

The Shopping Momentum Effect

Ravi Dhar, Joel Huber and Uzma Khan*

December 2005

*Ravi Dhar is Professor at the School of Management, Yale University, 135 Prospect Street, New Haven, CT 06511, Tel: (203) 432 5947, Fax: (203) 432 3003, email:ravi.dhar@yale.edu. Joel Huber is Professor at the Fuqua School of Business, Duke University, Box 90120, Durham, NC 27708, Tel:(919) 660 7785, Fax: (919) 684 2818, email:joel.huber@duke.edu. Uzma Khan is an Assistant Professor at the Tepper School of Business, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh, PA 15213, Tel: (412) 268 9455, Fax: (412) 268 7357, email: khanu@andrew.cmu.edu.

ABSTRACT

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. Under this theory, shopping momentum occurs because the initial purchase moves one from a deliberative to an implemental mindset, thus driving subsequent purchases. After demonstrating the main shopping momentum effect, we support the mindset theory by (1) showing that the result is not compatible with affect connected with the first purchase increasing the likelihood of purchasing the second, (2) demonstrating how an initial purchase induces implemental orientation and (3) by illustrating that an implementation mindset leads to greater purchase. Then we explore the boundaries of this effect by examining how shopping momentum can be interrupted. Finally, we discuss alternative theoretical accounts for these results and explore consequences for marketing managers.

Imagine a consumer who stops 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 numerous 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. 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, the fact that different items are purchased on one 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 costs across these purchases. Our focus is on demonstrating a shopping momentum effect that is independent of the desire to limit shopping costs by grouping purchases. We demonstrate the effect by showing that the purchase likelihood for a subsequent item (hereafter referred to as the “target”) increases with the purchase incidence of an initial item (hereafter referred to as the “driver”). Put differently, target purchase incidence increases for groups of consumers with more attractive driver item. 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*. Momentum is a useful analogy that generates a number of hypotheses that we find to hold. For example, if one thinks of the initial purchase as providing an action orientation toward shopping that makes a second purchase more likely, then 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 on 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 for mediating impact of shifting mindsets, we show that respondents who make a purchase are subsequently more likely to retrieve information associated with an implemental mindset, and in a separate study that an implemental mindset leads to higher purchase propensity.

The remainder of this paper is organized as follows. First, a brief review of relevant research on mindset orientation and consumer decision-making generates our prediction of the shopping momentum effect. Next, an initial experiment demonstrates the basic effect and offers evidence for mindsets as the theoretical mechanism. The following experiment then shows that an alternative explanation of positive affect associated with the first purchase is not sufficient to produce the effect. Direct evidence for the mindset framework then arises from a demonstration

that the initial purchase alters mindsets as predicted and that subsequent purchase is influenced by the evoked mindsets. Finally, we provide a boundary around the effect by showing that shopping momentum dissipates when the expenditure sources are separated. A conclusion section discusses the theoretical and managerial implications 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 predicts that previous purchase should *decrease* the likelihood of subsequent purchase.

Our proposed explanation for shopping momentum arises out of a shift in implicit mindsets that influence people's cognition and behavior. 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 evoked a mindset perseveres, guiding thought production, encoding and retrieval of information, and ultimately behavior. For example, Chandran and Morwitz (2005) show that a price participation exercise evokes an implementation focus that later 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 an outcome of 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 individual's goals towards implementation. This implementation mindset then evokes feelings of commitment to purchase the product by reducing the psychological barriers to action.

In summary, while the term "momentum" suggests a physical mechanism, the theory examining shopping momentum derives from psychology. In addition to mindsets, we also test the validity of alternative psychological mechanisms 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 by presenting the experimental paradigm and a simple experiment that provides clear evidence for the shopping momentum. We then conduct additional experiments that help further discriminate among different accounts and provide boundaries for the effect.

