

RAVI DHAR, JOEL HUBER, and UZMA KHAN*

Shopping momentum occurs when an initial purchase provides a psychological impulse that enhances the purchase of a second, unrelated product. The authors propose that the most promising theoretical mechanism for shopping momentum comes from Gollwitzer's (1990) theory of implementation and deliberation mind-sets. Under this theory, shopping momentum occurs because the initial purchase moves the consumer from a deliberative to an implemental mind-set, thus driving subsequent purchases. After demonstrating the main shopping momentum effect, the authors support the mind-set theory by (1) demonstrating how an initial purchase induces implemental orientation and (2) by illustrating that an implementation mind-set leads to greater purchase. The authors then explore the boundaries of this effect by demonstrating how shopping momentum can be interrupted. Finally, they discuss alternative theoretical accounts for the results and explore consequences for marketing managers.

The Shopping Momentum Effect

"An object at rest remains at rest, and an object in motion remains in motion, unless acted on by an outside force." (Newton's first law)

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 makes further purchases more likely when it is crossed. Commercial practice appears to support the existence of a shopping momentum effect. Consider the efforts of retailers that 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.

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 purchase. From a cost perspective, consumers in the real world may aggregate purchases at a single store or through mail order to consolidate travel, shipping, or processing across purchases. Conversely, to the extent that subsequent purchases are complementary items, the purchase of an initial item might enhance the purchase of additional items. We demonstrate the shopping momentum effect by showing that the purchase likelihood for a subsequent item (the "target") increases with the purchase incidence of an initial, unrelated item (the "driver"). We focus on demonstrating that the effect occurs independently of the desire to limit shopping costs by consolidating purchases or complementarity across items.

We label the increase in purchase propensity for the target item as "shopping momentum," taking this metaphor from physics as a description of a behavioral regularity rather than a theoretical explanation per se. Momentum is a useful analogy that generates several hypotheses that we find to hold. For example, if the initial purchase is viewed as providing an action orientation toward shopping that makes a second purchase more likely, it can be predicted that the greater that initial drive (the intent to purchase the first alternative), the greater is the propensity to purchase the second alternative. Furthermore, the metaphor facilitates the idea that friction generated by other actions or stimuli can serve to weaken shopping momentum.

We explain our findings based on the literature on goal-related mind-sets. Building on the theory of mind-sets (Gollwitzer 1990), we can conceptualize shopping momentum in terms of a shift in a consumer's cognitive mind-set from deliberation to implementation. Specifically, we propose that the first purchase produces a shift in the mind-set

*Ravi Dhar is George Rogers Clark Professor of Management and Marketing, School of Management, Yale University (e-mail: ravi.dhar@yale.edu). Joel Huber is Alan D. Schwartz Professor of Marketing, Fuqua School of Business, Duke University (e-mail: joel.huber@duke.edu). Uzma Khan is an assistant professor, Graduate School of Business, Stanford University (e-mail: khan_uzma@gsb.stanford.edu). This article was accepted for publication under Russell Winer; J. Jeffrey Inman served as guest editor.

To read and contribute to reader and author dialogue on JMR, visit <http://www.marketingpower.com/jmrblog>.

from deliberation-based browsing to implementation-based shopping and that such a shift makes subsequent purchase more likely. As evidence for the mediating impact of shifting mind-sets, we show that respondents who make a purchase are subsequently more likely to retrieve information associated with an implemental mind-set and, in a separate study, that an implemental mind-set leads to greater purchase propensity.

We organize the remainder of this article as follows: We begin with a brief review of relevant research on mind-set orientation and consumer decision making, which generates our prediction of the shopping momentum effect. The first experiment then demonstrates the basic effect, followed by an experiment showing that positive affect associated with the first purchase is not sufficient to produce the effect. Supporting evidence for the mind-set framework then arises from a demonstration that the initial purchase alters mind-sets and that subsequent purchase is influenced by the evoked mind-sets. Finally, we provide a boundary around the effect by showing that shopping momentum dissipates when the expenditure sources are separated. We conclude with a discussion of the theoretical and managerial implications and suggestions for further research.

THE SHOPPING MOMENTUM EFFECT

Shopping momentum occurs when the purchase of a driver item increases the likelihood of purchasing a target. It is difficult to justify shopping momentum from a normative perspective. To the extent that these goods are independent, 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 the previous purchase should decrease the likelihood of a subsequent purchase.

