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A Motivational Account of the Question-Behavior Effect

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To explain the question-behavior effect, that is, the effect of answering an intention question on subsequent behavior, this article takes on a motivational perspective and proposes that answering an intention question automatically activates an intention. The activation of this motivational state influences subsequent brand choices due to changes in brand accessibilities. Three studies provide support for the assumption that responding to an intention question affects brand choices through a motivational mechanism, such that (1) answering an intention increases the accessibility of motivation-related information and decreases the accessibility of motivation-competing information which increases the choice for the intention-related brand; (2) intention completion temporarily reverses the foregoing accessibility patterns, instigating a reversal of the brand choices for an immediate, second brand choice; and (3) the changes in brand accessibilities and thus the behavioral effect persist as the delay between the intention question and brand choice occasion increases until intention completion.

Imagine that someone asks you about your intentions to buy a candy bar. Would merely indicating your intention change your future purchase behavior? This question has prompted significant research (Dholakia 2010; Sprott et al. 2006), most of which indicates that responding to an intention question alters subsequent consumer purchases (Chandon et al. 2011; Fitzsimons and Morwitz 1996; Morwitz, Johnson, and Schmittlein 1993). For example, consumers who completed an intentions survey about car purchases appeared more likely to purchase a car later (Morwitz et al.

1993); those who did not own a car became more likely to purchase a car from a large market share brand; and car-owning respondents became more likely to repurchase from the currently owned brand (Fitzsimons and Morwitz 1996). Responding to intention questions thus appears to influence purchase incidence, as well as brand choice probabilities, in a process called the question-behavior effect.

Across the various theoretical explanations advanced for the question-behavior effect (e.g., cognitive dissonance, attitude accessibility, response fluency), two elements are striking. First, all these theoretical accounts provide valid explanations for some reported findings, but none of them by themselves or in combination can explain all previously observed effects. Second, no theoretical accounts start from the specific characteristics of intentions, which seems surprising, as starting from the core of intentions might reveal some missing elements and clarify the question-behavior effect. Therefore, this article attempts to advance extant research by investigating exactly what intentions instigate on a cognitive level.

We propose that taking a motivational perspective might help explain why the simple act of answering an intention question actually causes significant behavioral changes. More specifically, we argue that merely responding to an intention question may actually automatically activate an intention. Similar to other motivational states, such as goals and needs, intentions—once activated—are specific memory

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structures that guide behavior in a unique manner due to changes in the accessibility of concepts in memory (Goschke and Kuhl 1993). Concretely, the activation of an intention, like other motivation states, is characterized by three main principles that govern changes in accessibility: (1) intention-related concepts increase in accessibility, and intention-competing concepts become less accessible; (2) the changes in relative accessibility persist until the intention is completed; and (3) intention completion temporarily inhibits intention-related concepts, whereas intention-competing concepts no longer experience inhibition.

In a first study, we show that answering an intention question alters the accessibility of the most preferred brand and its closest competitor. These changes reflect the first and third characterizations of motivational states. The study also shows that changes in brand accessibility drive the question-behavior effect. However, some results might be explained by other theoretical accounts, so a second study focuses on a new context and demonstrates how the question-behavior effect develops in a sequential choice setting, for both fictitious and existing brands. Unlike existing explanations, the motivational perspective suggests that responding to an intention question leads to an increase in the likelihood of choosing the most preferred brand in an initial choice situation, but to a lower likelihood in a subsequent choice situation. A sequential choice context thus provides an ideal setting to establish the validity of the motivational perspective. Finally, in a third study we investigate the role of time lags between the intention question and the initial brand choice and between the two consecutive brand choices. The results show that the question-behavior effect persists and as such they reflect the second principle of motivational states. Together our studies provide compelling evidence of our central proposition that merely answering an intention question activates an intention.

THEORETICAL BACKGROUND

The Question-Behavior Effect

The question-behavior effect implies that questioning people about their future behavior influences their likelihood of actually engaging in that behavior (Dholakia 2010; Sherman 1980; Sprött et al. 2006). Williams, Fitzsimons, and Block (2004) thus demonstrate an increase in flossing behavior and decrease in the consumption of fatty foods following relevant intention questions. The occurrence of this effect also has been investigated in both laboratory (Fitzsimons and Williams 2000; Levav and Fitzsimons 2006) and field (Chandon, Morwitz, and Reinartz 2004, 2005; Greenwald et al. 1987; Obermiller and Spangenberg 2000) settings. It holds in a wide variety of situations, including socially desirable (e.g., recycling) and undesirable (e.g., cheating) behaviors, and for purchases in various product categories, both durable and nondurable (Chandon et al. 2004; Morwitz et al. 1993).

The three processes most frequently shown empirically to contribute to the occurrence of the question-behavior ef-

fect are (1) attitude accessibility (Morwitz and Fitzsimons 2004), (2) cognitive dissonance (Spangenberg et al. 2003), and (3) response fluency (Janiszewski and Chandon 2007). The attitude accessibility account holds that answering intention questions makes underlying attitudes toward the target behavior more accessible, which results in a change in the target behavior in line with the valence of the attitude that became more accessible (Fitzsimons and Moore 2008; Morwitz and Fitzsimons 2004). That is, answering an intention question increases the likelihood of selecting positive, accessible choice options, but it decreases the choice likelihood of negative, accessible choice options. The cognitive dissonance account posits that when asked to predict future behavior, cognitions about past behavior and social norms come to mind and may evoke a feeling of dissonance (e.g., "I should spend more time with my family, I have promised them, yet I worked overtime almost every day the past week"). Alleviating this feeling of dissonance then may become a motivating force to align future behavior with social norms (Spangenberg et al. 2003). Finally, empirical evidence suggests that question-behavior effects are sensitive to response fluency. Janiszewski and Chandon (2007) show that the cognitive processes that generate a response to an intention question may overlap with the processes associated with deciding whether to engage in a behavior (e.g., "Do you plan to buy brand X?" and deciding to purchase brand X). This overlap in cognitive processes creates a fluency experience that supports the behavioral tendency, such that the intended behavior becomes more likely.

In summary, ample evidence indicates that measuring intentions changes consumers' purchase behavior. Researchers have also provided valid explanations for their reported findings. Yet, despite the appeal of these explanations, at least two elements suggest the need for an investigation of additional processes that contribute to the question-behavior effect. First, each explanation can account for some previously reported question-behavior findings, but none of them can explain all the results. For example, responding to an intention question leads to a stronger question-behavior effect than responding to an attitude question (Chapman 2001; Janiszewski and Chandon 2007; Spangenberg et al. 2003). Inasmuch as responding to an intention question does not make an attitude more accessible than responding to an attitude question (Chapman 2001), attitude accessibility cannot account for the incremental effect of responding to intention questions (Janiszewski and Chandon 2007). Cognitive dissonance (Spangenberg 1997; Spangenberg and Greenwald 1999; Spangenberg et al. 2003) operates especially in the domain of socially desirable behaviors, but when the focal behavior does not refer to a socially desirable act, failing to behave in line with the predictions is not likely to evoke a feeling of dissonance. Finally, response fluency-driven question-behavior effects are limited to infrequent or novel acts about which respondents possess little substantive information. Janiszewski and Chandon (2007, study 5) even show that the fluency-driven question-behavior effect is mitigated when respondents can rely on diagnostic brand in-

formation. Because all these theoretical explanations are valid in specific situations, but none of them can account for all the reported question-behavior findings, researchers have suggested complementary approaches (Spangenberg, Greenwald, and Sprott 2008). But even combining the different theoretical explanations leaves at least one type of question-behavior effect unexplained: behavioral changes that occur after responding to an intention question related to products that fall outside the domain of socially desirable products when people consider attribute information. This caveat to prior findings provides the first reason to look for an additional explanation of the question-behavior effect.

