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WORKING PAPER

Intention Superiority Perspectives on Preference-decision Consistency^{*}

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Intention Superiority Perspectives on Preference-decision Consistency

ABSTRACT

This paper investigates the cognitive processes underlying the increased preference-behavior correspondence following intention formation. In line with 'intention superiority' principles, three studies show that a brand tied to an intention remains in a heightened state of activation until a choice is made, after which brand inhibition sets in. A fourth study suggests that keeping intention-related information in a heightened state of activation leads consumers to shield their intentions from interference by avoiding information processing and ignoring competing information. Moreover, intention superiority principles are drivers of increased preference-behavior correspondence independent of decision involvement (Studies 1 and 2), product involvement (Study 2) and cognitive dissonance (Study 3). Implications for marketers conclude the paper.

Keywords: intention, choice, preference, consistency

INTRODUCTION

Intentions are good predictors of behavior. They are the most immediate and reliable antecedents of actual behavior (Sheeran and Abraham, 2003). By now, researchers generally acknowledge that the mere formation of an intention induces behavior that is consistent with an individual's preferences (Feldman and Lynch, 1988; Morwitz, Johnson, and Schmittlein, 1993). But, less clear is why exactly intentions trigger more preference-consistent behavior. Therefore, the main purpose of this paper is to uncover the cognitive processes that cause the heightened degree of preference-behavior correspondence after intention formation. Starting from the specific characteristics of intentions, this paper looks into prospective memory literature, which describes the principles of intention superiority. These principles state that human memory keeps intention-related cognitions in a heightened state of activation prior to intention completion (Goschke and Kuhl, 1993) and a decreased state of activation after intention completion (Marsh, Hicks, and Bink, 1998). Translated to a purchase behavior setting, these principles imply that a brand tied to an intention remains in a heightened state of activation until choice, after which brand inhibition sets in. Generally, this paper argues that the mere formation of a choice intention instigates a dynamic process of changes in intention-related brand accessibilities, and these changes in brand accessibilities then induce individuals to make a choice decision that is in line with their initial preferences.

A series of four studies enhances our understanding of what is and what is not going on after consumers form a choice intention. Using fictitious brands in a strictly controlled setting, the first study shows changes in brand accessibilities after intention formation, in line with the intention superiority principles. More specifically, the study demonstrates increased accessibility of the intention-related brand before choice and inhibited accessibility of this brand post choice. Study 2 replicates the findings of Study 1 for existing, well-known brands. Both studies also exclude an increase in decision involvement due to intention formation as an alternative explanation for increased preference-decision correspondence. Study 3 yields further confirmation for intention superiority as a valid account for intention formation induced preference-behavior consistency by excluding cognitive dissonance as an alternative explanatory mechanism. Finally, Study 4 sheds light on the strategy that consumers use once they have formed an intention. The results show that when consumers form a purchase intention, they ignore information on competing, superior brands. So, the results seem to imply that consumers keep intention-related information in a high activation state to shield their intentions from interference by avoiding information processing, even if this behavior results in a suboptimal decision. The reported findings hold important implications for the design of both marketing communications and market research.

THEORETICAL BACKGROUND

The notion of preference consistency is a basic premise within consumer behavior research (Lee, Amir, and Ariely, 2009). Keeping all attributes equal, when a consumer indicates to prefer one brand over another, this consumer will most likely translate this preference in a consistent choice decision in a subsequent purchase occasion. However, the reasons why consumers may not behave in line with this preference consistency principle are vast. For instance, deliberation on one's preferences (Nordgren and Dijksterhuis, 2009), a different framing of attribute information (Levin and Gaeth, 1988), and the passing of time (Zhao, Hoeffler, and Zauberan, 2007) all have the potential of decreasing preference consistency.

Other studies, however, look at this issue from the opposite angle and try to answer why consumers persist with past preferences or choices in future situations. In essence, the chosen alternative's superiority is often the main driver of preference persistence. However, other mechanisms, such as loss aversion (Tversky and Kahneman, 1991), choice set and brand characteristics (Carpenter, Glazer, and Nakamoto, 1994; Simonson and Tversky, 1992), and superfluous choices (Muthukrishnan and Wathieu, 2007) can also explain why consumers (erroneously) persist with past choices in future situations.

This paper focuses on intention formation as a mechanism through which consumers persist in their preferences. The formation of an intention is only functional if the intention serves as an input for later actual behavior (Sherman, 1980). If consumers cannot retrieve a formed intention from memory at the moment of decision making, this would render intention formation redundant (Shapiro and Krishnan, 1999). Hence, although people may change their mind between the formation of an intention and the actual choice of an alternative, behavior is often likely to correspond to intentions (Pieters and Verplanken, 1995). This idea is also expressed in traditional attitude theories, such as the Theory of Reasoned Action, which postulate that intentions fully mediate the effects of attitudes on behavior (Ajzen & Fishbein, 1980). Ajzen and Fishbein (1980) indicate that an attitude (i.e., a mental event) can influence behavior (i.e., an observable action) through an intention, which is referred to as "a particular type of volition that transforms a psychological state into guided bodily responses" (Bagozzi, Baumgartner, and Yi, 1989). Although the exact nature of the transformational process is not yet fully understood, research on prospective memory clarifies how people are able to act in accordance with the intentions they formed.

The memory for intentions is unique, in the sense that respondents keep intention-related contents in a heightened state of activation up until the moment of intention enactment (Goschke and Kuhl, 1993). Intention

completion next causes a temporary inhibition of the intention-related contents (Marsh, Hicks, and Bink, 1998). Cognitive psychological research refers to these findings as ‘intention superiority’^{**}. Hence, intention superiority describes that people can retrieve information related to an intention more rapidly from memory than information that has no associated intentionality (Goschke and Kuhl, 1993). When forming a choice intention, the most preferred brand is most likely to become the object of the intention, turning the brand name of the most preferred brand into an ‘intention-related stimulus’. The consumers’ mind will then keep this intention-related option in a heightened state of activation facilitating the choice for the most preferred option. Intention formation is likely to put the brand name of the most preferred choice option, and not necessarily its attribute information, in a heightened state of activation. Merely remembering the brand name, rather than its specific attribute scores, is sufficient to pursue an intention. Hence, the first intention superiority principle is likely to unfold in a brand choice context as follows: Forming (versus not forming) a choice intention increases the accessibility of the most preferred brand.

