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Benefits Leader Reversion: How a Once Preferred Product Recaptures Its Standing

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Consumers generally establish a preference for one product early in a decision process. When this preference does not include consideration of product prices, the currently preferred product is called the *benefits leader*. This article proposes that consumers who switch to a cheaper product after learning prices retain a trace of their benefits leader. Retention of the benefits leader is evidenced by the distortion of new information to favor the benefits leader, and by greater than normative reversion to it. We also find that reversion does not occur when the initially leading product (that consumers switch from) is based on a cost savings. This suggests that though consumers retain cognitive elements associated with benefits leaders, they do not retain similar elements associated with leaders based on cost savings.

Key Words: pricing, information distortion, preference reversal, discounts, reversion

Most processing models of consumer decision making reasonably assume that consumers update their preferences as new information is encountered. This updating determines the currently preferred or leading option (i.e., the brand or option that is better on the full balance of information seen up to that point in the decision process). Several studies have found that consumers interpret new information to favor that leading option. The robustness of this tendency suggests that the option that emerges as the leader exerts influence on the choice process, regardless of how it came to be the leader (e.g. Bond et al. 2006; Carlson, Meloy, and Russo 2006; Russo, Meloy, and Medvec 1998).

In contrast to this notion of universal leader influence, we posit that in the process of making a decision, consumers who switch to a cheaper brand as their new overall leader do not fully abandon their pre-price leader. Put differently, we expect that consumers form and retain a cognitive element associated with the product that was preferred before price induced them to switch to a cheaper option. We refer to this latent preference as the benefits leader. We further posit that the benefits leader influences the processing of information encountered after price. Consistent with this view, and in contrast with prior research on predecisional distortion, we find that consumers who switch to a cheaper product during the choice process tend to bias subsequent information against their price leader and in favor of their (previous) benefits leader. This distortion is so substantial that a majority of consumers readopt their benefits leader as their overall leader—an effect we refer to as *benefits leader reversion*.

The remainder of this paper is organized as follows. We begin with an overview of leaders, how they emerge, and the influence they can have on the decision process. Next, we develop the idea that benefits leaders may co-exist with price leaders and we derive our research hypotheses. We then test the hypotheses with data from a series of studies. In study 1, we

demonstrate the presence of benefits leader reversion. A follow-up study finds benefits leader reversion in real and hypothetical choices. Study 2 demonstrates the strength of this effect by showing that reversion can occur even when post-price information objectively favors the cheaper option. Both studies 1 and 2 find evidence that consumers support reversion by distorting post-price information to favor their benefits leader. Finally, study 3 examines whether reversion occurs only for benefits leaders or if consumers also revert back to price leaders. Specifically, we investigate what happens if the role of price and benefit attributes are switched—whether consumers whose initial preference is based on price information and who switch leaders after seeing some diagnostic non-price information revert to their initial price leader. We finish with a discussion of managerial and theoretical implications of our findings.

BACKGROUND AND HYPOTHESIS DEVELOPMENT

There are many situations where consumers know relatively little about the specific options available before they begin the choice process (e.g., houses, new technology, restaurants or hotels in a new city, etc.). In such cases, consumers may acquire some information about the benefits of the options before they learn prices. For example, consumers may see advertisements or read reviews for products that cause them to form a tentative preference. Likewise, catalog and internet retailers frequently provide full descriptions of brand alternatives, but also state “Call for Price.” One need only search “call for price” on Google to appreciate the ubiquity of this practice. Finally, it is common for internet retailers and product search sites to list product attributes side-by-side to facilitate comparisons that encourage formation of a leading option (Fasolo and McClelland 2006) before prices are learned. Situations like these provide the

conditions necessary for consumers to develop a preference for one product before learning prices. If they later learn that their leading product is more expensive, they might switch their preference to a cheaper product. When this happens, the consumer may be torn between the two different products, with one leading on benefits and the other leading on price.

The Benefits Leader

Festinger (1957) was among the first to propose that choice gives rise to a new cognitive element in the individual's mind. He claimed that the element representing the chosen option had a pull that caused the decision maker to bias new information to support it. Since Festinger's seminal work, a vast body of research has found that most decision makers also establish a tentative leader during predecisional processing. This leader represents the option that is tentatively preferred given the evidence at that point (Fischer, Greitemeyer, and Frey 2008; Gerard 1967; Jecker 1964; Montgomery 1983).

This article extends the work on tentative leaders by examining whether consumers can have two different leaders at the same time. One of these, the benefits leader, is the option that is preferred overall based on the non-price information seen so far in the decision process. The other, the price leader, is the option that is preferred based on a consideration of benefits and prices. Rarely, the benefits leader and the price leader are the same—such as when the more appealing option is cheaper, or when the more appealing option is more expensive but the cost difference is insufficient to cause the consumer to shift preference to the cheaper option. More typically, the price leader and benefits leader are different since most benefits carry with them an additional cost. In our case, we define dual leadership as occurring when a consumer would

prefer the more expensive brand if price were no object, but prefers the cheaper brand given the cost savings it provides.

The process we envision for dual leadership is consistent with recent findings on dual attitudes. Specifically, whereas attitude change had been thought of as overwriting an existing attitude with a new one, new findings suggest that old attitudes persist in parallel with new attitudes, even when the old attitude conflicts with the new one (Cohen and Reed 2006; Petty et al. 2006). Though there continues to be debate over whether original attitudes are implicitly or explicitly retained, there is little debate around the claim that original attitudes leave traces that persist in the face of explicit attitude change. Similarly, consumers who switch leaders during a decision process may not fully overwrite their prior leader, but instead retain a trace of it. Specifically, we propose that consumers who switch away from their benefits leader (for cost considerations) will not overwrite this leader with their new leader, but instead will retain a cognitive element associated with the benefits leader, an element that might influence the remainder of the choice process.

