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Shopping under the influence of curiosity: How retailers use mystery to drive purchase motivation[☆]

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ABSTRACT

Mystery appeals are gaining popularity as a shopper marketing strategy. In this practice, firms intentionally restrict information about their offerings in order to pique consumer curiosity and drive purchase motivation. The present research examines curiosity's role in influencing consumer behavior. Study 1 reveals that mystery appeals create more curiosity than other affective states, and that curiosity predicts purchase motivation via a direct path. Exploring the optimal level of information needed to maximize curiosity, study 1 finds that participants are more curious when given moderate information, over minimal information. Next, study 2 demonstrates that shopping in an actively curious state can impact consumer outcomes via an indirect path that is mediated by consumer evaluation of the mystery appeal. This research is the first to identify curiosity as the affective state that is primarily triggered by mystery appeals, and to explain how curiosity directly and indirectly impacts consumer purchase motivation.

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1. Introduction

The use of mystery as a tactic to attract attention is nothing new in human interactions but is one that is gaining popularity as a marketing strategy. Through the use of mystery appeals, many retailers intentionally withhold information from their consumers, which motivates them to seek such information and thereby, interact with the firm. With this innovative practice, companies such as Bloomingdale's, Groupon, Banana Republic, Ann Taylor, American Airlines, and JetBlue Airways restrict the information they share about their offerings deliberately via mystery products and secret promotions (Andrezejewska, 2013). They do this not to be deceptive but in order to pique consumer curiosity (Loewenstein, 1994). This curiosity allows firms to connect with consumers in new ways that influence behavior significantly.

Despite their emergence in marketing, little academic research has sought to understand why mystery appeals work and how marketers can best use these strategies to affect their consumers' behavior. The

current study proposes that the stimulation of curiosity is the mechanism by which mystery appeals connect with consumers, a process demonstrated here in two controlled experiments. Furthermore, the current study examines ways in which firms can maximize their influence on purchase motivation. Finally, building on extant theory, the experiments illustrate how curiosity can elicit purchase motivation via two different routes. The first is through a direct process in which curiosity is relieved as a result of purchasing the mystery product. The second is indirect, where the effect of curiosity on purchase motivation is mediated by consumers' evaluations of their experience with the mystery appeal.

2. Theoretical framework and hypothesis development

2.1. Mystery appeals

"Mystery appeals" are attempts to connect with consumers by intentionally withholding information about the product or promotion being offered. Traditionally, mystery or uncertainty has been considered aversive (Loewenstein, 1994). However, a different approach is taken in this study, which demonstrates that, consistent with recent research, mystery can have positive effects on consumer outcomes. For example, in one experiment (van Dijk & Zeelenberg, 2007), participants were instructed to choose between money and a sealed package of unknown content. The researchers found that participants who were given some information about the sealed package but understood that the contents would not be revealed if they chose the money, became more curious, and were more likely to choose the package. In another example,

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Goldsmith and Amir (2010) found that consumers would opt for free mystery incentives with a purchase (as opposed to a known incentive) because they were overly optimistic about the nature of the free gift. Furthermore, Laran and Tsiros (2013) found that consumers preferred to receive free mystery gifts with their purchase (vs. free known gifts) when they were primed to make affective decisions. Like Laran and Tsiros, the current research proposes shopping while in an affective state will increase consumers' preferences for mystery and furthers this work by identifying curiosity as the specific affective state that is induced by mystery appeals and by examining how to maximize consumer curiosity (study 1). Furthermore, while both Goldsmith and Amir (2010) and Laran and Tsiros (2013) looked at consumers' preferences to purchase a product accompanied by a free mystery gift, the present research examines the behaviors associated directly with the mystery product or promotion (study 1 and study 2). Thus, the core product or service purchased constitutes the actual mystery.

A detailed literature review yielded only one study in which participants directly interacted with mystery stimuli. In this work, Menon and Soman (2002) showed participants a digital mystery advertisement and reported the levels of curiosity elicited. Curiosity was associated with more time spent looking at the advertisement and more time spent searching for product information. The current research attempts to rule out alternative explanations by collecting data on additional affective states that might have influenced Menon and Soman's findings. Further, while Menon and Soman (2002) explored information-search-related outcomes, this study addresses an outcome that occurs later in the decision-making process and is relevant to marketing (i.e., purchase motivation).

The current research also explores what occurs when consumers shop while curious (study 2). Past research in this emerging area focuses primarily on the way in which curiosity influences such behavior as purchasing directly. Subsequently, as prior theory explains, affective states often have an indirect effect on behavior and influence several other human processes (e.g., cognition) before behavior changes (Lerner & Keltner, 2000, 2001). In this research, this indirect effect is explored by examining consumer evaluations as a mediator of the relationship between curiosity and consumer behavior.