After making a choice, however, this intention-related option is likely to experience inhibition, in accordance with the intention superiority principle. When an intention is no longer prospective, the consumer’s mind keeps this intention-related information temporarily in a decreased state of activation. Hence, forming (versus not forming) a choice intention results in a decreased accessibility of the most preferred brand after consumers make a choice.

The proposition that the mere formation of an intention enacts a sophisticated system of changes in the accessibility of concepts in memory is important to account for in research on consumer decisions. Prior research findings indicate that accessibility can have a major impact on consumers’ information processing and decision making (e.g., Nedungadi, Chattopadhyay, and Muthukrishnan, 2001; Thelen and Woodside, 1997). The more accessible pieces of information are, the more likely it is that they will influence behavior. Hence, the relationship between attitudes and behavior grows stronger as attitudes become more accessible (Biehal and Chakravarti, 1983). Likewise, Nedungadi (1990) found changes in consumer memory and choice as he varied the accessibility of fast-food alternatives.

Consequently, due to changes in brand accessibilities (i.e., a brand’s retrieval advantage), the mere formation of a choice intention may increase preference-choice consistency.

^{**} Besides intention superiority, attitude accessibility (Morwitz and Fitzsimons, 2004) and response fluency (Janiszewski and Chandon, 2007) are also viable accounts for why answering an intention question influences the

STUDY 1

The first study investigates whether intention formation instigates a dynamic process of changes in brand accessibilities in a strictly controlled setting by using fictitious brands of laundry detergents. Hence, next to confirming an increase in preference-behavior correspondence, this study establishes the existence of an effect of intention formation on brand accessibility. Intention superiority is not the only mechanism that can explain an increase in preference-behavior correspondence and a change in brand latencies after intention formation. An alternative explanation could be that intention formation increases respondents' involvement with the decision which in turn affects respondents' subsequent brand choices. Those who are high versus low involved with the choice decision may devote more effort to the decision process, resulting in a higher likelihood of choosing their initially most preferred brand. To rule out decision involvement as an alternative explanation for potential effects on preference consistency, this study also investigates the relation between intention formation and decision involvement.

Method

Pretest

A pretest collects information on absolute and relative attitudes, uniqueness and believability of the product, purchase intentions and perceived availability of 11 fictitious product concepts from 18 participants (10 women and 8 men, $M_{Age} = 31.7$, $SD = 4.4$). The gathered data indicate the five products that are the most appropriate for the main study. More specifically, the main study includes the five pretested products that score rather positive on likeability, and induce a positive purchase intention in the majority of the participants (i.e., Alko, Snove, Agom, Meva, and Olia, for a description of the product concepts, see Appendix 1).

Participants

The study uses data from 123 participants, 56 men and 67 women, age 25 year and older ($M_{Age} = 31.7$, $SD = 6.5$). By filling in the questionnaire participants could win movie tickets and a gift voucher at the value of €200.

Design

The experiment employs a 2 x 2 full factorial between-subjects design. The two manipulations are (1) whether or not the participants have to form and report a purchase intention regarding new brands of laundry detergents, and (2) whether brand accessibility measures precede or succeed respondents' decision making.

subsequent brand choice behavior. However, none of these explanations starts from the specific characteristics of

Concerning the intention formation manipulation, previous research shows that merely responding to a purchase intention question (e.g., Do you intend to try out one of these five laundry detergents if they are available to you? Yes/No) can indeed instigate the formation of a purchase intention (Feldman and Lynch, 1988). To answer this question, the participants have to form a (positively or negatively valenced) purchase intention. However, in view of the characteristics of the fictitious laundry detergents, the participants most likely develop a positive intention. Concerning the second manipulated variable, the measurement of brand accessibilities occurs between-subjects in this experiment because the measurement of the response latencies prior to the choice task could affect the outcome of the choice task. To obtain a valid measure of brand choices only half of the participants respond to a pre-choice brand accessibility measure.

Procedure

Participants two times read the description of each of the five fictitious brands of laundry detergents. After reading the descriptions, the participants rank order the products according to their preferences. Half of the participants subsequently answer an intention question to induce intention formation. Afterwards, all participants respond to a three-item seven-point semantic differential rating scale measuring the degree of importance a person attaches on a purchase decision for these laundry detergents and the amount of attention devoted to it ($\alpha = .91$) (Ratchford, 1987). After completing the subsequent filler task, all participants focus their attention on their attitude towards their second most preferred choice option. To this end respondents answer six additional questions regarding their second most preferred option (e.g., How important do you consider the benefits of brand X? with 1=not at all important and 5=very important). In general, respondents are then more likely to select this focal alternative (Posavac, Sanbonmatsu, and Ho, 2002). Previous research indicates that the most accessible brand is most likely to be chosen (e.g., Nedungadi, 1990). Since the most preferred brand often is more accessible, especially in a research with fictitious brands, an increase in accessibility of the second brand forms a strong test case. Hence, this intervention enhances preference-decision inconsistency, which is necessary to enable the detection of a difference in the choice decisions of those that did or did not form a choice intention. If all variables remain the same at the moment participants report their preferences and at the moment they make a choice decision, all participants, in both conditions, are likely to depict preference persistence. Next, the participants either perform (1) a response latency task or (2) make a memory-based choice first, followed by a response latency task. To assess response latencies, the names of the five new laundry detergents, five established laundry detergents and 10 brands of other product categories appear on a computer monitor in a random order. In this

intentions.

product category-identification task participants press a button labeled 'laundry detergent' for brands of laundry detergents and press a button labeled 'non-laundry detergent' for other products. Table 1 summarizes the experimental procedure.

Table 1 here.