Our proposed explanation for shopping momentum arises out of a shift in implicit mind-sets that influence people's cognition and behavior. Gollwitzer (1990) proposes two important mind-sets, deliberative and implementation. A deliberative mind-set weighs the pros and cons of pursuing a specific action, whereas an implementation mind-set focuses on the timing and sequencing of goal-oriented actions. Relevant to the current work, when a mind-set is evoked, it perseveres, guiding thought production, encoding and retrieval of information, and, ultimately, behavior.

In a purchase context, momentum can be viewed as an outcome of a switch to an implementation orientation that is propelled by the first purchase. Although the process of deciding the first purchase is likely to be deliberative, we postulate that this switch occurs as the act of purchase shifts a person's focus to an implementation mind-set. This implementation mind-set then evokes feelings of commitment to purchase by reducing the psychological barriers to action. For example, Chandran and Morwitz (2005) show that a price participation exercise evokes an implementation focus that subsequently leads to greater purchase intent than a fixed price offer for the same object. We propose that an initial purchase itself can induce an implementation focus, and consistent with Chandran and Morwitz (2005), this implementation focus can then lead to greater subsequent purchase.

In summary, although the term "momentum" suggests a physical mechanism, the theory behind shopping momentum derives from psychology. We begin by presenting the experimental paradigm and a simple experiment that provides clear evidence for 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

Study 1 demonstrates the shopping momentum effect, showing that 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 people and note the differences in purchase propensity for the target item across these groups. Although 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. For example, the probability of subsequent purchase conditional on purchasing the driver item in the treatment condition may be greater than in a control condition simply because people with the resources and motivation to buy one product are 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, participants 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; they were 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. Respondents in the low-driver condition were offered a light bulb for 18 rupees, which a pretest showed 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 final task, all participants indicated how useful they thought the initially offered item (CD or light bulb) was on a ten-point scale (1 = "not at all useful," and 10 = "very useful"). Furthermore, on another ten-point scale, all participants stated the extent to which they liked

the initially offered item (1 = "not at all," and 10 = "very much").

Results and Discussion

Table 1 shows that the purchase incidence differed across the two drivers. Specifically, 72.0% of respondents bought the educational CD, whereas only 15.0% chose to buy the light bulb. Consistent with our prediction that the driver item with a higher incidence would produce greater momentum, 65.0% of the participants in the CD condition bought the key chain, whereas only 37.0% purchased it following the offer of the less popular light bulb ($\chi^2 = 9.64$, $p < .05$). Comparison with the control condition also yields results consistent with the theory. That is, whereas 46.6% bought the key chain in the control condition, significantly more (65.0%) bought the target item in the CD condition ($\chi^2 = 4.1$, $p < .05$). The difference in the percentage of participants buying the target item in the control and the light bulb conditions was not significant ($\chi^2 = 1.2$).

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 participants 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 ($\chi^2 = 9.2$, $p < .01$). Similarly, in the light bulb condition, 67.0% of those who bought the initial item purchased the target item, whereas only 31.0% of those who did not buy the initial item chose to purchase the target key chain ($\chi^2 = 4.1$, $p < .05$). As we noted previously, although these results are consistent with our predictions that an initial purchase increases the likelihood of subsequent purchase, 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 drive both purchases. In subsequent studies, we do not report the conditional probabilities because we found them to be consistent with the unconditioned ones.

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 mind-set in the respondents. Before providing support for the proposed underlying mechanism, we consider data relevant to two

opposing accounts derived from potential inferences about the value of the target item based on the perceived value of the driver items. In the first account, if the educational CD (light bulb) is viewed as an attractive (inferior) monetary deal, participants assigned to this condition might infer that any subsequent offer is also attractive (unattractive) and that this justifies its purchase (rejection). The second inference account generates the opposite prediction and is based on the trade-off contrast hypothesis (Simonson and Tversky 1992). According to this hypothesis, a highly attractive driver item could make a subsequent offer on the target appear less attractive. In both accounts, it is important to minimize such concerns by controlling for differing inferences that could be made from the manipulated driver items.

