

How Happy Are You With Your Cell Phone?:

The Merits of Measuring Product Happiness

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ABSTRACT

When consumers reflect upon an experience with a product or brand, how exactly does this evaluative process unfold? One possibility is that consumers routinely adopt a *product satisfaction* mindset and consider their satisfaction or dissatisfaction with a product. In this research, we suggest instead that consumers often adopt an alternate mindset, which we refer to as a *product happiness* mindset. We demonstrate that satisfaction and happiness mindsets are conceptually distinct and have differential effects on consumer behavior. When consumers reflect on their satisfaction with a product, they tend to consider *both* the positive and the negative aspects of their consumption experience, which we call *bilateral processing*. In contrast, when consumers reflect on their happiness with a product, they tend to engage in *unilateral processing* – they are more likely to consider *either* the positive or negative aspects of their consumption experience and are less likely to consider both. As a result, happiness mindsets produce more polarized product evaluations, whereas satisfaction mindsets produce more balanced evaluations. We present evidence that the impact of mindset type on product evaluations is a function of product attractiveness. For generally attractive products, happiness mindsets result in more favorable product evaluations and behavioral intentions than satisfaction mindsets (because of *positively unilateral processing*). For generally unattractive products, happiness mindsets result in less favorable product evaluations and behavioral intentions than satisfaction mindsets (because of *negatively unilateral processing*). Across four experiments, we provide converging evidence that satisfaction and happiness mindsets lead consumers to engage in different types of lateral processing, which impacts evaluations and behavioral intentions.

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Consider a cell phone user who enjoys her phone's text messaging and speaker phone capabilities but dislikes its poor battery life and bulky design. When deciding whether to upgrade or replace her phone, what determines which features, attributes, and experiences come to mind? In this research, we claim that consumers may be in different mindsets when evaluating a consumption experience and that these mindsets can substantially influence product evaluations and behavioral intentions. The sustained focus by academicians and practitioners alike on the measurement of product satisfaction might suggest that consumers routinely adopt a *product satisfaction* mindset and consider their satisfaction or dissatisfaction with a product. We show, however, that consumers are more likely to reflect on their happiness or unhappiness with a product, which we refer to as a *product happiness* mindset. We present evidence that the two mindsets cause individuals to focus differentially on the positive and negative aspects of a consumption experience. When products are generally unattractive, happiness mindsets lead to *less* favorable product evaluations than satisfaction mindsets by directing consumers to focus their attention disproportionately on the negative aspects of their consumption experience. However, when products are generally attractive, happiness mindsets lead to *more* favorable product evaluations than satisfaction mindsets by directing consumers to focus disproportionately on the positive aspects of their consumption experience.

PRODUCT SATISFACTION

Nearly 45 years after Cardozo's (1965) seminal article on product satisfaction, the topic remains vibrant and relevant for academicians and practitioners alike. The literature on customer

and product satisfaction is voluminous, encompassing over 15,000 published academic and trade articles (Peterson and Wilson 1992). The measurement of satisfaction is equally ubiquitous in the marketplace. Ofir and Simonson (2001) have suggested that satisfaction measurement may be the most prevalent form of marketing research performed by companies today. In a survey of 124 large companies, Mentzer, Bienstock, and Kahn (1995) found that 75% of these companies mentioned the words “customer satisfaction” explicitly in their mission statements. The rationale for accurately measuring and subsequently enhancing product satisfaction is clear. There is widespread belief that increasing satisfaction generates a host of positive consequences for the firm, such as directly enhancing customer retention and indirectly increasing corporate profitability. In Cardozo’s original article, he speculates that “customer satisfaction with a product presumably leads to repeat purchases, acceptance of other products in the same product line, and favorable word-of-mouth publicity.”