Second, the basic premise of the question-behavior effects entails a response to an intention question. Sherman (1980) asserts that when people respond to an intention question, they project themselves into a future situation and make statements about what their behavior would be in that situation. Generally this projection of behavior into a hypothetical future situation offers an important input for and determinant of later actual behavior (Sherman 1980). If thinking about future behavior instead were irrelevant to actual behavior, there would be no reason to foreshadow (Papies, Aarts, and de Vries 2009). In general, though, intentions transform into actions (Sheeran and Abraham 2003). Yet intentions can affect future behavior only if they are accessible in memory at the time an adequate opportunity for their execution occurs (Goschke and Kuhl 1993). Therefore, it is important to consider whether and how the accessibility of intention-related concepts is affected by a response to an intention question, especially because this fundamental element is only partly incorporated in prior accounts of the question-behavior effect.

To address this gap, we adopt a motivational framework and consider the question-behavior effect as an outcome of the activation of an intention. Specifically, we demonstrate the importance of the motivational properties that characterize intentions in the context of the question-behavior effect.

Motivational Consequences of Responding to an Intention Question

Similar to goals, intentions are stored in memory as motivational states. Whereas goals can be described as desirable states that people try to attain or undesirable states they try to avoid (Baumgartner and Pieters 2008; Custers and Aarts 2005; Dijksterhuis, Chartrand, and Aarts 2007), intentions refer to the specific ways a desired state can be accomplished or an undesired state avoided. Intentions are behavioral tendencies committed to during goal pursuit. Kuhl (1987, 282) thus describes an intention as “an activated plan to which an actor committed herself or himself.” When forming an intention, an actor commits to performing a certain action, but we know little about how consumer intentions actually come to be selected and pursued (Bagozzi and Dholakia 1999; Chartrand et al. 2008). Research on goal activation has indicated that it may occur unconsciously or con-

sciously; even the mere presence of certain goal cues in the environment can establish goal activation. Chartrand et al. (2008) show, for example, that merely being exposed to prestigious (e.g., Tiffany) or low-cost (e.g., Dollar Store) retail brands unconsciously activates prestige or thrift goals.

According to Bargh (1990), once a goal is activated, the action associated with that goal should be activated as well and direct subsequent behavior. For example, Aarts and Dijksterhuis (2000) find that the activation of a goal (e.g., “going to the university”) leads to the activation of specific behaviors previously performed to attain that goal (e.g., “take the bus”). It is also possible to activate specific intended behavior directly, which might lead to the activation of a related goal (Bayuk, Janiszewski, and Leboeuf 2010; Kruglanski et al. 2002), such as priming Lipton iced tea to activate the goal of quenching thirst (Karremans, Stroebe, and Claus 2006). Along similar lines, this research proposes that responding to an intention question is a subtle manipulation that may engender the activation of an intention. Answering a seemingly innocuous intention question may activate the representation of this intention in memory. In the next section, we discuss the consequences of activating intentions.

Accessibility Principles of Motivational Constructs in Memory

The activation of motivational states, such as goals and intentions, traditionally is accompanied by changes in the cognitive set-up that supports the intended behavior (Higgins and King 1981). Several principles characterize accessibility that arises from motivational states. First, intention-relevant information should be well activated to enable the person to transform an intention into action. Accordingly, Goschke and Kuhl (1993) demonstrate the increased accessibility of words such as “coffee,” “table,” and “spoon” subsequent to the formation of an intention to set the table. To determine whether this relative increase in accessibility stems from a true increase in the activation of intention-related concepts or from a decreased activation of competing concepts, prior research offers support for both processes. That is, in addition to facilitating the retrieval of intention-related information, activating an intention likely inhibits the retrieval of information related to competing intentions (Veling and Van Knippenberg 2008).

Research thus suggests that inhibitor links exist between competing goals or competing intentions (Kruglanski et al. 2002). Both abstract goals and concrete intentions require shielding from competitive motivational states if they are to be completed (Gollwitzer 1999). Thus Bayuk et al. (2010) demonstrate that adopting a plan (e.g., eat fewer eggs to reduce cholesterol) encourages its execution but discourages the execution of alternative, out-of-plan behaviors (e.g., exercise more to reduce cholesterol). Veling and Van Knippenberg (2008) further show that veling that competes with intentions gets inhibited. For example, participants who intend to respond to certain exemplars of a category (e.g.,

fruits: peach, melon, and strawberry) inhibit other exemplars of that category (e.g., grape, plum, and orange) but not unrelated stimuli (e.g., animals: elephant, rabbit, and lion; Veling and Van Knippenberg 2006). Therefore, a first principle that characterizes the activation of an intention is the relative activation of intention-related information and the relative inhibition of information competing with this intention.

A second principle is that the activation is persistent. The increased level of activation of intention-related, relative to competing and neutral, information, should persist until that intention is discarded or enacted. Unlike accessibility that results from a recent activation, motivation-induced accessibility thus should last as long as the motivational state is active (Bargh et al. 2001; Goschke and Kuhl 1993). Goschke and Kuhl (1993) investigate the course of activation of intention-related memory representations with an interval of approximately 15 minutes between the formation of an intention and its execution. Intention-related concepts, unlike equally well learned neutral concepts, were recognized faster when latencies were measured over a 15-minute interval. In a similar vein, Bargh et al. (2001) show that activation of an achievement goal increased performance on an anagram task; the performance facilitation also appeared more pronounced after a delay of 5 minutes compared with an immediate performance facilitation. Thus, the second principle of intention activation indicates that the increased activation of intention-related information is likely to persist or even strengthen over time.

Finally, a third principle that distinguishes the accessibility of motivational constructs, compared with the activation of other constructs, is that motivation-related information becomes inhibited upon fulfillment of the motivational state (Förster, Liberman, and Higgins 2005; Liberman and Förster 2000; Marsh, Hicks, and Bink 1998; Marsh, Hicks, and Bryan 1999). Thus when a person sets an intention to purchase the latest CD released by his or her favorite band, the concept of this CD should become accessible and remain so until this CD is bought. Actually purchasing the CD completes the intention, so by the logic of postfulfillment inhibition, the accessibility of the concept of this CD decreases. When an active motivation is achieved, that motivation should decrease in strength (Chartrand et al. 2008). This finding of postfulfillment inhibition relates uniquely to motivational constructs, because accessibilities resulting from a recent activation would predict increased accessibility postpurchase, in that completing an intention usually involves processing constructs related to it (Förster et al. 2005). Traditional accessibility theories thus predict increased accessibility of relevant concepts when more attention focuses on them because of their achievement. This distinction represents the satiation criterion (Chartrand et al. 2008).

This postgoal fulfillment inhibition may be functional for the performance of the next task at hand. Constructs related to a completed intention often become irrelevant and potentially interfere with the next task. If multiple actions need

to be performed consecutively, postfulfillment inhibition may occur to facilitate the completion of the next intention. For example, if a shopper plans to purchase a CD and then purchase a new shirt, constructs related to the purchase of the CD may be inhibited to facilitate the purchase of the new shirt. In this situation, postfulfillment inhibition appears functional, and therefore persistent, until completion of the subsequent intended action (Li et al. 2000). However, consumers might not have a second task to perform after completing their first intention, in which case constructs relating to the initial task would not be likely to interfere with the nonexistent subsequent, unrelated task. The inhibition of these constructs thus is not necessary, other than to avoid a repetition of the completed intention (Marsh et al. 1998). In this situation, postchoice inhibition likely decays rapidly over time rather than persisting (Marsh et al. 1999), and competing information should lose its inhibitory effect on the satiation of the active motivational state (Veling and Van Knippenberg 2008). In conclusion, the third principle that characterizes the activation of a motivational state is that motivation-related information becomes inhibited as soon as the intention is completed.

