

The Shopping Momentum Effect

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ABSTRACT

The Shopping Momentum Effect

Shopping momentum occurs when an initial purchase provides a psychological impulse whose momentum drives the purchase of a second, unrelated product. The most promising theoretical mechanism for shopping momentum comes from Gollwitzer's (1990) theory of implementation and deliberation mindsets. Momentum occurs because the initial purchase moves one from a deliberative to an implemental mindset, thus driving subsequent purchases. After demonstrating the effect both in a market and in highly controlled settings, we support the mindset theory by showing how an initial purchase encourages greater recall of implemental thoughts. Then we explore the boundaries of this effect by examining how shopping momentum can be interrupted. Finally, we show that shopping momentum is not intuited by respondents in a hypothetical purchase. This result suggests that consumers have limited awareness of previous purchases affecting subsequent ones. We discuss alternative theoretical accounts for these results and explore consequences for marketing managers.

Imagine a consumer who decides to stop by at a department store on her way back from work. Although not planning to make any purchases, she finds herself walking out of the store an hour later carrying several items. Shopping momentum arises from the idea that shopping has an inertial quality, that there is a mental hurdle in the shift from browsing to shopping, which once crossed makes further purchases more likely. Commercial practice appears to support the existence of a shopping momentum effect. Witness the efforts of retailers to use loss leaders to get people into their stores (Mulhern and Padgett 1995) or the heroic efforts by both electronic and paper catalogers to encourage a first purchase. Shopping momentum contrasts with a strictly rational perspective in which the decision to purchase any product is based on its associated costs and benefits. In contrast, we provide clear demonstrations showing that the propensity to purchase an item is enhanced merely by inducing an initial purchase, results that are very difficult to account for within a rational view of consumer behavior.

Although shopping momentum results in the purchase of multiple items, aggregation of different items on a shopping trip is not sufficient to identify a momentum effect in a purchase. For example, consumers in the real world may aggregate purchases at a single store or mail-order in order to consolidate travel costs or shipping expenses across these purchases. Our focus is on demonstrating a shopping momentum effect that exists independently of a desire to limit shopping costs by grouping purchases. To do so, we demonstrate the shopping momentum effect by comparing the purchase likelihood for a subsequent item (hereafter referred to as the “target”) by manipulating the purchase incidence for an initial item (hereafter referred to as the “driver”). Target purchase incidence increases for groups of consumers who had the opportunity to purchase a high incidence driver. We

ensure that the two items (i.e., the driver and the target) are not complements, thereby ruling out an alternative reason for the increase in purchase likelihood of the target item.

We term this increase in purchase propensity for the target item as shopping momentum, taking this metaphor from physics as description of a behavioral regularity rather than a theoretical explanation per se. It is useful because the analogy permits generation of a number of hypotheses that we find to hold. For example, one can think of the initial purchase as providing an action orientation toward shopping that makes a second purchase more likely. By that analogy, one can predict that the greater that initial drive (the intent to purchase the first alternative), the greater the propensity to purchase the second alternative. Further, the metaphor facilitates the idea that friction generated by other actions or stimuli can weaken shopping momentum.

We explain our findings based on the literature of goal-related mindsets. Building on the theory of mindsets (Gollwitzer 1990; Gollwitzer and Bayer 1999), shopping momentum can be viewed in terms of a shift in consumer mindset from deliberation to implementation. Specifically, we propose that the first purchase produces a shift in the mindset from deliberation-based browsing to implementation-based shopping and that that shift makes subsequent purchase more likely. As evidence, we show that respondents who have made an initial purchase are subsequently more likely to encode and retrieve information associated with an implementation mindset.

The remainder of this paper is organized as follows. First, a review of relevant research on mindset orientation and consumer decision-making generates our prediction of the shopping momentum effect. We then demonstrate the effect in a market setting. A series of experiments follow that demonstrate shopping momentum and assess its boundaries in controlled settings. These studies give evidence that affect associated with the first purchase is not sufficient to produce

the effect and support the mindset framework by showing that an initial purchase alters mindsets as predicted. Then we show that separating the expenditure source for the two purchases can dissipate momentum. Finally, we demonstrate that consumers have a difficult time intuiting the effect in scenarios, suggesting that the effect is largely automatic and may be difficult to consciously control. A conclusion section discusses the theoretical and managerial implications of our findings and suggests future work.

THE SHOPPING MOMENTUM EFFECT

Shopping momentum occurs when the purchase of a driver item increases the likelihood of purchasing a target. It is hard to justify shopping momentum from a normative perspective. To the extent that goods are not complements, consumers should separately assess the value of each purchase and make a utility-maximizing choice regarding each item, resulting in no systematic increase from initiating purchase on the likelihood of buying other items. Indeed, the effect of budget or income constraints suggests that spending money on one item potentially *decreases* the likelihood of subsequent purchase.

Our proposed explanation for shopping momentum arises out of a cognitive shift in implicit mindsets that influence people's cognition and behaviors. Gollwitzer (1990) defines two important mindsets, deliberative and implemental. A deliberative mindset weighs the pros and cons of pursuing a specific action whereas an implementation mindset focuses on the timing and sequencing of goal-oriented actions. Relevant to the current work, once a mindset is evoked it perseveres over time, guiding thought production, encoding and retrieval of information, and ultimately behavior. For example, Chandran and Morwitz (forthcoming) show that a price participation exercise evokes an implementation focus that leads to higher purchase intent compared to a fixed price offer for the same object.