Across the papers that explore its downstream consequences, evidence for the predictive validity of customer satisfaction is somewhat mixed. In their meta-analysis, Szymanski and Henard (2001) found a strong correlation between customer satisfaction and one of its consequences, repeat purchasing. However, these same data also suggest that satisfaction explains less than 25% of the variance in repeat purchase (Chandrashekar et al. 2007). Using the American Customer Satisfaction Index (ACSI), which is published quarterly in the *Wall Street Journal* and contains satisfaction data on over 200 companies, researchers empirically demonstrated that customer satisfaction was a robust indicator of both shareholder value (as measured by stock performance and cash flow) and firm profitability (Anderson, Fornell, and Lehmann 1994; Anderson, Fornell, and Mazvancheryl 2004; Gruca and Rego 2005). The same research also identified multiple moderators of these relationships, including industry concentration and firm-level differences. Despite this evidence, Reichheld (1996) found that,

among ACSI companies, the correlation between traditional satisfaction measures and sales growth was “difficult to discern” and even inverse on occasion. In the same paper, Reichheld showed that 65-85% of customers who defect reported being satisfied or very satisfied just a few months before defection. As another indicator of the poor predictive power of standard satisfaction measures, Reichheld (2003) noted that investors pay little attention to ACSI fluctuations because they are not usually diagnostic.

In sum, the notion that high levels of product satisfaction exert positive influence both on customer-level behavior and firm-level performance has substantial face validity. However, the empirical support for these predictions is imperfect, which implies that complementary metrics that tap into other aspects of the consumption experience are worth seeking out.

With a few notable exceptions (such as the Net Promoter Score (Reichheld 2003)), traditional studies of product satisfaction reference the term *satisfaction* directly within the survey instrument (Szymanski and Henard 2001; Yi 1990). For example, a typical satisfaction survey might instruct respondents to rate specific product features and/or provide a composite evaluation of a product on a series of 5- or 7-point semantic differential scales anchored at “Extremely dissatisfied” and “Extremely satisfied.” We suggest that merely instructing customers to reflect on their product satisfaction in this manner (i.e. by using the term *satisfaction*) generates a product satisfaction mindset.

By slightly varying the typical product satisfaction metric, we contend that a novel mindset can be induced which we refer to as a product happiness mindset. Importantly, we suggest that happiness mindsets are often evoked spontaneously during real consumption episodes, when consumers are not forced into a satisfaction mindset by the wording of a typical market research survey. In the next section, we will contrast product happiness mindsets with product satisfaction mindsets and theorize about the defining characteristics of each.

PRODUCT HAPPINESS

Whereas it has become standard in marketing practice and theory to conceptualize product evaluations in terms of satisfaction, the mixed predictive validity of standard product satisfaction measures suggests that complementary metrics warrant further investigation. We posit that there may be occasions when it is preferable to measure product happiness in lieu of product satisfaction. The most direct means of evoking a product happiness mindset is to ask consumers to reflect on their happiness (rather than their satisfaction) with a product. It may appear implausible that such a slight variation of the original question can produce meaningful differences in subsequent behavioral outcomes, which is what we claim. However, there are many precedents in the literature to support the presence of similar question wording effects. For example, Mogilner and Aaker (2009) recently found that asking individuals to think about “how much time they would like to donate” (vs. “how much money they would like to donate”) to a charity increased the monetary amount that they ultimately donated to the charity. There is also robust evidence from consumer psychology that mere measurement can dramatically influence the likelihood of subsequent behaviors, such as product purchases (Morwitz and Fitzsimons 2004).

Product happiness mindsets are particularly important to the extent that consumers adopt them during everyday consumption situations. We have reason to believe that this may indeed be the case. To investigate whether satisfaction or happiness mindsets are more prevalent when participants are given an open-ended evaluative task, we performed a search of customer reviews sold on an online retailer’s website (Amazon.com) for two words: *satisfied* and *happy*. When users elect to provide a product review on Amazon, they are prompted to rate the product on a scale ranging from one to five stars and then asked to share their opinion by typing their review into a text box. Since Amazon’s survey instrument does not reference any words related to

satisfaction or happiness, we assume that neither a satisfaction nor a happiness mindset has been directly evoked. Initially, we chose five products to examine that each had a large number of product reviews: the Kindle e-book reader, the Garmin GPS navigation system, the Apple iPod Touch mp3 player, the Flip camcorder, and the Western Digital external hard drive. Amazon users had written a total of 12,236 reviews for these five products (as of June 16, 2009). Across products, a search for the term *satisfied* produced 217 results (i.e., *satisfied* appeared in 1.8% of all reviews). In comparison, a search for the term *happy* produced 823 results (i.e., *happy* appeared in 6.7% of all reviews), which was nearly four times the frequency of *satisfied*. The same pattern of data was evident for all five products.