The Operation of Motivation-Induced Accessibility in the Question-Behavior Effect

This study posits that the occurrence of the question-behavior effect might reflect the activation of an intention and the cognitive features typically associated with motivational states. As we described in the previous section, the activation of motivational states entails three main principles: (1a) Intention-related stimuli are relatively more accessible than neutral stimuli, whereas (1b) intention-competing stimuli are relatively less accessible than neutral stimuli prior to intention completion (i.e., prior to posing the intended behavior); (2) this relative accessibility advantage of intention-related stimuli is persistent in time up until the moment of intention completion; and (3a) after intention completion, intention-related stimuli become relatively less accessible than neutral stimuli, whereas (3b) intention-competing stimuli no longer experience inhibition.

Translating these activation principles to a consumer purchase setting in which we can investigate the question-behavior effect immediately raises the question of which brands are intention related and which are intention competing. We argue that the most preferred brand is most likely to attain intention-related status, whereas competing brands, that is, other well-liked brands, are expected to be flagged as intention competing. With respect to the former, Davis and Warshaw (1991) show that people tend to form a specific intention targeted at their most preferred option when they respond to an intention question that does not refer to a specific option. With respect to the latter, Veling and Van Knippenberg (2008) suggest that only well-preferred, competing brands tend to be inhibited, because the degree to which a brand is inhibited depends on the degree to which it detracts attention from the intention-related brand. The

level of competition should depend on a brand's position in preference rankings.

The foregoing logic leads us to propose that when they answer an intention question, consumers' most preferred brand becomes more accessible, and other appealing brands become less accessible. This increased activation of the most preferred brand is likely to persist when the time lag between the intention question and the choice situation increases. That is, after making a brand choice, the most preferred brand may be temporarily inhibited, but previously inhibited competing brands regain their neutral level of activation. Accessibility has a pervasive influence on consumer behavior (Nedungadi, Chattopadhyay, and Muthukrishnan 2001; Thelen and Woodside 1997), and thus changes in relative brand activation should translate into brand choices. We expect a question-behavior effect that unfolds as follows: responding to an intention question increases choices of the most preferred brand. However, this relative advantage, compared with that for competing brands, reverses when consumers must make an immediately subsequent choice.

RESEARCH OVERVIEW

We undertake three studies to illustrate the added value of adopting a motivational perspective and show that the question-behavior effect develops in line with predictions based on the unique accessibility principles associated with the activation of motivational states. Thus in study 1 we aim to demonstrate how responding to an intention question instigates a pattern of changes in brand activation that is uniquely associated with motivational states. A second objective of this study is to illustrate, with a mediation analysis, that differential brand accessibilities drive the changes in brand choice caused by answering an intention question. Although an increased activation of the most preferred brand could be explained by attitude accessibility, the inhibition of other well-preferred brands before brand choice and of the most preferred brand after brand choice cannot. Nor could they be explained by response fluency or cognitive dissonance. Therefore, this study provides initial support for the added value of taking a motivational perspective on answering intention questions.

Studies 2A and 2B try to corroborate the findings of study 1—namely, the accessibility advantage of the intention-related (i.e., most preferred) brand prior to an initial choice and the subsequent accessibility deficit of this brand for subsequent brand choice—in a different setting. We thus investigate the impact of answering an intention question on not only the subsequent brand choice but also an immediate, second brand choice. The question of how responding to an intention question alters downstream brand choice behavior has not been addressed in prior research; empirical studies documenting the validity of existing explanations for the question-behavior effect focus only on initial, rather than subsequent, brand choices. Chandon et al. (2004) suggest that question-behavior effects were unlikely to affect purchases beyond the initial purchase and

anticipate only a carryover of the initial purchase to a subsequent purchase. In contrast, if the question-behavior effect reflects the motivational nature of intentions and their associated cognitive features, the influence of responding to an intention question is not likely to be limited to the initial choice situation. Answering an intention question thus should increase the choice of the most preferred brand in the initial choice instance, but a decreased choice for this brand in a second choice instance also may be anticipated. Addressing how the question-behavior effect operates in a sequential brand choice setting provides an excellent test case to demonstrate the value of an additional explanation for this effect.

Whereas studies 1, 2A, and 2B focus on finding evidence to support principles 1 and 3 in two different contexts, study 3 investigates the proposed motivational account according to the persistence of the effect over time (principle 2). We thus manipulate the time delay between the intention question and the initial and subsequent brand choice. Persistence in effect sizes as time intervals increase generally are ascribed to motivational sources (Bargh et al. 2001; Chartrand et al. 2008).

STUDY 1

The objectives of study 1 are twofold. The first and most important objective is to provide initial evidence of a motivational account of the question-behavior effect by showing that responding to an intention question results in increased activation of the most preferred brand prior to decision making (principle 1a) but decreased activation after decision making (principle 3a). A motivational perspective on answering intention questions also predicts that competing brands will be inhibited before brand choice (principle 1b) but return to a neutral activation level after brand choice (principle 3b). To test these hypotheses, we use a setting in which respondents first answer either an intention question or an attitude question, and then make a brand choice. The attitude question condition serves as a control condition (instead of having another or no question), because showing that the expected changes in activation and inhibition occur after answering an intention question, but not after answering an attitude question, delivers even more convincing evidence than would a comparison with a no question condition. Asking an attitude question has offered a stringent test of the question-behavior effect in prior research as well (Chapman 2001).

This study employs a choice set with five brands. A pretest indicated how many of these brands, on average, are preferred and included in participants' consideration sets. Brands that are generally preferred can be considered competitors with the most preferred brand. Only for these brands do we expect that answering an intention question leads to inhibition.

As a second objective, we aim to provide evidence that the changes in brand activation, instigated by responding to an intention measure, drive the mere measurement effect. With a mediation analysis, we show that relative differences

in brand activation, as measured by a response latency task, between the most preferred and competing brands are responsible for the behavioral effects of responding to an intention question. Veling and Van Knippenberg (2006) show that facilitating and inhibitory effects do not necessarily occur independently. Intention-related stimuli can be in a heightened state of activation, potentially interfering stimuli may be in a lowered state of activation, or a combination may take place. The key element is the relative difference between intention-related stimuli and potentially interfering stimuli. To establish that differences in brand activation serve as a mediator of brand choices, we measure pre-choice brand accessibilities and brand choices within subjects. The experiment includes an additional condition, in which the brand accessibilities are not measured prior to brand choices; this experimental scenario enables us to assess whether measuring brand accessibility a priori distorts subsequent brand choices.

Pretest

A pretest (27 students, 11 women) investigated the fictitious brands and their attributes to identify the number of preferred alternatives to include in the choice set. In this pretest, the participants first received attribute information about five brands (see table 1) and then were instructed to rank order the presented brands according to their preferences.

Next, they were asked to indicate which brands they would actually consider purchasing. Finally, they responded to two items designed to assess the number of brands (and which brands) they judged as more direct competitors. Specifically, the number of competing brands was identified with two items: "If I was intending to choose [name of the most preferred brand], there is/are ____ (fill in a number) brand(s) that could make me doubt whether to purchase [name of the most preferred brand]" and "If I was to make a purchase decision for one of the five candy bar brands, it would come down to a choice between ____ (fill in a number) of the brands I prefer." Each item was followed by a request to indicate the brands that matched the query.

The results of this pretest demonstrate the following mean preference ranking of the participants for five candy bars: Abba Zaba ($M = 1.41$, $SD = .89$), Mamba ($M = 1.93$, $SD = .47$), Mauna Loa ($M = 2.89$, $SD = .64$), Skor ($M = 4.33$, $SD = .55$), and Granola ($M = 4.44$, $SD = .89$). The mean number of brands in the consideration set is 1.78 ($SD = .69$). Based on this we can assume that one brand competes with the most preferred brand. The two items designed to determine the number of competing brands more directly also indicate that most participants view only the second most preferred brand as a competing brand ($M_{\text{Number_competing}} = 1.18$, $SD = .62$). Thus the pretest measures consistently indicate that only the second most preferred brand in this assortment is likely to be a competitor and thus experience inhibition.