2.2. The role of curiosity in consumer behavior

Affective states may influence many aspects of consumers' lives, including their attitudes (e.g., Petty, DeSteno, & Rucker, 2001) and consumption behavior (e.g., Han, Lerner, & Keltner, 2007). According to Lerner and Keltner's appraisal-tendency framework (2000, 2001), specific affective states give rise to specific cognitive and motivational processes. These processes account for the influence that affective states have on judgments, behavior, and decision making. For example, sadness is accompanied by appraisals of experiencing loss, while anxiety is accompanied by appraisals of helplessness. These appraisals then lead to action designed to change one's circumstances (Lazarus, 1991; Lerner, Small, & Loewenstein, 2004). This framework can be applied to the influence of affect on consumer behavior. Consumers experience a given affective state, which in turn activates cognitive and motivational processes that result ultimately in various behaviors. Thus, advertisers often include emotionally evocative stimuli in their campaigns to produce affect that elicits particular behaviors (Pavelchak, Antil, & Munch, 1988). Although it is clear that affective states can affect consumer behavior, how to elicit specific states that lead to specific behaviors is less obvious (Roseman, Spindel, & Jose, 1990). Curiosity is the motivating state among consumers when a marketer evokes mystery (cf. Menon & Soman, 2002). The present study furthers past work by investigating ways in which marketers can elicit this state to affect consumer behavior optimally.

Curiosity, the desire to know, has been implicated as a motivation relevant to human behavior, and leads individuals to seek methods to resolve the arousal it elicits (Loewenstein, 1994). While prior research

has often treated curiosity as an inherent trait measured as an individual difference (Baumgartner & Steenkamp, 1996), this research focuses on consumer curiosity as a temporary motivational state. This is an important distinction for firms, because stimulating a temporary state is possible, while activating a personality trait is not.

According to Loewenstein's information gap theory (1994), curiosity is aroused when people become aware of a gap in their knowledge or when they encounter new, inconsistent, or ambiguous stimuli. For example, some advertisements evoke curiosity intentionally by withholding the ad's sponsor until the end of the commercial. These advertisements create an information gap by withholding the identity of the sponsor strategically until the end of the ad. Like these advertisements, mystery products and promotions are novel stimuli that make consumers aware of their knowledge gap, and thus, elicit curiosity.

Curiosity is a state of high activation and positive valence that is thought to be accompanied by appraisals of uncertainty, which can then lead to feelings of psychophysiological stimulation (Litman & Spielberg, 2003; Loewenstein, 1994). Not surprisingly, people are motivated to reduce the uncertainty this causes. This reduction is often accomplished by seeking the specific information that can address the lack of knowledge. This research proposes that purchasing a mystery product is a direct method to close this gap. Therefore, H1 posits that elevated levels of consumer curiosity will increase purchase motivation.

If curiosity is associated with purchase motivation, the question remains—can firms induce and optimize the degree of consumer curiosity? Loewenstein's information gap theory states that curiosity reflects the curious individual's desire to obtain information that is available yet unknown. Past research has argued that curiosity will be elevated in the presence of information that can close the information gap more easily. Although they did not examine curiosity directly, Laran and Tsiros (2013) found that participants who were offered an uncertain free gift (i.e., they were told they would receive one of two potential gifts) preferred to receive some product information, such as a picture or description of the potential gifts, rather than no product information. Similarly, Menon and Soman (2002) found that consumers would search more for information when they were given a moderate amount of information rather than either limited or full information. This suggests that curiosity is highest when the consumer understands that only a moderate amount of information is needed to obtain all of the information, and filling the information gap is realistic. Here, a moderate information gap is defined as a situation in which several cues about the mystery product or promotion are provided without revealing the product or promotion itself. A large information gap, in which minimal information is provided, is defined as a situation in which only a few cues are offered. This creates a high degree of uncertainty about the nature of the mystery product or promotion. Following this logic, if an individual is only missing a small amount of the information needed to close the information gap, then he or she should be more curious than if little to no information is available. H2 is thus posited as: exposure to a mystery appeal with moderate information will result in higher levels of consumer curiosity by comparison to exposure to one with minimal information.