In order to further validate the claim that consumers tend to naturally adopt a happiness mindset rather a satisfaction mindset, we searched *all* customer reviews on Amazon (across all product categories) for a set of words that closely relate to either satisfaction or happiness. Our search for satisfaction-related words generated a total of 167,758 non-unique results from the following words: satisfied (114,739 results), satisfaction (28,706), satisfactory (15,955), and dissatisfied (8,358). Our search for happiness-related words generated 612,235 non-unique results from the following words: happy (527,702), happiness (56,163), unhappy (28,370). In their product reviews, Amazon customers used happiness-related words 3.65 times more frequently than satisfaction-related words to describe their product experience.

The prior analysis shows that happiness-related words are more prevalent than satisfaction-related words in written consumer reviews. We argue that this is because consumers naturally adopt a happiness mindset when evaluating products. An alternative explanation is that happiness-related terms are generally more prevalent in written communication than satisfaction-related words. To rule out this competing explanation, we analyzed results from a separate search of the Brown University Standard Corpus of Present-Day American English (the Brown

Corpus), a collection of over a million words carefully selected from various American English written texts in which the relative frequency of common words has been parsed. In the Brown corpus, satisfaction-related words occurred with a frequency of .0101% in written texts, whereas happiness-related words occurred with a frequency of .0145%, which is about 1.44 times as often. As displayed in Table 1, written consumer reviews, and written texts more generally, tend to disproportionately emphasize happiness-related words over satisfaction-related words. However, although written texts generally give disproportionate emphasis to happiness-related words, this cannot explain the magnitude of the difference in happiness-related words vs. satisfaction-related words in product evaluations.

Table 1: Frequency of Satisfaction- and Happiness-Related Words

Source (accessed 06-16-09)		Ratio of Happiness-to-Satisfaction Words	Happiness Words Included	Satisfaction Words Included
Amazon Reviews	All Products	3.65	happy, happiness, unhappy	satisfactory, satisfied, satisfaction, dissatisfied
	Apple iPod Touch	6.00	happy	satisfied
	Kindle 1st Generation	4.94	happy	satisfied
	Garmin GPS	2.10	happy	satisfied
	Flip Camcorder	2.32	happy	satisfied
	Western Digital External Hard Drive	2.27	happy	satisfied
Brown Corpus		1.44	happy, happiness, unhappy	satisfactory, satisfied, satisfaction

Our analysis of the Amazon review database and the Brown corpus presumes that the use of happiness- or satisfaction-related words indicates the presence of either a happiness or satisfaction mindset, respectively. We also assume that happiness- and satisfaction-related words map onto different constructs (happiness vs. satisfaction) rather than a single overarching construct. The validity of this assumption is explored in the next section, where we discuss how

happiness and satisfaction mindsets may differ.

HAPPINESS AND SATISFACTION MINDSETS

It is well established that affective states can influence information processing and judgments (Isen et al. 1978; Slovic et al. 2007). Very little research has explored whether activating affective mindsets can impact evaluations *independently* of experienced affect (for an exception, see Caruso and Shafir 2006). We propose that reflecting on one's happiness with a product generates a happiness mindset, which may have different consequences than reflecting on one's satisfaction with the same product. We believe that satisfaction and happiness mindsets can operate separately from affect itself.

Over the past thirty years, a handful of researchers have studied the relationship between happiness and satisfaction mindsets, although not typically in the context of product consumption experiences. There is some basis in this literature to support our view that happiness and satisfaction mindsets may cause individuals to focus on different aspects of the same experience. A number of researchers have suggested that satisfaction and happiness mindsets map onto distinct affective and cognitive mental systems. A number of researchers have hypothesized that the term *satisfaction* is highly cognitive with an evaluative tone (Brief and Roberson 1989; McKennell 1978; Organ and Near 1985). Andrews and McKennell (1980) produced correlational evidence that happiness mindsets are more a function of past affective experiences than satisfaction mindsets. By definition, mindsets cannot be strictly affective since producing *any* self-reported evaluation involves some degree of cognitive reflection which makes the affect-cognition distinction somewhat "illusory" (Crooker and Near 1998). Nevertheless, it may be the case that happiness mindsets are relatively more affective (less cognitive) than satisfaction mindsets.