Results and Discussion

The analysis of the memory-based choices (see Table 2) indicates a difference in preference-choice consistency depending on intention formation. Participants that formed an intention are more likely to finally select their most preferred choice option compared to the participants that did not form an intention (90.9 % vs. 69.0 %, $\chi^2 = 4.76$, $p = .029$). In line with the expectations, these data show that the preference persistence is stronger after intention formation. Furthermore, participants that did not form an intention tend to select the second most preferred brand more than those that did not form an intention (27.6 % vs. 3.0 %, $\chi^2 = 7.50$, $p = .006$). This may suggest that the memory for intentions is strong enough to withstand competing threats to accessibility, induced by focusing on the second most preferred alternative. In the absence of intention formation, preferences appear more malleable and, consequently, participants are more likely to choose their second most preferred brand after focusing on it immediately prior to decision making.

Table 2 here.

A 2 (intention formation: yes vs. no) x 2 (moment of latency measurement: before vs. after the choice decision) between-subjects ancova, with response latencies for the most preferred choice option as the dependent variable and a mean of the filler latencies as a covariate then explores the intention superiority effect, and more specifically its dynamic properties of activation and inhibition, as a theoretical explanation for this increased preference persistence. As instructed by Fazio (1990, p. 86), the latencies of filler trials provide a means of controlling for individual differences in general speed in responding. Further, because of positively skewed latencies, all analyses include log-transformed latencies. Overall, ancova shows a significant interaction effect between intention formation and the moment of response latency measurement ($F(1,121) = 9.42$, $p = .003$), with the mean of the filler latencies as a meaningful covariate ($F(1,121) = 4.01$, $p = .048$). Figure 1 shows this interaction.

Figure 1 here.

When the accessibility of the most preferred choice option is measured prior to decision making, then the response latencies are faster when consumers have versus have not formed intentions a priori ($M_{\text{intention}} = 6.9$ vs. $M_{\text{no_intention}} = 6.7$, $F(1,117) = 3.74$, $p = .056$). When measuring the accessibility of the most preferred choice option after the choice decision, the difference between the two conditions inverts. The most preferred choice option becomes significantly less accessible after decision making when consumers did versus did not form an intention a priori ($M_{\text{intention}} = 6.6$ vs. $M_{\text{no_intention}} = 6.8$, $F(1,117) = 6.03$, $p = .016$). Hence, the simple effect tests for the influence of forming intentions (vs. not forming intentions) on the accessibility of the most preferred choice option are significant before and after a choice decision is made. This finding indicates that when a consumer forms a purchase intention, the option that this consumer links with this intention (i.e., the most preferred option) becomes more accessible when the intention is still prospective.

After the behavioral stage, this most preferred choice option becomes significantly less accessible. These findings seem to indicate an increased accessibility in memory for prospective elements. Furthermore, the data also provide evidence for inhibition after the behavior is performed. Given that both dynamic properties of increased activation and inhibition occur in the collected data, these data provide first evidence that the intention superiority principles apply in consumer settings as well.

In addition, forming an intention does not alter the level of involvement with a choice decision in the given product category. Participants that formed an intention view a choice decision as equally important as participants that did not form an intention ($M_{\text{no_intention}} = 4.0$ vs. $M_{\text{intention}} = 4.3$, $t(121) = 1.27$, $p = .207$). Based on this finding and the evidence for a dynamic pattern of brand accessibilities, altered levels of decision involvement are not likely to account for the increased level of preference-behavior correspondence after intention formation.

Study 1 shows that the formation of an intention for fictitious brands overcomes preference-behavior inconsistency by increasing the accessibility of the most preferred, intention-related brand. The question, however, remains whether the results also hold for existing brands. Hence, will mere changes in brand activation also account for preference persistence after intention formation when the brands are familiar and preferences are already more crystallized prior to intention formation? A second study provides an answer to this question.

STUDY 2

The main objective of Study 2 is to replicate the findings of Study 1 for real, existing brands. This study again demonstrates that the formation of an intention instigates a dynamic process of changes in accessibilities rather than altering the level of involvement with the choice decision. If the results of the previous study are robust and genuine, then the straightforward prediction is that again a cross-over interaction will appear in the data, in which the option associated with the intention shows greater activation prior to the choice behavior and less activation after the choice decision. However, because consumers may hold strongly developed attitudes towards existing products and may respond in a habitual way towards existing products, an increase in preference persistence may be much harder to detect.

Therefore, the current study includes product involvement as a potential moderator in the analysis of the brand choices. Low involved consumers may show an increase in preference consistency due to intention formation. Highly involved consumers, on the other hand, are generally more knowledgeable, and may consequently be less likely to divert from a choice for their most preferred brand (Laroche, Kim, and Zhou, 1996), regardless of intention formation. Hence, preference-behavior correspondence is likely to be high when product involvement is high. When product involvement is low, preference-behavior correspondence is likely to be high only when an intention was formed a priori. Pre-choice increased and post-choice decreased accessibility of the most preferred brand, however, are only likely to occur after intention formation and independent of the level of product category involvement.

Furthermore, as Study 1, Study 2 also accounts for the potential role of decision involvement in increasing preference-decision consistency.

Method

Participants

This study analyses data from 199 students at a large European university, aged between 18 and 32 ($M_{Age} = 19.9$, $SD = .44$). Of these students 148 (74.7%) are female. In return for their participation, participants could win a gift voucher at the value of € 50.