Because we needed the two driver items to differ in their likelihood of purchase, the foregoing concern required varying the purchase likelihood of the driver items by manipulating their situational attractiveness, not their price discount. We defined a high-purchase-likelihood item as something useful and that students buy often and are most likely to buy in a university setting. We defined a low-purchase-likelihood item as something useful but that 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 ten-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 ($M = 7.56$) than a light bulb ($M = 5.03$; $t(58) = 3.68$, $p < .05$) in a campus setting. Furthermore, participants reported similar willingness to pay for the educational CD ($M = 18.73$) and the light bulb ($M = 15.03$; $t(58) = 1.88$, not significant [n.s.]). In summary, the results ensured that both driver items, the light bulb and the CD, were viewed as having comparable monetary value but 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 items that they want and/or like. Although reasonable, this interpretation is unlikely given that the light bulb condition did not significantly diminish target choice compared with the control ($\chi^2 = 1.2$, n.s.). Furthermore, in the actual study, respondents' ratings of the usefulness of the offered item did not differ significantly for the educational CD ($M = 6.98$) and the light bulb ($M = 7.17$; $t(118) = .48$, n.s.). Finally, there was no significant difference in participants' liking ratings for the CD ($M = 5.98$) and the light bulb ($M = 5.21$; $t(118) = 1.63$, n.s.).

This 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. However, there remains the possibility that shopping momentum arises from pleasure generated by the usefulness of the CD purchase. 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, it could be argued that the educational CD, which is a more attractive purchase, increases subsequent affect and thus

Table 1
EFFECT OF DIFFERENT DRIVERS ON THE PURCHASE
LIKELIHOOD OF THE TARGET

First Item (<i>n</i> = 60 in each cell)	% Buying the First Item (Driver)	% Buying the Second Item (Key Chain)
Control (no prior purchase)	N.A.	46.6
Light bulb (low purchase likelihood)	15.0	37.0
Educational CD (high purchase likelihood)	72.0 ^a	65.0 ^a

^aIndicates that the percentage is significantly greater than for the low-purchase-likelihood alternative, $p < .05$.

Notes: N.A. = not applicable.

causes momentum. If so, increasing the affect associated with the initial driver should increase the likelihood of subsequent purchase.

Study 2 directly tests this affect explanation by offering the driver item as an affect-generating free gift. In contrast, a mind-set-based account predicts that receiving the driver item as a free gift will not alter shopping momentum, because it does not shift mind-sets from deliberation to implementation.

STUDY 2: TESTING AFFECT AS A CAUSE OF SHOPPING MOMENTUM

Study 2 examines the likelihood of purchasing the target key chain in three conditions—a control, a purchase condition, and a free-gift condition. The idea is that if positive affect generates the momentum, it should be greater when the driver is given as a free gift than when the driver item requires payment. However, if it is the change in the mind-set or cognitive orientation caused by an initial purchase that generates the momentum, the effect should be more pronounced in the condition in which the driver item is offered for purchase.

Method

Each condition comprised 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. In the control condition, only the target key chain was made available for purchase. The purchase and the gift conditions offered a pen as the driver item before offering the key chain for purchase. In the purchase condition, respondents were offered a pen for 5 rupees before they were offered the key chain. Those in the gift condition were given the same pen as a gift before they were given the option to purchase the target key chain. Finally, all participants could buy the key chain for 10 rupees.

Results and Discussion

A mind-set-based account predicts that shopping momentum will be greater when the driver item is offered for purchase 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, whereas only 52.5% bought the key chain after receiving the same pen as a free gift ($\chi^2 = 5.49$,

$p < .05$). The results indicate that compared with a control condition, in which 55.0% of the respondents bought the key chain, respondents were substantially more likely to buy the key chain when they were previously given an opportunity to buy the pen ($\chi^2 = 4.53$, $p < .05$). However, there is no significant difference in the purchase likelihood of the key chain in the control and the free-gift condition ($\chi^2 = .05$, n.s.).

To ensure 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), 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, and 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 questions again. Examining the pre- and post-manipulation measures of affect, we find that the free gift generated a greater gain in positive affect than the purchase option. In particular, the average increase in affect was higher when participants received the pen as a free gift ($M = 1.25$) than when they were given the opportunity to buy it ($M = .13$; $t(28) = 5.44$, $p < .01$).