Lateral Processing

In this research, we suggest a novel difference between product happiness and product satisfaction mindsets. Specifically, we argue that the two mindsets produce different types of lateral processing. Lateral processing describes the relative valence of inputs that people consider when making product evaluations. We hypothesize that a product happiness mindset leads to unilateral processing. That is, we anticipate that a product happiness mindset makes individuals more likely to focus on *either* the positive *or* the negative aspects of their consumption experience and less likely to focus on both. Conversely, we believe that a product satisfaction mindset leads to bilateral processing, whereby individuals consider *both* the positive *and* the negative aspects of their consumption experience. These predictions are consistent with the affect-cognition distinction described earlier. Because of its evaluative tone, product satisfaction mindsets may lead to more balanced and even-handed thoughts (e.g., what do I like and dislike about this product?). Happiness mindsets, on the other hand, may lead to more extreme and polarized thoughts (e.g., do I like or dislike this product?). The affect literature provides corroboration that happiness may allow individuals to assume more extreme perspectives. Barone, Miniard, and Romeo (2000) found that happy participants were willing to accept unusual brand extensions that were not very similar to the parent brand. Additionally, Isen and Daubman (1984) showed that happy participants often rated low-prototypic exemplars of a category as members of the category. Although these papers focused on the affective state of happiness, we suspect that happiness mindsets may also induce an affinity for extreme judgments.

Impact of Lateral Processing on Product Evaluations

We expect that lateral processing type will affect subsequent product evaluations and

behavioral intentions. This prediction is consistent with research on other types of processing (e.g., heuristic vs. systematic processing) which has identified downstream consequences of processing type on product attitudes and choices (Petty, Cacioppo, and Schumann 1983). It is also logical that lateral processing would affect evaluations given that lateral processing types lead consumers to attend to aspects of their consumption experience that vary in terms of valence. Of greater interest are the specific predictions we make regarding how the different types of lateral processing impact product evaluations and behavioral intentions.

Unilateral processing may be either positive (i.e., focused on positive aspects of the consumption experience) or negative (i.e., focused on negative aspects of the consumption experience). We claim that positively unilateral processing will generate more favorable product evaluations (and behavioral intentions) than bilateral processing, which in turn will generate more favorable evaluations than negatively unilateral processing. Initially, this theorizing may appear to be somewhat at odds with extant research on one- versus two-sided appeals. In persuasion research, there is substantial evidence that messages which highlight the positive aspects of a product on a primary attribute but acknowledge the product's shortcomings on a secondary attribute (i.e., a bilateral structure) can be more effective at enhancing product evaluations than standard (positively unilateral) appeals (Kamins and Assael 1987; Pechmann 1992). The persuasiveness of two-sided appeals has been attributed to the enhanced credibility of the source and to the perception of consumers that they have thoroughly considered all aspects of the product. In our research, consumers engage in unilateral or bilateral processing on their own accord; given the absence of an external source (e.g. an advertising appeal), lateral processing is unlikely to affect perceptions of source credibility. When a product is generally attractive, we surmise that the benefits of positively unilateral processing will overwhelm the benefits of bilateral processing.

Based on our theorizing, we predict the following consequences of mindset type on lateral processing type and behavioral intentions (e.g., self-reported likelihood to renew, likelihood to recommend product to a friend, etc.):

- H1: [Attractive Product Hypothesis]** When products are generally attractive, product satisfaction mindsets will lead to *less favorable* behavioral intentions than product happiness mindsets.
- H2: [Unattractive Product Hypothesis]** When products are generally unattractive, product satisfaction mindsets will lead to *more favorable* behavioral intentions than product happiness mindsets.
- H3: [Lateral Processing Hypothesis]** When evaluating a product, the difference between positive thoughts and negative thoughts will be relatively closer to zero for product satisfaction mindsets and relatively farther from zero for product happiness mindsets.

Across four experiments, we provide converging evidence in support of our hypotheses.

EXPERIMENT 1: SATISFACTION VS. HAPPINESS WITH A MUSEUM MEMBERSHIP

The primary objectives of Experiment 1 were to test whether satisfaction mindsets and happiness mindsets could be elicited by innocuous shifts in the wording of a question and whether the two mindsets might produce different behavioral intentions even when the consumption experience is generally attractive and held constant across individuals. To demonstrate the potential implications for market research, we conducted Experiment 1 in a field setting. We examined the impact of mindset type on the likelihood of renewing an annual membership at a children's museum.