Dominance of the Benefits Leader

We expect consumers who switch to the cheaper product during a decision process will continue to retain the originally preferred product as their benefits leader. Based on what we know about biased pro-leader processing, it is possible that the benefits leader will exert influence on how new information is evaluated (Carlson et al. 2006; Posavac, Sanbonmatsu, Kardes, and Fitzsimons 2004). Alternatively, it is also possible that the current price leader will exert influence over the evaluation of new information in a manner that is consistent with

previous work on predecisional distortion. Namely, new information will be evaluated to support whichever product is the current overall leader (for a review, see Brownstein 2003). The key question here is which leader (the benefits leader, which is now trailing the decision process, or the price leader, which represents the current overall preference) will have the greatest influence on the evaluation of new information. Ultimately, the answer to this question is empirical. However, there is some evidence to suggest that the benefits leader may be more dominant than the price leader.

It is well documented that consumers struggle to avoid making impulse purchases. That is, consumers often act against what they believe they should do (for long run welfare) so that they can satisfy immediate desires (e.g., Kahn and Dhar 2007; Milkman, Rogers, and Bazerman 2007). Put differently when faced with a conflict between a want option and a should option, consumers tend to focus on the immediacy of the outcome which often leads to the selection of the want option (Shiv and Fedorikhin 1999). If the benefits leader belongs to the same desire-oriented category as want options and vice options, then it might have special status.

The role of biased processing. Although the evidence above suggests that the benefits leader is likely to dominate the price leader, the question remains as to how this dominance will play out. Prior research has found that consumers' bias new information to favor whichever brand is leading during a decision process (Carlson et al. 2006; Meloy 2000; Russo et al. 1998). If the benefits leader exerts a dominant influence on the predecisional processing of new information, then consumers who have both a benefits leader and a price leader might bias their evaluations of new information (encountered after price) so that it supports the benefits leader. If the benefits leader exists and if it dominates the price leader, consumers might distortion post-price information to favor the benefits leader, thereby enabling reversion to it.

In sum, we posit *benefits leader reversion*. Upon seeing new information, consumers who previously switched to the cheaper option (i.e., the price leader) will revert to their benefits leader with greater frequency than would be expected normatively. If this tendency toward benefits leader reversion is strong enough, consumers might revert even if the new information objectively favors the price leader. That is, despite the fact that the new information favors the price leader, it may be distorted sufficiently to permit consumers to revert to their benefits leader.

STUDY 1: DEMONSTRATING BENEFITS LEADER REVERSION

A test of benefits leader reversion requires that we create conditions necessary for consumers to have dual leadership. To do so, consumers must develop a preference for one of the options and then encounter a price difference that is sufficient to induce switching to the cheaper option. Individuals who switch at price can have both a benefits leader (their original leader) and a price leader (the option that was cheaper). We will refer to this subset of individuals as the focal sample. If these individuals retain a cognitive element associated with their benefits leader, then we should (a) find evidence of its influence on the evaluation of new (post-price) information and (b) greater reversion to the benefits leader than is normatively expected.

Methods

The decision task. We test benefits leader reversion for a decision process between two “white tablecloth” restaurants (Restaurant L and Restaurant R). Four attributes defined the restaurants: *Service*, *Desserts*, *Prices*, and *Menus*. These attributes were designed to maximize

the number of participants in the focal sample. Through pretests, the first two attributes (*Service* and *Desserts*) were designed to slightly favor Restaurant L, so that most participants would have this restaurant as their leader (i.e., their benefits leader) before seeing price. The *Service* attribute read as follows:

A local food critic has recently been to both restaurants and had this to say in his column. “Service at **Restaurant L** is excellent. The waitstaff is well-trained, courteous, knowledgeable, and friendly, and the service is well-timed. The chef and management are polite and responsive to customer requests. Service at **Restaurant R** is very good. The waitstaff is well trained, knowledgeable, and friendly. Management is responsive to customer needs.”

The third attribute, *Price*, indicated that the restaurants generally had similar prices, but that Restaurant R was currently offering a discount. We expected this attribute would cause many participants to switch from the slightly more appealing restaurant (L) to the cheaper one (R), thereby creating the conditions necessary for participants to have two leaders.

We were also interested in whether larger discounts might also be related to benefits leader reversion. As such, we created six price discounts between participants from 10% and 35% using increments of five percent. The *Price* attribute was worded as below, where X represents the magnitude of the discount and Y represents the dollar equivalent of that discount from a base of \$50 for the condition.

You do some math using prices from the two menus to figure out how much the meal might cost. You compute the average cost for dinner at **Restaurant L** assuming one appetizer, a mid-range entrée, and dessert as being roughly \$50 per person. You do the same for **Restaurant R** and discover that it is roughly X% cheaper, with the average cost per person being roughly \$Y.

Assuming we find reversion to the benefits leader, there are three possibilities for how reversion might be influenced by the magnitude of price difference. A negative relationship (i.e., smaller price differences causing greater reversion) would suggest that benefits leaders are more likely to be abandoned or overwritten when a preference reversal is induced by a large price discount.

