

## The question–behavior effect: What we know and where we go from here

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Researchers have consistently shown that questioning people about a future behavior influences the subsequent performance of that behavior. Since its first demonstration by Sherman (1980), two groups of researchers have built parallel streams of research investigating the self-prophecy and mere-measurement phenomenon. Both sets of scholars have clearly demonstrated the importance of questioning as a social influence technique and have shed light on at least two of the theoretical processes underlying observed effects. In the current paper, these researchers formally adopt a common label—the *question–behavior effect*—for these and similar effects. After providing a review of prior work in the area, the authors detail directions for future researchers interested in joining the investigation of this unique and persuasive form of social influence.

A growing body of literature in psychology and consumer behavior demonstrates that asking people a question about their future behavior influences the subsequent performance of that behavior. Until very recently,

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researchers of this phenomenon—which we propose be labeled the question-behavior effect—have traveled two distinct routes, sharing some remarkable similarities. The goal of both research streams has been to develop a theoretical and applied understanding of the intriguing effects of questions on subsequent human behavior.

One group of researchers (Block, Fitzsimons, Morwitz, and Williams, among others) has focused on what they have referred to as the mere-measurement effect in the literature. Typically, mere-measurement studies employ a scaled intention measure to influence the purchase of consumer products. For example, Morwitz, Johnson, and Schmittlein (1993) showed that asking a scaled intention question on whether and when consumers will buy their next car influenced car purchase rates in the next 6 months. Another set of scholars (Greenwald, Spangenberg, and Sprott among others) have studied a similar phenomenon under the label of the self-prophecy effect. The conventional self-prophecy experiment employs self-predictions (most often with a dichotomous response format) to favorably influence socially normative behaviors. For example, Spangenberg (1997) asked health club members to predict their expected use of the health club and found increased frequency of attendance up to 6 months after the prediction (as compared to the control group). Both groups of researchers have demonstrated the real-world importance of the effects and have begun to identify theoretical mechanisms consistent with observed effects. Since each group worked independently, there unfortunately was minimal communication between these scholars, leading to relatively isolated paths of knowledge development regarding the general question-behavior phenomenon. Until now, no effort to combine what have been viewed as separate, independent areas of study has been meaningfully attempted.

We now find ourselves at a point where two once-independent groups of scholars have agreed to travel together towards an understanding of this phenomenon, as opposed to following separate, parallel paths. As suggested above, the beginning of this journey is to adopt formally a new descriptor for previously reported self-prophecy and mere-measurement effects. In particular, we encourage the use of the label *question-behavior effect* to describe any phenomenon whereby questioning of a person (whether it be through an intention measure, self-prediction, a measure of satisfaction, or other means) influences the future performance of the focal behavior. By acknowledging similarities in the literature and adopting a shared, single label for related, observed effects, we can step back and take a comprehensive look at the broader set of phenomena we have observed and the proposed explanations for these phenomena. This broader perspective should prove valuable in suggesting directions for future research and how best to progress in our understanding of this unique form of social influence. In the current paper, we will discuss some of what

we have learned from the two parallel streams of research and why we think it is now most appropriate to consider them together as part of a broader set of question–behavior effects.

### WHAT DO WE KNOW?

Sherman (1980) introduced the idea that questioning can influence a focal behavior, which was originally referred to as the self-erasing nature errors of prediction. In a series of studies, Sherman asked research participants to make predictions about socially desirable (e.g., volunteering for a charity) and non-desirable (e.g., singing a song over the telephone) behaviors. Those who made a prediction (as compared to those in a no-prediction control condition) were more likely to perform the behavior in a socially normative fashion. Since Sherman’s initial publication, researchers have explored the general effect under the mere-measurement (e.g., Morwitz et al., 1993) and self-prophecy (e.g., Spangenberg, Sprott, Grohmann, & Smith, 2003) nomenclatures. Although these effects have been demonstrated by different sets of researchers employing differing terminologies and purporting distinct theoretical interpretations, there are enough similarities to suggest that a common name (i.e., the question–behavior effect) is an appropriate label for both effects.