In a purchase context, shopping momentum can be viewed as a switch to an implementation orientation that is propelled by the first purchase. We postulate that this switch occurs as the act of purchase shifts the focus of individuals goals towards implementation. This implementation mindset then evokes feelings of commitment to purchase the product by reducing the psychological barrier to action.

In summary, while the term “momentum” suggests a physical mechanism, the theory examining shopping momentum comes from psychology. In addition to mindsets, we also test the validity of alternative psychological accounts that could lead to shopping momentum. We demonstrate that shopping momentum does not depend on the affect produced by the driver item, and show that it is conceptually independent of the foot-in-the-door effect and inaction inertia. We begin with a natural experiment conducted at a small, sole proprietor clothing store, demonstrating behavior that is consistent with shopping momentum in a real setting. We then conduct additional experiments that help further discriminate among different accounts and provide boundaries for the effect.

STUDY 1: EVIDENCE OF THE SHOPPING MOMENTUM EFFECT IN A MARKET SETTING

A small, stand-alone clothing store in a South Asian city acquired some dress shawls that had recently been very popular in some other cities but were not yet available locally. Each shawl was priced at 800 rupees. In addition to these shawls the store carried a variety of casual and formal clothes as well as loose cloth. This setting provided us an opportunity to conduct an in-store experiment to demonstrate shopping momentum.

We selected these shawls as the impulse product to generate shopping momentum because a pretest confirmed them to be attractive and a likely purchase. Specifically, participants in a pretest were randomly approached and asked how likely they were to buy

the shawl for 800 rupees (around 15 US dollars) on a seven-point scale. Most participants (18 out of 20) indicated that they would definitely buy the shawl at this price. The overall purchase likelihood of these shawls was therefore very high ($M = 6.85$), making it an appropriate impulse item to trigger the momentum effect.

The store's management agreed to display the shawls either in the front or the back of the store on alternate days of the week for one month. In the front-end display, the shawls were exhibited prominently at the front of the store. To minimize its effect on bringing people into the store, the display was not visible from outside. However, upon entering the store, the shawls were the first item on display. In contrast, the back-end display shawls were not visible until shoppers had the opportunity to browse many items. The store remained open seven days of the week and the display was switched daily between the front and back of the store for 34 consecutive days. We hypothesized that shopping momentum would increase sales of other products in the front-end condition. This result is consistent with the decision to buy the shawl providing an action orientation that increases the likelihood of subsequent purchase.

The results show that the location manipulation worked in that daily shawl sales were significantly higher when displayed in the front ($M = 3476$ rupees) rather than at the back ($M = 2629$ rupees; $t(32) = 2.1, p < 0.05$). More important, the average sales of other merchandise were higher when the shawls were displayed in the front ($M = 42,266$ rupees) as compared to when they were displayed at the back ($M = 36,175$ rupees; $t(32) = 1.93, p = 0.06$). These marginally significant results are consistent with the notion that an initial purchase, induced by an attractive item, leads to higher purchase likelihood of additional items.

There are confounds in this market experiment. One limitation is that it could not control for word-of-mouth generating greater store traffic when the shawls were featured and saw greater sales in the front. Further, although we tried to pick a shawl that would not inspire complementary purchases, we cannot rule out the possibility that its purchase made related garments more valuable. Finally, the study does not take into account transaction savings that arise from combining the first purchase with subsequent ones. While these preliminary findings are vulnerable to these confounds they are consistent with our theorizing and provide a realistic application of our proposed effect. For more substantial evidence of the shopping momentum effect, we conducted a series of controlled experiments that not only demonstrate the basic effect more conclusively but permit tests of our proposed underlying process of shifting mindsets and examine possible alternative accounts.

STUDY 2: A CONTROLLED EXPERIMENT DEMONSTRATING SHOPPING MOMENTUM

The retail experiment demonstrated that other purchases increased when the desirable shawl was accessible at the beginning of the shopping experience. The next experiment is designed to demonstrate shopping momentum controlling for the three problems with the market study. First, the new study controls for selection biases by assigning people randomly to experimental conditions. Second, it controls for possible item complementarity by using items where the purchase of one does not have an impact on the value of the other. Finally, it controls for transaction cost by separating the transaction costs of the two purchases.

The field test manipulated the strength of the impulse driver by making the shawls more or less salient. In the following laboratory study we manipulate the strength of the driver by providing different stimuli with divergent purchase likelihoods. We demonstrate

the shopping momentum effect by showing that the availability of a more popular item significantly increases the sales of an unrelated target item.

The laboratory study permits an assessment of within conditional probabilities given purchase of the target, but they will not be an important part of the argument to demonstrate purchase momentum. While we will note the probabilities of purchasing the target item conditional on purchase of the driver item, these probabilities are equivocal in establishing a causal impact from initial purchase. Specifically, the probability of subsequent purchase for those who had purchased the target item may be greater than those who had not purchased the target item simply because people with the resources and motivation to buy one product are also more likely to have the resources and motivation to buy the next. Because of the interpretive difficulties with these conditional probabilities, we will focus on the impact of different drivers on the proportion of consumers choosing the target as a way to infer shifts in individual probabilities.

This study tests the shopping momentum effect by comparing the likelihood of purchasing a target item (a key chain) for groups of respondents who were assigned randomly to three conditions. In the control condition, only the target key chain was available for purchase. In the two experimental conditions, subjects were initially provided the opportunity to purchase an item unrelated to the target. These conditions differed only in the extent to which the driver item was likely to be purchased. Participants were 135 (64 men and 71 women) students from a South Asian university paid 25 rupees for completing an unrelated questionnaire. After being paid, the respondents learned that they could either keep all the money or purchase an item from the experimenter. Those in the control condition could only purchase a key chain for 7 rupees. Those in the high driver condition were offered an educational CD for 18 rupees before being offered the key chain. Subjects in the low

driver condition were offered a light bulb for 18 rupees, which a pretest had shown to be a less likely purchase for a student than the educational CD. The idea here was that the educational CD would be more likely to create shopping momentum because it was more likely to be purchased. At the end, all subjects indicated how useful they thought the initially offered item (CD or light bulb) was on a 10-point scale (1= not at all useful, 10 = very useful). Furthermore, on another 10-point scale, all subjects stated the extent to which they liked the initially offered item (1 = not at all and 10 = very much).