Study 2 is important in four ways. First, it replicates the increase in target purchase in the high-driver condition reported in Study 1. Second, the free-gift condition casts doubt on an affect or reciprocity explanation for the results. If the momentum effect is driven by positive mood or reciprocity, the purchase likelihood of the target key chain should be at least as high when the pen is offered as a free gift as when it is offered for purchase. Third, the driver item used in Study 2 (a pen for 5 rupees) was much cheaper than the target item (a key chain for 10 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. Fourth, the two items were priced such that even after buying both the items, participants were left with 5 rupees. This last modification helps rule out a “loose-change” account for Study 1. Specifically, after participants purchased a relatively more expensive driver item, it is possible that they treated 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 possibility.

So far, the studies have focused on demonstrating the shopping momentum effect. Although the data are consistent with the proposed shift in mind-set, they still lack any direct evidence for the mind-set mechanism. In Studies 3 and 4, we provide more direct support for the proposed account of shifting mind-sets. First, we demonstrate that an initial purchase shifts the mind-set from a deliberative to an implementation orientation. Second, we show that cuing implementation independent of purchase subsequently results in greater purchase likelihood. The combination of these theoretical studies strongly corroborates mind-sets as the mechanism behind shopping momentum.

Table 2

PURCHASE LIKELIHOOD OF THE TARGET 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 ^a
Pen as a free gift	All received the driver	52.5
Control	No driver item	55.0

^aIndicates that the percentage is significantly greater than for the control or free-gift condition, $p < .05$.

STUDY 3: THE EFFECT OF AN INITIAL PURCHASE ON MIND-SETS

In Study 3, we replace the second purchase decision with an unrelated recall task designed to reveal the mind-set adopted. Our test of greater implementation mind-set is similar to the one employed by Gollwitzer, Heckhausen, and Steller (1990), who show superior recall of implementation-related thoughts (e.g., when, how, and where to act) for participants in the implemental mind-set than for those in the deliberative mind-set. Our test involves recall of either deliberative or implemental thoughts related to an automobile purchase. In line with prior research, we generated deliberative thoughts for the experiment from 25 pretest participants who listed four pros and four cons of buying a car; we generated implementation thoughts from their listing of eight things that needed to be done when purchasing a car. The Appendix shows the six most commonly mentioned thoughts in each mind-set that we then used to cue either the deliberative or the implemental focus.

Method

Sixty-six students at a major East Coast campus were paid \$1 to participate in a study that assessed mind-set shifts by contrasting an experimental group with a prior purchase against control participants who knew nothing about the purchase. Those who were 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 \$.25 from the experimenter. We selected these items on the basis of a pretest in which a group of 15 participants rated how attractive they found various snacks at the price of \$.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 after the decision to purchase has been made. After a filler task that provided consistent time delay before the recall task, participants 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 implementation mind-set. The purchase manipulation worked; 97.0% of the participants who were offered the snack purchased it. As we predicted, Table 3 shows that respondents in this purchase condition, and thus in the implementation mind-set, recalled significantly more implemental thoughts ($M = 2.59$) than those in the control

condition ($M = 2.09$; $t(64) = 1.98$, $p < .05$). Deliberative thoughts were appropriately lower in the purchase ($M = 1.32$) than the control ($M = 1.66$) condition, but this difference was not significant ($t(64) = 1.19$). These results are consistent with our hypothesis that the momentum effect in shopping behavior is triggered by the shifting mind-set orientation, which can be induced by initiating an action orientation through an initial purchase.

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 further demonstrates that cuing an implementation mind-set independent of a purchase task subsequently results in greater purchase likelihood.

STUDY 4: THE EFFECT OF MIND-SETS ON PURCHASE

Study 4 examines the effect of activating an implementation mind-set on the likelihood of purchase. We use a similar methodology as Gollwitzer, Heckhausen, and Steller (1990), who induce a deliberative mind-set by asking participants to weigh the pros and cons of making a personal change decision and then induce an implementation mind-set by asking participants to list the most crucial implementation steps.