STUDY 1: A DEMONSTRATION OF SHOPPING MOMENTUM

The first study demonstrates the shopping momentum effect whereby an initial purchase of a driver item significantly increases the within person likelihood of purchasing a subsequent unrelated target item. In most theories, within person changes in behavior due to an experimental treatment are tested with a between subjects design. Following this practice, we test for the shopping momentum effect by varying the kinds of driver products offered to randomly assigned groups of individuals and note the differences in purchase propensity for the target item across these groups. While we calculate 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 conditional on purchasing the driver item in the treatment condition may be greater

than those in a control condition 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 focus on the impact of different drivers on the proportion of consumers choosing the target as a way to infer shifts in individual probabilities.

Method

This demonstration study tests the shopping momentum effect by comparing the likelihood of purchasing a target item (a key chain) for groups of respondents randomly assigned 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 180 (77 men and 103 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 seven 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 create shopping momentum because it was more likely to be purchased. As their last task, 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).

Results and Discussion

As expected, the purchase incidence differed across the two drivers. Specifically, 72% of respondents bought the educational CD while only 15% chose to buy the light bulb. Consistent with our prediction that the driver item with a higher incidence would produce greater momentum, 65% of the participants in the CD condition bought the key chain compared with 37% purchasing it following the offer of the less popular light bulb ($\chi^2 = 9.64$; $p < 0.05$). Comparison with the control condition also yields results consistent with the theory. That is, while 46.6% bought the key chain in the control condition, significantly more (65%) bought the target item in the CD condition ($\chi^2 = 4.1$; $p < 0.05$). The difference in the percentage of participants buying the target item in the control and the light bulb condition was not significant ($\chi^2 = 1.2$; *ns*).

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 76.7% of those who bought the driver item also bought the target item. In contrast, only 35.0% of those who did not buy the driver item purchased the target item ($\chi^2 = 9.2$, $p < 0.01$). Similarly, in the light bulb condition, 67.0% of those who bought the initial item purchased the target item, while only 31.0% of those who did not buy the initial item chose to purchase the target key chain ($\chi^2 = 4.1$, $p < 0.05$). 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 potentially confounding individual covariates, such as income or desire to please, that might be driving both purchases. In subsequent studies we will not report the conditional probabilities as we found them to be consistent with the unconditioned ones.

Table 1**Purchase Probabilities Depending on Purchase Likelihood and Presence of the Driver**

First Item (<i>n</i> = 60 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)	15.0%	37.0%
Educational CD (High Purchase Likelihood)	72.0%*	65.0%*

** Indicates the probability is significantly greater than for the low purchase likelihood alternative.*

The results from Study 1 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 data relevant to two opposing accounts derived from 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 a better monetary deal than the light bulb, participants assigned to that condition might infer that the subsequent offer is also a bargain and that that justifies its purchase. 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 situational 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 separate test, 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. Furthermore, participants reported similar 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 having comparable monetary value but have different purchase likelihoods in a campus setting.

A related argument is that the first item sends a signal to the participants about the ability of the experimenter to offer 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 ($\chi^2 = 1.2$, *ns*). Furthermore, in the actual study subjects’ ratings of how useful they thought the offered item was did not differ significantly for the educational CD ($M = 6.98$) and the light bulb ($M = 7.17$, $t(118) = 0.48$, *ns*). Finally, there was no significant difference in participants’ liking ratings for the CD ($M = 5.98$) and the light bulb ($M = 5.21$, $t(118) = 1.63$, *ns*).

The above analysis increases our confidence that differences in inferences about the relative value of the manipulated driver items are unlikely to be the underlying cause for the momentum effect. Still, there remains the possibility that shopping momentum arises from pleasure generated by the usefulness of the CD offer. 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 so, then increasing the affect associated with the initial driver should increase the likelihood of subsequent purchase.

The next study directly tests this affect explanation by offering the driver item as a free gift. This explanation suggests that greater positive affect engendered by a free gift should augment shopping momentum. In contrast, a mindset-based account predicts that receiving the driver item as a free gift would not alter shopping momentum since it does not shift mindsets from deliberation to implementation of a purchase.