As expected, the purchase incidence was different for the two drivers. Specifically, 69% of respondents bought the educational CD while only 11% chose to buy the light bulb. Consistent with our prediction that the driver item with a higher incidence would produce greater momentum, 64% of the participants in the CD condition bought the key chain compared with 40% purchasing it following the offer of the less popular light bulb ($\chi^2 = 5.39$; $p < 0.05$).

We also examined the probabilities of choosing the target item conditional on whether the driver item was chosen. The data indicate that in the educational CD condition 77% of those who bought the driver item also bought the target item. In contrast, only 36% of those who did not buy the driver item purchased the target item ($\chi^2 = 7.32$, $p < 0.01$). Similarly, in the light bulb condition, 80% of those who bought the initial item purchased the target item, while only 35% of those who did not buy the initial item chose to purchase the target key chain ($\chi^2 = 3.75$, $p = 0.05$). As noted earlier, while these results are consistent with our predictions, the conditional probabilities do not allow us to isolate the shopping momentum effect from confounding individual characteristics, such as income, that might be driving both purchases.

Table 1: Purchase Probabilities of Key Chain

First Item (<i>n</i> = 45 in each cell)	% Buying the First Item (Driver)	% Buying the Second Item (Key Chain)
Control (No Prior Purchase)	NA	46.6%
Light Bulb (Low Purchase Likelihood)	11.0%	40.0%
Educational CD (High Purchase Likelihood)	69.0%	64.4%

The results from Study 2 are consistent with a goal theoretic framework based on the notion that the purchase of the first item produces an implementation mindset in our respondents. We next consider two opposing accounts based on potential inferences about the value of the target item that might have been created by the perceived value of the driver items. In the first account, if the educational CD is viewed as better deal monetarily in comparison to the light bulb, subjects assigned to that condition might infer that the subsequent offer from the same experimenter is a bargain. The second account generates the opposite prediction and is based on the tradeoff contrast hypothesis (Simonson and Tversky 1992). According to this hypothesis, a high attractiveness for the driver item could make a subsequent offer on the target look less attractive. In both, it is important to minimize such concerns by controlling for differing inferences that could be made from the manipulated driver items.

Since we needed the two driver items to differ in their likelihood of purchase, the above concern required varying the purchase likelihood of the driver item by manipulating not its price discount but its contextual attractiveness. A high purchase likelihood item was defined as “something useful, which students buy very often and are most likely to buy in a university setting,” while a low purchase likelihood item was defined as “something that is

useful but which students seldom buy and are least likely to buy in a university setting.” In a pretest, 30 university students rated the educational CD and the light bulb on a 10-point scale (1 = least likely to purchase and 10 = most likely to purchase) and indicated a price at which they were most willing to buy the items. The first measure showed that the educational CD was rated as being more likely to be purchased ($M = 7.56$) compared to a light bulb ($M = 5.03$, $t(58) = 3.68$; $p < 0.05$) in a campus setting. However, there was no significant difference in the willingness to pay for the educational CD ($M = 18.73$) and the light bulb ($M = 15.03$, $t(58) = 1.88$; *ns*). In summary, the results ensured that the two driver items, the light bulb and the CD, are both viewed as being of comparable monetary value but are different in their degree of purchase likelihood in a campus setting.

Another argument could be that the first item sends a signal to the participants about the ability of the experimenter to offer to them items that they want and/or like. While reasonable, this interpretation is unlikely given that the light bulb condition did not significantly diminish target choice compared with the control ($\chi^2 = 0.41$, *ns*). Moreover, according to the pretest reported above, participants’ willingness to pay for the light bulb, was not significantly different from the amount they were willing to pay for the attractive educational CD. However, as designed, participants were less likely to buy a light bulb while they were at the university (as most of them lived off-campus). Furthermore, in the actual study subjects ratings of how useful they thought the offered item was did not differ significantly for the educational CD ($M = 7.56$) and the light bulb ($M = 8.32$, $t(88) = 1.60$, *ns*). Finally, there was no significant difference in participants’ liking ratings for the CD ($M = 6.54$) and the bulb ($M = 5.83$, $t(88) = 1.20$, *ns*).

The above analysis provides evidence that differences in inferences about the relative value of the manipulated impulse items are unlikely to be driving the momentum effect.

However, there remains the possibility of the momentum arising out of differences in affective states generated by differences in the usefulness of the offers. In particular, research has shown that an unexpected gift can increase the likelihood of subsequent purchase (Arkes, Herren and Isen 1988; Heilman, Nakamoto and Rao 2002). Consistent with this research, one might argue that the educational CD offers the opportunity to purchase a more attractive item, and thus increases subsequent affect. If affect is creating the effect, then making the initial driver even more attractive should increase the likelihood of subsequent purchase. The next study directly tests the affect explanation by a condition in which the driver item is a free gift. An affect-based account would suggest that positive affect engendered by a free gift might produce an even greater degree of purchase momentum. In contrast, a mindset-based account predicts that receiving the driver item as a free gift would not in itself momentum since it does not shift mindsets from deliberation to implementation.