This result would be consistent with a straightforward cost benefit tradeoff account. The positive case (i.e., larger price differences causing greater reversion) would be consistent with quality inference, wherein the privately retained benefits leader is bolstered by an inference that it is far superior in quality to the cheaper option. The idea here is that the likelihood of making a quality inference and perhaps even the weight of the inference would increase as the price difference that induced the initial switch increased. Finally, the null case (i.e., no relationship between magnitude of price difference and reversion) would imply that all benefits leaders have the same potential to induce reversion.

The fourth and final attribute, *Menus*, was designed and pretested to be neutral, so that objective participants would (on average) see it as favoring neither restaurant. A sample of 37 participants from the same population as participants in the main experiment pretested this attribute. Pretest participants evaluated this attribute by responding to the following question, “Consider the information that you have seen and rate it on the scale below according to your personal judgment. This information strongly favors:” Responses were collected on a 9-point scale anchored on the low and high ends by “Restaurant L” and “Restaurant R”, respectively. The mean pretest evaluation of this attribute (4.80) is an unbiased estimate of its diagnostic value, which did not differ significantly from the midpoint of the 9-point scale ($t(36) = .72, p > .45$). That is, participants did not (on average) see this attribute as favoring either restaurant.

Though neutral on average, the standard deviation (across pretest participants) of the evaluations for this last attribute was 2.06, indicating that some choice participants would likely see it as favoring Restaurant R and others would see it as favoring Restaurant L. In fact, 51.3% of pretest participants evaluated it in the 1 to 4 range on the 9-point scale. This percentage is important because it sets the normative upper bound for benefits leader reversion. That is, if

every participant who switches at price from Restaurant L (the benefits leader) to Restaurant R (the price leader) is indifferent between the restaurants after price, then up to 51.3% of participants (but no more) could normatively switch back to the benefits leader (Restaurant L) after seeing the last attribute. This percentage is an upper bound because it makes the Herculean assumption that all those who switch at price are actually indifferent between the restaurants after switching to the cheaper one.

Tracking the choice process. The decision task required participants to evaluate the attributes in sequence and to select the restaurant they preferred. After each attribute, participants answered three progress questions. The first question asked participants, “Please consider the information that you have just received. Rate it on the scale below according to your personal judgment.” Responses were recorded on the nine-point evaluation scale described above. The second and third questions measured which brand was leading up to that point and how confident participants were in their leader. Answers to the second question allow us to determine which individuals switched to the cheaper restaurant (R) after reading the price attribute. This subset of individuals is our focal sample because they may simultaneously possess both a benefits leader (Restaurant L) and a price leader (Restaurant R). We can then determine what proportion of this subset reverted back to their benefits leader after reading the last attribute. We can also examine how these participants evaluated the last attribute. A traditional predecisional distortion account would predict that participants would distort the last attribute to favor their current leader, the price leader (Restaurant R), and so would tend to rate it above the neutral value of five (Carlson et al. 2006). However, if participants in the focal sample retained their benefits leader, and if it influenced the evaluation of new information, they might see the last attribute as favoring the benefits leader (i.e., evaluate it, on average, below the neutral value of five).

Participants and procedures. Participants were 266 undergraduate students at a large Northeastern university who received extra course credit for completing the study. After completing the study, a final decision page required participants to indicate which option they would select and their confidence that it was best. Follow-up questions addressed individual differences in mood (Peterson and Sauber 1983), perceptions of the quality of the two restaurants, standard measures of price consciousness, value consciousness, and proclivity to utilize the price quality schema (Lichtenstein, Ridgway, and Netemeyer 1993), as well as Childers, Houston, and Heckler's (1985) visualizer-verbalizer scale.

Results

Focal sample. Of the 266 individuals who participated in this study, 136 had the more expensive restaurant as their leader (the benefits leader) before examining price, and switched to the cheaper one (the price leader) after price. These participants comprise the focal sample. Before testing for benefits leader reversion, we tested whether the magnitude of the discount influenced entry into the focal sample (i.e., whether higher discount levels created more switching at price). A logistic regression predicting eligibility of dual leadership (yes/no) revealed that greater discounts led to more switching to the cheaper restaurant (est. $\beta = .036$, $z = 2.33$, $p < .05$). For example, the 30% discount caused 69.6% of participants to switch to the cheaper restaurant (Restaurant R), whereas the 10% discount caused only 37.8% to switch.

Benefits leader reversion. Of the participants in the focal sample, 96 (70.6%) reverted back to their benefits leader after reading the final attribute. In other words, a significant majority ($z = 4.80$, $p < .001$) did not stay with their price leader after seeing an additional attribute that

was objectively neutral. Impressive as this is, the best test for benefits leader reversion is to compare this percentage to the normative upper bound (51.3%), which was established by pretest participants who evaluated the fourth attribute in isolation. A comparison of proportions revealed that the incidence of reversion was reliably above this upper bound ($z = 2.11, p < .05$).

We next examined whether benefits leader reversion differed by discount level. For those in the focal sample, we regressed reversion to the benefits leader (0/1) on discount level. There was no effect of discount level on reversion (est. $\beta = -.023, z = .95, p > .30$). This null result suggests that the key element in reversion is the presence of a benefits leader, not the magnitude of price difference that compelled individuals to switch in the first place.

Evaluation of the final attribute. If benefits leader reversion occurs because consumers bias their evaluation of new information to support the benefits leader, then focal sample evaluations of the last attribute should be lower than the neutral value of five on the 9-point scale (i.e., participants should see this attribute as favoring the benefits leader, Restaurant L). However, if the effect occurs through increased weight to the first two attributes in the sequence (both of which favor Restaurant L), then the mean evaluation of the last attribute should not differ from the scale midpoint of five. Finally, if participants bias their evaluation of the last attribute to support the current leader, mean evaluations should exceed five (i.e., they should favor the price leader, Restaurant R).