Method

One hundred eight respondents received 15 rupees for participating in a study about consumers' goals. On 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 were thinking about buying a car. Participants were then randomly assigned to either a deliberative or an implemental condition. Participants in the deliberative condition wrote down four pros and four cons of buying a car, and those in the implemental condition wrote down eight steps that they would need to take to buy a car. After listing their thoughts, participants in both 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," and "I will have to pick and drop people all the time." Examples of thoughts generated by participants in the implemental condition were "I will have to look for a good car," "arrange the money," "I will search newspapers for advertisements," and "I will have to ask someone to help me choose the right car."

Results and Discussion

We eliminated 10 and 13 participants from the deliberative and implemental conditions, respectively. These participants failed to generate all eight thoughts and were excluded from our analysis because fewer thoughts may lead to weaker manipulation of the mind-sets. We predicted that participants in the implementation-mind-set condition would be more likely to purchase the key chain than those in the deliberative-mind-set condition. In support of this

Table 3

EFFECT OF A PURCHASE ON SUBSEQUENT IMPLEMENTAL AND DELIBERATIVE THOUGHTS

	Number of Implemental Thoughts Recalled		Number of Deliberative Thoughts Recalled	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Purchase ($n = 34$)	2.59 ^a	1.18	1.32	1.07
Control ($n = 32$)	2.09	.81	1.66	1.21

^aIndicates that the mean is significantly greater than for the control, $p < .05$.

prediction, we find that whereas 65.8% of the participants bought the key chain after indicating implementation-related thoughts, only 41.0% bought the key chain after indicating deliberative thoughts ($\chi^2 = 5.3, p < .05$).¹

Study 4 complements Study 3's support for the shifting mind-set mechanism as an explanation of the shopping momentum effect. Whereas Study 3 shows that purchase cues an implementation mind-set, Study 4 shows that activating an implementation mind-set leads to greater purchase.

A question that naturally arises at this point pertains to the factors that might disrupt the momentum effect. These disruptions can be viewed as boundary conditions to the implementation orientation triggered by an initial purchase. Conceptually, we posit that factors that might draw attention to deliberation may disrupt the implementation mind-set triggered by the initial purchase and thus moderate the momentum effect. One such deliberation-inducing situation can arise when the second purchase requires spending money from a source that is different from that of the first purchase. Prior research has shown that people often compartmentalize money into categories, which differ with respect to their purchase propensities, according to the source of the income (e.g., Heath and Soll 1996). That is, whereas an implementation mind-set induced by an initial purchase may carry over to the second item when the source of the two payments is the same, using a separate source to pay for the second purchase may induce deliberation and thus disrupt the momentum effect. In support of the notion that spending from a new source is potentially disruptive, Cheema and Soman (2007) show that partitioning one large pool of resources into several smaller pools decreases spending and consumption. On the basis of this notion, we posit that an action orientation induced by an initial purchase might be disrupted when payment for the subsequent purchase requires the consumer to draw from a separate income source. Study 5 tests this reasoning by examining whether using separate sources disrupts shopping momentum.

STUDY 5: DISRUPTION OF SHOPPING MOMENTUM

We examine a possible boundary condition for the shopping momentum effect by disrupting the implementation orientation induced by an initial purchase. To the extent that an implementation mind-set is disrupted by drawing from a new source of money, separating the sources of payment should dampen the shopping momentum effect.

Method

To test this prediction, 40 men and 40 women were randomly assigned to either a single or a separate source condition with respect to the 7 rupee key chain target. The single-source condition was similar to that of Study 2, except that the CD was replaced by a floppy disk for 18 rupees and the total compensation was increased to 30 rupees. The

separate-source condition separated the source of funds into two accounts. For the single source, an experimenter approached respondents and asked them to fill out a questionnaire for 30 rupees. For the separate source, participants were 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 in either single or dual accounts, respondents could purchase a floppy disk for 18 rupees, and following that, they could buy the key chain for 7 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 sources interrupt shopping momentum. Although purchase of the driver floppy disk was similar in the two conditions (72.5% in the single and 67.5% in the dual payment), 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 ($\chi^2 = 5.05, p < .05$).

It is useful to relate these results to our previous findings. When both payments came from a single account, 70.0% of participants chose the key chain, a share similar to that generated by the CD in Study 1. However, when the payment came from two sources, only 42.5% chose the key chain, about the same level as in the control and the light bulb conditions in Study 1. These results are consistent with the idea that separate payment sources disrupt the momentum from the first purchase. This study again demonstrates the robustness of the shopping momentum effect; in addition, it provides an important boundary condition by showing that the shift in mind-sets can be disrupted if items have separate income sources.