STUDY 3: COULD AFFECT BE A CAUSE OF SHOPPING MOMENTUM?

We measure the likelihood of purchasing the target key chain in three conditions. In the control condition, only the target key chain is available for purchase. The second and the third conditions use a pen as the driver item. However, in the second condition, respondents are given an opportunity to buy a pen for 5 rupees, while in the third condition they are given the same pen as a gift prior to being given the option to purchase option the target key chain. The idea here is that if the momentum effect is driven by the positive affect induced by a driver item, then it should be greater after a free gift than one requiring payment. However, if the momentum is driven by a change in the mindset caused by an initial purchase, then the effect should be more pronounced in the condition where the driver item is offered for purchase.

Each condition contained 40 respondents who were randomly approached at a South Asian university campus and were each given 20 rupees for filling out an unrelated questionnaire. After being paid, respondents were told that they could either keep all the money or buy an item from the experimenter. Those in the control condition could only purchase the key chain for 10 rupees. Subjects in the purchase condition were offered a pen for 5 rupees prior to being offered the key chain. In the gift condition, prior to viewing the key chain, all participants were provided the pen under a pretext that the experimenter had an extra supply from the company and was hence giving them away as a free gift. Next, all participants faced the choice of buying the key chain for 10 rupees¹.

A mindset-based account predicts that shopping momentum will be greater when the driver item is offered for purchase rather than when it is given as a gift. In support of this prediction Table 2 shows that significantly more respondents, 77.5%, bought the key chain after having an option to buy the pen, while only 52.5% bought the key chain after receiving the same pen as a free gift ($\chi^2 = 5.49$, $p < 0.05$). Results indicate that compared to a control condition, where 55.0% buy the key chain, subjects were substantially more likely to buy the key chain when they were previously given an opportunity to buy the pen ($\chi^2 = 4.53$, $p < 0.05$). However, there is no significant difference in the purchase likelihood of the key chain in the control and the free gift condition ($\chi^2 = 0.05$, *ns*). We also examine the probabilities of choosing the target item conditional on whether the driver item is chosen for the two treatment groups. The data indicate that the conditional probability of choosing the target key chain is 96% for those who buy the pen. This result contrasts with 40% of the respondents who buy the key chain but not the pen.

¹ The pen used in the study was selected after a pretest in which 22 subjects from the same population indicated some school supplies that they often use and indicated the prices they pay for them. Out of 22 subjects, 17 listed the pen as an item they often used and the mean price for this pen was indicated as 8.70 rupees.

Table 2
Purchase Probabilities of Key Chain in Purchase and Free Gift Conditions

First Item (<i>n</i> = 40 in each cell)	% Buying the First Item (Driver)	% Buying the Second Item (Key Chain)
Pen for Purchase	62.5%	77.5%
Pen as a Free Gift	All received the driver	52.5%
Control (No Prior Purchase)	Not available	55.0%

To be sure that the free gift generated greater positive affect than the purchase option we conducted a manipulation check by administering an affect scale to a separate set of participants in a post-test. Specifically, in two conditions we asked 30 participants from the same population to state how they felt *at the moment* on a four-item, seven-point mood scale (Lee and Sternthal 1999) that was anchored by: sad-happy, bad mood–good mood, irritable-pleased, and depressed-cheerful (1 = most negative and 7 = most positive). After the preliminary affect measure, participants in one condition were given the pen as a free gift while participants in the other condition were offered an option to buy the same pen for 5 rupees. Then participants were asked to respond to the affect questionnaire once again. Looking at the pre and post-manipulation measures of affect, we find that free gift generated a greater gain in positive affect than the purchase option. In particular, average increase in affect was higher when participants received the pen as a free gift ($M = 1.25$) than when they were given an opportunity to buy the same pen ($M = 0.13$, $t(28) = 5.44$; $p < 0.01$).

This study is important in four ways. First, it replicates the increase in target purchase in the experimental over control condition reported in Study 2. Second, the free-gift condition casts doubt on an affect-based explanation for our results. If the momentum effect

is driven by positive mood, the purchase likelihood of the target key chain should be at least as high when the pen is offered as a free gift than when it is offered for purchase. Third, the driver item used in this study (a pen for 5 rupees) was much cheaper than the target item (a key chain for 10 rupees) thus ruling out the possibility that the price for the first item serves as an anchor for the evaluation of the target's price. Finally, the two items were priced such that even after buying both the items participants were left with 5 rupees. This last modification helps to rule out an alternative account for Study 1. Specifically, it is possible that after purchasing a relatively more expensive driver item, people treat the remaining money from the experimenter as "loose change" that they were more willing to spend. By not having the two items add up to the total amount paid for participation, we helped limit this possibility².

The studies so far have focused on demonstrating the basic shopping momentum effect. Although the results are consistent with the proposed shift in mindset, they still lack any direct evidence for the mindset framework. As noted by Gollwitzer, this greater focus on implementation should also be observed in subsequent tasks unrelated to a purchase decision. Thus, recall of information in an unrelated task provides a test to determine the type of mindset. This test is similar to one employed by Gollwitzer, Heckhausen, and Steller (1990), who show superior recall of implementation-related thoughts (e.g., when, how, where to act) for participants in the implemental mindset than for those in the deliberative mindset. To the extent that initiating a purchase puts people in an implemental mindset, it should favor the recall of feasibility related thoughts in a subsequent task compared to those who did not have an opportunity to make a purchase.

² We thank an anonymous reviewer for suggesting this explanation.