The basic, and obvious, similarity between the parallel streams of research is the use of some type of “question” to influence actual subsequent behavior. While self-prophecy researchers typically use a *self-prediction* (e.g., “Do you predict you will recycle?”) with a dichotomous response, mere-measurement researchers typically utilize an *intention* measure (e.g., “How likely are you to exercise?”) or a satisfaction measure (e.g., “How satisfied were you with your most recent service encounter with X?”) on a scaled response. Although a variety of different questions have been asked of research participants in both streams, the general finding is that behavior change occurs after the question is asked (as compared to a control group who are not asked the question). The direction of behavior change appears to depend on the nature of the behavior, the type of question, and the mechanism underlying the effect. For example, self-prophecy studies using self-predictions have uniformly found changes in normative behaviors in the direction of social norms, while mere-measurement studies using intention measures have found changes to be directional with the valence of the underlying attitude of the person completing the question.

Another important point is that both research streams have shown that asking an individual a question influences actual behavior across a wide variety of questioning contexts and response frames. While recent research has begun to use non-direct measures of behavior (self-reported prior

behavior, Williams, Fitzsimons, & Block, 2004; written commitments to perform the behavior in the future, Sprott, Spangenberg, & Fisher, 2003) to simplify experimental procedures and to contribute to efficient theory testing, it has been the effectiveness of questioning to influence actual behavior that is a hallmark of both research streams. For example, Spangenberg et al. (2003) recently demonstrated that self-prediction regarding attending a local health club (imprinted on a mail promotional insert) influenced actual club attendance for members receiving the mailed manipulation, as compared to a similar group who received a control message. Such effects are not isolated to the self-prophecy stream of research. For example, Morwitz et al. (1993) found that an intention question inserted in a consumer survey influenced the purchase of durable goods (automobiles and personal computers).

Given that the question-behavior effect has been consistently demonstrated to influence human behavior, the phenomenon has important real-world applications. Those interested in social influence can use questions to alter behavior. Compared to other methods (e.g., belief-based interventions surrounding the theory of reasoned action; cf. Sprott, Smith, Spangenberg, & Freson, 2004) the question-behavior approach is relatively simple and easy to implement in real-world settings. Indeed, a wide variety of institutions and organizations could benefit from this social influence technique. Of course, caution is warranted when applying this approach, especially when attitudes and/or social norms regarding a particular behavior may oppose the direction of desired change (e.g., as demonstrated in the Williams, Block, & Fitzsimons (2006) paper in this issue). There are also ethical considerations about whether it is appropriate for firms or non-profit organizations to use questions embedded in a market research survey to purposely influence subsequent respondent behavior. For those more interested in measuring (than changing) behavior, one must remember that survey questions about a behavior could have downstream effects that may affect the behavior of those responding to the question.

Although enough similarities exist between mere measurement and self-prophecy to reasonably consider them related phenomena, noteworthy differences in the reported literature exist. An important distinction between the streams of research is the focal behavior. While mere-measurement researchers have focused on a variety of behaviors (e.g., first time and repeat purchase of durable and non-durable goods, product choice, transactions with and defection from service providers, flossing, drug and alcohol consumption), the self-prophecy group has focused exclusively on socially normative behaviors (e.g., recycling, health club attendance, donating to a charity, gender stereotyping, cheating on an exam, and voting). The reported effect sizes associated with the self-prophecy literature

have at times been larger than some of those reported in the mere-measurement literature. One reason may be that questions regarding socially normative actions with self-prophecy lead to larger changes in associated behavior, while mere-measurement behaviors typically involve less normative but still significantly impacted activities such as purchase outcomes.

Another difference, as noted earlier, is that the two approaches use different types of questions to invoke behavioral change—an intervally scaled future intention, expectation, or satisfaction measure for mere measurement and a dichotomous prediction request for self-prophecy. Prior research suggests that such simple differences can lead to important variation in outcome variables and as such may be a theoretically meaningful distinction in reported effects. For example, a meta-analytic review of the theory of reasoned action found that expectations and intentions were differentially related to other constructs specified by the theory of reasoned action (Sheppard, Hartwick, & Warshaw, 1988). Although more research is required, at least two papers focused on question–behavior effects suggest that subtle changes in the question can have an impact on behavior change. Sprott et al. (2004) demonstrated that question–behavior effects are significantly larger when using specific, as compared to more general, self-predictions. Further, Levav and Fitzsimons (2006) demonstrated that when the question wording leads to the behavior being easily imagined, substantially larger question–behavior effects are observed.