Previously, we suggested that factors that shift attention to deliberation could disrupt the implementation mind-set triggered by the initial purchase and thus moderate the momentum effect. In a separate study, we explored another potential disruption that might arise because of a price comparison with the driver. That is, a driver item could hurt momentum by creating unfavorable price contrast. For example, suppose that a desired CD at half price lures a person into a shopping mode. Seeing all the other CDs at full price is likely to interrupt any shopping momentum the person might have developed. A preferred strategy might be to feature a difficult-to-get CD at regular price and then let

Table 4
EFFECT OF SINGLE VERSUS SEPARATE SOURCE ON
PURCHASE LIKELIHOOD OF THE TARGET

Payment Source (<i>n</i> = 40 in each cell)	Driver: Floppy Disk (%)	Target: Key Chain (%)
Single source	72.5	70.0 ^a
Separate source	67.5	42.5

^aIndicates that the percentage is significantly greater than for separate sources, $p < .05$.

¹We also analyzed the data by including participants who failed to generate all eight thoughts. Although the results were not significant, they were in the predicted direction ($\chi^2 = 3, p = .08$). That is, purchase of the key chain was greater in the implemental condition than in the deliberative condition. As we suggested previously, the results might not have reached significance because generating fewer thoughts may lead to weaker tuning of the mind-sets and, thus, to less of an impact on subsequent purchase.

shopping momentum carry people to purchase other CDs at that price. We tested this contrast effect in a separate study of shopping momentum in which 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 in the other. Specifically, in the steep-discount condition, respondents were told that the market price of the pen was 40 rupees, and in the regular-discount condition, they were informed that the pen was discounted from a regular price of 25 rupees. The results indicated that though more people bought the initial item in the deep-discount condition, fewer purchased the target item in this condition than when the initial item was offered at regular discount. This finding is consistent with the deep discount generating a counterproductive contrast effect that made the second item appear relatively inferior.

Finally, our findings raise a paradox. Although Studies 1–4 suggest that the momentum effect in purchase carries over to unrelated items, it can be disrupted when different sources of payment or when price comparisons are involved. A possible explanation for this seeming inconsistency could be that people often are relatively insensitive to resources when they are focused on a goal (e.g., Dhar and Simonson 1999). Thus, when the resource requirement is not made salient, people focus on the shopping goal, and the activated mind-set carries over to the subsequent unrelated items. However, an attention on resources in general may attenuate the momentum effect (e.g., by virtue of opening a second envelope or by noticing an extremely attractive discount). It is possible that any manipulation that focuses people on resources will be disruptive to momentum. Further investigation is required to understand fully the factors that can disrupt the momentum effect. However, our results indicate that (1) purchase momentum is unlikely to carry over when payments for the target and driver items have separate sources and (2) the use of deep discounts by retailers to lure customers may not work well. Indeed, the best driver of subsequent purchase is likely to be a highly desirable item (e.g., a seasonal or an emergency good) offered at a discount similar to that of other items in the store.

GENERAL DISCUSSION

The objective of this article was to introduce the concept of shopping momentum and to explore its underlying mechanism and some boundary conditions. After we demonstrated the basic effect, two studies provided evidence for mind-sets as the theoretical mediator. First, we showed that making a purchase resulted in a shift in mind-set toward implementation thinking, and second, we demonstrated that priming an implementation mind-set led to increased purchase likelihood. We also reported two studies that help rule out alternative explanations and suggest boundary conditions. First, we showed that shopping momentum did not occur when respondents received the driver item as a gift rather than purchasing it. Second, we demonstrated that having the money for the purchases from different sources was sufficient to dissipate the shopping momentum effect.

Theoretical Contributions

It is important to distinguish shopping momentum from two related psychological phenomena that dynamically link choices across time. Both the foot-in-the-door effect (e.g.,

Cialdini and Guadagno 2004) and inaction inertia (Tykocinski and Pittman 1998) postulate a within-person reinforcement mechanism in which one action leads to a change in probability of a subsequent action. However, these two processes can be usefully distinguished from shopping momentum by 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 larger but related request. In their initial studies, Freedman and Fraser (1966) asked participants to place a small card that advocated a prosocial 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 the control participants who experienced no initial request, those who were asked to comply with a small initial request generated more compliance with the second, larger request. Since this initial study, several other researchers have explored and replicated the effect.