The optimal arousal model states that affective stimulation typically ranges in intensity from low to high, in which extremes produce discomfort, while moderate levels are highly desirable (e.g., Berlyne, 1967). Based on this, the current study proposes that the satisfaction of curiosity could produce lower arousal (Litman, 2005); for example, after viewing a mystery appeal, a consumer may experience the arousal of curiosity. After the mystery is revealed and the information gap is closed, he or she is left in a neutral, unmotivated state. Thus, in order to maximize the outcomes created by curiosity (i.e., positive arousal), the consumption behavior must occur while the consumer is experiencing the state actively, not thereafter. Thus, H3 states that consumers in an actively curious state will report higher levels of purchase motivation than will those in a neutral/post-curious state.

This hypothesis is in contrast to popular business practice, in which retailers, such as Banana Republic, expose shoppers to a mystery stimulus and relieve their curiosity thereafter by providing them immediately with the information they seek, typically before they shop or checkout.

H3 differs from H1, in that a neutral/post-curious state is compared to an actively curious state. H1 compares the ways in which various levels of curiosity activate purchase motivation differentially. Study 1 tests H1 and H2; study 2 tests H3 and H4, which is discussed next.

How does curiosity affect purchase motivation? Purchasing a mystery product can reduce the information gap directly, but curiosity may also influence purchase motivation indirectly. Here, it is proposed that active curiosity influences consumer evaluations, which in turn influence behavioral motivation. This prediction is consistent with the affect-as-information model, which suggests that individuals may use affect to understand and evaluate stimuli in their environments. This is especially true for ambiguous and novel stimuli that they do not know how to evaluate (Forgas, 1995). This model suggests that “rather than computing a judgment on the basis of recalled features of a target, individuals may ask themselves: ‘How do I feel about it?’ [and] in doing so, they may mistake feelings due to a pre-existing state as a reaction to the target” (Schwarz, 1990, p. 529). In this research, consumers will use the affective state of curiosity induced by the mystery appeal to evaluate their experience with the appeal. This evaluation should reflect their current experience, rather than a judgment of their future experience (i.e., how they will feel after purchasing the product).

Given that curiosity is a state of high arousal and positive valence, it was hypothesized to result in consumers’ subsequent positive evaluations. Importantly, the affect-as-information model applies only when the feelings experienced are perceived to be relevant to the object evaluated (Schwarz, 1990; Schwarz & Clore, 1983). Thus, curiosity about a mystery product or promotion may influence evaluations relevant to these appeals, such as satisfaction with the discount or product. This relationship is especially relevant, because satisfaction is associated frequently with purchase motivation (e.g., Taylor & Baker, 1994). Thus, H4 posits that satisfaction with the mystery appeal experience, as measured by satisfaction with the discount received, will mediate the relationship between consumer curiosity and purchase motivation.

3. Study 1: examining and optimizing the effects of curiosity

Study 1 was designed to demonstrate that mystery appeals induce curiosity that elicits purchase motivation (H1). Further, the study tested whether curiosity can be elicited differentially by manipulating the amount of information consumers receive (H2).

3.1. Methods

Forty-nine undergraduate participants were recruited for extra credit and assigned randomly to one of two information conditions: minimal information and moderate information. The moderate information condition ($n = 26$) provided participants with information about the product without disclosing its identity. This information was predicted to result in a small but significant gap in information. The minimal information condition ($n = 23$) provided basic information about what the mystery product might be. This condition was predicted to result in a significant gap in information. After exposure to the product information, participants then rated their current affective state and purchase motivation.

3.1.1. Stimulus development

An online simulation was devised based on a real mystery product website. The stimulus site began by welcoming study participants: “This store is a fun website that operates simply: We will send you *something*, an item selected randomly among many products from our inventory, for a small price (\$10, free shipping) you will discover what your *something* is when you receive it. What will yours be?” In the

moderate information condition, the site included a list of specific items that the mystery product might be (e.g., a board game, a hand-made necklace, the latest version of a piece of software). Next to the list, participants were provided a graphic that contained three of the mystery products that had been shipped by the firm recently: a low-quality camera, a remote control car, and a pair of gloves. In the minimal information condition, the participants received neither a list of potential items nor images of products sold previously. In both conditions, the screen showed participants a statement that read: “We guarantee that your ‘something’ will be worth at least \$10, per MSRP, or we will refund the difference.” Thus, although purchasing mystery products involved some risk, full loss was not possible, as participants were guaranteed to receive a product worth the amount charged. Thus, the study was not analogous to gambling (Fang & Mowen, 2009).