Probably the most important difference between the two areas of research regards the proposed theoretical underpinnings for the observed effects. Over the years, a variety of mechanisms have been proposed for question–behavior effects, including scripts and impression management (Sherman, 1980), attitude accessibility (e.g., Morwitz & Fitzsimons, 2004), consistency (Cialdini & Trost, 1998), norm salience, (Sprott et al., 2003), and cognitive dissonance (e.g., Spangenberg & Greenwald, 1999). To date, the most compelling accounts—based on empirical evidence—for the observed effects are attitude accessibility and cognitive dissonance. The former account contends that being asked the question increases the accessibility of beliefs about the behavior, and changes in behavior are based on people’s underlying attitudes (whether positive or negative) about the behavior. The latter account holds that the question simultaneously evokes social norms regarding the behavior and prior failures to perform the behavior in a normative fashion; differences in these cognitions leads to dissonance, which in turn motivates behavior change. Such a process is conceptually similar to the hypocrisy induction of dissonance developed by Aronson and colleagues (e.g., Fried & Aronson, 1995).

Both theoretical accounts have received considerable support in the literature. While direct process evidence is limited, there are a number of

studies reporting moderators that provide deeper understanding of the mechanisms underlying the question-behavior effect (e.g., Levav & Fitzsimons, 2006; Spangenberg & Sprott, 2006). In many instances, these moderators are more easily interpreted from a single theoretical perspective. For example, Sprott et al. (2003) showed that social norms moderate the question-behavior effect. While such findings are tenable within a dissonance-based account of the effects, it is more difficult to interpret this moderator from an attitude accessibility perspective. Similarly, Morwitz and Fitzsimons (2004) found that the strength of prior brand attitudes moderated the question-behavior effect—a finding perhaps more easily interpreted from an attitude accessibility than a cognitive dissonance perspective. In either case, it appears that there are at least two generative mechanisms underlying outwardly similar effects.

### WHERE DO WE GO NEXT?

Now that we have begun considering mere-measurement and self-prophecy as related effects under the larger umbrella of the question-behavior phenomenon, it is clear that further research integrating our core knowledge of these once-separate bodies of literature is necessary. The current effort is a first step in this direction, but clearly a more thorough integrative review of the research is important (e.g., a meta-analysis of reported effects) and could provide us with greater insights into the processes underlying the question-behavior effect. Our brief review herein also suggests the potential benefits of investigating additional moderators and motivates a new line of research focused on providing more direct evidence of the underlying processes for observed question-behavior effects.

As future research examines new and different contexts for the question-behavior effect, it is reasonable to assume that alternate processes will be uncovered. While we are confident in the evidence that attitude accessibility and cognitive dissonance are both plausible theoretical mechanisms associated with observed effects, we do not want to suggest that other theoretical processes may not underlie some instances of question-behavior phenomena. Although research has ruled out some previously proposed explanations for the effects (e.g., impression management as suggested by Sherman, 1980; see e.g., Sprott et al., 2003), other potential accounts exist (e.g., implementation intentions; Gollwitzer & Schaal, 1998). Indeed, we are currently aware of at least two additional research teams investigating alternate processes for question-behavior effects, and encourage others to conduct similar investigations.

One area that we feel possesses considerable promise is research exploring how differences in question composition may influence the direction and the magnitude of the question-behavior effect. Such research may prove equally

instructive for those designing questions and response frames for social influence purposes, and for those interested in learning more about the processes underlying the reported effects. As noted in the Williams et al. (2006) paper in the current issue of this journal, research could investigate negative behaviors (e.g., illicit drug consumption, unsafe sex) that have countervailing attitudinal and normative beliefs. The evidence presented by Williams et al. suggests that in some instances, the question-behavior effect may actually increase inappropriate behaviors with an intention measure. It remains to be seen whether such behaviors can be eliminated or reduced by purposely evoking competing cognitions via the question (e.g., by reminding people of the societal norms associated with behaviors) or the response frame. Research in social psychology suggests alternate procedures. For example, a question may evoke greater dissonance if it also increases the salience of aversive consequences of the inappropriate behavior (Cooper & Fazio, 1984).