STUDY 2: TESTING AFFECT AS A CAUSE OF SHOPPING MOMENTUM

Study 2 examines 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. In the second condition, respondents are given an opportunity to buy a pen for five rupees, while in the third condition they are given the same pen as a gift prior to being given the option to purchase the target key chain. The idea here is that if the momentum is driven by the positive affect induced by a driver item, then it should be greater after a free gift than after a driver item requiring payment. However, if the momentum is driven by a change in the mindset or cognitive orientation caused by an initial purchase, then the effect should be more pronounced in the condition where the driver item is offered for purchase.

Method

Each condition contained 40 respondents at a South Asian university campus who, after being paid 20 rupees for filling out an unrelated questionnaire, 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. Those in the purchase condition were offered a pen for five rupees prior to being offered the key chain. Those in the gift condition received the pen under a pretext that the experimenter had an extra supply from a company. Then, all participants could buy the key chain for 10 rupees.

Results and Discussion

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*).

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

First Item <i>(n = 40 in each cell)</i>	% 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%

* *Indicates the probability is significantly greater than for the control or free gift*

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. 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 five rupees. Then participants were asked to respond to the affect questions 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 given the opportunity to buy it ($M = 0.13$, $t(28) = 5.44$; $p < 0.01$).

The second study is important in four ways. First, it replicates the increase in target purchase in the experimental over control condition reported in Study 1. 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 five rupees) was much cheaper than the target item (a key chain for ten rupees) thus limiting the possibility that a high price for the first item serves as an anchor to make the target's price seem lower. Finally, the two items were priced such that even after buying both the items participants were left with five rupees. This last modification helps to rule out a "loose change" account for Study 1. Specifically, after purchasing a relatively more expensive driver item, it is possible that 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 possibility¹.

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. In the next two studies we provide more direct support for the proposed account of shifting mindsets. First, we demonstrate that an initial purchase alters the mindset and induces an implementation orientation towards shopping. Next, we show that cuing implementation subsequently results in greater purchase likelihood. The combination of these theoretical studies strongly corroborates mindsets as the mechanism behind shopping momentum.

In Study 3 we will show how an initial purchase induces an implementation orientation that can be observed in subsequent tasks unrelated to a purchase decision (e.g., Chandran and Morwitz 2005). Our test is similar to the one employed by Gollwitzer, Heckhausen, and Steller (1990), who show superior recall of implementation-related

¹ We thank an anonymous reviewer for suggesting this explanation.

thoughts (e.g., when, how, and where to act) for participants in the implemental than the deliberative mindset.

STUDY 3: EFFECT OF AN INITIAL PURCHASE ON MINDSETS

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. Following prior research, deliberative thoughts for the experiment were generated from 25 pretest participants who listed four pros and four cons of buying a car, while implementation thoughts were generated from their listing of six things that needed to be done when purchasing a car. Exhibit 1 shows the six most commonly mentioned thoughts that were then used to cue either the deliberative or implemental mindsets.

Method

Sixty-six students at a major East Coast campus were paid a dollar to participate in a study in which mindset was assessed by contrasting an experimental group with a prior purchase against control subjects who knew nothing about the purchase. Those randomly assigned to the experimental condition could either keep their dollar or use part of it to buy either an apple or a bag of chips for \$0.25 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 \$0.25. We looked for items that would encourage most participants to purchase at least one of the items. All participants were then asked to read the 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.

Results and Discussion

Our prediction was that having the option to purchase would induce an implemental mindset. The manipulation worked, as 97% of the subjects offered them purchased the snacks. As predicted, respondents in this purchase condition, and hence in the implemental mindset, recalled significantly more implemental thoughts ($M = 2.59$) as compared to the control condition ($M = 2.09$, $t(64) = 1.98$; $p < 0.05$). Deliberative thoughts were appropriately lower in purchase ($M = 1.32$) compared with control conditions ($M = 1.66$), but this difference was not significant ($t(64) = 1.19$, *ns*). These results are consistent with our hypothesis 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.

Table 3

Impact of a Purchase on Subsequent Implemental and Deliberative Thoughts

	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

** Indicates the mean is significantly greater than for the control.*

This analysis shows that an initial purchase can induce an implementation orientation. To complete our theoretical explanation that an initial purchase generates an action orientation, which then facilitates subsequent purchases, Study 4 will further demonstrate

that cuing an implementation mindset without making a purchase subsequently results in greater purchase likelihood.