The average evaluation of the last attribute by the focal sample was 4.32, a value that was below both the scale midpoint ($t(135) = 3.65, p < .001$) and below the objective benchmark obtained from the pretest sample ($t(135) = 2.58, p < .01$).¹ That is, even though this entire sample of 136 participants had Restaurant R as their leader when they examined the last attribute, and

even though the last attribute was objectively neutral (i.e., not different from five), they evaluated it as favoring their benefits leader (Restaurant L).

Tests for individual differences. Because participants in the focal sample were qualified for inclusion on the basis of their having switched at price, the possibility exists that the reversion effect above was partly due to a selection bias. For example, focal sample participants may simply have been more prone to switching leaders in general. To examine this possibility, we compared the proportion of focal sample participants who switched between attributes one and two (.030) to the proportion of non-focal participants who did so (.071). Not only was the difference in these proportions not reliable ($p > .10$), it was not even in the direction required for the sample selection argument to gain traction. We also examined a battery of individual difference measures (e.g., mood, price-quality schema, price consciousness, value consciousness), but found no difference between those in the focal sample and those in the non-focal sample on any of these measures (all $p > .20$). Moreover, none of these measures were related to reversion in any way (all $p > .20$).

Discussion

Participants who switched to a cheaper restaurant during the decision process reverted back to their benefits leader at rates greater than would be expected if individuals evaluated the last attribute objectively. Moreover, participants biased their evaluation of the final attribute so that it favored the trailing option (i.e. their benefits leader). Interestingly, we also found that though magnitude of the price discount influenced switching at price, it had no effect on reversion, suggesting that reversion is likely to exist for a wide range of price promotion tools.

Finally, none of the individual differences that we explored were correlated with benefits leader reversion, suggesting that the tendency to revert may be very general.

Benefits leader reversion can be thought of as a tendency for consumers to flip flop on price. Though this pattern of behavior is revealing, its external validity for real world choices hinges on whether people will forgo a cost savings to revert to their benefits leader. To examine this issue, we conducted a follow-up study involving a probabilistically real choice. Participants were 65 undergraduate students who made a restaurant decision like the one above. Each had a 1-in-65 chance to receive a gift certificate to one of two restaurants. Participants were told that if their name was drawn, they would receive a \$50 gift certificate to the restaurant they selected after reading the information about both restaurants. They were also aware that \$50 would be enough to cover a meal for two at the cheaper restaurant, but that it would not cover the full cost of a meal at the more expensive one. Thus, they were aware that selecting the more expensive restaurant would mean that they would have to spend some of their own money to make use of the gift certificate if they won it.

Despite there being a real (probabilistic) cost of reversion, 71% of those in the focal sample reverted back to the more expensive (benefit leader) after the last attribute. As in the main study above, we used a holdout sample ($n = 31$) to assess the normative upper bound for reversion (35.5%) on the final attribute, and found that the incidence of reversion by those in the real choice was significantly greater than this upper bound ($z = 2.61, p < .01$). Finally, though the last attribute was seen as slightly favoring the cheaper option by those in the holdout sample ($M = 5.95$), it was evaluated as favoring the benefits leader by participants in the focal sample ($M = 3.62, t(38) = 5.49, p < .01$). In other words, the benefits leader had so much influence on evaluations of the final attribute that the perceived diagnosticity of this attribute was reversed

from (objectively) favoring the cost leader to favoring the benefits leader. Since the final attribute was intended to be neutral, this finding is serendipitous and so begs for replication.

STUDY 2: BENEFITS LEADER REVERSION AS A STRONG BIAS

This study was designed to determine if benefits leader reversion would occur even when the last attribute objectively favored the cheaper option. It was also designed to determine whether individuals can retain two benefits leaders or if the new benefits leader replaces the old one. That is, if reversion in the studies above occurred because all original leaders are retained, then consumers should revert to their original leader, regardless of whether they switched from it for price or benefits considerations. However, if consumers only revert when the switch was for cost considerations, then we can infer that consumers do not retain multiple benefits leaders, but rather that reversion is only viable when the consumer has a price leader and a benefits leader. To examine this issue, we included a control condition in which a non-price attribute was used in place of *Price* to induce individuals to switch leaders.

Methods

Overview. This study employed the same basic design as that used in study 1, with two fundamental changes and a few minor differences. The first fundamental change was the construction of the last attribute. To examine the robustness of benefits leader reversion, the final attribute was written to favor the cheaper option. If participants in the focal sample interpret this attribute objectively, they should not revert to the benefits leader. The second fundamental

change was the addition of a control condition in which the price attribute was replaced by a non-price attribute that was designed to create approximately the same level of leader switching as a price difference would.

There were also three minor changes from study 1. First, in an attempt to establish the reversion effect in another domain, the decision domain here was resort hotels for an upcoming spring break vacation. Second, the decision involved six (not four) attributes. This was accomplished by adding two attributes to the beginning of the decision process. Finally, the first four attributes were designed to be neutral (on average), which meant that about half of the participants would have the cheaper option as leader before they encountered price. The choices of these participants cannot be used for examining benefits leader. As such, the focal sample in this study will be a smaller proportion of all participants than in study 1. We deemed this change to be necessary because it allows us to test for benefits leader reversion in a decision where the initial attributes are not correlated (as they were in study 1). This is important because the existence of reversion here would rule out the possibility that reversion occurs only when the benefits leader is objectively superior on the pre-price attributes.