Procedure. Participants were adults with family memberships at the Kohl Children’s Museum, an interactive museum near Chicago with exhibits and activities for young children. During a two-week period, patrons at the museum were approached by experimenters and asked to participate in a brief survey. As an incentive, all participants were promised entry into a lottery where they could win a free one-year membership renewal to the museum upon the expiration of their current membership. Given their interest in attaining a free membership, we assumed that the patrons who were willing to complete the study considered their membership to be generally attractive. This assumption was confirmed by self-reported evaluations captured during the study. Experiment 1 employed a 2-cell design: product satisfaction and product happiness. Participants (one per family) were randomly presented with one of two different surveys to complete by hand. Those in the product satisfaction condition were instructed to consider their *satisfaction* with their museum membership. Those in the product happiness condition were instructed to consider their *happiness* with their museum membership. To further manipulate mindset type, we asked participants to list the thoughts that crossed their minds when reflecting on their satisfaction (happiness) with their membership. Next, to strengthen our manipulation, participants rated their satisfaction (happiness) with their museum membership on 9-point scales anchored at 1 by “Not very satisfied” (“Not very happy”) and at 9 by “Very satisfied” (“Very happy”). Next, as our dependent variable of interest, all participants indicated their likelihood to renew their membership upon expiration, using a 9-point scale anchored at 1 by “Very unlikely” and at 9 by “Very likely.” Finally, member identification numbers were collected from all participants so that we could access demographic information from Kohl’s member database, including membership level, membership duration, size of family, and frequency of visits. These variables will not be discussed further since their mean values did not differ across conditions.

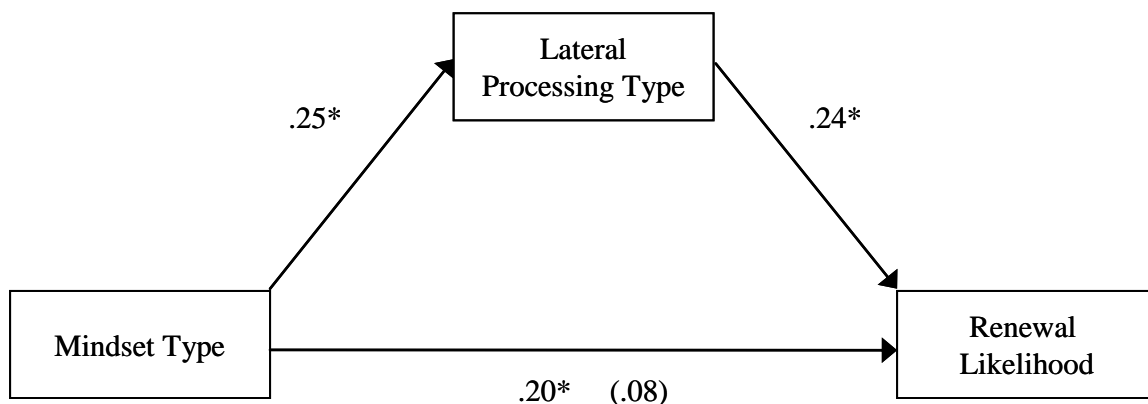
Results. A total of 100 members completed the study, although not all participants answered all the questions, particularly the thought-listing task. Across conditions, museum membership ratings were consistently very high, $M(\text{Satisfaction}) = 8.1$ and $M(\text{Happiness}) = 8.4$, thus confirming our assumption that members considered their membership to be generally attractive. Ratings did not differ across conditions, $t(98) = 1.3$, $p > .21$; this comparison should be interpreted cautiously since the questions themselves differed in the two conditions. Upon examining participants' likelihood to renew their museum membership, however, we found that participants in the product satisfaction condition ($M = 7.7$) were *less* likely to renew their membership than participants in the product happiness condition ($M = 8.3$); $t(183) = 2.1$, $p < .05$.