STUDY 4: EFFECT OF AN INITIAL PURCHASE ON MINDSET

In previous research on mindset consequences, participants were typically induced into either a deliberative or implemental mindset by asking them to choose between two potential goals or by planning to perform a chosen task. In this study, we replace the second purchase decision with an unrelated recall task designed to reveal the mindset adopted. The test involves recall of either deliberative or implemental thoughts related to automotive purchase in the context of a minor prior purchase. Deliberative thoughts were generated by asking 25 pretest participants to list four pros and four cons of buying a car and implementation thoughts were generated from their listing of six things that needed to be done when purchasing a car. Using the most commonly mentioned thoughts, we identified six deliberative and six implemental thoughts shown in Exhibit 1.

Sixty-six students at a major East Coast campus were paid to participate in this study. Those randomly assigned to the experimental condition were told that they could either keep their dollar or use part of it to buy either an apple or a bag of chips for \$.25 from the experimenter. These items were selected on the basis of a pretest in which a group of 15 subjects rated how attractive they found various snacks at the price of \$.25 on a 10-point scale (1 = Not at all attractive, 10 = Very attractive). An apple ($M = 7.2$) and a bag of chips ($M = 7.9$) were selected as two snacks that did not differ significantly on their level of attractiveness ($t(28) = 1.18, ns$). Unlike the respondents in the experimental condition who were given an opportunity to either keep the money or buy an item from the experimenter, respondents in the control condition were not informed about this option. All participants were then asked to read 12 thoughts that a hypothetical person might have when deciding whether to buy a car and how to go about the purchase once the decision to purchase has been made. Following a filler task that provided consistent time delay before the recall task,

subjects recalled as many thoughts as they could. During subsequent debriefing none of the participants guessed our hypothesis.

Our prediction was that having the option to purchase would induce an implemental mindset. As expected, 97% of the subjects decided to purchase the offered snacks. The recall scores for deliberation and implementation-related thoughts were determined by counting the respective thoughts that were recalled correctly. As predicted, respondents in the purchase condition (and hence in the implemental mindset) recalled significantly more implemental thoughts ($M = 2.59$) as compared to the control condition ($M = 2.09$, $t(64) = 1.98$; $p < 0.05$). There was no significant difference in the number of deliberative thoughts recalled in purchase ($M = 1.32$) and control conditions ($M = 1.66$, $t(64) = 1.19$, *ns*). Overall, the results are consistent with our hypotheses that the momentum effect in shopping behavior is guided by the shifting mindset orientation, which can be induced by initiating an action orientation through an initial purchase.³

Table 3
Recall of Implemental and Deliberative Thoughts in Purchase and Control Condition

	Number of Implemental Thoughts Recalled		Number of Deliberative Thoughts Recalled	
	Mean	SD	Mean	SD
Purchase ($n = 34$)	2.59	1.18	1.32	1.07
Control ($n = 32$)	2.09	0.81	1.66	1.21

³ Although we did not make any specific predictions about the recall of deliberative thoughts, we find that subjects in the purchase condition recalled more deliberative reasons for buying an automotive than reasons for not buying one in comparison to the control condition ($p = .09$). This is consistent with the finding that an implemental mindset is characterized with a lower perception of risk of action as compared to a deliberative mindset (Gollwitzer and Bayer 1999).

The previous analysis demonstrated that making a decision can alter mindsets as predicted by our theoretical framework. A question that naturally arises concerns which factors might interrupt these mindsets stimulated by an initial purchase. Since the deliberative mindset facilitates a careful consideration of competing goals, it makes an individual balance the cost and benefit associated with the purchase of the target item. Although the costs and benefits of an option are assumed to correspond to its utility and price, recent research suggests that this traditional notion should be modified so that the disutility associated with a monetary payment also depends importantly on when and how the payment is made (Soman 2001; Prelec and Loewenstein 1998). Specifically, Soman and Cheema (2004) demonstrate that the disutility associated with payments is lower from an account that has been opened as opposed to one that is still closed. If so, then shopping momentum is more likely to occur if the payment source is viewed as coming from an account from which money has been previously spent compared with a yet unopened account. An open account increases the focus on implementation while opening a new one requires deliberation.

The notion that money from different accounts is not treated interchangeably follows from research showing that consumers often categorize money into accounts. For example, Heath and Soll (1996) show that consumers allocate money to different accounts or goals and that their purchase propensity is driven by the money available in a category. Their research suggests that payment for additional items from the same account is unlikely to interrupt a consumer on an action-oriented path. In contrast, if the payment for the target item requires making the payment from a different account, it is more likely to be seen as a new rather than a continuing transaction, thereby reinforcing deliberation. We test this account in Study 5 by

examining whether segregating two purchases into different payment accounts interrupts shopping momentum.

STUDY 5: DISRUPTION OF MOMENTUM USING SEPARATE PAYMENT ACCOUNTS

To the extent that an implementation mindset is facilitated by drawing from a current source of money, then separating the sources of payment should dampen the momentum effect. Mental budgets have value as self-control mechanisms (Thaler 1985), so that having to open any new budget should inhibit spending from that source. By contrast, a second payment from an open account with surplus funds should be relatively easy. We therefore propose that paying for the target item from a separate account will inhibit an implementation mindset and thereby limit shopping momentum.