Design and Procedure

The design and procedure of this study are comparable to those of the previous study. Hence, this study encompasses a 2 x 2 full factorial between subjects design, with the formation of a choice intention (intention questions vs. attitude questions) and the moment of the response latencies measurement (before vs. after decision

making) as the between subjects variables. The main difference with the first study is that the current study focuses on existing brands as stimuli to test the hypotheses. The focal products in this study are snack bars. Participants first report to which degree they are familiar with buying products in the target product category. Subsequently, they indicate whether they know the ten brands of snack bars under investigation, that are, “Nuts”, “Crunch”, “Kitkat”, “Lion”, “Mars”, “Milky Way”, “Twix”, “Snickers”, “Balisto” and “Bounty”, and report their absolute attitude towards each brand on a 1-item 9-point Likert scale with the endpoints ranging from -4 [extremely negative] to +4 [extremely positive]. Afterwards, the participants report their top-3 of snack bars, starting with their most preferred brand. Subsequently, they either answer four general intention questions (e.g., Do you intend to buy one of these candy bars in the near future?) or they answer four general attitude questions (e.g., How much do you enjoy eating candy bars?). While the participants in the control group in the first study just skipped the intention questions, the participants in the control group in this second study answer additional general attitude questions. Consequently, the participants in both conditions attend to the product category equally. Next, all participants respond to three items that measure the level of decision involvement (Ratchford, 1987) and to the 20 items from the Personal Involvement Inventory, which measures the level of product category involvement (Zaichkowsky, 1985). The Chronbach’s Alpha is .75 for decision involvement and .93 for the 20 product category involvement items. After a 10-minutes filler task all participants focus their attention on their second most preferred brand by looking at an advertisement for this focal brand and completing a 4-item semantic differential with 9 anchor points, ranging from -4 to +4 to assess the attitude towards the ad. Then, participants either perform a response latency task or make a memory-based choice followed by a response latency task. To register response latencies, a computer monitor presents the names of the 10 target snack bar brands and 10 brands of other product categories, one by one, in a random order. In this product category-identification task participants press a button labeled ‘snack bar’ for brands of snack bars and a button labeled ‘non-snack bar’ for other products.

Results and Discussion

At first sight, the participants’ choice decisions do not reveal a significant difference between the participants that did or did not answer intention questions. The two intention formation conditions are equally consistent in their decision making (83.0 % vs. 71.4%, $\chi^2 = 1.91$, $p = 0.167$). However, looking separately at the choices of the participants that are either high or low involved with the product category reveals a different picture. Since Chronbach’s Alpha was comfortably high ($\alpha = .93$), the mean across all 20 involvement items represents each participant’s involvement score. Next, a median split on this mean involvement variable divides the participants

into a high and a low involvement group ($M_{\text{low_involvement}} = 4.6$ vs. $M_{\text{high_involvement}} = 6.1$, $t(208) = -18.47$, $p < .001$).

Table 3 gives an overview of the results of the choices for the two involvement groups separately.

Table 3 here.

With respect to these choices, the low involved participants appear significantly more consistent if they did, versus did not, form an intention (87.5 % vs. 66.7 %, $\chi^2 = 3.70$, $p = 0.054$). High involved participants, on the other hand, remain consistent irrespective of the intention formation manipulation (73.3 % vs. 75.9 %, $\chi^2 = 0.03$, $p = 0.854$). This difference between high and low involved participants is in line with the expectations.

Given the high level of preference persistence after intention formation, the question is whether the dynamic properties of the intention superiority explanation also apply in this experimental set up. A 2 (intention formation: yes vs. no) x 2 (moment of latency measurement: before vs. after the choice decision) x 2 (product category involvement: low vs. high) between-subjects ancova, with response times for the most preferred choice option as the dependent variable and a mean of the filler latencies as a covariate explores this proposition. The level of product category involvement was added as an independent variable in this analysis because it moderates preference persistence. The straightforward prediction from an intention superiority perspective, however, is that intention formation affects the accessibility of the most preferred brand independent of the level of involvement. The ancova-analysis indicates that the three-way interaction is not significant ($F(1,158) = 1.71$, $p = .193$). The interaction effect between intention formation and the moment of response latency measurement ($F(1,158) = 21.99$, $p < .001$) is the only significant two-way interaction, with the mean of the filler latencies as a meaningful covariate ($F(1,158) = 41.39$, $p < .001$). Figure 2 presents this interaction.

Figure 2 here.

More specifically, simple effect tests show that, prior to decision making, this most preferred choice option is significantly more accessible if intentions are formed compared to when no intention formation manipulation occurred ($M_{\text{intention}} = 6.2$ vs. $M_{\text{no_intention}} = 6.50$, $F(1,150) = 13.78$, $p < .001$). Further, after making a choice decision, the accessibility of the most preferred choice option again significantly differs between the ‘intention formation’ conditions. This time, the most preferred choice option is significantly less accessible for the participants that formed an intention compared to the participants in the control condition ($M_{\text{intention}} = 6.5$ vs. $M_{\text{no_intention}} = 6.3$,

$F(1,150) = 8.84, p = .004$). Again, the formation of a choice intention did not appear to alter the level of decision involvement. Participants that form an intention report an equally high level of decision involvement as those that do not form an intention in advance ($M_{\text{no_intention}} = 4.3$ vs. $M_{\text{intention}} = 4.2, t(209) = .79, p = .432$)

Overall, these results confirm the expectations and validate the results of the second study. They clarify that only the low involvement group of participants shows a difference in preference persistence. Participants that are highly involved with the product category all make rather consistent choices, irrespective of whether they a priori formed an intention. Further analyses point out, that the increased accessibility and inhibition of the most preferred choice option occurs after intention formation, irrespective of the level of product category involvement. Therefore, these findings confirm that the intention superiority perspective is a valuable factor in investigating preference persistence. They, however, also clarify that alternative mechanisms can also account for a high level of preference-behavior correspondence. Specifically, the high involved participants that did not form an intention in advance were also highly likely to make a consistent decision. A dynamic pattern of changes in brand accessibilities, however, could not be observed for this group of participants and can therefore not account for this higher level of preference-behavior correspondence.

The previous studies suggest that intention superiority is an important element in accounting for increased preference-decision correspondence after intention formation. The studies also show that the dynamic pattern of accessibilities can neither be explained by process involvement, nor by product involvement. The third study further establishes the importance of these intention superiority principles, by excluding cognitive dissonance as an alternative explanation.