TABLE 1

ATTRIBUTE SCORES FOR THE BRANDS USED IN STUDY 1

Brand Name	Taste	Grams of fat	Calories	Shelf life
Mauna Loa	8	4.8	350	100
Skor	7.5	11.0	340	110
Granola	7	7.0	335	105
Abba Zaba	10	8.0	350	105
Mamba	9	6.6	345	100

Participants and Design

In total, 179 students (70 men, 109 women), aged between 18 and 29 years ($M_{\text{Age}} = 22.41$, $SD = 3.39$), participated in a 2×2 between-subjects experiment. As a first factor we manipulated whether the participants responded to an intention or attitude question. The participants in the intention condition responded to a category-level intention question ("How likely or unlikely would you be to try the presented candy bars if they were available to you?") on a 7-point Likert scale with endpoints of -3 ("very unlikely") and $+3$ ("very likely"). We used a category-level intention question, because this type of question is most likely to activate only an intention targeted at the most preferred brand, rather than activating multiple intentions targeted at different brands (Davis and Warshaw 1991). This set-up, without any explicit reference to a specific option in the intention question, facilitates the prediction of which intention will be activated, namely, that for the most preferred brand. The participants in the attitude condition served as the control group and answered one attitude question ("How positive or negative are you about the presented candy bars becoming available to you?"), also on a 7-point Likert scale with endpoints of -3 ("very negative") and $+3$ ("very positive"). The attitude question in the control condition ensured that these participants paid just as much attention to the product category as did the participants in the intention condition. Any differences between the two conditions (intention versus attitude question) cannot be attributed to differential attention to the product category.

The conditions also varied in the measured dependent variables, such that half the participants first completed a response latency task, then made a choice decision, followed by a second response latency task. The other half of the participants made a brand choice and then completed a response latency task. In contrast with the former respondents, this half completed only one response latency task. The data gathered from the first group of participants provide the input for the mediation analysis, whereas those from the second group provide verification of whether measuring brand latencies prior to the choice task affects that choice task. If no differences between these two groups emerge, we can confidently assume that measuring their brand latencies before respondents make a choice does not distort their brand choice.

TABLE 2
OVERVIEW OF BRAND CHOICES BY CONDITION IN STUDY 1

Type of question	Measured pre-choice accessibility	N	Brand 1 (%)	Brand 2 (%)	Brand 3 (%)	Brand 4 (%)	Brand 5 (%)
Attitude	No	37	56.8	21.6	8.1	8.1	5.4
Intention	No	55	76.4	16.4	3.6	1.8	1.8
Attitude	Yes	48	62.5	16.7	6.3	8.3	6.3
Intention	Yes	39	82.1	5.1	2.6	2.6	7.7

Procedure

Participants first considered attribute information (on the attributes taste, grams of fat, calories, and shelf life) about the five unknown brands of candy bars (as in the pretest). The participants were told that the candy bars were available in a neighboring country and that the manufacturer was thinking of introducing them in the domestic market. Next, participants reported their relative attitudes toward the presented brands by rank ordering them from least to most preferred. Subsequently, half the participants answered an intention question, and the other half answered an attitude question. After they completed several filler questions, half the participants responded to a choice task that indicated the manufacturer would distribute samples of candy bars to participants; to enter to win, respondents had to fill in the name of the brand they would prefer to receive. The other half completed a response latency task after the filler questions and before making a choice decision. For both groups of participants the experiment concluded with a response latency task, immediately following respondents' choice decision. The response latency task served as a measure of the brand accessibilities. To assess response latencies, the names of the five target brands, five existing candy bar brands, and 10 brands from other product categories appeared, one by one, on a computer monitor in random order. In this product category identification task, participants were instructed to press a button labeled "snack bar" for brands of snack bars or a button labeled "non-snack bar" for other products.

Results

The percentage of participants that chose their most preferred brand was significantly influenced by the type of question participants answered (Wald $\chi^2 = 7.731$, $p = .005$), but neither by whether a response latency task was completed before making a choice (Wald $\chi^2 = .704$, $p = .401$), nor by the interaction of both variables (Wald $\chi^2 = .025$, $p = .875$). The choices made by participants who did not complete a response latency task indicate a question-behavior effect. Significantly more participants who answered an intention versus an attitude question chose their most preferred brand (76.4% vs. 56.8%, $\chi^2(92) = 3.94$, $p = .047$). A similar difference emerged in the choice share of the most preferred brand when participants completed a response latency task before making a choice (82.1% vs.

62.5%, $\chi^2(87) = 4.02$, $p = .045$). That is, a comparable number of participants opted for the most preferred brand after responding to an intention question, whether they completed a response latency task first or not (82.1% vs. 76.4%, $\chi^2(94) = .44$, $p = .507$; see table 2).

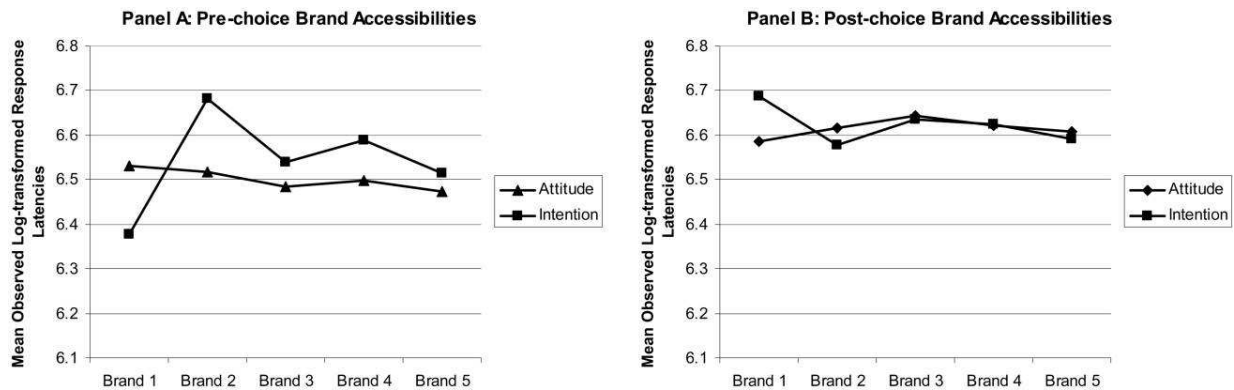
The pattern of brand accessibilities prior to decision making matches the expectations based on a motivational perspective (see fig. 1A). First, analyses confirm increased activation (i.e., lower mean response latencies) of the most preferred brand after responding to an intention question and prior to decision making. The activation of the most preferred brand compared to less preferred brands (i.e., brands 3, 4, and 5) differs across the type of question conditions ($F(1, 82) = 6.13$, $p = .01$). Specifically, when comparing the most preferred brand with the less preferred brands, the most preferred brand is significantly more accessible within the intention condition ($t(82) = -2.48$, $p = .015$), but not when making this comparison within the attitude question condition ($t(82) = .95$, $p = .345$). Similar results are obtained when comparing the accessibility of the most preferred brand to that of all less preferred brands (i.e., brands 2, 3, 4, and 5). These findings provide support for principle 1a of motivational states.

Second, principle 1b predicts that the second most preferred brand is inhibited compared with other less preferred brands (i.e., brands 3, 4, and 5) when participants answered an intention question, but not when they answered an attitude question. The interaction effect of the type of question and the type of brand is indeed significant ($F(1, 83) = 3.76$, $p = .056$). Specifically, the second most preferred brand is less accessible compared to less preferred brands in the intention question condition ($t(83) = 2.20$, $p = .030$), but not in the attitude question condition ($t(83) = -.47$, $p = .641$).