STUDY 4: EFFECT OF MINDSETS ON PURCHASE

The next study examines the effect of activating an implementation mindset on the likelihood of purchase. We use a similar methodology as Gollwitzer et al. (1990) who induced a deliberative mindset by asking participants to weigh the pros and cons of making a personal change decision and induced an implemental mindset by asking participants to list most crucial implementation steps.

Method

One hundred and eight respondents received 15 rupees for participating in a study about consumers' goals. Upon agreeing to participate, respondents were prepaid and were told that they could either keep all the money or buy an item from the experimenter after completing the study. All participants were asked to imagine that they are thinking of buying a car. Participants were then randomly assigned either to a deliberative or an implemental condition. Participants in the deliberative condition wrote out four pros and four cons of buying a car, while those in the implementation condition wrote down eight steps that they would have to take in order to buy a car. After listing the thoughts, participants in both the conditions were offered the key chain for 10 rupees.

In the deliberative condition participants' generated pros and cons such as, "*buying a car can help me get to college on time*", "*no more wait for crowded buses*", "*it is fun*", "*Cars are very expensive*", "*It takes time and effort to maintain a car*", "*I don't have a place to park a car*", "*I will have to pick and drop people all the time..*". Examples of thoughts generated by participants in the implemental condition are: "*I will have to look for a*

good car,” “arrange the money,” “I will search newspapers for advertisements,” “I will have to ask someone to help me choose the right car.”

Results and Discussion

We eliminated participants who failed to generate all eight thoughts from our analysis as fewer thoughts may lead to weaker tuning of the mindsets. A mindset based account predicts that participants in the implemental mindset will be more likely to purchase the key chain as compared to those in the deliberative mindset. In support of this prediction we find that while 65.8% bought the key chain after indicating implementation related thoughts only 41.0% bought the key chain after writing deliberative thoughts ($\chi^2 = 5.3, p < 0.05$).²

The present study complements the previous study’s support for the mindset explanation of the shopping momentum effect. While Study 3 shows that purchase cues an implementation mindset, Study 4 shows that activating an implementation mindset leads to greater purchase.

A question that naturally arises at this point concerns the factors that might interrupt an implementation mindset stimulated by an initial purchase. A possible boundary comes from past research demonstrating that people allocate and track money to mental accounts that differ with respect to their purchase propensities (e.g., Heath and Soll 1996). These mental accounts have value as self-control mechanisms (Thaler 1985). For example, having to open any new account inhibits spending from that source, while a second payment from an open account with surplus funds should be relatively easy. In support of this mechanism, Soman and Cheema (2004) show that the disutility associated with payments greater from a

² We also analyzed the data by including participants who failed to generate all eight thoughts. The results while not significant were in the predicted direction ($\chi^2 = 3, p = 0.08$). That is, purchase of the keychain was higher in the implemental condition than in the deliberative condition. As suggested above, the results might not have reached significance as generating fewer thoughts may lead to weaker tuning of the mindsets and hence less impact on subsequent purchase.

closed as opposed to an open account. Based on these findings, we posit that an action orientation induced by an initial purchase might not carry over when money for the subsequent purchase requires the individual to open a different account. In other words, while an open account might facilitate continued implementation, opening a new one could restore deliberation. We test this reasoning in Study 5 by examining whether shopping momentum is disrupted when the second purchase requires spending money from an account that is different from the first purchase.

STUDY 5: DISRUPTION OF SHOPPING MOMENTUM USING SEPARATE PAYMENT ACCOUNTS

To the extent that an implemental mindset is facilitated by drawing from a current source of money, separating the sources of payment should dampen the shopping momentum effect. We therefore propose that the implementation orientation and hence the shopping momentum induced by an initial purchase will not carry over when payment for the target item is seen as coming from a separate account.