STUDY 3

Not only intention superiority, but also cognitive dissonance can account for the accessibility pattern of increased activation and inhibition. Whereas other alternative explanations for increased preference persistence such as involvement and commitment would also be able to account for an increase in pre-choice accessibility of the most preferred brand, the post-choice inhibition can only be accounted for by a cognitive dissonance perspective. That is, if dissonance emerges after making a choice, foregone alternatives may become more salient, resulting in a decline in accessibility of the chosen brand. Therefore, this study investigates whether inhibition of the most preferred brand also occurs in a situation in which dissonance is unlikely to emerge. More specifically, when participants make a choice but do not receive the brand of their choice due to an alleged stock-out, intention

superiority would still predict a temporary inhibition because of intention completion, whereas cognitive dissonance would not predict a difference in accessibility because a dissonance arousing situation is absent.

Method

Participants and Design

In total, 92 undergraduate students ($M_{\text{Age}} = 22.0$, $SD = 3.6$), 42 men and 50 women, participated in Study 3. To investigate the influence of cognitive dissonance, this study employs a between-subjects design with the formation of an intention (intention question vs. attitude question) as the between subjects factor.

Procedure

At the beginning of the experiment, participants receive the information that for this study the researchers collaborate with a national market research organization for confectionery products. The organization reportedly would like to get an idea of the market potential of foreign brands of candy bars on the domestic market. On the next page, participants review brand attribute information about five unknown brands, available in a neighboring country (see Table 4). They then rank order the five brands according to their preferences, and they either respond to an intention question in the intention formation condition (“How likely or unlikely would you be to try one of the presented candy bars if they were available in the store?”) or an attitude question in the control condition (“How positive or negative is your opinion on making a new candy bar available in the store?”). This attitude question in the control condition ensures the participants pay equal attention to the product category as do participants in the intention formation condition.

Table 4 here

After a short filler task, participants make a choice, followed by a response latency task. The choice decision the participants receive informs them that the market research organization distributes samples of candy bars to participants; the participants that would like to win a box of candy bars have to fill in the brand of their choice. Upon indicating the brand of their choice, a notification appears on the screen stating that many other participants have already chosen the specific brand and, consequently, no boxes of this brand are left. Therefore, the respondents get the opportunity to choose another brand. This out-of-stock manipulation intends to eliminate dissonance that may arise after making a choice decision. After reading the notification, half of the participants perform a response latency task. To assess response latencies, the names of the five target brands, five existing

candy bar brands and ten brands from other product categories appear, one by one, on a computer monitor in random order. Participants then press a button labeled “snack bar” for brands of snack bars or a button labeled “non-snack bar” for other products, as fast but also as accurately as possible.

Results and Discussion

The participants' initial brand choices indicate that those participants that formed a choice intention are significantly more likely to fill in their most preferred brand as the option of their choice, compared to those participants that did not form a choice intention (76.4 % vs. 56.8 %, $\chi^2 (N=92) = 3.94, p = .047$). This finding confirms the increased level of preference persistence after intention formation. A between-subjects ancova, with response times for the most preferred choice option as the dependent variable, intention formation as a between-subjects factor and a mean of the filler latencies as a covariate explores whether the inhibition of the most preferred brand also occurs in this experimental set up, in which cognitive dissonance is unlikely to arise.

If intention formation induces inhibition of the most preferred brand after choice in a situation that does not evoke cognitive dissonance, this yields strong support for the validity of the intention superiority account. The ancova-analysis indicates that intention formation leads to significant slower response latencies after choice ($M_{\text{intention}} = 6.6$ vs. $M_{\text{no_intention}} = 6.4, F(1,89) = 6.29, p = .014$), with the mean of the filler latencies as a significant covariate ($F(1,89) = 22.56, p < .001$). This finding demonstrates the importance of intention superiority in accounting for increased preference-behavior correspondence after intention formation, over and above cognitive dissonance.

Together studies 1 to 3 offer convincing evidence that the increased preference-decision consistency after intention formation results from intention superiority. According to intention superiority principles, consumers need to keep intention-related information in a heightened state of activation in order to be able to enact upon it. Besides affecting actual brand choices, brand accessibilities may also direct information processing in order to ensure the enactment of the intention. Study 4 investigates whether consumers use a specific information processing strategy to safeguard their intentions.

STUDY 4

Studies 1 and 2 investigated whether intention formation is associated with an increased level of decision involvement because a change in decision involvement could induce differential information processing

subsequently. Intention formation and decision involvement appear to be unrelated. But, what about a direct relation between intention formation and information processing? As mentioned before, consumers need to be able to retrieve their intentions from memory, otherwise intention formation would be redundant (Shapiro and Krishnan, 1999). Intention superiority principles suggest that, to facilitate the retrieval and enactment of their intentions, consumers hold the most preferred choice option in a heightened state of activation once they form an intention. Deep and profound processing of competing information (i.e., information that is related to a brand different from the one that is tied to the intention) could impede the heightened activation of the preferred brand. Therefore, to shield their intentions, consumers may be less likely to engage in information processing once they have formed an intention.

The main aim of Study 4 is to demonstrate that intention formation has a profound influence on information processing. The study shows that intention formation may render choices suboptimal by leading consumers to persist in choosing the initially most preferred brand even when a more attractive new brand is available. More concretely, this first study shows that forming (versus not forming) a choice intention increases the likelihood of persistently choosing the initially most preferred brand over a newly presented, superior brand, because information on the newly presented brands is ignored.

Method

Participants

This fourth study investigates data gathered from 242 students, recruited at a large European university. About 86 men and 155 women, aged between 18 and 24 ($M_{\text{Age}} = 20.4$) participated in this final study.

Design and Procedure

This study comprises a between-subjects design with 2 conditions. The experimental manipulation of ‘intention formation’ takes place at the very beginning of the experiment. Half of the participants receive an ‘intention formation’ manipulation by asking them to imagine that they are spending a weekend in a neighboring country and that they are planning a trip to the grocery store. One of the products they surely want to have is candy bars. Given the fact that they frequently spend a weekend in the neighboring country they supposedly are familiar with six of the candy bars the store holds. Consumer Reports-type of information provides the respondents information on these six different fictitious brands. The upper part of Table 5 presents this information.

Table 5 here.