3.1.2. Materials

There does not appear to be any measure of the *state* of curiosity in the literature and thus, one had to be created for this study. Items were selected from a well-cited affective state scale (PANAS; Watson, Clark, & Tellegen, 1988) that represents each quadrant of the circumplex model of affect. This model describes affect in terms of two dimensions: valence and activation (e.g., Russell, 1980). Valence is a pleasure–displeasure continuum, while activation refers to the arousal or alertness associated with the state. The four quadrants of this model include high activation, positive valence; high activation, negative valence; low activation, positive valence, and low activation, negative valence. An item of curiosity was added to the scale. Participants reported on a 5-point Likert scale (1 represented “not at all,” and 5 represented “extremely”) to measure to what extent they experienced the following: curiosity; interest; excitement; enthusiasm; attention; inspiration; gratitude; determination; pride; irritation; distress; nervousness; anger; annoyance; upset, hostility, and shame immediately after they viewed the mystery product. To assess participants’ motivation to purchase the mystery product, they were asked, “How likely are you to purchase this mystery box product?”

3.2. Results and analyses

The 17 affective state items were factor analyzed to reduce the number of variables for analysis and were subjected to principal component analysis (PCA) with a varimax rotation. Exploratory factor analysis clearly revealed four distinct factors that accounted for 74% of the variance. These four factors were as follows: curiosity, encouragement, distress, and discontent. *Curiosity* (Cronbach’s alpha = 0.92) was composed of “curious,” “interested,” “excited,” “enthusiastic,” and “attentive.” *Encouragement* (Cronbach’s alpha = 0.76) was composed of “inspired,” “grateful,” “determined,” and “proud.” The third factor, *discontent* (Cronbach’s alpha = 0.87), was composed of “irritable,” “angry,” “upset,” and “ashamed.” The final factor, *distress* (Cronbach’s alpha = 0.70), consisted of “distressed,” “annoyed,” and “hostile.” These loadings corresponded to the quadrants of the circumplex model of affect (Russell, 1980). As expected, the curiosity factor fell in the quadrant of high activation and positive valence (e.g., Barrett & Russell, 1999). High activation is a dimension that refers to a state of motivation or energy (Barrett & Russell, 1999), and thus, a state of curiosity elicits action on the part of the consumer. Further, as optimal arousal theorists have argued, the induction of curiosity is rewarding and involves feelings of interest (Litman, 2005). Within each factor, the affective state items were averaged to create a factor score.

Paired-sample *t*-tests indicated that participants reported significantly more curiosity ($M = 2.88$) than encouragement ($M = 1.57$, $t = 8.47$, $p < 0.01$), distress ($M = 1.63$, $t = 7.45$, $p < 0.01$), and discontent ($M = 1.37$, $t = 11.37$, $p < 0.01$). To test H1, that curiosity, and not the other three affective states, elicited purchase motivation, a multiple regression analysis was performed in which all four factors were entered simultaneously to predict the purchase motivation variable.

As expected, the curiosity factor predicted purchase motivation significantly ($b = .52, t_{48} = 2.84, p < .01$). No other relationships were significant. Thus, curiosity, as a state of positive arousal, was the sole contributor to the prediction of purchase motivation and the influence of other affective states was ruled out. Thus, H1 was supported.

Independent-sample t -tests were performed to compare the moderate and minimal information conditions in order to test whether participants' affect differed significantly between them (see Table 1). As can be seen in the table, two of the factors differed by condition: curiosity and discontent. The significant difference in curiosity between the two conditions supported H2, which stated that consumers would be more curious when given moderate rather than minimal information. This finding was consistent with Loewenstein's (1994) information gap theory, which predicts a U-shaped curve, in which curiosity is highest when given moderate information and lowest both with minimal and complete information. Differences in discontent were also to be expected, as uncertainty can be unpleasant and increase negative affect (Loewenstein, 1994). The discontent factor included items with a negative valence, such as irritable, angry, upset, and ashamed, which supported the negative influence of uncertainty.

To test whether information has an effect on purchase motivation, an independent-sample t -test was conducted. This test revealed no significant difference in purchase motivation between the no information ($M = 1.88$) and moderate information conditions ($M = 2.17$). This, however, does not rule out curiosity as a mediator of information and purchase motivation (Zhao, Lynch, & Chen, 2010). To demonstrate this, a mediation analysis was conducted with condition as the independent variable, purchase motivation as the dependent variable, and curiosity as the mediator. The mediation procedures outlined by Hayes (2013) were followed, and the proposed indirect effects were examined using Hayes (2013) PROCESS macro. A path analysis was performed that demonstrated a significant direct path for condition on purchase motivation ($b = 0.35, t = 2.41, p < 0.05$). Curiosity ($b = 0.58, t = 3.99, p < 0.0001$) affected purchase motivation significantly and directly. Finally, mediation by curiosity was confirmed with a bootstrapped estimate. Using 5,000 bootstrap samples, the procedure indicated a significant indirect path that was mediated by satisfaction ($b = 0.20, p < 0.05$). The 95% confidence interval for this effect was greater than zero (.0576 to .4272).