Participants and design. Participants were 139 undergraduate students at a large Southeastern university who were paid \$8 to participate in this study. Each participant was assigned either to the standard or the control condition.

Standard condition. Participants in the standard condition made a decision between resort hotels. The choice packet consisted of eight pages: an introductory page, six attribute pages, and a decision page. The six attributes describing the two hotels were: *Airport Shuttle Service*, *Pool and Game Area*, *Proximity to Shopping and Nightlife*, *Rooms*, *Price*, and *Food*. The price attribute always appeared in the fifth serial position, far enough into the decision process to allow

a benefits leader to have spontaneously emerged and to allow us to examine individual differences in levels of pre-price leader switching. It read:

A double occupancy room at **Hotel A** generally costs \$220 per night during the time of year you plan to travel, but there is currently a discount of 20% off for guests staying 3 days or more. **Hotel B** costs \$225 per night for double occupancy during the time of year you plan to travel. Currently, there are no discounts available for Hotel B.

The last attribute in the information sequence, *Food*, was designed and pretested so that it favored the cheaper hotel (Hotel A). As in study 1, the decision process was tracked using the three progress questions after each attribute.

Control condition. Participants in the control condition responded to the same stimuli as participants in the standard condition, with the exception that an *Entertainment* attribute was substituted for the *Price* attribute. This attribute was designed and pretested to favor the targeted option (Hotel A) so that individuals who were leaning toward Hotel B would be inclined to switch leaders. It was also designed to be slightly less diagnostic than the *Price* attribute used in the standard condition. The idea here was to create a new leader (for participants in the control condition) for which commitment was not stronger than in the standard condition. If reversion rates were lower in the control condition than in the standard condition, it could not be due to greater commitment to the new leader adopted after switching at the fifth attribute.

Pretests. The attributes in this study were pretested to verify their neutrality and diagnosticity as prescribed by the design above, and also to establish a normative upper bound for reversion. For the first pretest, 25 participants were drawn from the same population as participants in the main study. These individuals read and reviewed the stimuli and evaluated each attribute on a 1-to-9 scale in response to the question, "Please consider the information that you have just received. Rate it on the scale below according to your personal judgment." A score of 1 favored the first alternative listed and 9 favored the second alternative listed. Different hotel

names were used for each attribute (i.e. Hotels K and Q for the first attribute, Hotels M and W for the second, and so forth) to preclude a preference from developing.

As expected, the four neutral attributes did not differ from the scale midpoint of five either collectively ($M = 4.99$; $t(24) = .04$, $p > .95$) or individually (all $p > .40$) (range 4.64 to 5.48). The 20% discount in the *Price* attribute was significantly diagnostic in favor of Hotel A ($M = 1.88$; $t(24) = 10.15$, $p < .001$). A second pretest was used to calibrate the *Entertainment* attribute that replaced *Price* in the control condition and the *Food* attribute that would be the last attribute seen. This pretest revealed that the *Entertainment* attribute favored Hotel A ($M = 4.77$), though as intended, it did not favor Hotel A as strongly as the *Price* attribute ($t(55) = 7.47$, $p < .01$).² Likewise, the mean evaluation of the *Food* attribute ($M = 3.80$) was significantly below the scale midpoint of five ($t(55) = 2.26$, $p < .05$), indicating that it favored the cheaper hotel.

To establish an upper bound on the proportion of participants who might normatively view the post-price attribute as favoring the more expensive option, we calculated the proportion of pretest subjects who evaluated the final attribute as favoring the more expensive alternative on the 1-to-9 scale. As expected, a minority of pretest participants (28.3%) evaluated it as favoring the more expensive hotel. Thus, normatively we should expect no more than 28.3% of focal sample participants to revert to their benefits leader after seeing the last attribute.

Results

Focal samples. Fourteen of the 49 participants in the standard condition preferred the cheaper hotel prior to receiving the *Price* information. These participants do not qualify for dual leadership so their data is ignored. Nineteen had the more expensive hotel as their leader before

they examined *Price* but were not swayed by the 20% price discount (i.e., they retained the more expensive option as leader throughout). This left 16 participants who qualified for dual leadership, and who constitute the focal sample for the standard condition. In the control condition, 27 of the 90 individuals preferred the targeted option when they received the *Entertainment* attribute, disqualifying them from the possibility of dual benefits leadership. Another 48 participants declined to switch in face of this benefits-based information, leaving a focal sample of 15 participants in the control condition.

Benefits-leader reversion. Examination of leadership data in the standard condition revealed that 11 of the 16 participants (68.8%) who qualified for dual leadership reverted to their benefits leader after the last attribute. This proportion is significantly greater than the normative benchmark of 28.3% ($z = 3.59, p < .001$) and establishes that benefits leader reversion occurs in a second domain. In contrast, only five of 15 participants (33%) in the control condition focal sample reverted back to their pre-*Entertainment* leader after reading the last attribute. This is both not greater than the normative benchmark of 28.3% ($z = .37, p > .70$) and lower than the reversion proportion from the standard condition ($z = 2.11, p < .05$). Thus, it seems that whereas consumers can hold both a price leader and a benefits leader in their minds, they do not simultaneously retain two benefits leaders.

Evaluations of the final attribute. As in study 1, we examined evaluations of the last attribute to better understand the benefits leader reversion effect. The mean evaluation of the last attribute by participants in the focal sample of the standard condition was 6.40, a value that was both reliably above the scale midpoint of five ($t(15) = 2.26, p < .05$) and well above the objective mean evaluation (3.80) provided by participants in the pretest sample ($t(15) = 4.90, p < .01$). That is, even though these 16 participants had Hotel A as their leader when they read the last

attribute, and even though the last attribute objectively favored Hotel A, they evaluated it as favoring their benefits leader (Hotel B).