After seeing the information, the participants report which brand they prefer the most, and they also indicate their attitude towards each brand on a 1-item 7 point scale. In the control condition, the participants merely imagine that they are spending a weekend in a neighboring country and that the presented brands are brands of candy bars that are available in that country. Subsequently, they take a closer look at the provided information and report which brand they prefer the most. They also report their attitudes towards each brand. Hence, the main difference in the script for the experimental and the control condition is the indication that they intend to go to the grocery store and purchase candy bars.

After completing a filler task, the participants choose one of eight brands. They imagine being actually in the grocery store while in the foreign country, and decide which of the presented brands they want to buy. They have the option to choose among eight brands, the six of which they saw information and two new brands. Table 5 presents the eight brands that are the available choice options for the participants. The two new brands, Sokko and Mape, are superior to the initial brands. A pretest among 20 participants illustrates the superiority of the brands Sokko and Mape. More specifically, the results indicate that all participants prefer at least one of the two brands over their initially most preferred brand. In the actual experiment, boxes hide each brand's attribute scores. To access the information, the participants move the mouse pointer on the box on the screen. As long as the pointer is on the box, the box displays the information. Whenever the pointer moves out of the box, the box closes again. The mouselabWEB program records the time of each box opening and closing with high accuracy. Hence, using this process tracing tool enables monitoring the information acquisition process of the respondents.

Results and Discussion

The participants' choices indicate that the majority of the participants remains consistent and chooses their initially most preferred brand (60.6 %). 29.9 % of the participants decides to choose one of the two new, superior brands, while 9.5 % of the participants makes an inconsistent choice by deciding upon an alternative that was also initially available, but that they did not indicate as their most preferred one. Comparing the choices for either a superior brand or the most preferred brand between the two intention formation conditions clearly indicates that significantly less participants chose the new, superior brands when they did versus did not form intentions in advance (26.0 % vs. 38.5 %, $\chi^2 (N = 218) = 3.79, p = .052$). This finding indicates that, although the majority of the participants make a 'suboptimal' choice decision, especially the participants that form an intention are likely to do so. Further analyses clarify the differences in the information acquisition process of the decision makers

between the two conditions. In line with expectations, the formation of a choice intention may not only decrease the choice for a new, superior brand, but may also decrease the extent to which respondents pay attention to the information on the new, superior brands. The relative amount of information that consumers consult on the two new, superior brands indeed significantly differs. When consumers formed an intention a priori, only 26.9 % of the consulted information pertains to the superior brands, whereas 33.6 % of the consulted information relates to the superior brand when they did not form an intention in advance ($t(1,207) = 1.96, p = .051$). Furthermore, logistic regression analyses indicate that a lack of knowledge gaining on superior brands mediates the differences in the choice for an inferior versus superior brand between the two intention formation conditions. While ‘intention formation’ has a significant effect on the choice for a superior brand ($B = -.56, SE B = .30, Wald = 3.58, p = .058$), this effect disappears when the logistic regression includes the relative time spent looking at information on the two superior brands as a predictor ($B = -.36, SE B = .31, Wald = 1.35, p = .245$); the relative time spent looking for information on the new brands then becomes a significant predictor of choice consistency ($B = 2.27, SE B = .63, Wald = 12.87, p < .001$).

In sum, Study 4 shows that intention formation has a profound influence on preference-behavior correspondence, even in a situation in which the consumers would benefit from inconsistent behavior. When participants form an intention, they seem to shield this intention from interference. By keeping intention-related information in a heightened activation state, consumers block new, incoming information. Avoiding knowledge acquisition on interesting new brands may prevent an informed choice of these brands and consequently result in suboptimal decision-making. Theoretically, this suboptimal decision making is also in line with the intention superiority principle.

GENERAL DISCUSSION

This paper addresses a major topic in consumer behavior research, that is, the translation of consumer preferences in actual choice behavior. The results provide a deeper insight in why consumers act in accordance with their preferences. The four reported studies confirm that the formation of a choice intention increases preference persistence. The first two studies clarify that the influence of intention formation in preference-decision consistency can be ascribed to the specific changes in brand accessibilities that accompany intention formation, according to the intention superiority principle. The reported studies indicate that once a consumer commits him/herself to an action by notifying a particular intention, cognitive processes enact in order to ensure that the

consumer performs the intended action. The studies show that a consumer's memory keeps a brand that is related to a particular intention in a heightened state of activation up until they make the choice. Afterwards the reverse pattern emerges and contents related to a completed intention experience inhibition. Intention formation and the dynamic pattern of brand accessibilities emerge independent from choice and product involvement. These results highlight the importance of intention superiority for understanding preference elicitation at choice moments. The results of Study 3 add to the major role of intention superiority by showing that intention formation and its accompanying changes in brand accessibilities affect preference-decision correspondence independent of cognitive dissonance. The final study demonstrates that persistency occurs by ignoring competing information, even when this results in suboptimal decision making.

These findings are relevant and valuable for market research firms in that they provide a better insight in the prediction of consumers' choice behavior. More specifically, the finding that measuring intent alters consumers' purchase behavior suggests caution in using sample intentions and subsequent purchase behavior to predict population purchase patterns (Morwitz, Johnson, and Schmitzlein, 1993). Hence, the reported findings indicate the importance of gathering data on a consumers' position in the intention formation process to enable market research firms to fine-tune the prediction of purchase patterns. When consumers are not yet in the intention formation stage when filling out a survey, they should be able to respond to an intention question with a 'not yet formed' alternative. Market research firms would benefit from distinguishing consumers with formed intentions from those with nonexistent intentions, because such a distinction enables them to make a better assessment of how predictive intentions are for choice behavior. Furthermore, these findings are also problematic for studies that use purchase intentions as a proxy for purchase behavior. Not all consumers are equally likely to form intentions and translate these behavioral intentions in actual buying behavior (De Cannière, De Pelsmacker, and Geuens, 2009). By inducing the formation of a purchase intention, purchase intentions are an even worse proxy for actual buying behavior.