We also hope to see continued research on the breadth of question-behavior effects, which may provide additional insights into underlying theoretical mechanisms and increase our knowledge of the effect itself and its implications. Beyond behavioral influences, research has shown that asking questions on a survey can change responses to other survey questions, and even change the strength of relationship between answers to survey questions (Feldman & Lynch, 1988). Consistent with this notion, Chandon, Morwitz and Reinartz (2005) demonstrated that measuring purchase intentions not only changes behavior, but also increases the strength of the relationship between latent intentions (i.e., intentions respondents would have, whether or not they were surveyed) and subsequent behavior. This research, however, was done in a context that did not involve social norms. It is possible that when social norms exist and are salient, being asked a question will reduce the strength of the relationship between the question answer and subsequent behavior when the answer is not consistent with the social norm. It would be interesting to examine conditions when asking questions increases, versus decreases, the strength of the relationship between the relevant latent construct and behavior.

More research is also needed on the duration of question-behavior effects. Dholakia and Morwitz (2002) found that the positive effects of responding to a satisfaction survey on customer behavior increased for several months after the survey, and persisted for months after that. In a similar field experiment, however, Chandon, Morwitz, and Reinartz (2004) found that the positive effects of measuring intentions on purchase incidence and the time until the first repeat purchase decayed rapidly, while the effects on profitability persisted. A more consistent pattern of effects over the longer term have been demonstrated for self-predictions and socially

normative behavior, with positive effects lasting up to 6 months after the initial self-prediction (Spangenberg, 1997). Indeed, more than one study in the self-prophecy research stream has shown question-behavior effects that last for many weeks after question administration (e.g., Spangenberg et al., 2003). It is unclear at this time how the leading theoretical frameworks for these effects (i.e., attitude accessibility and cognitive dissonance) can account for such long-term effects of questioning. Of considerable interest is the question whether attitudes can remain accessible and dissonance can serve as a motivational source for such long periods of time (especially considering the numerous likely intervening cognitions and behaviors that exist between questioning and performance of the target behavior). Clearly, better understanding of factors that moderate the duration of the question-behavior effect is necessary.

For those who rely on survey measures and for whom the subsequent effects on behavior are problematic, research is needed on methods to reduce or eliminate question-behavior effects. Recent research (Williams et al., 2004) suggests, for example, that informing people that question-behavior effects may occur can reduce the impact of being asked questions. Such a suggestion is consistent with Obermiller, Spangenberg, and Atwood's (1992) reactance interpretation of their findings. Finally, for those interested in using question-behavior effects for policy reasons (e.g., voter turnout campaigns; cf. Greenwald, Carnot, Beach, & Young, 1987) research should examine the strength of the question-behavior effect when questions are posed through mass media versus through individual-level surveys. This has been supported with recent research (Spangenberg et al., 2003) suggesting that such mass-communicated questioning can be effective in inducing the question-behavior effect in larger populations.

## CONCLUSION

The question-behavior effect was first demonstrated by Sherman (1980) in a series of studies showing that questions can increase the performance of some behaviors (e.g., donating to a charity) and reduce the performance of others (i.e., singing over the telephone). In the intervening 25 years, two groups of researchers have consistently replicated this effect across a wide variety of different human behaviors. Taken together, the body of work to date finds question-behavior effects to be real and to have significant implications for the practice and science of social influence. The once-independent schools of thought have united to more effectively and efficiently gain an understanding of a phenomenon bigger than those studied separately, with much work left to be done. As we join forces to tackle the next set of questions in this area of research, we invite those

interested in the topic to join in our quest for understanding the question-behavior effect.