Before providing their quantitative ratings, respondents listed the thoughts that crossed their mind when reflecting on either their satisfaction or happiness with their membership. To examine the relationship between mindset type and lateral processing type, participant thought listings were classified as positively unilateral (i.e., only positive thoughts were listed), negatively unilateral (i.e., only negative thoughts were listed), or bilateral (i.e., including both positive and negative thoughts) by two independent coders ($\alpha > .90$) and disputes were resolved through discussion. There were no thought listings in either condition that were classified as negatively unilateral. Consistent with our theorizing, for participants in the happiness condition, 41 thought listings were classified as positively unilateral and 2 were bilateral. For participants in the satisfaction condition, 30 thought listings were classified as positively unilateral and 8 were bilateral. As an indication of the difference in lateral processing between conditions, 21% of participants in the satisfaction condition listed at least one negative thought whereas only 5% of participants in the happiness condition expressed a negative thought; $\chi^2=3.61$, $df=1$, $p < .06$. Furthermore, unilateral participants ($M = 8.2$) were more likely to renew their membership than bilateral participants ($M = 7.1$); $t(79) = 2.2$, $p = .03$. Seven participants in the happiness

condition and twelve participants in the satisfaction condition either did not list any thoughts or their thoughts did not have a clear valence (e.g., “We visit the museum every month”) and were therefore excluded from the prior analysis.

To test whether lateral processing type was responsible for the effect of mindset on renewal likelihood, we conducted a mediation analysis after creating dummy variables for mindset type and lateral processing type. We determined that the relationship between mindset type and renewal likelihood was fully mediated by lateral processing type. As Figure 1 illustrates, the standardized regression coefficient between mindset and renewal likelihood was no longer significant after controlling for processing type. The other conditions of mediation, as specified by Baron and Kenny (1986), were also met: mindset type was a significant predictor of renewal likelihood and of lateral processing type, and lateral processing type was a significant predictor of renewal likelihood while controlling for mindset type. Finally, the Sobel test indicated that this reduction in the mindset effect was reliable ($z = 1.58, p < .06$).

Figure 1: Influence of Lateral Processing Type on Renewal Likelihood (Experiment 1)



* $p < .05$

Discussion. The results of Experiment 1 suggest that satisfaction and happiness mindsets can have different effects on behavioral intentions. In a field setting involving a generally attractive consumption experience (museum membership), we show that happiness mindsets lead to more favorable behavioral intentions than satisfaction mindsets. Additionally, our mediation analysis suggests that the greater propensity of those in a happiness mindset (versus those in a satisfaction mindset) to engage in unilateral processing may explain the more favorable behavioral intentions.

Our view is that satisfaction and happiness mindsets cause individuals to focus on different aspects of their consumption experience. Implicit in our theorizing is the assumption that satisfaction and happiness mindsets operate independently of experienced affect. An alternate explanation that is consistent with the data reported in Experiment 1 is that being asked about product happiness is affectively more positive than being asked about product satisfaction. The positive affect evoked by the question may be misattributed to the product being evaluated, leading to more favorable behavioral intentions in the product happiness condition (vs. the product satisfaction condition). Although we do not endorse an affective explanation for the results, we were unable to assess participants' actual affect in Experiment 1 due to the constraints of our field setting. We address this issue in Experiment 2 by measuring participants' affect directly in the lab. Additionally, participants in Experiment 1 evaluated an intangible experience (their museum membership). In Experiment 2, we examine whether our results can be reproduced when consumers evaluate a more conventional consumer product, a cellular phone.

EXPERIMENT 2: SATISFACTION VS. HAPPINESS WITH A CELL PHONE

Experiment 2 had two main objectives. The first objective was to demonstrate the robustness of our earlier findings by having participants evaluate a more conventional (but still

generally attractive) consumer product: a cellular phone. Rather than evaluating the exact same item (as was the case in Experiment 1, when all participants evaluated the children's museum membership), participants in Experiment 2 reflected on their happiness or satisfaction with their own cellular phone. Finding a consistent effect between conditions, in spite of any variation introduced by differences in cell phone brands and models, would indicate that the mindset effect is quite robust. A second objective of Experiment 2 was to assess whether our mindset manipulation produced differences in affect itself, a finding that could potentially contradict our theorizing. We studied the impact of mindset type on the likelihood of recommending one's cell phone brand to a friend.