To test this prediction, 40 men and 40 women were randomly assigned to single and separate account conditions. The single account condition was similar to Study 2 except the CD was replaced by a floppy disk for 18 rupees, and the total compensation was increased to 30 rupees. The target item was again the key chain for 7 rupees. In the separate accounts condition, care was taken to separate the source of funds for each of these products. Initially, respondents were approached by an experimenter and asked to fill out a questionnaire for 20 rupees. After a delay of a few minutes, they were approached by a different experimenter who offered them 10 rupees for filling out an unrelated questionnaire. All respondents who filled out the first questionnaire also filled out the second one. After finishing the second questionnaire, subjects could purchase a floppy diskette for 18 rupees. After making that decision, they could buy the key chain for 7 rupees. To avoid any difference in the effort

required for the experimental task between the two conditions, we divided the single questionnaire used in the first condition into two separate ones for this condition.

The data in Table 4 support our prediction. Although purchase of the driver item, a floppy diskette, was similar in the two payment conditions (72.5% in single and 67.5% in separate envelopes), only 42.5% of the respondents bought the target key chain when money was received in two envelopes as payment for two separate studies, significantly fewer than the 70.0% who purchased it when they were paid in one envelope ($\chi^2 = 5.05, p < 0.05$). These results show that we were successful in creating separate accounts in participants' minds. Purchase of the second item was higher when both payments were made from the same envelope as compared to when payments for the two items came from different envelopes.

Table 4
Purchase Probabilities of Key Chain in Single vs. Separate Accounts

Payment source (<i>n=40 in each cell</i>)	<i>Driver</i> Floppy Diskette	<i>Target</i> Key Chain
Single Account	72.5%	70.0%
Separate Accounts	67.5%	42.5%

It is useful to relate these results to our earlier findings. When both payments are made from a single account, the percent choosing the key chain is 70%, a result similar to the purchase momentum generated by the CD in the Study 2. However when the payment source is broken into two accounts, the probability of choosing the key chain drops to 42.5%. Although not directly comparable, it is interesting to note that 42.5% is about the same level

as it was in the control and the light bulb conditions in Study 2. Thus the separate payment accounts can be interpreted as disrupting the momentum from the first purchase, a result is consistent with the first purchase activating an implementation mindset that is disrupted when new payment sources are considered.

This study again demonstrates the robustness of the momentum effect, but shows that it can be disrupted by separate income sources. Next we consider whether consumers have a well-formed intuition about shopping momentum. If so, then it should be possible to reveal the effect through scenarios. However, past research on prediction by consumers has documented that people can make inaccurate and biased estimates of their future preferences and behavior (Gibbs and Snell 1995). The intrapersonal empathy gap (Loewenstein 1996) suggests that people do not accurately anticipate their future preferences if their current state does not match the state to which they are predicting. As in the case of the endowment effect, which generally cannot be revealed through scenarios, it may be that one has to actually commit to a purchase to create shopping momentum. In the next study we test this possibility by using hypothetical scenarios to test consumers' intuitions about what would happen in their shopping behavior if they were in positions similar to the ones described in our previous experiments. These tests are important because if behavior is not predictable by consumers, then shopping momentum may be an automatic reaction that is difficult for consumers to regulate and control.

STUDY 6: CONSUMER INTUITIONS ABOUT SHOPPING MOMENTUM

We implemented the study in two different ways, first by asking respondents to project their own future behavior and second by asking them to predict the behavior of a

hypothetical individual. For both we used different groups of university students, randomly assigned to different conditions.

In the first test, 150 participants were presented with hypothetical scenarios to determine whether respondents would predict shopping momentum in the behavior of others. The participants viewed hypothetical conditions involving Mr. A and Mr. B in four different stores. In each scenario, Mr. A buys an item prior to viewing the second item, while Mr. B only sees the same second item (target item). Participants were asked to indicate who in their opinion was more likely to buy the target item. For example, in one scenario subjects were asked to imagine the following:

Assume that Mr. A and Mr. B, who are generally similar in terms of their wealth and willingness to spend money, are at a local Staples store. Mr. A purchases a pack of diskettes while Mr. B does not buy anything. On their way out they see some planners for the next year. They could purchase a planner now or during a later visit. In your opinion, who is more likely to purchase a planner now -- Mr. A, who just purchased the diskettes or Mr. B who did not make a purchase?

Other scenarios were similar but used different driver and target items.⁴

As shown in Table 5, respondents did not predict a consistent shopping momentum effect in the shopping pattern of others ($t(149) = 0.39; p > 0.6$).

⁴ Bookstore: Driver = *University mug*; Target = *Dictionary*.

Discount store: Driver = *Cell-phone*; Target = *Calvin Kline lipsticks* (Individuals in this scenario were females)

Amazon.com = Driver = *Book*; Target = *CD*

Table 5: Predictions on Purchase Likelihood of the Target Item after Buying a Prior Item (Mr. A) and in Control Condition (Mr. B)

	Staples	Bookstore	Discount Store	Amazon.com
Mr. A with a prior purchase is more likely to buy the target item	54%	46%	51.3%	45.3%
Mr. B with no prior purchase is more likely to buy the target item	46%	54%	48.7%	54.7%

We also conducted another test where the hypothetical scenarios more closely resembled the methodology used in earlier studies. Specifically we asked participants to:

Imagine that Ms. A and Ms. B, who are similar in terms of their, wealth and preferences, are approached (separately) by an experimenter and are asked to participate in a questionnaire on consumer behavior for \$3. Both are told that, if they want, they can later buy an item from the experimenter using this money. Both Ms. A and Ms. B agree to the request. After they complete the questionnaire...

<i>Ms. A</i>	<i>Ms. B</i>
<i>...the experimenter offers Ms. A a floppy disk for \$1 that Ms. A decides to buy. Then the experimenter offers Ms. A a star-sign keychain for \$1.</i>	<i>...the experimenter offers Ms. B a star-sign keychain for \$1. (Ms. B is not told about or offered anything to buy prior to the keychain)</i>

The data replicated the result that people do not predict purchase momentum in the shopping behavior of others.