Individual differences. Again, we examined whether participants in the focal sample were especially prone to changing leaders prior to price by comparing pre-price switch rates of participants in the focal sample to switch rates of participants not in the focal sample.

Participants in the focal sample of the standard condition switched an average of .33 times across the first four attributes, a rate that was not significantly different from that of participants not in the focal sample ($.22$; $t(47) = 1.15$, $p > .25$). Thus, there is no indication that participants in the focal sample were more likely to switch in general.

Discussion

Like study 1, we found evidence of benefits leader reversion in a selection between two hotels for an upcoming spring break trip. This reversion occurred even though the final attribute objectively favored the cheaper hotel. Moreover, participants' attribute evaluations suggest that individuals biased their evaluation of this final attribute so that it favored their benefits leader. We also found that reversion only occurred when the cause of the initial reversal was a cost savings. That is, we found no reversion to an abandoned benefits leader when information that caused the consumer to change leaders was not cost-based, even though that information was less diagnostic and less important than the price information used to induce an initial reversal in the standard condition. Thus, it seems that consumers overwrite old benefits leaders with new ones, but they do not overwrite old benefits leaders with new price leaders.

What might explain the benefits leader reversion effect? Is it possible that the leadership question does not fully capture the “true” cumulative preference of participants when answered after price? If so, then the leader reported after seeing price would not correspond with the final choice made when price is the last attribute seen. Or is there something special about the serial position of the price attribute deep in the decision process? Do individuals need to feel a sense of strong commitment to their benefits leader in order for benefits leader reversion to occur? To examine these and other issues, we conducted a series of follow up studies.

Replicates

To address the issues above, we ran several replicate experiments. The study design and stimuli for these experiments were like the main study above, except as noted below. They are reported in summary form to avoid repetition in description of their common methods.

Validity of the post-price leader. Thus far, we have assumed that the leader that participants report after price is a good measure of overall preference at that time. If, however, people who switch to the cheaper option would not actually select it as their final preference at that time, then reversion might be due to our measuring the leader (i.e., an epiphenomenon). To examine this possibility, we had 184 participants pick between two hotels that were described by the first four attributes from Study 2 and a price attribute. Participants reported their leader after all five attributes and then were asked to form a final overall preference and pick their preferred hotel on a subsequent page. Of the 184 participants, only 11 (less than 6%) reported a final choice that differed from the leader they reported after seeing price. In short, the post-price leader question is a good measure of cumulative preference up to that point.

Commitment to the benefits leader. Participants ($n = 117$) selected between two resort hotels. Each participant was randomly assigned to one of four conditions that varied in the number of attributes that constituted the decision process and where price appeared in the sequence. Specifically, price was varied to be in serial positions 2, 3, 4, or 5 but it always was second-to-last in the sequence, with a diagnostic attribute appearing last. This meant that the choices involved three, four, five, or six attributes, respectively. Likewise, pre-price benefits leaders were based on one, two, three, or four neutral attributes, respectively. The post-price attribute used in this study was the same as that in Study 2, so the normative upper bound for reversion was 28.3%. Findings revealed that benefits leader reversion was lowest when price was the second attribute 31.4% (i.e., when the benefits leader was based on just one attribute), but that it jumped to a plateau thereafter (51.9% with price third; 53.6% with price fourth; 51.8% with price fifth). Tests revealed no difference in reversion when price appeared in serial positions three through five ($\chi^2(2) = .022, p > .90$), but a significant difference when these reversion rates were compared to that when price was in the second position ($\chi^2(1) = 4.36, p < .05$). Thus, it seems that benefits leader reversion requires some commitment to the benefits leader, the sort that develops from viewing two or more attributes.

Cognitive closure and need for decisiveness. Prior research has likened predecisional distortion to selective hypothesis testing, where the hypothesis being tested is that the leader is better, and the process of selective hypothesis testing relies on distorting new information to favor the leader (Carlson et al. 2006). If a similar mechanism is at work here, then constructs that moderate selective hypothesis testing should moderate benefits leader reversion. Along these lines, it has been argued that consumers high in need for cognitive closure are less likely to test multiple hypotheses (Cronley et al. 2005; Kardes et al. 2004). As such, they may also be less

likely to have multiple leaders. If so, then those high in need for cognitive closure should be less likely to switch at price, and if they do switch at price, they should be less likely to revert (i.e., exhibit benefits leader reversion). Since the decisiveness factor of Webster and Kruglanski's (1994) need for cognitive closure scale is the most relevant for our decision tasks (e.g., "I usually make important decisions quickly and confidently"), we tested it as a potential moderator of reversion. We expected those high in decisiveness would be less likely to gain entry to the focal sample, but if they did, they would be less likely to revert to the benefits leader.

To test this prediction, 203 participants made a choice between two hotels under the same procedures used in Study 2. After doing so, they answered the seven questions that make up the decisiveness factor of the need for cognitive closure scale. Those participants who switched to the cheaper option after seeing price ($n = 73$) constituted the focal sample. Of these, 44% ($n = 32$) reverted to their benefits leader. Looking next to need for decisiveness, we found that this construct was negatively related to being in the focal sample ($r = -.166, p < .05$). More importantly, conditional on being in the focal sample, need for decisiveness was negatively correlated with benefits leader reversion ($r = -.345, p < .01$). In other words, not only does need for decisiveness cause participants to stay with the more expensive hotel, but for those who switch to the cheaper option, it causes them to stick with it. Need for decisiveness successfully moderates the benefits leader reversion effect.