Method

To test this prediction, 40 men and 40 women were randomly assigned either to a *single* or a *separate* account condition with respect to the seven rupee keychain target. The *single* account condition was similar to that of Study 2 except the CD was replaced by a floppy disk for 18 rupees, and the total compensation was increased to 30 rupees. The *separate* account condition separated the source of funds into two accounts. For the *single* account, respondents were approached by an experimenter and asked to fill out a questionnaire for 30 rupees. For the *separate* account, respondents were first approached by an experimenter and asked to fill out a questionnaire for 20 rupees. After a delay of a few

minutes, a different experimenter offered respondents 10 rupees for filling out an unrelated questionnaire. All respondents who filled out the first questionnaire also filled out the second one. In both conditions, after receiving the 30 rupees either in single or dual accounts, subjects could purchase a floppy diskette for 18 rupees, and following that could buy the key chain for seven rupees. To avoid any difference in the effort required for participation, the single questionnaire simply merged the questions from the two separate ones.

Results and Discussion

The data in Table 4 support the prediction that separate accounts interrupt shopping momentum. Although purchase of the driver 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 for the same work in one envelope ($\chi^2 = 5.05, p < 0.05$).

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%

* Indicates the probability is significantly greater for single over separate accounts.

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 share similar to that generated by the CD in the Study 1. However, when the payment source is broken into

two accounts, the probability of choosing the key chain drops to 42.5%, about the same level as it was in the control and the light bulb conditions in Study 1. Thus these results are consistent with the idea that separate payment accounts disrupt the momentum from the first purchase. This study again demonstrates the robustness of the shopping momentum effect, and additionally provides an important boundary condition by showing that the shift in mindsets can be disrupted if items have separate income sources.

GENERAL DISCUSSION

The purpose of this paper was to introduce the concept of shopping momentum and to explore its underlying psychology and boundary conditions. After demonstrating the basic effect, evidence for mindsets as an explanatory framework was provided by first showing that making a prior purchase resulted in a higher recall of implemental thoughts, and second by demonstrating that an initial implemental mindset subsequently leads to increased purchase likelihood. We also reported two studies that helped rule out alternative explanations and suggested boundary conditions. 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 purchases in different accounts was sufficient to dissipate the shopping momentum effect.

It is important to distinguish shopping momentum from two related psychological phenomena that 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 paradigm (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 but larger related request. In the initial studies, Freedman and Fraser (1966) asked participants to 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 a large sign in their front yard advocating safe driving. The authors found that compared with controls who experienced no initial request, those individuals asked to comply with a small initial 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 compelling is based on self-perception. The 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). While foot-in-the-door seems similar, it does not extend readily to shopping momentum for several reasons. First, since self-perception theory relies on consistency among *related* actions, it does not provide a clear prediction about how an initial purchase would influence purchase of the subsequent *unrelated* item that provides the focus of our studies. Second, the foot-in-the-door action typically reflects a small initial request that facilitates a large request later. In contrast, we show that the shopping momentum is not sensitive to the relative magnitude of the two items. Thus, in Studies 1 and 3 the driver light bulb and floppy disk were more expensive than the target, while in Study 2 the pen is less expensive. Here, and in other tests we have made, we

find no difference in the magnitude of the shopping momentum effect arising from relative prices. Third, the foot-in-the-door effect generally becomes stronger when there is greater involvement or impact on self-image generated by the initial request (Hansen and Robinson 1980), but the results of our studies suggest that large momentum changes can be triggered by quite low involvement and small purchases. Finally, consistent with theories on consistency and involvement, foot-in-the-door is a long-term effect, operating across weeks. In our view, shopping momentum is a short-term effect, capable of being dissipated quickly over time.

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 derive from 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 turning down a large bargain engenders regret, which can be minimized by not participating in the second purchase opportunity for the same item. By contrast, our shopping momentum studies were designed to limit the impact of either price or product anchors. For example, in Study 1 we made sure that the light bulb and the CD were perceived as equally good deals.

Notice that our results do not disconfirm the existence of inaction inertia since the preconditions for the reference related regret are not satisfied by our problem settings. Instead, the idea of a potential reference effect from the driver provides an important boundary condition for shopping momentum. Just as a rejected attractive alternative can

make a subsequent option look relatively unattractive, 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 CDs at full price is likely to interrupt 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 CDs 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 cost 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 also 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) offered at discount similar to that of other items in the store.