The second test asked 90 participants to predict their own behavior under the same testing conditions. For example, in one scenario participants were told the following:

Imagine you are at a local superstore and you purchase a floppy disk. On your way to the checkout you see a key chain that you find attractive. You can either purchase the key chain now or decide not to make a purchase at this time. How likely are you to purchase the key chain now?

The other scenario was similar but the floppy disk was replaced by an air freshener. In the no-momentum conditions, participants were told the following:

Imagine you are at a local superstore. Now imagine that you did not buy anything and you are about to exit the store. On your way out you see a key chain that you find attractive. You can either purchase the key chain now or decide not to make a purchase at this time. How likely are you to purchase the key chain now?

In all conditions participants indicated their purchase likelihood for the key chain on a 10-point scale (1 = least likely, 10 = most likely). Results in Table 6 suggest that respondents' predictions reverse the shopping momentum effect. Mean purchase likelihood of the key chain was significantly higher in the control condition ($M = 6.07$) than in the floppy ($M = 4.93$; $t(58) = 1.91$; $p = 0.06$) or the air freshener conditions ($M = 4.77$; $t(58) = 2.14$; $p < 0.05$).

Table 6: Mean Projected Purchase Likelihood of Key Chain

First item (<i>n</i> = 30 in each cell)	Mean Projected Purchase Likelihood
Floppy Diskette	4.93
Air freshener	4.77
Control (no first item)	6.07

In summary, participants indicated a higher probability of purchasing a key chain in the control condition, which did not specify a prior purchase. Although the results indicate that respondents are unable to predict purchase momentum, it does not clarify the list of reasons why this may occur in practice. For example, what may be operating is a reasonable anticipation of the budget effect where a person is thinking of having less money after the first purchase. Alternatively, a respondent in the prediction condition takes a more cognitive approach that does not sufficiently adjust for the changed mindset after purchase. More generally, the failure to anticipate the shopping momentum effect is interesting considering the vast experience most people have with shopping, but the exact reasons need to be further explored.

DISCUSSION

The purpose of this paper was to introduce the concept of shopping momentum and to explore its underlying psychology and some boundary conditions. We provided some evidence for the shopping momentum effect in a market setting and subsequently in controlled laboratory experiments. Evidence for mindsets as an explanatory framework was provided by showing that making a prior purchase resulted in a higher recall of implemental thoughts on a subsequent unrelated task. Three studies then replicated the effect and helped

rule out alternative explanations. First, we showed that shopping momentum does not occur when respondents receive the driver item as a gift rather than purchasing it. Second, we demonstrated that having the money for the two purchases in different accounts was sufficient to dissipate the momentum. Finally, we showed that people do not accurately predict shopping momentum both in their own behavior and in the behavior of others.

It is useful to distinguish shopping momentum from two related psychological phenomena in the literature that also dynamically link choices across time. Both foot-in-the-door (Cialdini and Guadagno 2004) and inaction inertia (Tykocinski and Pittman 1998) postulate a within-person reinforcement mechanism whereby one action leads to a change in probability of a subsequent action. However, these two processes can be usefully distinguished from shopping momentum in their range of applicability and their underlying theoretical mechanisms.

Consider first the foot-in-the-door research program (Cialdini and Guadagno 2004), which demonstrates that a prospect's agreement with a small request leads to a greater likelihood of agreeing to a subsequent larger related request. In the initial studies, Freedman and Fraser (1966) asked participants to either sign a petition or place a small card that advocated a pro-social message in a window in their home or car. The same participants were contacted two weeks later and asked to place in their front yard a large sign advocating safe driving. They found that compared with a control respondents experiencing no initial request, those the individuals asked to comply with a small request generated more compliance with the second, large request. Since then a number of different researchers have explored and replicated the effect.

Several explanations have been proposed for the foot-in-the-door effect, but the most common one is based on self-perception. An initial small act of compliance produces a

change in a person's self-concept whereby he "becomes in his own eyes, the kind of person who does this sort of thing" (Freedman and Fraser 1966). However, this paradigm does not extend readily to purchase momentum in our studies for several reasons. First, since self-perception theory relies on consistency among related actions, it does not provide any clear prediction about how an initial purchase would influence purchase of a subsequent unrelated item that is the focus of current studies. Second, the foot-in-the-door action typically reflects a small initial request that facilitates a large request later. In contrast, we find that the shopping momentum is not sensitive to the relative magnitude of the two items. Third, the foot-in-the-door effect is generally moderated by the involvement and impact on self-image generated by the initial request (Hansen and Robinson 1980), but the results of studies 4 and 5 suggests that momentum can be triggered by relatively low involvement and small purchases. Finally, foot-in-the-door is a long-term effect, operating across weeks. In our view, purchase momentum is a short-term effect, capable of being dissipated in minutes.

A second theoretically distinct phenomenon is inaction inertia (Tykocinski and Pittman 1998; Arkes et al. 2002). Under inaction inertia, bypassing an initial action opportunity (e.g., \$40 sale price for a \$100 ski pass) increases the likelihood of subsequent inaction on a less attractive opportunity (e.g., \$90 for the \$100 ski pass). Although both shopping momentum and inaction inertia reference reinforcement-like behavior, the underlying processes are quite different. Inaction inertia is based on forgoing an initially more attractive opportunity that makes the subsequent opportunity less attractive. The key driver of inaction is based on the notion that missing out on a large bargain initially engenders regret, which can be minimized by not participating in the second purchase opportunity. By contrast, in our shopping momentum studies, we deliberately limited either

price or product anchors that could lead to contrast effects and accompanying shifts in probabilities.