STUDY 3: DO CONSUMERS REVERT TO PRICE LEADERS?

Thus far, we have found that the benefits leader prevails over the price leader when consumers who are eligible for dual leadership encounter new information. The mechanism that

allows this reversion to occur is the biased processing of new information to support the benefits leader. A natural next question is whether consumers will revert to a price leader. That is, if an initial preference is formed based on price information and individuals switch from it to a more expensive option with better benefits, will they revert back to the cheaper brand upon examining additional cost information? If price leader reversion occurs, then we can conclude that consumers retain both their price leader and their benefits leader, never fully integrating both into their current cumulative preference. However, if price leader reversion does not occur, then we can conclude that though consumers integrate their price leader into their current preference when they switch from it to a benefits leader, they do not do the reverse. That is, a lack of price leader reversion would suggest that consumers retain a cognitive element associated with their benefits leader, but they do not do so for a price leader.

Methods

Participants and procedures. Ninety-one undergraduate students participated in exchange for a donation to charity. The decision task involved a choice between two resort hotels, with the stimuli adapted from study 2. In order to address whether price leader reversion occurs, the *Price* attribute was first in the sequence (a 20% discount for Hotel Z), followed by a benefits attribute (created by combining the attributes one through four from study 2), *Amenities*, that was intended to induce some of the participants to switch to the more expensive hotel (Hotel A). This *Amenities* attribute was followed by the *Other Cost Considerations* attribute that revealed a clear but small difference in favor of the discounted hotel (Hotel Z).

Pretest. A pretest was used to verify the diagnosticity of the *Other Cost Considerations* attribute and to establish the normative upper bound for price leader reversion. Ninety-one individuals evaluated this attribute in isolation on a 1 to 9 scale, anchored on the low and high ends by Hotel A and Hotel Z, respectively. The mean evaluation of this attribute ($M = 6.14$) was significantly above the scale midpoint ($t(90) = 5.96, p < .01$), indicating that it objectively favored Hotel Z (i.e., the cheaper hotel). Analysis of individual responses revealed that the normative upper bound for switching was 51.6%. That is, 51.6% of pretest participants (47 of 91) rated this attribute as favoring the cheaper hotel (i.e., Hotel Z). A switching rate higher than this would suggest leader reversion effects for price as well as benefits.

Results and Discussion

Although the diagnostic *Price* attribute created unanimity in a preference for Hotel Z after the first attribute, just 41 of the 91 individuals switched to Hotel A after reviewing the *Amenities* attribute. These 41 participants form the focal sample for the current study. Of interest is what proportion of this focal sample reverted back to the cheaper hotel after reading the final attribute. Examination of participants' choices revealed that only five participants (12.2%) reverted to their initial price leader, a number substantially lower than the normative upper bound ($z = 5.39, p < .01$). We interpret this result to mean that individuals who switched to a more attractive (but more expensive) hotel were not compelled to return to their price leader by a diagnostic cost-related attribute that objectively favored the cheaper option. In other words, there is no evidence that reversion exists for both price leaders and benefits leaders, which suggests

that consumers fully integrate over their price leader in a manner such that if they leave it for another option, they abandon it altogether.

GENERAL DISCUSSION

A majority of consumers who switched to a cheaper option during their decision process reverted back to their original (benefits) leader after encountering additional information about the options. This benefits leader reversion effect is a within-consumer preference reversal that violates the axiom of monotonicity (i.e., the more is better principle). Specifically, switching to a less preferred option in light of objectively neutral information is non-normative. When observed without knowledge of one's emerging preference history, this sort of behavior looks very odd indeed. However, by knowing the history of consumers' emerging preferences, one can see that consumers are not leaving a currently preferred option, they are simply returning to a previously preferred option (i.e., reverting to their benefits leader).

Benefits leader reversion is a strong bias that is present both when post-price information is objectively neutral or favors the cheaper option (i.e., the price leader). In addition, it appears that reversion is aided by the biased evaluation of new information to support the benefits leader. It is worth highlighting how this form of distortion differs from previous work on predecisional distortion. Predecisional distortion occurs when consumers bias new information to favor the currently leading option. However, in the current work, individuals biased new information to favor their trailing option. That is, they biased their interpretation of new information to support the option that was leading before price was seen (i.e., their benefits leader), the same option that was trailing when the information was encountered. By itself, this finding (of distortion to favor

the trailing option) is surprising when considered in light of the tenaciousness of predecisional distortion (for a recent review see Russo et al. 2008).

With respect to boundary conditions, we found that consumers do not revert to a previous benefits leader from a new benefits leader (study 2), nor do they revert to a previous price leader (study 3). We also discovered that benefits leader reversion was minimal when the benefits leader was based on just one attribute, but that it quickly reached a plateau when the benefits leader was based on two or more attributes. This suggests that a minimum level of commitment to the benefits leader is necessary for reversion to occur, but that the minimum is reached very quickly. We also found that benefits leader reversion was moderated by the need for decisiveness, with those high in need for decisiveness being less likely to revert to the benefits leader. This finding is consistent with claims made elsewhere that those high in need for cognitive closure are less likely to entertain multiple hypotheses. When applied to the current findings, this result suggests that those high in need for cognitive closure might be more likely to abandon their benefits leader when they switch away from it.