Various explanations have been proposed for the foot-in-the-door effect, but the most compelling is that based on self-perception. In this account, the initial small act of compliance produces a change in a person's self-concept such that he or she "becomes in his [or her] own eyes, the kind of person who does this sort of thing" (Freedman and Fraser 1966). Although the foot-in-the-door effect seems similar, it does not extend to shopping momentum for several reasons. First, because self-perception theory relies on consistency among related actions, it does not provide a clear prediction about how an initial purchase will influence purchase of the subsequent unrelated item; this provides the focus of our studies. Second, the foot-in-the-door effect typically reflects a small initial request that facilitates a larger subsequent request. In contrast, we show that the shopping momentum is not sensitive to the relative magnitude of the driver and the target items. Thus, in Studies 1 and 3, the light bulb and floppy disk drivers were more expensive than the target, whereas in Study 2, the pen was less expensive. Here, and in other tests we conducted, we find no difference in the magnitude of the shopping momentum effect arising from relative prices. Third, in general, the foot-in-the-door effect 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 low involvement and small purchases. Finally, in line with theories on consistency and involvement, the foot-in-the-door phenomenon is a long-term effect, operating across weeks. In our view, shopping momentum is a short-term effect that is capable of being dissipated quickly over time.

The second theoretically distinct phenomenon is inaction inertia (Tykocinski and Pittman 1998). 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 a \$100 ski pass). Although both shopping momentum and inaction inertia derive from reinforcement-like behavior, the underlying processes are different. Inaction inertia is based on forgoing an initially more attractive opportunity that

makes the subsequent opportunity less attractive. The key driver of inaction inertia 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. Similar to our finding that a driver item can hurt momentum by creating an unfavorable contrast, a rejected attractive alternative can make a subsequent option appear relatively unattractive. However, we designed our shopping momentum studies to limit the impact of either price or product anchors. For example, in Study 1, we ensured that the light bulb and the CD were perceived as equally good deals. Furthermore, inconsistent with inaction inertia, participants in the low-driver condition were not less likely to purchase the target than the control participants.

Extensions for Further Research

Theoretically, the results of our studies suggest several additional opportunities for further research. The most notable theoretical issue arises from the nature of cognitive and affective processes that underlie shopping momentum. Our preferred account is based on the notion that the first purchase alters the cognitive mind-set by shifting the focus to implementation, which facilitates future purchases. A notable issue is the degree to which the effect of initial purchase on change in mind-set can be activated outside awareness and then can operate nonconsciously to guide self-regulation (Bargh and Chartrand 1999). Similarly, although we used the initial purchase to cause a shift in the mind-set, other manipulations, such as scrambled sentences, might alter mind-sets in the same way.

A related question is whether consumers have well-formed intuitions about shopping momentum. In a series of separate studies (authors' working paper), we used hypothetical scenarios to reveal 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 superstore and you purchase a floppy disk (Imagine you are at a superstore. 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?" Notably, we find that participants expected a higher probability of purchasing a key chain in the control condition, which did not specify a prior purchase. These findings, which show a reverse of the momentum effect, are important because if behavior is not predictable by consumers, shopping momentum may occur outside awareness and may be difficult to regulate and control.

Although our findings indicate that respondents have difficulty predicting shopping momentum, further research should clarify why this may occur in practice. For example, what may be operating in the scenario tests is a budget effect due to a greater focus on resources. Alternatively, a respondent in the prediction condition may assume a more

cognitive approach that does not sufficiently adjust for the changed mind-set after purchase. Such failures to predict are consistent with mechanisms such as focalism (Wilson et al. 2000) and intrapersonal empathy gaps (Loewenstein 1996). In general, the failure to anticipate the shopping momentum effect is notable, considering the vast experience most people have with shopping, but its exact sources need to be further explored.