Identifying a consumer's position in the intention formation process is also of added value for marketers. The adoption of the presented insights implies that huge differences may exist in consumers' purchase likelihood depending on whether they formed a purchase intention before or after entering the point of purchase. Given that a purchase intention is highly likely to be transformed into actual purchase behavior, sales would benefit from marketing actions directed at intention formation. Several tools are available to induce a consumer to plan a purchase in advance. For instance, stickers consumers can peel off the package and place on their shopping list and coupons are interesting marketing tools to encourage advance planning (Block and Morwitz, 1999)

Not only the finding that intention formation results in consistent choice behavior, but also the specific underlying mechanism that was identified in this paper is important for marketers to account for. When a consumer sets a general intention and ties this intention to a specific brand prior to store entrance, this brand is likely to be kept in a heightened state of activation. Accessibility is likely to guide attention and information search behavior (e.g., Nedungadi, Chattopadhyay, and Muthukrishnan, 2001; Thelen and Woodside, 1997). Consequently, consumers that form a purchase intention may shield this intention from interference of competing brands. In-store communication may have a differential impact on consumers that did versus did not develop purchase intentions a priori, because brand accessibility drives in-store attention. Marketers' common focus on in-store marketing tools, such as end-aisle displays and shelf tags, may be superseded. They may be better off to not only schedule marketing communications as such that they reach consumers in close temporal proximity to their decisions (Ephron, 1998; Posavac et al., 2003); increased brand awareness prior to intention formation may also be desirable. Hence, designing marketing actions in such a way that they induce consumers to form a purchase intention for the presented brand will increase the returns on marketers' efforts.

The pattern of brand accessibilities, instigated by intention formation is dynamic in the sense that the most preferred brand experiences post choice inhibition. This finding may have implications for sequential purchase decisions. When an intended brand is purchased in-store, this brand is likely to experience inhibition, which may negatively affect the choice for the same brand in the same product category (i.e., when multiple items are needed), or for a different product, when brand extensions are present. Future studies should further examine how intention formation and its accompanying process of activation and inhibition affect consumers' sequential choice decisions within and across product categories.

The reported findings on increased preference-behavior correspondence induced by intention formation are closely related to findings of the mere measurement effect. The mere measurement effect refers to the finding that answering an intention question appears to influence the likelihood of purchase behavior, as well as brand choice probabilities. Several explanations for the mere measurement effect have been advanced, such as attitude accessibility (Morwitz and Fitzsimons, 2004) and response fluency (Janiszewski and Chandon, 2007). While the mere measurement effect is specifically related to answering intention questions, none of the advanced explanations starts with the specific characteristics of intentions. Consequently, research on the mere measurement effect could benefit from exploring the potential of intention superiority as an explanation for the effect.

Although this research provides a meaningful contribution to the processes that produce preference-decision consistency, readers should put these findings in the right perspective. The prediction of consumers' choices is a

complex matter. A consumers' actual choice is the result of the interplay of multiple factors. Intention formation plays a role in this decision, next to other determining factors. Study 2 illustrates the importance of other factors in evoking a consistent choice decision. Part of this preference persistence results from intention formation, given that significant differences emerge depending on whether consumers did versus did not form a purchase intention in advance, but this factor only explains part of the picture. Even when no intentions were induced to be formed, high involved participants were highly likely to make a consistent choice decision. Study 4 also illustrates that other factors have an important role in this process. Despite the presence of a superior alternative, the majority of participants opt for the originally preferred alternative. Also here, intention formation only explains part of the picture. Hence, this paper acknowledges that intention formation alone cannot fully explain preference persistence.

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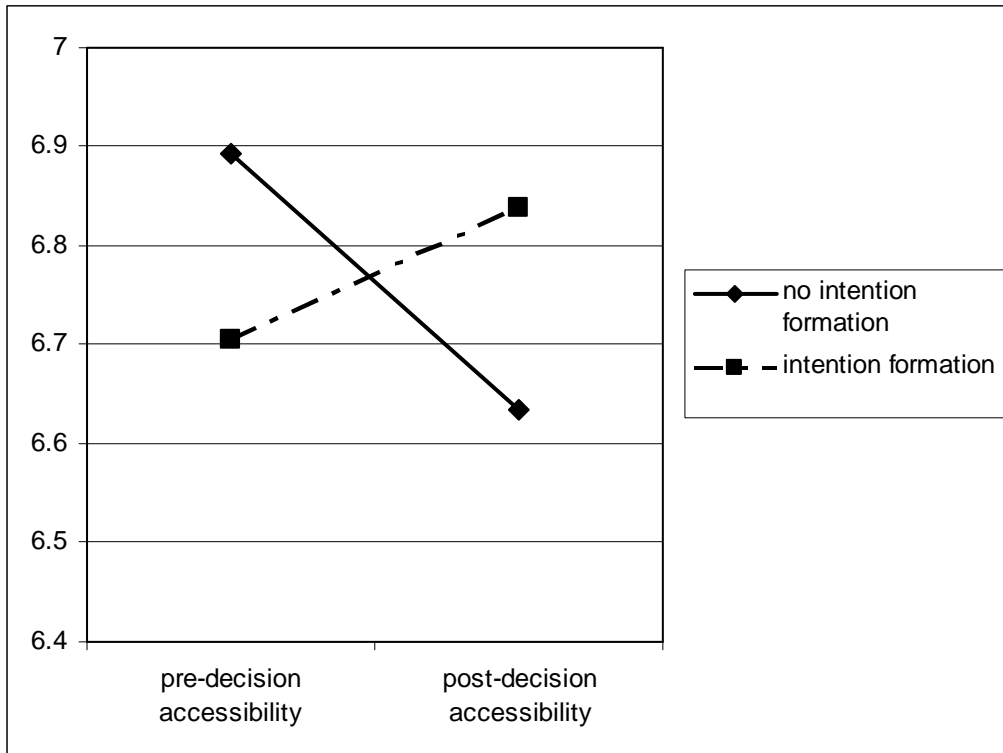
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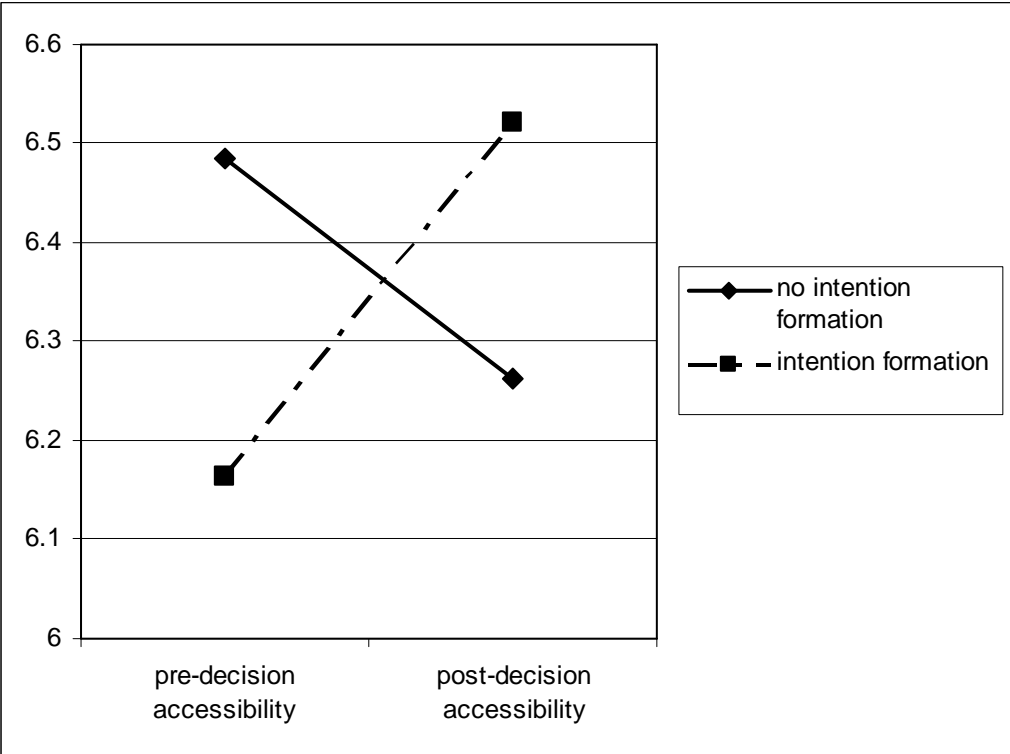
FIGURES