Our findings have managerial implications for pricing strategy, sales closing techniques, and the design of comparative advertising. For example, in terms of pricing strategy, the implications are that managers offering a discount to induce purchase should consider this as a last resort after all the benefits of the various options have been considered. This follows from the finding that a price inducement may establish one's brand as the price leader, but subsequent consideration of non-price information may be distorted by the consumer to allow the benefits leader to reemerge as the preferred option. Implications for closing techniques follow directly from this view. In particular, the strongest attempt to close a deal for a product that is cheaper but not as good should follow immediately after a strong case has been made for cost savings. Even

if the cheaper brand has a previously unnoted benefit, our findings suggest that salespersons should avoid mentioning this benefit because consumers' privately held benefits leaders might cause them to distort this information, and ultimately to revert to their benefits leader.

We note that these implications apply only to situations where consumers form preferences with respect to novel options. In situations where consumers already have preferences, these conclusions might not hold. For example, a price discount might be the only way to induce trial of a well known lesser-preferred brand. Though our findings have implications only for decisions between novel options, in many ways it is these early preferences which form the foundation of years of purchase behavior.

Perhaps the most important implication of our findings is about the role of price as an attribute. Most models of consumer decision making (e.g., conjoint analysis) do not afford unique status to price beyond allowing it enough weight to reflect its substantial importance. Our data suggest that price, as an attribute, should be treated as a unique entity. That is, when cost is an issue and when it is material to the choice, consumers do not seem to fully reconcile it against their preference for the more expensive option. When viewed this way, price is still treated as an attribute, but its ability to create sway in consumer choice is restricted by the information environment—in particular by the possible existence of a benefits leader and by the presence of new information that might give rise to reversion.

Our findings also raise the possibility that previous research on predecisional distortion has unwittingly captured the effect of the benefits leader on the evaluation of new information. That is, it is not the cognitive element associated with the current cumulative preference that consumers are supporting with their evaluations, but the benefits leader. Of course, in many situations (i.e., when price is not used as an attribute) these two are the same. However, by

decoupling the benefits and price leader (as we have done in the studies above), we found that only benefits leaders are capable of inducing distortion of new information. The effect is so profound that it occurs when the benefits leader is trailer and when the new information encountered diagnostically opposes the benefits leader.

Though we have identified benefits leader reversion as a robust phenomenon, it is not clear why people exhibit reversion. There are at least two ways to frame the issue. First, is there something special about a leader that is based on non-price information? To answer this question we need to know more about what the benefits leader means to people in the context of a choice. One possibility is that it represents the consumer's true desire (i.e., if cost were no object). In aggregate marketing terms the proportion of consumers who have a particular product as their benefits leader might be used to represent that product's share of heart among prospective buyers. As such, the benefits leader may have more in common with wants and vices than it does with shoulds or virtues (Shiv and Fedorikhin 1999; Kivetz and Zheng 2006). When considered in this light, it is possible that the benefits leader has a stronger link to the affective system. That is, it might be marked with positive affect (Damasio 1994). If so, one might envision a larger class of effects that involve distortion to favor affectively appealing options, but not cognitively appealing ones. Similarly, examining leaders based on tangible versus intangible attributes (Horsky, Nelson, and Posavac 2004) might prove insightful. In this light, one possibility is that leaders based on intangible attributes are more affective, so even if people switch leaders when given a tangible attribute, they may revert back if shown an intangible one.

The second way to frame the question of why does benefits leader reversion occur is to consider that price is a special attribute. This framing accords with a substantial amount of speculation that price has a unique status in consumer decision making. This unique status

derives in large part from the fact that market prices respond to demand. All else equal, cheaper products are less desirable. Therefore, in any setting where the value of an item is even slightly uncertain, consumers are likely to experience conflict when they learn that the option they like more is also more expensive. That is, on the one hand, consumers can make a price-quality inference to support their benefits leader. On the other hand, the cost difference may be too large (even given the inference) to not switch to the cheaper option.

The evidence presented in this article suggests that under certain conditions consumers can and do hold more than one leader during a predecisional choice process. By itself, this is noteworthy. When added to the finding that consumers bias new information to build support for a previously abandoned benefits leader, even in the presence of a publicly revealed cumulative preference for a cheaper option, the finding is even more revealing. If this effect is a special case of a larger tendency (e.g. to not overwrite preferences for desired options), then similar preference reversals might be observed in settings where consumers are torn between an option they desire and one they think is best given all the constraints.

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FOOTNOTES

1. The non-focal sample ($n = 130$) consisted mainly of individuals who had the more expensive restaurant as their leader and kept it as their leader after seeing price ($n = 124$). These individuals biased their evaluation of the final attribute so that it favored the more expensive restaurant ($M = 3.86$, $t(124) = 6.39$, $p < .01$), even though this attribute objectively favored neither option. For completeness, we compared the mean evaluation of the final attribute by those who had the more expensive restaurant leading throughout to the mean evaluation of those in the focal sample ($M = 4.32$). This revealed that the evaluations of the former were only marginally more biased in favor of the more expensive option ($t(258) = 1.75$, $p = .08$).
2. A third pretest was used to determine the objective importance of the *Price* and *Entertainment* attributes. Thirty-eight additional pretest participants read either the six attributes for the control condition ($n = 20$) or the six attributes for the standard condition ($n = 18$) and then allocated 100 importance points across the six attributes. A comparison of the importance of *Price* to the importance of *Entertainment* revealed the former to be statistically more important than the latter predecisionally (31.6 points for price and 11.5 for entertainment, $t(36) = 6.29$, $p < .001$). Post-decisionally, however, the gap narrowed (26.9 for price and 18.9 for entertainment, $t(36) = 1.29$, $p > .10$). This eliminates any possibility that reversals due to the *Entertainment* attribute would result in a more strongly held new leader.