The brand accessibility analyses also lend support to principle 3a, which suggests inhibition of intention-related information after intention completion (fig. 1B). The accessibility of the most preferred brand compared with the less preferred brands (i.e., brands 2, 3, 4, and 5) after the choice decision differs significantly across the two type of question conditions ($F(1, 170) = 4.29$, $p = .040$). Comparing the accessibility of the most preferred brand to the accessibility of the less preferred brands within each type of question condition confirms longer latencies for the most preferred brand, compared with less preferred brands, in the intention question condition ($t(171) = 2.14$, $p = .034$), whereas no significant difference in the accessibility of the most pre-

FIGURE 1

MEAN PRE-CHOICE AND POST-CHOICE LOG-TRANSFORMED RESPONSE LATENCIES FOR FIVE BRANDS, RANK ORDERED FROM MOST TO LEAST PREFERRED



ferred brand, compared with less preferred brands, could be detected in the attitude question condition ($t(171) = -.82$, $p = .41$).

The post-choice accessibility of the second most preferred brand compared with less preferred brands in the intention question condition is comparable to that in the attitude question condition ($F(1, 170) = .19$, $p = .661$). Thus, the second most preferred brand, which experienced inhibition prior to decision making in the intention question condition, has a post-choice activation level comparable to that of less preferred brands in the intention question condition ($t(171) = -.01$, $p = .990$) and in the attitude question condition ($t(171) = -.65$, $p = .517$), in support of principle 3b.

Finally, if changes in brand accessibilities underlie the question-behavior effect, then the activation of the most preferred brand, relative to the second most preferred brand, prior to choice should mediate the effect of responding to an intention question on the choice of the most preferred brand. Following Baron and Kenny (1986), this study used a simultaneous logistic regression of brand choice on the type of question and the relative activation of the most preferred brand. The introduction of relative activation in the logistic regression analysis that predicts choice according to the type of question reduces the effect of the type of question from significant ($\beta = 1.01$, $t(85) = 1.96$, $p = .053$) to insignificant ($\beta = .52$, $t(85) = .94$, $p = .348$), and the relative activation of the most preferred brand becomes a significant predictor ($\beta = 1.57$, $t(85) = 2.50$, $p = .015$). The overall significance of this indirect effect can be assessed with a bootstrapping mediation test (Preacher and Hayes 2004; Shrout and Bolger 2002). The bootstrap estimate of this indirect effect and the constructed 95% confidence interval (lower bound 95% CI = .174, upper bound 95% CI = 1.44) show that 0 is not in the 95% confidence interval, so the indirect effect is significant, in further support of successful mediation.

Discussion

The results of study 1 provide initial evidence for the proposed motivational account. Activated intentions tend to be associated with changes in the accessibility of options, which influence subsequent brand choices. Study 1 demonstrates that measuring category-level intentions affects brand accessibilities, which in turn affect brand choices. Dynamic changes in brand accessibilities occur after responses to a category-level intention measure, in line with a motivational account. The reported findings establish the motivational nature of the question-behavior effect by demonstrating that motivation-related concepts are inhibited upon satiation of the motivation. This inhibition relates specifically to a motivational account and cannot be accounted for by other, existing theoretical accounts of the question-behavior effect. To further demonstrate the usefulness of a motivational account, study 2A focuses on the inhibition of intention-related cognitions after completing an intention (principle 3) and shows that this principle has implications for brand choices.

STUDY 2A

Study 2A takes the question-behavior effect one step further. It traditionally has been investigated as the impact of answering an intention question on a subsequent purchase decision. Study 2A goes one step further and investigates how the question-behavior effect unfolds when two brands are chosen consecutively from a choice set. That is, this study looks into what happens if consumers first answer an intention question, subsequently make a choice decision, and immediately thereafter make a second choice decision in the same product category. In line with previous records of the question-behavior effect, responding to an intention question is likely to affect the choice share of the most preferred

TABLE 3
OVERVIEW OF BRAND CHOICES BY CONDITION IN STUDY 2A

Type of question	N	Initial brand choice (%)	Subsequent brand choice (%)	
			Unconditional	Conditional
No question	46	45.7	30.4	47.6
Attitude	42	54.8	33.3	52.2
Intention	41	80.5	14.6	18.2

brand in the first choice instance. But what happens in the second choice decision?

Traditional theoretical accounts anticipate the same effect on the second as on the first choice decision. Having chosen a certain brand in the first choice decision implies that this brand is highly accessible and therefore should be likely to be chosen again, according to the attitude accessibility account. Response fluency also would be higher for the brand chosen in the first choice instance, so again this option is most likely to be chosen in the second choice instance according to the response fluency explanation. For situations in which cognitive dissonance applies, the same outcome can be expected, because if a consumer chooses a certain option initially because that option is most congruent with social norms, he or she should choose the same option again.

In contrast, principle 3a of the motivational perspective predicts a reduced likelihood of choosing the most preferred brand again in the second choice instance, because the accessibility of intention-related information gets reduced after intention completion (Förster et al. 2005; Liberman and Förster 2000; Marsh et al. 1998, 1999). This reduced accessibility of intention-related information—that is, the reduced accessibility of the most preferred brand—should result in a reduced choice likelihood of this option in the second choice instance. If we thus demonstrate the role of postfulfillment inhibition in the question-behavior effect, we can confirm the importance of relying on a motivational perspective, in addition to other theoretical accounts of the question-behavior effect.

Participants and Design

One hundred twenty-nine university students ($M_{\text{Age}} = 20.91$) participated in this study and were randomly assigned to one of three conditions. To investigate whether answering an intention question affects the pattern of brand choices, the participants in the experimental condition responded to an intention question (“How likely or unlikely would you be to try the presented candy bars if they were available to you?”), whereas those in the control condition either responded to an attitude question (“How positive or negative are you about the presented candy bars becoming available to you?”) or were not asked another question. The brand choices in the experimental condition thus are compared to the brand choices in two control conditions, including an attitude question and a no control question. Unlike the first study, in which we investigated a traditional question-be-

havior setting, this study uses a new, sequential choice setting. For traditional settings, the most stringent case (i.e., comparing an intention with an attitude question) is sufficient, because the comparison with a no question control condition has been frequently reported (Janiszewski and Chandon 2007; Morwitz and Fitzsimons 2004). For a new setting, though, we thought it important to compare the results of an intention question with (1) a baseline condition (i.e., no question) to get a sense of the size of the effect and (2) a stringent condition (i.e., attitude question) to get an idea of its relative size.

Procedure

As in study 1, participants reviewed the ratings of five brands of unknown candy bars on four attributes (i.e., taste, grams of fat, calories, and shelf life). Participants rank ordered the brands according to their preferences. Next, these participants were told that the candy bars were available in a neighboring country and that the manufacturer was thinking of introducing them on the domestic market. The experimental manipulation then determined whether participants responded to a category-level intention question, an attitude question, or no additional question. After completing a filler task, the participants were informed that the manufacturer intended to distribute samples of candy bars and made a decision by clicking on the brand of their choice. After the first choice decision, they were told that the winners of a box of candy bars could receive two boxes. Therefore, on the next page, they clicked the brand of their choice for the second box of candy bars. The experiment explicitly stated that they were completely free to choose whatever brand they desired, including the previously chosen brand if they wished. Thus, all five brands were depicted as available choice options in the second choice instance.

Results and Discussion

The students who participated in this study made two separate choice decisions (see table 3). A separate chi-square analysis for the first choice decision indicates that participants who respond to an intention question are more likely to select their most preferred choice option than are participants in the control condition with an attitude question (80.5% vs. 54.8%, $\chi^2(83) = 6.256, p = .012$) or the control condition with no additional question (80.5% vs. 45.7%, $\chi^2(87) = 11.174, p = .001$). This difference is in line with

TABLE 4
OVERVIEW OF BRAND CHOICES BY CONDITION IN STUDY 2B

Type of question	N	Initial brand choice (%)	Subsequent brand choice (%)	
			Unconditional	Conditional
Attitude	53	86.8	56.6	58.7
Intention	53	84.9	37.7.6	33.3

the predictions of the motivational perspective. For the second choice decision, a contradictory pattern emerges: participants who respond to an intention question are significantly less likely to select the most preferred brand than are participants in the control conditions with an attitude question (14.6% vs. 33.3%, $\chi^2(83) = 3.966$, $p = .046$) or no additional question (14.6% vs. 30.4%, $\chi^2(87) = 3.057$, $p = .080$).