Another fruitful direction for research is to investigate how the nature of the driver item moderates the momentum effect. We expect that products perceived as guilty pleasures, such as candy, cigarettes, liquor, or tabloid magazines, will 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 to increase subsequent purchases, whereas tempting products might initiate purchase but also activate consumers' resistance to additional purchases by encouraging deliberations. In particular, recent research has suggested that a hedonic driver item is more likely to reinforce a deliberative mind-set. In particular, Fishbach, Friedman, and Kruglanski (2003) suggest that temptations tend to activate higher priority goals spontaneously. Thus, a hedonic or a frivolous purchase may spontaneously bring to mind the importance of being frugal as a means of effective self-regulation. In addition, there is evidence that compared with utilitarian objects, purchases of more indulgent or hedonic objects are associated with feelings of guilt and a pain of paying (Kivetz and Simonson 2002). To the extent that these negative emotions carry over to the subsequent purchase, they may interrupt shopping momentum.

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 that the driver provides 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, this temporal change raises the possibility that a disruption in shopping momentum leads to lost sales rather than deferral over time.

In summary, we demonstrated the shopping momentum effect and proposed a theoretical account for it based on a shift in mind-sets from deliberative to implemental. Different mind-sets evoke different cognitive orientations that interact in various ways to affect purchase decisions. The nature of the shopping experience may change the nature of goals being pursued. For example, if a shopper has extensive prior shopping experience, he or she may have an initial focus on saving or careful deliberation before acquisition. However, when 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.

APPENDIX: 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. (Deliberative)
- If I decide to buy a car, I would have to find a good dealer. (Implemental)
- I should buy a car because it is a more dependable mode of transportation. (Deliberative)
- If I decide to buy a car, I would have to take care of the registration and license. (Implemental)
- I should not buy a car because I would have to spend time on its upkeep. (Deliberative)
- If I decide to buy a car, I would have to arrange for insurance. (Implemental)
- I should buy a car because it will save the money I spend on public transportation. (Deliberative)
- I should not buy a car because it is a financial liability. (Deliberative)
- If I decide to buy a car, I would have to save money or arrange for finance. (Implemental)
- If I decide to buy a car, I would have to decide whether to buy or lease. (Implemental)
- I should not buy a car because parking is inconvenient. (Deliberative)
- If I decide to buy a car, I would have to research different models and compare prices. (Implemental)

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), 181-93.
- Bargh, John A. and Tanya L. Chartrand (1999), "The Unbearable Automaticity of Being," *American Psychologist*, 54 (July), 462-79.
- 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), 249-59.
- Cheema, Amar and Dilip Soman (2007), "The Effect of Partitions on Spending and Consumption Decisions," working paper, Olin School of Business, Washington University, St. Louis.
- Cialdini, Robert B. and Rosanna E. Guadagno (2004), "Sequential Request Compliance Tactics," in *Perspectives on Persuasion, Compliance-Gaining, and Social Influence*, R.H. Gass and J.S. Steiter, eds. Boston: Allyn & Bacon, 207-222.
- Dhar Ravi and Itamar Simonson (1999), "Making Complementary Choices in Consumption Episodes: Highlighting Versus Balancing," *Journal of Marketing Research*, 36 (February), 29-44.
- 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 Postdecisional Implementation," *Organizational Behavior and Human Decision Processes*, 45 (February), 41-46.
- , 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), 1119-27.
- Hansen, Robert A. and Larry Robinson (1980), "Testing the Effectiveness of Alternative Foot-in-the-Door Manipulations," *Journal of Marketing Research*, 17 (August), 359-64.
- 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), 242-51.
- Kivetz, Ran and Itamar Simonson (2002), "Earning the Right to Indulge: Effort as a Determinant of Customer Preferences Toward Frequency Program Rewards," *Journal of Marketing Research*, 39 (May), 155-70.
- Lee, Angela and Brian Sternthal (1999), "The Effects of Positive Mood on Memory," *Journal of Consumer Research*, 26 (2), 115-32.
- 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.
- Simonson, Itamar and Amos Tversky (1992), "Choice in Context: Tradeoff Contrast and Extremeness Aversion," *Journal of Marketing Research*, 29 (August), 281-95.
- Tykcinski, Oret E. and Thane S. Pittman (1998), "Inaction Inertia: The Role of Avoidance in Forgoing Future Benefits Following an Initial Decision Not to Act," *Journal of Personality and Social Psychology*, 75 (3), 607-616.
- 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 and Social Psychology*, 78 (May), 821-36.