3.3. Discussion

Study 1's participants reported elevated levels of curiosity after exposure to a mystery product. The creation of this positive state of arousal was related significantly to an increase in purchase motivation that other affective states failed to predict, in support of H1. Study 1 also revealed that curiosity could be elicited differentially by manipulating the amount of information participants received, which supported H2.

4. Study 2: examining curiosity's indirect effect on intentions

Study 1 tested the direct relationship between curiosity and purchase motivation. However, it was posited that an indirect relationship also exists, in which consumer evaluations of the mystery appeal are influenced by active curiosity, and these evaluations affect purchase motivation thereafter. Study 2 tested this possibility. The first goal of study 2 was to test H3, which stated that consumers in an actively

curious affective state will report higher levels of purchase motivation than will those in a neutral/post-curious state. To address this goal, a realistic mystery promotion and subsequent shopping experience were created that were similar to one they would experience with any retailer who currently uses e-mail-based mystery appeals. In these online promotions, the consumer is informed that the retailer is offering them a mystery discount. However, the amount of the discount is unknown, and thus, the mystery will be revealed only by engaging with the retailer. While some retailers reveal the discount amount immediately after the consumers begin their online shopping experience, others reveal the discount after consumers have filled their shopping carts and are checking out. In the former strategy, consumers' curiosity is piqued by the promotional e-mail, but is then relieved instantly when they click through, which leaves them in a neutral/post-curious state while shopping. In the latter case, consumers are induced into an actively curious affective state, which endures throughout the consumption experience.

Study 2 also addressed H4, which states that active curiosity influences purchase motivation indirectly. If this hypothesis received support, consumer evaluations of the mystery appeal experience (as measured by satisfaction) would mediate the relationship between curiosity and purchase motivation significantly.

4.1. Methods

Study 2 was an online experiment with 105 participants from the United States recruited through an online research service. Fifty-nine percent of the participants were male; 48% were 25–34 years of age, 26% were 18–24 years of age, 15% were 35–44 years of age, 7% were 55–64 years of age, and 3% were 65 and older.

Participants were assigned randomly to either a control condition or an extended curiosity condition (see Table 2 for a summary of the procedures). In both conditions, participants were exposed to a mystery sale promotion intended to pique their curiosity. All participants then reported how curious they were ("Time 1 curiosity"). The curiosity of the participants was relieved immediately in the control condition ($n = 50$) by displaying the following message: "Congratulations! You receive 40% off." In the extended curiosity condition ($n = 55$), curiosity was not relieved and instead, participants received the following message: "Thank you for shopping with us. We will reveal your discount at checkout." All participants then rated their curiosity before beginning the shopping task ("Time 2 curiosity").

For the shopping task, participants were asked to shop at their favorite online clothing store using their discount (or future mystery discount) by opening a new tab in their web browser and visiting their favorite retailer's webpage. While shopping, they were to look for items they would purchase with their discount and enter a brief description of the items and their prices in the questionnaire. Example retailers chosen by participants included Eddie Bauer, Old Navy, and Macy's. During this shopping experience, the participants in the extended curiosity condition shopped prior to the revelation of the mystery discount. It is clear, then, that they were shopping while curious.

Immediately after shopping, the 40% off discount was revealed to participants in the extended curiosity condition with the following message: "Congratulations! You receive 40% off." To control for the effect of the actual discount amount, all participants received the same savings off their entire purchase. Thus, study participants neither lost any money, as they might in a gambling scenario, nor did they experience disappointment at any point in the study, such as they would if they received no discount (Fang & Mowen, 2009). In the final stage of the experiment, all participants reported their satisfaction with their discount, as well as their purchase motivation.

4.1.1. Stimulus development

A promotional customer communication based on a mystery sale e-mail was created and sent by a North American-based retailer in

Table 1
Study 1 means for affective states by condition.

Affective state factor	Means minimal information	Means moderate information	t	p
Curiosity	2.55	3.25	−2.42	.020
Encouragement	1.37	1.80	−0.519	.606
Discontent	1.47	1.80	−2.38	.021
Distress	1.33	1.42	−1.75	.087

Table 2
Study 2 procedures.

Condition							
Control ($n = 50$)	Receive mystery promotion	Rate curiosity (IV)	Receive message: "Congratulations! You receive 40% off"	Rate curiosity (IV)	Shopping task	No message	Rate DVs: satisfaction, purchase motivation
Extended curiosity ($n = 55$)	Receive mystery promotion	Rate curiosity (IV)	Receive message: "Thank you for shopping with us. We will reveal your discount at checkout"	Rate curiosity (IV)	Shopping task	Receive message: "Congratulations! You receive 40% off"	Rate DVs: satisfaction, purchase motivation

Note. IV = independent variable; DV = dependent variable.