Figure 1. Interaction effect of measurement moment and intention formation on the accessibility of the most preferred choice option in Study 1



Note: Smaller values indicate higher accessibility

Figure 2. Interaction effect of measurement moment and intention formation on the accessibility of the most preferred choice option in Study 2



Note: Smaller values indicate higher accessibility

TABLES

Table 1. Overview of the Experimental Procedure of Study 1

Condition	Attitude	Intention	Filler	Focus	Response	Brand	Response
	Measures	Formation	Task	Option 2	Latency	Choice	Latency
		Manipulation			Task		Task
1	✓	✓	✓	✓	✓		
2	✓		✓	✓	✓		
3	✓	✓	✓	✓		✓	✓
4	✓		✓	✓		✓	✓

Table 2. Research Results Study 1 - (In)consistent Choice Behavior

		Intention Formation	No Intention Formation
Consistent Choice	N	30	20
	%	90.9 %	69.0 %
Inconsistent Choice	N	3	9
	%	9.1 %	31.0 %
Total	N	33	29
	%	100.0 %	100.0 %

$\chi^2 = 4.76$, $df = 1$, $p = 0.029$

Table 3. Research Results Study 2 - (In)consistent Choice Behavior for Each Level of Involvement

		Low Product Involvement^a		High Product Involvement^b	
		Intention Formation	No Intention Formation	Intention Formation	No Intention Formation
Consistent Choice	N	28	18	11	22
	%	87.5 %	66.7 %	73.3 %	75.9 %
Inconsistent Choice	N	4	9	4	7
	%	12.5 %	33.3 %	26.7 %	24.1 %
Total	N	32	27	15	29
	%	100.0 %	100.0 %	100.0 %	100.0 %

^a $\chi^2 = 3.70$, $df = 1$, $p = 0.054$; ^b $\chi^2 = 0.03$, $df = 1$, $p = 0.854$

Table 4. Brand Attribute Information Used in Study 3

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

Table 5. Attribute Scores for the Brands Used in Study 4

Brand Name	Taste	Grams of fat	Calories	Shelf Life
Twizzler	8.0	4.8	350	100
Skor	7.5	11.0	340	110
Granola	7.0	7.0	335	105
Mauna Loa	6.0	13.0	330	110
Abba Zaba	10	8.0	350	105
Mamba	9.0	6.6	345	100
Sokko	9.5	6.5	345	105
Mape	10.0	7.8	350	105

APPENDIX

Appendix 1. Description of the Fictitious Product Concepts used in Study 1

* MEVA introduces a completely new way of washing clothes, namely by using washing nuts instead of laundry detergent! A new way of doing laundry that can be picked right from a tree. Hence, this is a completely environmental friendly and ecologically responsible way of removing stains from your clothes. A clean laundry guaranteed!

* SNOVE introduces a revolutionary change in the laundry detergent industry. Your clothes are from now on washed by 'washballs'. An ingenious system of magnets, that is located in the centre of the washballs, removes stains out of clothes and gives them a fresh scent. The washballs last a lifetime and therefore include an enormous price advantage.

* AGOM: the latest revelation in laundry detergents that makes ironing redundant! Are you also tired of ironing for hours after washing your clothes? Then this laundry detergent is the solution for you. This revolutionary anti-crease formula promises to lighten the work of many women.

* Is sorting out your laundry also such a big task for you? Then ALKO is the solution for you! Due to the unique formula of this laundry detergent you can mix different colors in your washing machine. This laundry detergent guarantees a perfect conservation of colors and cleans them thoroughly at the same time!

* With OLIA we present you the ultimate method to save energy. Due to its unique formula, this laundry detergent is effective in fighting dirt both in cold and hot water. Even the most persistent stains are removed from your clothes while using even cold water.