Procedure. Participants were undergraduates at Northwestern University who completed Experiment 2 on lab computers along with several other unrelated studies in exchange for course credit. Experiment 2 also employed a 2-cell design: product satisfaction and product happiness. Participants first indicated which brand of cell phone they currently owned. Depending on the condition to which they had been randomly assigned, participants were instructed to reflect on either their satisfaction or their happiness with their cell phone. To reinforce our manipulation, participants listed the thoughts that crossed their mind when reflecting on their satisfaction (happiness) with their phone. Subsequently, all participants rated their satisfaction (happiness) with their phone on 9-point scales anchored at 1 by "Not very satisfied" ("Not very happy") and at 9 by "Very satisfied" ("Very happy"). Our primary dependent variables followed. All participants indicated their likelihood to recommend their brand of cell phone to a friend on a 9-point scale anchored at 1 by "Very unlikely" and at 9 by "Very likely." Then, participants evaluated their phones by responding to three items which were anchored at either end of a series of 7-point scales by "Hate It/Love It", "Not very favorable/Very favorable", and "Very bad/Very good." Next, for use as a potential covariate, we asked participants to indicate how long they

had owned their phone. Finally, participants completed a modified version of the positive affect and negative affect scale (PANAS), which possesses a high degree of internal consistency and stability (Watson, Clark, and Tellegen 1988). Participants were asked to indicate the extent to which they currently felt (on a five-point scale ranging from “Very slightly or not at all” to “Extremely”) each emotion. In addition to the ten standard PANAS positive items (enthusiastic, interested, determined, inspired, alert, active, strong, proud, attentive, and excited), we included two more: happy and satisfied. The ten standard PANAS negative items (scared, afraid, upset, distressed, jittery, nervous, ashamed, guilty, irritable, and hostile) were retained. Due to time constraints, only 126 participants (two-thirds of our sample) were able to complete the PANAS. Based on their responses to the other questions in the study, we believe that the group of participants who completed the PANAS are representative of the entire group.

Results. A total of 191 respondents completed the study; however, one participant (who had been randomly assigned to the happiness condition) did not own a cell phone and was therefore excluded from the subsequently described analyses. Across conditions, cell phone ratings were generally high, $M(\text{Satisfaction}) = 5.7$ and $M(\text{Happiness}) = 6.6$, which validates our assumption that cell phone owners consider their phones to be generally attractive. Although ratings differed between groups, $t(189) = 3.2$, $p < .01$, this could be a function of the psychometric properties of the satisfaction scale vs. the happiness scale. More germane to our hypothesis was the “Likelihood to Recommend” dependent variable, since the wording of this question was identical for all respondents. As predicted, participants in the product satisfaction condition ($M = 5.7$) were *less* likely to recommend their cell phone than participants in the product happiness condition ($M = 6.4$); $t(189) = 2.0$, $p < .05$. It is worth noting that this same data pattern (satisfaction < happiness) prevailed for each of the seven cell phone brands (Apple, Blackberry, LG, Motorola, Nokia, Samsung, Sony Ericsson) where there was at least one

participant in a satisfaction mindset and one in a happiness mindset. Additionally, the same pattern holds when age of phone is included as a covariate. These data provide strong evidence that the mindset effect is a robust phenomenon. We combined the three evaluation items to form a single Evaluation Index after verifying their inter-item reliability (Cronbach's alpha was .98). Using this index, evaluations made by participants in the product satisfaction condition ($M = 5.2$) were found to be lower than evaluations of participants in the product happiness condition ($M = 6.1$); $t(189) = 3.1, p < .01$.

As in Experiment 1, participant thought listings were classified as positively unilateral, negatively unilateral, or bilateral by two independent coders ($\alpha > .92$) and disputes were resolved through discussion. For participants in the happiness condition, 45 thought listings were classified as positively unilateral, 35 were bilateral, and 8 were negatively unilateral. In contrast, for participants in the satisfaction condition, 23 thought listings were classified as positively unilateral, 44 were bilateral, and 8 were negatively unilateral. Consistent with our predictions, 60% of participants in the happiness condition engaged in unilateral thinking compared to only 41% of participants in the satisfaction condition; $\chi^2 = 5.06, df = 1, p < .03$. Conversely, 40% of participants in the happiness condition engaged in bilateral thinking compared to 59% of participants in the satisfaction condition. Nine participants in the happiness condition and eighteen participants in the satisfaction condition did not list any thoughts and were therefore excluded from the prior analysis.

In order to test whether the three levels of lateral processing type (negatively unilateral, bilateral, positively unilateral) influenced recommendation likelihood, we conducted a one-way ANOVA. The omnibus test was highly significant; $F(2,160) = 35.2, p < .001$. All planned contrasts were significant ($p < .001$), indicating that recommendation likelihood differed for each

of the three groups; $M(\text{Negatively unilateral}) = 2.9$, $M(\text{Bilateral}) = 5.5$, $M(\text{Positively unilateral}) = 7.5$.