September 2013. While this promotion was used as a model, it is representative of many of the promotions in this genre. Because curiosity is elicited most strongly when individuals are interested in a given context (Smith & Swinyard, 1983), instructions informed the participants that they had received an e-mail from their favorite clothing store (i.e., no retailer brand names were included in the e-mail). The choice of clothing as the product of interest was also consistent with Laran and Tsiros (2013) findings that uncertainty is preferred when shopping for affective (vs. cognitive) products. The stimulus e-mail began with the headline, "MYSTERY OFFER! Find out how much your offer is worth." Building on the results of study 1, in which a moderate information gap elicited the most curiosity, the promotion controlled for moderate information by stating that the recipient might receive "20%, 40%, or 60% off their entire purchase." Although manipulating the discount amount would be interesting, this study did not do so in order to control for post-revelation reactions to the discount received. Thus, everyone received the same discount, so any differences would be due to the experience of receiving a mystery discount.

4.1.2. Materials

Study 2 created a state curiosity scale, which offered a contextualized measure of consumers' temporary arousal of curiosity following a mystery promotion. This scale was based on the literature on the psychological state of curiosity (Litman & Spielberg, 2003). Participants reported on a 7-point Likert scale (1 represented "not at all" and 7 represented "extremely") on the following items: "I am eager to learn how much my mystery discount will be," "I am interested in discovering what my mystery discount will be," "I have a great desire to know what my mystery discount will be," "I can't wait to find out what my mystery discount will be," and "I am excited to learn what my mystery discount will be." Reliability at both times was high ($\alpha = 0.96$ at Time 1, $\alpha = 0.98$ at Time 2), so the items were averaged to create a state curiosity composite variable for each assessment point.

To measure purchase motivation, the following questions were asked: "To what extent did the discount you received motivate you to purchase more items?" and "To what extent did the discount you received motivate you to purchase more expensive items?" All items were answered on a 7-point Likert scale with 1 representing "not at all" and 7 representing "extremely." The scale had a Cronbach's alpha of 0.93.

Purchase motivation was measured after the discount was revealed to both groups. This was done intentionally and allowed examination of the indirect, rather than the direct effect, of curiosity. In study 1, purchase motivation reduced the information gap caused by mystery appeals directly, but this is less likely to occur with promotional discounts involving mystery. These promotions reveal the discount to the consumer even if the consumer chooses not to purchase any products thereafter. Thus, curiosity must also have an indirect effect on these outcomes in certain contexts. For this reason, the way in which consumers' evaluations can be influenced while experiencing an actively curious state was examined; in turn, these evaluations may influence later purchase motivation. To test this possibility, participants' satisfaction with the discount offered in the mystery promotion was assessed with the question: "How satisfied with the discount are you?" with 1 representing "not at all" and 7 representing "extremely." Because participants in all conditions were granted the same discount, measuring

their satisfaction with this controlled amount facilitated a clearer understanding of the way in which active curiosity influences consumer evaluations and subsequent purchase motivation.

4.2. Results and analyses

A 2×2 mixed ANOVA was performed with one between-subjects factor (condition) and one within-subjects factor (time). On the curiosity scale, time and condition interacted significantly ($F_{1,102} = 7.46$, $p < 0.01$; see Table 3 for means by condition and time). As expected, no significant differences emerged at Time 1 across conditions in a post hoc analysis, as at this point, participants had only viewed the mystery promotion e-mail, and the discount had not been revealed. In contrast, a significant difference was found at Time 2, when only participants in the control condition had learned their discount amount ($t_{102} = 2.41$, $p < 0.05$, $M_{\text{Control condition}} = 3.66$, $M_{\text{Extended curiosity condition}} = 4.49$). This indicated that the time at which the information was revealed is important in optimizing consumer curiosity. If the information gap was closed before the consumer began the shopping task (control condition), the level of curiosity was lower than in the extended curiosity condition, in which the information gap was closed after the consumer finished shopping. One plausible explanation for this finding is that the manipulated affect had decayed for those individuals in the control condition. This is consistent with the literature on affect induction, which suggests that manipulations may be brief and fragile. For example, moods induced using the Velten procedure tended to last approximately ten minutes and then decay (Frost & Green, 1982). The findings in this study showed a similar effect.

