudes and behaviors.

The hypothesis that the constraints on responses imposed by survey design can shape future attitudes and behaviors can be viewed as similar in some respects to the hypothesis that the constraints of language shape thought (Whorf 1956). However, whereas the latter has proved to be difficult to test, the former is likely to be far easier to examine and might even shed some light on the latter. Further research should investigate this hypothesis empirically.

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