Notice that our results do not disconfirm the existence of inaction inertia since the preconditions for that reference related bias are not satisfied by our problem settings. Instead, the idea of a reference effect from the driver provides an important boundary condition for shopping momentum. Just as a rejected alternative can make a subsequent option look inferior, a driver item could hurt momentum by creating unfavorable contrast. For example, suppose a desired CD at half price lures one into a shopping mode. Seeing all the other CD's at full price is likely to overcome any shopping momentum one might have developed. A preferred strategy might be to feature a hard-to-get CD at regular price and then let shopping momentum carry people to purchase other CD's at that price.

We tested this contrast effect in a separate study of shopping momentum where respondents in two conditions could purchase a pen for 18 rupees. Although the pen costs the same in both conditions, it was framed as having a steeper discount in one condition than the other. Specifically, in the steep discount condition subjects were told that the market price of the pen was 40 rupees while in the regular discount condition they were informed that the pen is discounted from a regular price of 25 rupees. We then examined the purchase likelihood of the target item (key chain) in each condition. Results indicated that although more people bought the initial item in the deep discount condition, fewer purchased the target item in this condition compared to when the initial item was offered at regular discount. The deep discount may have generated a counter-productive contrast effect similar to the one inaction inertia produces that may have made the second item look relatively inferior.

Our finding that a free gift limits shopping momentum is consistent with the contrast story above and with the idea that it is the purchase, not the acquisition and related affect,

which brings about the shift to an implemental mindset. This result suggests that the use of free gifts by retailers to lure customers may not work as well as a gift with purchase. In particular, our results suggest that the best driver of subsequent purchases is a highly desirable item (say a seasonal or an emergency good) at reasonable prices.

Extensions for future research

Theoretically, the results of our studies are interesting and suggest several additional opportunities for future research. The most interesting theoretical issue arises from the nature of cognitive and affective processes that underlie shopping momentum. Our preferred account was based on the notion that the first purchase alters the cognitive mindset by shifting the focus to implementation which facilitates future purchases. An interesting issue is the degree to which the effect of initial purchase on change in mindset can be activated outside of awareness and then can operate non-consciously to effectively guide self-regulation (Bargh and Chartrand 1999). Similarly, while we used the initial purchase to cause a shift in the mindset, other manipulations to alter the mindset could obtain the same results.

Another interesting direction of future research would be to investigate how the momentum effect is moderated by the nature of the driver item. We expect that products that are considered guilty pleasures, such as candy, cigarettes, liquor, or tabloid magazines would be less successful at inducing momentum than utilitarian items such as back-to-school supplies, snow blowers, or umbrellas. The utilitarian items are likely both to initiate shopping and increase subsequent purchases, whereas tempting products might initiate purchase but also spontaneously activate consumers' resistance to additional purchases by encouraging deliberations. In particular, a hedonic driver item is more likely to reinforce a deliberative mindset for two reasons. First, recent research (Fishbach, Friedman, and Kruglanski 2003) suggests that temptations tend to spontaneously activate higher priority goals. Thus, a

hedonic or a frivolous purchase may spontaneously bring to mind the importance of being frugal as a means of effective self-regulation. Second, there is evidence that compared to utilitarian objects, purchases of objects that are more indulgent or hedonic are associated with feelings of guilt and a pain of paying (Kivetz and Simonson 2002; Strahilevitz and Myers 1998). To the extent that these emotions carry over to the subsequent purchase, they could interrupt shopping momentum.

Finally, an important untested moderator of shopping momentum is the time elapsed between purchases. In our studies, the target choice immediately follows the first purchase. We expect that shopping momentum provided by the driver will dissipate quickly with time or intervening tasks. For example, the money left over after the purchase of the first item may become endowed with ownership over time, rather than being 'in play'. If so, then this temporal change raises the possibility that a disruption in purchase momentum may lead to lost sales rather than deferral over time. Future research can also try to investigate whether the momentum effect detected in shopping is a general principle that also exists in other behavioral domains.

In summary, we have demonstrated the shopping momentum effect and have proposed a theoretical account for it based on a shift in mindsets from deliberative to implemental. Different mindsets evoke different cognitive orientations that interact in various ways to impact purchase decisions. Of course, the nature of shopping experience may change the nature of goals being pursued. For example, based on extensive past shopping experience, shoppers may have an initial focus on saving or careful deliberation before acquisition. However, once the shopper makes the first purchase this could make different goals more salient, such as those of time saving, or acquisition. Exploring such spontaneous

shifts of the goals could have important implications for understanding consumer purchase behavior involving a sequence of decisions.

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Exhibit 1: RECALL TASK SLIDE

Imagine Mr. A, who is a student, is deciding whether or not to purchase a car. He is also thinking about what he would have to do if he does decide to buy one. Listed below are some of his thoughts:

I should buy a car because it would give me greater mobility (D)

If I decide to buy a car, I would have to find a good dealer (I)

I should buy a car because it is a more dependable mode of transportation (D)

If I decide to buy a car, I would have to take care of the registration and license (I)

I should not buy a car because I would have to spend time on its upkeep (D)

If I decide to buy a car, I would have to arrange for insurance (I)

I should buy a car because it will save the money I spend on public transportation (D)

I should not buy a car because it is a financial liability (D)

If I decide to buy a car, I would have to save money or arrange for finance (I)

If I decide to buy a car, I would have to decide whether to buy or lease (I)

I should not buy a car because parking is inconvenient (D)

If I decide to buy a car, I would have to research different models and compare prices (I)