This difference across conditions might not be caused by differences in motivational states but rather reflect a logical consequence of the differences in the initial choice decision. To exclude this alternative explanation, we conduct a further investigation focused on the choice share of the most preferred brand in the second choice instance, conditional on the choice of this brand in the first choice instance. These analyses reveal a significant difference between the experimental and control conditions. Whereas 52.2% of the participants in the control condition with an attitude question and 47.6% of them in the control condition without an additional question who chose the most preferred brand in the first instance select this brand again in the second instance, only 18.2% do so in the experimental condition with an intention question ($\chi^2(56) = 7.180$, $p = .007$; $\chi^2(54) = 5.334$, $p = .021$, respectively).

The results of this study demonstrate that there is more to the question-behavior effect than the influence on a first choice decision. These results also indicate the gaps in existing theoretical accounts, whether combined or in isolation. Answering an intention question initially increases choice for the most preferred, intention-related brand, but in a second instance, it decreases the choice for that most preferred brand. This choice pattern is in line with the predictions from a motivational perspective that describes responding to intention questions, but they run counter to predictions based on other theoretical accounts of the question-behavior effect. Therefore, our second study provides further evidence of the usefulness of incorporating a motivational perspective together with existing explanations to account for the question-behavior effect.

STUDY 2B

To determine if the foregoing results hold for existing brands with which consumers have a lot of experience, we conducted an abbreviated version of study 2A with two brands known by the target group: M&Ms and Smarties.

Participants and Design

One hundred six university students ($M_{\text{Age}} = 21.31$) participated in this study and were randomly assigned to one of two conditions: an experimental condition in which they responded to an intention question ("How likely or unlikely would you be to purchase the presented brands in the near future?") or a control condition in which they responded to an attitude question ("In general, how positive or negative is your attitude toward the presented brands?"). This study uses a sequential choice setting in which participants choose between two existing brands, M&Ms and Smarties.

Procedure

Upon entering the laboratory, participants took seats in front of computer screens. The participants looked at a picture of the two target brands, indicated their attitude toward each brand on a one-item 7-point Likert scale, and rank ordered the two brands according to their preferences. Next, the experimental manipulation ensured that participants responded to an intention or an attitude question. After completing a filler task, the participants were informed that they were to receive either M&Ms or Smarties. After selecting one of these two brands, participants were told that they could select a second brand. The experiment explicitly stated that they were completely free to choose whatever brand they desired, including the previously chosen brand if they wished.

Results and Discussion

The students who participated in this study made two separate choice decisions (see table 4). The percentage of participants who chose their most preferred brand in the first choice instance does not appear to differ across conditions. All participants are likely to select their most preferred brand, irrespective of whether they answer an attitude or an intention question (86.8% vs. 84.9%, $\chi^2(106) = .078$, $p = .780$). This lack of a question-behavior effect makes sense because the percentage of participants selecting their most preferred brand in the control condition is very high. More interesting though are the choice decisions in the second choice occasion. Participants who respond to an attitude question are significantly more likely to select their most preferred brand than participants who respond to an intention question (56.6% vs. 37.7%, $\chi^2(106) = 3.786$, $p =$

.052). The same pattern emerges when we investigate the second choice decision, conditional on their choice of their most preferred brand in the initial choice occasion (58.7% vs. 33.3%, $\chi^2(91) = 5.888$, $p = .015$). This finding provides further support for the proposed motivational account of the question-behavior effect. Study 2B demonstrates that the finding that a motivational state leads to decreased choice of the most preferred brand in a second choice instance also holds in the context of real brand choices.

STUDY 3

The purpose of study 3 is to replicate the findings of studies 2A and 2B and provide further support for our motivational account. Manipulating the time interval between the intention question and the initial brand choice, as well as between the initial and subsequent brand choice, enables us to establish the motivational nature of the results of study 2. By demonstrating the persistence of accessibility, we can distinguish a motivational from alternative accounts. Accessibility, according to the motivational perspective, is characterized by a relatively slow decay, whereas traditional accessibility theories suggest a rapid decay over relatively short periods of time (Higgins, Bargh, and Lombardi 1985; Srull and Wyer 1979). In addition, the techniques designed to discern motivational from nonmotivational effects suggest that motivational effects likely increase in strength over time (Bargh et al. 2001; Chartrand et al. 2008). Accordingly, we can expect that an activated intention ought to maintain or strengthen its activation when the time interval between the intention question and subsequent choices increases, maintaining or escalating the effects of intention questions on brand choices.

This maintenance or escalation in altered brand choices should occur only for the first brand choice. Any subsequent decrease in the choice of the most preferred brand in a second brand choice occasion, when the intention question has been answered first, is unlikely to persist when the time lag between the choice moments increases. The active inhibition of the intention-related brand after intention completion would be functional only if it is likely to interfere with the next intention in line. When no related intention gets activated subsequently, the concepts related to the previously activated intention are unlikely to interfere (Förster et al. 2005), and therefore, the inhibition of these concepts is unlikely to persist. Extending the time lag between the initial and subsequent brand choice then should negate the decreased choice for the most preferred brand in the second choice instance.

Participants and Design

Two hundred thirty-eight participants were randomly assigned to one of the eight conditions in a 2 (type of question: intention vs. attitude) \times 2 (initial time delay: no delay vs. delay) \times 2 (subsequent time delay: no delay vs. delay) between-subjects design. Prior research designed to identify a motivational effect has incorporated time delays ranging

from 5 (Bargh et al. 2001; Fitzsimons, Chartrand, and Fitzsimons 2008; Sela and Shiv 2009) to 8 (Chartrand et al. 2008) minutes; we use a 10-minute time delay to identify whether the question-behavior effect can be ascribed to a motivational source.

Procedure

The procedure for this study parallels that used in study 2A. At the beginning of the experiment, participants read that the research was being conducted in collaboration with a national market research organization for confectionery products. The organization reportedly was interested in estimating the market potential of new brands of candy bars. As in study 2A, participants first reviewed the ratings of five brands of unknown candy bars on four attributes, then rank ordered the brands according to their preferences. Next, they responded to a category-level intention question in the intention condition or an attitude question in the control condition. In the condition without an initial delay, the first choice decision followed immediately after the question manipulation. In the initial time delay condition, a 10-minute filler task, inserted between the question and initial choice decision, required participants to judge abstract shapes, numbers, colors, and jingles on their attractiveness. The presented choice decision informed participants that the market research organization would distribute samples of candy bars; they viewed all the brand names on computer monitors and revealed their choices by clicking on the preferred brand name. After this initial choice decision, and the filler task in the time delay condition, participants made an additional choice. As in study 2A, participants were told that they had to make this second choice decision because some participants would be lucky enough to receive two candy bars. All participants made a second choice decision by clicking on one of the five presented brand names.