Extensions for future research

Theoretically, the results of our studies 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, such as scrambled sentences, might alter mindsets in the same way.

A related question is whether consumers have well-formed intuitions about shopping momentum. If so, then it should be possible to reveal the effect through hypothetical scenarios. Past research on prediction by consumers has documented several situations where people mis-predict their future preferences, particularly if their current state does not match to which they are predicting (Loewenstein 1996). 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 a series of separate studies we used hypothetical scenarios to test consumers' intuition about the momentum effect in shopping behavior. For example, in one scenario participants in a between subjects design were told:

Imagine you are at a local superstore and you purchase a floppy disk (or 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 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?

Interestingly, we find that peoples' predictions reversed the shopping momentum effect. Participants expected a higher probability of purchasing a key chain in the control condition, which did not specify a prior purchase. In a different implementation, we tested whether respondents would predict the momentum effect in the shopping behavior of others. Like the predictions for self, people were also unable to predict a momentum effect in the shopping behavior of others. These two findings are important because if behavior is not predictable by consumers, then that provides evidence that shopping momentum may occur outside awareness and is difficult to regulate and control.

Although our findings indicate that respondents have difficulty predicting shopping momentum, future research should clarify why this may occur in practice. For example, what may be operating in the scenario tests is a reasonable anticipation of the budget effect where a person is focusing on the budget implications of the first purchase. Alternatively, a respondent in the prediction condition may assume a more cognitive approach that does not sufficiently adjust for the changed mindset after purchase. Such failures to predict are consistent with mechanisms such as focalism (Wilson et al. 2000) and intrapersonal empathy gaps (Loewenstein 1996). More generally, the failure to anticipate the shopping momentum effect is interesting considering the vast experience most people have with shopping, but its exact sources need to be further explored.

Another fruitful direction of future research investigates how the momentum effect is moderated by the nature of the driver item. We expect that products perceived to be guilty pleasures, products 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

activate consumers' resistance to additional purchases by encouraging deliberations. In particular, recent research suggests that a hedonic driver item is more likely to reinforce a deliberative mindset. In particular, Fishbach, Friedman, and Kruglanski (2003) suggest 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. Additionally, there is evidence that compared to utilitarian objects purchases of more indulgent or hedonic objects are associated with feelings of guilt and a pain of paying (Kivetz and Simonson 2002; Strahilevitz and Myers 1998). To the extent that these negative emotions carry over to the subsequent purchase, they may 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 is likely to become endowed with ownership over time, rather than being 'in play'. If so, then this temporal change raises the possibility that a disruption in shopping momentum may lead to lost sales rather than deferral over time.

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

REFERENCES

- Arkes, Hal R., Lisa T. Herren, and Alice M. Isen (1988), "The Role of Potential Loss in the Influence of Affect on Risk-Taking Behavior," *Organizational Behavior and Human Decision Making*, 42 (October), 181-193.
- , Yi-Han Kung and Laura Hutzler (2002), "Regret, Valuation, and Inaction Inertia," *Organizational Behavior and Human Decision Processes*, 87 (March), 371-385.
- Bargh, John A. and Tanya L. Chartrand (1999), "The Unbearable Automaticity of Being," *American Psychologist*, 54 (July), 462-479.
- Chandran, Sucharita and Vicki G. Morwitz (2005), "Effects of Participative Pricing on Consumers' Cognitions and Actions: A Goal Theoretic Perspective," *Journal of Consumer Research*, 32 (September), 249-259 .
- Cialdini, Robert B. and Rosanna E. Guadagno (2004), "Sequential Request Compliance Tactics," in R. H. Gass & J. S. Steiter (Eds.), *Persuasion, Compliance-Gaining, and Social Influence*. Boston, MA: Allyn & Bacon.
- Fishbach, Ayelet, Ronald S. Friedman, and Arie W. Kruglanski (2003), "Leading Us Not into Temptation: Momentary Allurements Elicit Overriding Goal Activation," *Journal of Personality and Social Psychology*, 84 (February), 296- 309.
- Freedman, Jonathan L. and Scott C. Fraser (1966), "Compliance without Pressure: The Foot-in-the-Door Technique," *Journal of Personality and Social Psychology*, 4 (August), 195-202.
- Gollwitzer, Peter M. (1990), "From Weighing to Willing: Approaching a Change Decision Through Pre- or Post Decisional Implementation," *Organizational Behavior and Human Decision Processes*, 45 (February), 41-46.