To test H3 (i.e., consumers in an actively curious state will report higher levels of purchase motivation), a one-way ANOVA was conducted with purchase motivation as the dependent variable. As expected, consumer curiosity, as manipulated by the time at which the information was revealed, predicted purchase motivation significantly. The groups differed significantly ($F_{1,100} = 6.08$, $p < 0.05$) in the extended curiosity condition, with significantly greater purchase motivation ($M = 5.17$) than in the control condition ($M = 4.30$). Further, when predicting the satisfaction with the discount, the two conditions differed significantly, with the extended curiosity condition demonstrating greater satisfaction than did the control group ($F_{1,100} = 3.69$, $p < 0.06$, $M_{\text{Extended}} = 5.63$, $M_{\text{Control}} = 5.14$). Thus, H3 was supported.

In the final analysis, the prediction that satisfaction with the discount received (i.e., consumer evaluation) will mediate the relationship between consumer curiosity and purchase motivation (H4) was tested. Using the mediation procedures outlined by Hayes (2013), these proposed indirect effects were examined with Hayes (2013) PROCESS macro. A path analysis that included a significant direct path for consumer curiosity on purchase motivation was estimated. The procedure indicated a significant path ($b = 0.24$, $t = 3.03$, $p < 0.01$). Satisfaction with the discount received ($b = 0.79$, $t = 7.30$, $p < 0.0001$) influenced

Table 3
Study 2 means by time and condition.

Condition	Time 1 curiosity	Time 2 curiosity
Control	4.82	3.66
Extended curiosity	4.82	4.49

purchase motivation directly and significantly. Finally, mediation by satisfaction was confirmed by a bootstrapped estimate. Using 5,000 bootstrap samples, the procedure indicated a significant indirect path that was mediated by satisfaction ($b = 0.14, p = 0.05$). The 95% confidence interval for this effect was greater than zero (0.0289–0.2556). In summary, participants who were actively curious during their shopping task perceived their discount as more satisfying, which supported H4. This helps explain why they reported significantly higher purchase motivation than did participants who shopped in a neutral/post-curious state (the control condition). This is a notable finding because both groups received the same 40% discount. It is important to note that identical analyses were performed using the PANAS curiosity scale (from study 1), with similar results.

A potential alternative explanation for these results is that shoppers were experiencing commitment to the items in their cart, not curiosity. To test this possibility, study 2 was rerun with a minor modification: using the following responses, participants were asked how committed they were to the items in their shopping cart ($\alpha = 0.83$): “I am committed to what is in my cart,” “I feel as if the items in my cart are already mine,” “The items in my cart have a great deal of meaning to me,” and “I have an emotional attachment to the items in my cart.” Undergraduate students ($n = 31$) were recruited for extra credit and were asked the commitment questions before the discount was revealed to the experimental group. Whether or not commitment mediated the relationship between condition and purchase motivation was then tested. Using 5,000 bootstrap samples, the procedure indicated that the mediation was not significant (indirect path: $b = -0.17, p > 0.05$), and the 95% confidence interval for the effect was less than zero: (-1.43 to 0.039). Thus, this alternative explanation was ruled out.

4.3. Discussion

Study 2 revealed that consumers who shopped under the active influence of curiosity were more likely to report purchase motivation than were consumers in a neutral/post-curious state, in support of H3. Further, study 2 offered insight into how curiosity can affect behavioral motivation indirectly, by demonstrating that evaluations of satisfaction mediated the effect of curiosity on purchase motivation significantly, which supported H4.

5. General discussion

Although Loewenstein (1994) describes curiosity as a motivation for human behavior, the underpinnings of how this state drives consumer behavior need to be explored. The present research demonstrates that the induction of curiosity produces positive outcomes for the firm and provides support for why this process occurs. First, the results of study 1 reveal that mystery elicits curiosity more than does other states and that the curiosity elicited predicts purchase motivation directly. In addition, participants who were exposed to moderate information about a product reported higher purchase motivation than did those exposed to minimal information. Finally, the results of study 2 demonstrate that curiosity also affected purchase motivation indirectly via consumer evaluations of the mystery appeal experience. Specifically, consumers who shopped while in an actively curious state judged their experience more positively than did those who shopped in a post-curious or neutral affective state. These findings explain why purchase motivation was higher for curious consumers.

These results are consistent with the literature on curiosity. Loewenstein's information gap theory states that stimuli that create deficits in a person's knowledge elicit curiosity. Further, curiosity is strongest when an information gap is moderate and appears to be solvable. Based on the results of this research, mystery appeals appear to be stimuli that induce curiosity. Further, mystery products and promotions that create moderate, as opposed to large, information gaps elicit the highest levels of curiosity. Using the appraisal-tendency framework (Lerner &

Keltner, 2000, 2001) to understand these findings more fully, curiosity can be considered an affective state that motivates behavior by eliciting processes that result from the absence of desirable knowledge (Litman & Spielberger, 2003; Loewenstein, 1994). These processes are then accompanied by action designed to reduce uncertainty directly, such as the purchase of products (Han et al., 2007).