Results and Discussion

Initial Brand Choice. Table 5 provides the choice shares of the five brands in each condition for the first choice instance. In line with our expectations, and as shown in figure 2, a logistic regression analysis estimating the choice for the most preferred brand at the initial choice moment reveals, besides a significant main effect of the type of question (Wald $\chi^2 = 20.225$, $p < .001$) and an insignificant main effect of time lag (Wald $\chi^2 = .749$, $p = .387$), a significant interaction effect between the type of question (intention vs. attitude) and time lag (absent or present) between the question and the first choice (Wald $\chi^2 = 5.275$, $p = .022$). The most preferred choice option was chosen more often in the intention question condition (82.1%) than in the attitude question condition (53.7%; $\chi^2(238) = 21.817$, $p < .001$). In the intention question condition, the most preferred brand was chosen more often when there was a time lag between the intention question and the initial brand choice (85.5%) compared with when the initial brand choice immediately followed the intention question (79.0%). This difference was

TABLE 5
OVERVIEW OF INITIAL BRAND CHOICES BY CONDITION IN STUDY 3

Type of question	Initial time lag	N	Brand 1 (%)	Brand 2 (%)	Brand 3 (%)	Brand 4 (%)	Brand 5 (%)
Attitude	No	61	65.6	18.0	11.5	3.3	1.6
Intention	No	62	79.0	19.4	1.6	0	0
Attitude	Yes	60	41.7	41.7	11.7	3.3	1.7
Intention	Yes	55	85.5	12.7	0	1.8	0

not significant though ($\chi^2(117) = .816, p = .255$). In contrast, in the attitude question condition, the most preferred brand was chosen less when the time lag between the attitude question and the initial brand choice was present (41.7%) versus absent (65.6%; $\chi^2(121) = 6.954, p = .007$). Overall, the difference in the choice share of the most preferred brand between the intention and attitude question conditions was greater in the case of a time lag (85.5% vs. 41.7%; $\chi^2(115) = 23.503, p < .001$) than in the absence of a time lag (79.0% vs. 65.6%; $\chi^2(123) = 2.785, p = .071$).

Subsequent Brand Choice. Table 6 presents the choice shares of the five brands in each condition at the second choice instance. Moreover, as shown in figure 3, a logistic regression estimating the choice of the most preferred brand (conditional on the choice of this brand at the first choice instance) in the second choice instance reveals, besides a significant main effect of the type of question (Wald $\chi^2 = 8.025, p = .005$) and an insignificant main effect of time lag (Wald $\chi^2 = 1.084, p = .298$), a significant interaction

between the type of question (intention vs. attitude) and time lag (present vs. absent; Wald $\chi^2 = 4.514, p = .034$). In the absence of a time lag between the two choice instances, respondents who chose their most preferred brand in the first choice instance were significantly less likely to reselect this brand in the second instance if they previously answered an intention question (11.1%) compared with an attitude question (45.2%; $\chi^2(76) = 11.350, p = .001$). With a time lag between choice instances, we observe no difference in the choice likelihood of the most preferred brand between the intention and attitude question conditions (29.4% vs. 35.3%; $\chi^2(85) = .326, p = .368$). In other words, a decrease in the choice share of the most preferred brand in the intention question condition emerges only when there is no time delay between the two choice moments (11% vs. 29%, $\chi^2(96) = 4.854, p = .024$).

The results of study 3 provide further support for the notion that merely responding to an intention question may activate this intention, which instigates behavior aligned

FIGURE 2
EFFECT OF TIME DELAY AND TYPE OF QUESTION ON INITIAL CHOICE OF THE MOST PREFERRED BRAND

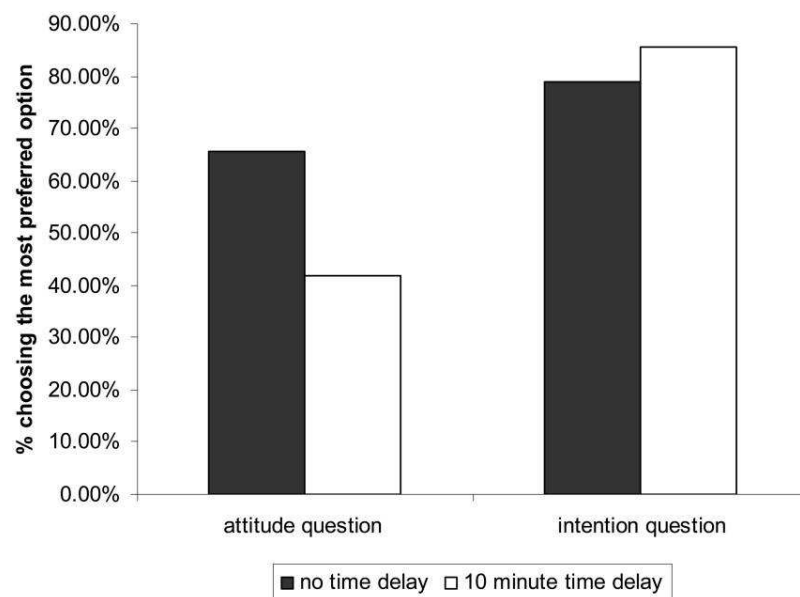


TABLE 6
OVERVIEW OF SUBSEQUENT BRAND CHOICES BY CONDITION IN STUDY 3

Type of question	Subsequent time lag	N	Brand 1 (%)	Brand 2 (%)	Brand 3 (%)	Brand 4 (%)	Brand 5 (%)
Attitude	No	61	44.3	39.3	13.1	1.6	1.6
Intention	No	62	27.4	59.7	11.3	0	1.6
Attitude	Yes	60	48.3	26.7	18.3	5.0	1.7
Intention	Yes	55	27.3	56.4	10.9	3.6	1.8

with this motivational state. Consistent with a motivational account, we find a persistent occurrence of the question-behavior effect as the time interval between the intention question and the brand choice increases. Also consistent with the proposed motivational account is the reversal in the choice pattern in the second choice instance, at least when the second choice task immediately follows the first. As the time interval between the two choice tasks increases, the choice share of the most preferred brand returns to a level comparable to that of the control condition.

GENERAL DISCUSSION

Summary of Findings

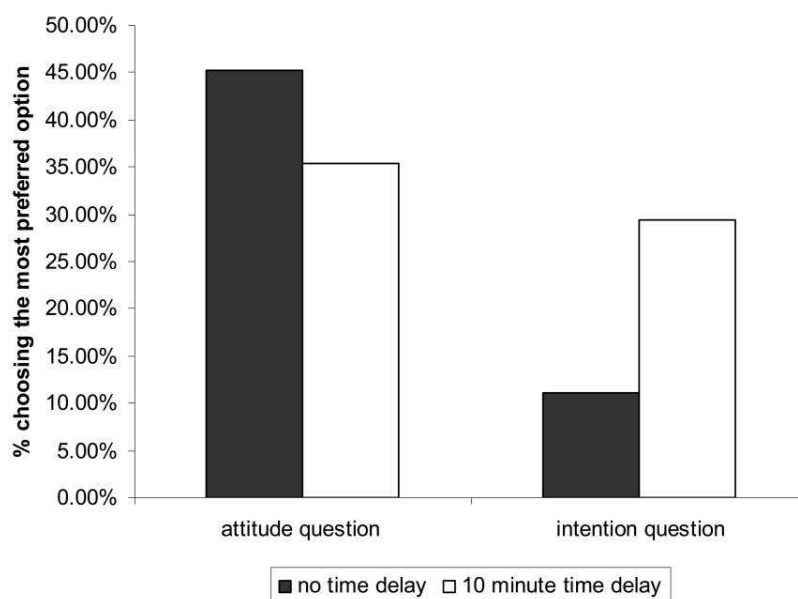
This article investigates why measuring intentions has such a profound influence on subsequent behavior. The results of three studies confirm that when a consumer responds to an intention question, the intention becomes activated,

and cognitive processes begin to ensure that the intended action is executed. Study 1 confirms that when a consumer responds to an intention question, cognitive processes initiate. It also establishes that a brand related to a particular intention remains in a heightened state of activation until the choice is made. Thereafter, a reverse pattern emerges, and brands related to a completed intention experience inhibition. Furthermore, brands that compete most with the intention are inhibited until intention completion takes place. Study 1 demonstrates directly that changes in brand activation drive the question-behavior effect. As such, this study provides initial evidence that the fundamental principles of a motivational perspective on answering intention questions applies to the question-behavior effect.