- and Ute Bayer (1999), "Deliberative versus Implemental Mindsets in the Control of Action," in S. Chaiken & Y. Trope (Eds.), *Dual-process Theories in Social Psychology*, 403-422, New York: Guilford.
- Heinz Heckhausen and Brigit Steller (1990), "Deliberative and Implemental Mind-Sets: Cognitive Tuning Toward Congruous Thoughts and Information," *Journal of Personality and Social Psychology*, 59 (December), 1119–1127.
- Hansen, Robert A. and Larry Robinson (1980), "Testing the Effectiveness of Alternative Foot-in-the-Door Manipulations," *Journal of Marketing Research*, 17 (August), 359-364.
- Heath, Chip and Jack B. Soll (1996), "Mental Budgeting and Consumer Decisions," *Journal of Consumer Research*, 23 (June), 40-52.
- Heilman, Carrie M., Kent Nakamoto and Ambar G. Rao (2002), "Pleasant Surprises: Consumer Response to Unexpected In-Store Coupons," *Journal of Marketing Research*, 39 (May), 242-251.
- Kivetz, Ran and Itamar Simonson (2002), "Earning the Right to Indulge: Effort as a Determinant of Customer Preferences Towards Frequency Program Rewards," *Journal of Marketing Research*, 39 (May), 155-170.
- Lee, Angela and Brian Sternthal (1999), "The Effects of Positive Mood on Memory," *Journal of Consumer Research*, 26, 115-132.
- Loewenstein, George F. (1996), "Out of Control: Visceral Influences on Behavior," *Organizational Behavior and Human Decision Processes*, 65 (March), 272-92.
- Mulhern, Francis J. and Daniel T. Padgett (1995), "The Relationship between Retail Price Promotions and Regular Price Purchases," *Journal of Marketing*, 59 (October), 83-90.

- Prelec, Drazen and George F. Loewenstein (1998), "The Red and the Black: Mental Accounting of Saving and Debt," *Marketing Science*, 17 (1), 4-28.
- Simonson, Itamar and Amos Tversky (1992), "Choice in Context: Tradeoff Contrast and Extremeness Aversion," *Journal of Marketing Research*, 29 (August), 281-295.
- Soman, Dilip (2001), "Effects of Payment Mechanism on Spending Behavior: The Role of Rehearsal and Immediacy of Payments," *Journal of Consumer Research*, 27 (March), 460-474.
- and Amar Cheema (2004) "When Goals are Counter-Productive: The Effects of Violating a Behavioral Goal on Performance," *Journal of Consumer Research*, 31 (June), 52-62.
- Strahilevitz, Michal and John G. Myers (1998), "Donations to Charity as Purchase Incentives: How Well They Work May Depend on What You Are Trying to Sell," *Journal of Consumer Research*, 24 (March), 434-446.
- Thaler, Richard H. (1985) "Mental Accounting and Consumer Choice," *Marketing Science*, 4 (Summer), 199-214.
- Tykocinski, Oret E., Thane S. Pittman, and Erin E. Tuttle (1995), "Inaction Inertia – Forgoing Future Benefits as a Result of an Initial Failure to Act," *Journal of Personality and Social Psychology*, 68 (May), 793-803.
- Wilson, Timothy D., Thalia Wheatley, Jonathan M. Meyers, Daniel T. Gilbert and Danny Axsom (2000), "Focalism: A Source of Durability Bias in Affective Forecasting," *Journal of Personality & Social Psychology*, 78 (May), 821-836

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)