In addition, the present research expands on prior studies by demonstrating that curiosity can influence outcomes indirectly, which is consistent with the affect-as-information model (Forgas, 1995; Schwarz, 1990). This model states that people use their affective states to make evaluations that influence subsequent behavior. Because curiosity is a state of positive valence, the results of these studies demonstrate that consumers who shopped while under the active influence of curiosity were more likely to form positive evaluations of the experience by comparison to those who had returned to a neutral state. Subsequently, this motivated consumers to purchase more with the retailer.

5.1. Applied implications

The data analyses in this research indicate that if a mystery appeal includes moderate information about the product or service being sold, curiosity will be highest and will influence purchase motivation. As a result, mystery appeals that offer little or no information about the product will not be as effective as they could be. For example, if a firm that sells a large assortment of products offers a mystery product selected from their entire inventory, they will be less effective in inducing consumer curiosity than will a firm with a narrow product niche. In this example, consumers can predict with some, but not perfect accuracy, the nature of the product from the niche firm, thus having a smaller information gap that is easier to resolve. However, if the former firm wishes to improve their probability of eliciting curiosity, they may wish to include additional information about the nature of the product.

Mystery promotional campaigns should keep consumers actively “under the influence” of curiosity. If consumers are curious, then they will rely on that affective state when making evaluations about their experiences with the mystery appeal, and these evaluations may influence their subsequent behavior. At present, a number of mystery appeals used in the field do not take this approach. Consumers often receive an e-mail, click through to the website, and find that their mystery discount is revealed instantly, before they begin shopping. Managers are more likely to be successful if they delay revealing the mystery discount until checkout to help build and maintain their consumers' active curiosity and maximize the power of that curiosity.

5.2. Limitations, future research, and conclusions

While the results presented here provide substantial evidence to support the research hypotheses, they have limitations. Consumers never “lost” or experienced any true risk during their shopping experiences. In study 1, participants were guaranteed to receive a mystery product that was worth at least as much as the amount hypothetically paid for that product. In study 2, while the mystery promotion discount ranged from 20% to 60% off, all participants received the same discount of 40%. Goldsmith and Amir (2010) reported that consumers are essentially optimistic in the face of uncertainty, but there are boundary conditions to this optimism. For example, they reported that consumers disliked an uncertain option in which they could win one of two prizes that differed significantly in value. This suggests that if the promotions varied more significantly, the consumers in study 2 might not have enjoyed their mystery experience. Although Goldsmith and Amir's (2010) work can help predict how consumers will behave before the mystery discount is revealed, their data did not provide propositions about what might occur if consumers chose an uncertain option and received the one that was less valuable. Study 2 demonstrated that the participants were still satisfied with the moderate discount, but it did

not investigate what would have occurred if they had received the 20% discount.

Testing the boundaries of what constitutes a “moderate” condition also would be worthwhile. In these studies, the definition of a moderate condition was “a situation in which information is provided to the consumer, but falls short of disclosing the mystery offering.” Clearly, a moderate information condition can be operationalized in many ways. In this research, examples of previous mystery products were provided in study 1, and in study 2, the discount possibilities were narrowed to three options; however, these are not the only ways to provide consumers with cues. For example, Laran and Tsiros (2013) manipulated their information gap by varying the probability that the consumer might win one gift over another. It would be interesting to test whether different types of cues would elicit varying levels of curiosity and purchase motivation. It may be the case that providing category information is preferable to providing specific examples of previous offers.

Finally, the shoppers in these studies did not have to carry the financial burden of accepting a mystery offer. Although the findings were consistent with those of others who have conducted field studies (e.g., Goldsmith & Amir, 2010; Laran & Tsiros, 2013), it would be useful if more studies of this type replicated the results found in the naturalistic settings in the studies in this research.

These studies extend the research on curiosity to mystery appeals and their influence on consumer behavior. The results of the two experiments revealed several outcomes. Mystery appeals elicited the affective state of curiosity, which in turn was associated with positive consumer outcomes. Curiosity was more likely to be elicited when moderate, rather than minimal, information about a mystery product was provided, and the consumers reported that they experienced positive behavioral motivation more often when they were actively curious than when they were in a neutral state. Curiosity also influenced outcomes indirectly by affecting consumer evaluations. As evidenced by their increasing popularity in current practice, mystery appeals appear to be an effective way to connect with consumers and motivate positive responses. These findings may promote additional work in this growing area.

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