Studies 2A and 2B provide further evidence for a motivational account of the question-behavior effect by showing how the effect develops in a sequential choice setting for both fictitious and existing brands. Unlike predictions based

FIGURE 3

EFFECT OF TIME DELAY AND TYPE OF QUESTION ON THE SUBSEQUENT CHOICE OF THE MOST PREFERRED BRAND CONDITIONAL ON ITS INITIAL CHOICE



on existing theoretical accounts, such as attitude accessibility, response fluency, and cognitive dissonance, predictions derived from a motivational perspective (i.e., pre-choice accessibility advantage and post-choice accessibility deficit for the most preferred brand) suggest that the question-behavior effect extends beyond immediate choices. Specifically, a motivational account suggests a dynamic pattern of brand accessibilities regarding the most preferred brand and predicts a continuation of this dynamic pattern in consumers' choices. The results of studies 2A and 2B demonstrate increased activation of intention-related brands prior to behavioral enactment and their inhibition after it translates into consumers' choice decisions. We thus find a unique choice pattern, with an initial increase and subsequent decrease in the choice of the most preferred brand when brand choices follow an intention question.

Study 3 lends further support to a motivational account of the question-behavior effect by demonstrating a greater effect when a time lag is introduced between the intention question and the initial brand choice behavior. This finding is in line with the predicted motivational account, because persistence is an interesting property of changes in the relative activation of concepts in memory. In contrast with traditional accessibility theories, which argue that the accessibility of cognitions declines with the passage of time (Higgins 1996), the accessibility of intention-related concepts depends on their intentional status (uncompleted vs. completed), rather than time elapsed. In contrast with information unrelated to an intention, intention-related information likely remains active until the enactment of the intention. Increased accessibility thus persists as long as the intention is active (Förster et al. 2005).

Theoretical and Managerial Implications

Theoretically, this research extends our knowledge on the question-behavior effect by casting a new light on the processes that may underlie the effect. Several explanations have already been proposed to account for this effect, yet all of them can only account for part of previously reported question-behavior manifestations. Attitude accessibility does not predict a behavioral change when brand attitudes are equally accessible before responding to an intention question (Morwitz and Fitzsimons 2004). Response fluency is likely influential when people fail to consider attribute information but not if consumers know a considerable amount about the product (Janiszewski and Chandon 2007). The cognitive dissonance account is limited to explaining changes in socially desirable behaviors. A motivational perspective, on the other hand, is likely to contribute to a wide array of question-behavior effects and may be able to explain some of the more anomalous findings in the question-behavior literature. For example, the persistence of behavioral effects of responding to an intention question is a straightforward observation when looking at it from a motivational perspective, whereas it is difficult to account for by most existing explanations (except response fluency).

Although a motivational account is likely to play a role

in a vast array of question-behavior effects, a motivational explanation is not able to account for all question-behavior effects either. Considerable research demonstrates the behavioral effects of satisfaction measures (Borle et al. 2007). For example, Dholakia and Morwitz (2002) find that measuring satisfaction in a financial services setting influences not only single purchases but also customers' relational behaviors over an extended period of time. The proposed motivational perspective relates specifically to the consequences of answering intention questions and thus cannot provide insight into these findings which are also generally described as manifestations of the question-behavior effect. However, satisfaction measures could possibly serve "as the basis for attitude formation, which then serves as the most salient basis for the development of an intention" (Feldman and Lynch 1988, 423). If responding to a satisfaction measure instigates spontaneous intention formation, the properties of motivational states could also play a role in the question-behavior effect caused by a satisfaction measure. Future research should address this issue.

Although we think that providing support for an additional explanation for the question-behavior effect has merit in its own right, the implications of the proposed motivational mechanism may also inspire marketers trying to use the effect strategically. For example, given the persistence of the question-behavior effect, an enterprising salesperson could benefit from asking consumers who are browsing or window shopping whether they intend to buy a certain product, rather than giving them information on the different brands and models first. Existing accounts would suggest to inform the consumers first and to only include an intention question later on in the sales pitch as part of the hard sell, as they assume the effect decays with delay.

Not only the persistence of changes in brand activation, but also the finding that competing choice options are inhibited after responding to an intention question may have implications for marketers. That is, responding to an intention question inhibits well-preferred, distracting brands. If a most preferred option is out of stock these well-preferred, distracting brands would make a proper choice. Yet consumers who previously answered an intention question may choose a less preferred brand because their well-preferred, distracting brands have been inhibited. To override any such inhibition, manufacturers of well-preferred brands might want to emphasize their brands as a choice option by point-of-sale communication.

Limitations and Directions for Further Research

Our research consistently shows that the choice for the most preferred brand is higher when a priori an intention question was answered because responding to a general, category-level intention question increases the accessibility of the most preferred brand. Thus, responding to an intention question is most likely to activate an intention that is targeted at the consumer's most preferred brand. Yet, we can easily think of situations in which answering a category-level intention question may have either a limited or a different

brand-level effect. First, the motivational perspective as laid out requires the formation of an intention toward a specific target to alter brand choices. If consumers merely respond to a category-level intention without tying a specific brand to it, no motivation-driven changes in brand choices are likely to emerge. Consumers may have no clear view on the different brands in a certain product category or multiple brands may be equally likely to be evoked by the product category. In these instances, responding to an intention question may have no implications for brand choice, although a category-level effect may still be present (i.e., an increased likelihood of making a purchase in the questioned product category).

Second, the effect of responding to a category-level intention question may on occasion sway a consumer in favor of a brand, other than the most preferred brand. For instance, when processing an ad featuring a category-level intention question chances are that consumers may tie the advertised brand, rather than their most preferred brand, to their intention. The reported studies do not include a manipulation to focus people's attention on a specific brand immediately prior to answering an intention question. Thus, further research could focus on providing more detailed information on when exactly a category-level intention question is more or less likely to affect the choice likelihood of the most preferred brand.

Furthermore, in certain occasions responding to an intention question may be less likely to actually activate an intention. Specifically, the activation of a certain goal may evoke associated behaviors that previously have been used to achieve the goal. Planning how to achieve a goal reduces the likelihood of applying out-of-plan behaviors to reach that goal (Bayuk et al. 2010). Thus goal activation may prevent the activation of an intention as a response to an intention question if the behavior cited in the question is an alternative to an already adopted plan. For instance, when activating the goal to reduce cholesterol leads to the activation of a plan to eat fewer eggs, responding to an intention question about exercising to reduce cholesterol may be less effective compared to people who had not set an alternative plan in advance. Future research should elaborate further on the interplay of goals and intention activation, and on whether the findings of Bayuk et al. (2010) also apply to the adoption of an intention through responding to an intention question.

Further, research on the question-behavior effect has consistently shown that responding to an intention question alters subsequent behavior. While existing explanations largely overlooked the fact that it is responding to an intention question that triggers the effect, identifying a motivational explanation accommodates our knowledge of the question-behavior effect at this point. However, raising a motivational account of the question-behavior effect inevitably relates the question-behavior effect to goal priming (e.g., Chartrand et al. 2008). Yet we suggest that intention questions may be discerned from traditional goal primes. Research has shown that a given prime may some-

times activate a goal, while at other times it activates a trait. Specifically, goal priming is the most likely outcome when the prime is discrepant from the self-concept whereas semantic priming effects are most likely to occur when the prime is reflective of the self-concept (Sela and Shiv 2009). For instance, whereas a frugality prime is likely to be consistent with people's ought self, a luxury prime is likely to be discrepant from people's ought self-concept. Consequently, a luxury prime is more likely to manifest temporal escalation, which is indicative of goal activation whereas a frugality prime is more likely to affect behavior in a temporally diminishing pattern, indicative of semantic activation. We suggest that priming a behavior by means of an intention question is likely to evoke a motivational state irrespective of how closely the behavior is related to the self-concept. Responding to an intention question may lead the questioned behavior to be represented as a desirable, feasible end state. Hence, a motivational component may be rather automatically attached to concepts made accessible by an intention question. Responding to an intention question may more certainly lead to intention formation whereas traditional primes only in certain instances may have the ability to evoke a motivational state.

Of course, this reasoning on the uniqueness of intention questions as motivational primes is speculative and needs to be addressed in future research. The conclusions of this paper remain restricted to the finding that responding to an intention question sets a motivational process into motion that leads to a change in subsequent behavior.

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