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## REFERENCES

- Chandon, P., Morwitz, V. G., & Reinartz, W. J. (2004). The short- and long-term effects of measuring intent to repurchase. *Journal of Consumer Research*, *31*, 566–572.
- Chandon, P., Morwitz, V. G., & Reinartz, W. J. (2005). Do intentions really predict behaviour? Self-generated validity effects in survey research. *Journal of Marketing*, *69*, 1–14.
- Cialdini, R. B., & Trost, M. R. (1998). Social influence: Social norms, conformity, and compliance. In D. T. Gilbert, S. T. Fiske & G. Lindzey (Eds), *The handbook of social psychology* (pp. 151–192). New York: McGraw-Hill.
- Cooper, J., & Fazio, R. H. (1984). A new look at dissonance theory. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 17, pp. 229–266). Orlando, FL: Academic Press.
- Dholakia, U. M., & Morwitz, V. G. (2002). The scope and persistence of mere-measurement effects: Evidence from a field-study of customer satisfaction measurement. *Journal of Consumer Research*, *29*, 159–167.
- Feldman, J. M., & Lynch, J. G. (1988). Self-generated validity and other effects of measurement on belief, attitude, intention, and behaviour. *Journal of Applied Psychology*, *73*, 421–435.
- Fried, C. B., & Aronson, E. (1995). Hypocrisy, misattribution, and dissonance reduction. *Personality and Social Psychology Bulletin*, *21*, 925–933.
- Gollwitzer, P. M., & Schaal, B. (1998). Metacognition in action: The importance of implementation intentions. *Personality and Social Psychology Review*, *2*, 124–136.
- Greenwald, A. G., Carnot, C. G., Beach, R., & Young, B. (1987). Increasing voting behaviour by asking people if they expect to vote. *Journal of Applied Psychology*, *72* (May), 315–318.
- Levav, J., & Fitzsimons, G. J. (2006). Asking questions and changing behaviour: The role of ease of representation. *Psychological Science*, *17*, 207–213.
- Morwitz, V. G., & Fitzsimons, G. J. (2004). The mere-measurement effect: Why does measuring intentions change actual behaviour? *Journal of Consumer Psychology*, *14* (1&2), 64–74.
- Morwitz, V. G., Johnson, E., & Schmittlein, D. (1993). Does measuring intent change behaviour. *Journal of Consumer Research*, *20* (June), 46–51.
- Obermiller, C., Spangenberg, E. R., & Atwood, A. (1992). Getting people to give more: A telephone funds-soliciting strategy based on the self-erasing nature of errors of prediction. In C. T. Allen, T. J. Madden, T. A. Shimp, R. D. Howell, G. M. Zinkham, D. D. Heisley, et al. (Eds), *Marketing theory and applications* (Vol. 3, pp. 339–345). Chicago, IL: American Marketing Association.
- Sheppard, B. H., Hartwick, J., & Warshaw, P. R. (1988). The theory of reasoned action: A meta-analysis of past research with recommendations for modifications and future research. *Journal of Consumer Research*, *15* (3), 325–343.
- Sherman, S. J. (1980). On the self-erasing nature of errors of prediction. *Journal of Personality and Social Psychology*, *39* (August), 211–221.
- Spangenberg, E. R. (1997). Increasing health club attendance through self-prophecy. *Marketing Letters*, *8* (1), 23–32.
- Spangenberg, E. R., & Greenwald, A. G. (1999). Social influence by requesting self-prophecy. *Journal of Consumer Psychology*, *8* (1), 61–89.
- Spangenberg, E. R., & Sprott, D. E. (2006). Self-monitoring and susceptibility to the influence of self-prophecy. *Journal of Consumer Research*, *32*, 550–556.

- Spangenberg, E. R., Sprott, D. E., Grohmann, B., & Smith, R. J. (2003). Mass-communicated prediction requests: Practical application and a cognitive dissonance explanation for self-prophecy. *Journal of Marketing*, 67 (July), 47–62.
- Sprott, D. E., Smith, R. J., Spangenberg, E. R., & Freson, T. S. (2004). Specificity of prediction requests: Evidence for the differential effects of self-prophecy on commitment to a health assessment. *Journal of Applied Social Psychology*, 34 (6), 1176–1190.
- Sprott, D. E., Spangenberg, E. R., & Fisher R, J. (2003). The importance of normative beliefs to the self-prophecy effect. *Journal of Applied Psychology*, 88 (June), 423–431.
- Williams, P., Block, L. G., & Fitzsimons, G. J. (2006). Simply asking questions about health behaviors increases both healthy and unhealthy behaviors. *Social Influence*, 1, 117–127.
- Williams, P., Fitzsimons, G. J., & Block, L. G. (2004). When consumers don't recognize "benign" intentions questions as persuasion attempts. *Journal of Consumer Research*, 31 (3), 540–550.

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