Next, we created a Positive Affect Index by averaging the ten standard PANAS positive items ($\alpha=.89$) and a Negative Affect Index by averaging the ten standard PANAS negative items ($\alpha=.85$). Based on these metrics, participants in the happiness condition ($M = 2.4$) did not experience significantly more positive affect than participants in the satisfaction condition ($M = 2.2$); $t(124) = 1.0$, $p > .29$. Similarly, participants in the happiness condition ($M = 1.3$) did not experience significantly more negative affect than participants in the satisfaction condition ($M = 1.4$); $t(124) = .66$, $p > .51$. The items *happy* and *satisfied* were analyzed individually. No difference was found in self-reported happiness between those in a product happiness mindset ($M = 2.2$) and those in a product satisfaction mindset ($M = 1.9$); $t(123) = 1.2$, $p > .22$. Additionally, those in a product happiness mindset ($M = 3.2$) reported feeling no more satisfied than those in a product satisfaction mindset ($M = 3.0$); $t(123) = .78$, $p > .43$. The results of these self-reported measures of affect constitute a null effect. While these null effects are consistent with our theorizing that happiness and satisfaction mindsets do not differentially influence affect, we realize that there are many possible explanations for such null results, including measurement error. We will revisit this issue in Experiment 4, when we attempt to rule out an affective explanation for our findings in a different way.

Another potential explanation for the results of Experiments 1 and 2 could be that satisfaction and happiness mindsets are not conceptually different, but merely represent the same construct at varying levels of extremity. Even though happiness ratings were significantly higher than satisfaction ratings in this experiment, it may be that a *satisfaction* rating of 5.7 and a *happiness* rating of 6.6 accurately reflect the same “true” experience. The difference in ratings could be merely semantic (related to slightly different meanings and interpretations of the two

words) rather than the product of theoretically unique mindsets. The downstream effects on the “likelihood to recommend” and “product evaluation” dependent variables, when the questions were identical between conditions, could be an artifact of anchoring and insufficient adjustment from responses to the initial question (satisfaction vs. happiness) which differed by condition. In order to rule out this alternate explanation, we conducted a follow-up study to assess people’s intuition about the extremity of the words *satisfaction* and *happiness*. Participants were undergraduates at Northwestern University who completed the preliminary study on lab computers along with several unrelated experiments in exchange for course credit. Although they were drawn from the same pool of subjects, there was no overlap between participants in the follow-up study and those who had participated in the main study. A total of 95 participants were asked to rate the words *satisfied* and *happy* in terms of how positive or negative they are, using a 7-point scale anchored at 1 by “Very Negative,” at 4 by “Neutral,” and at 7 by “Very Positive.” All participants evaluated both words, but the order of word presentation was counterbalanced. We found that participants considered the word *happy* ($M = 6.3$) to be more positive than *satisfied* ($M = 5.5$); $t(94) = 8.1, p < .001$. There were no order effects.

The findings of the follow-up study suggest that an intensity explanation is inconsistent with the results of the main experiment. To explain the logic behind this conclusion, take the hypothetical example of two individuals who have an identical product experience and feel exactly the same about it. If one individual rated her satisfaction and the other rated her happiness, which numeric rating would we expect to be higher? Based on our follow-up study, the word *happiness* is considered more positive than *satisfaction*. Thus, we would expect a higher rating in the main experiment from the individual who reported her satisfaction compared to the individual who reported her happiness in order for the “true” experience of both individuals to be equated. Note that this prediction is exactly opposite what we found in the

main experiment, where happiness ratings were higher than satisfaction ratings. These data suggest that happiness and satisfaction may not merely map onto the same construct at different levels of intensity. Instead, a product satisfaction mindset (versus a product happiness mindset) may indeed focus consumers on distinct aspects of the consumption experience, as we propose.

Discussion. In Experiment 2, we again show that product satisfaction and product happiness mindsets can produce differences in behavioral intentions. Since cell phones were perceived as generally attractive by their owners, the likelihood to recommend one's cell phone brand was greater for participants in the product happiness condition compared to those in the product satisfaction condition. We also find additional support for our hypotheses that happiness and satisfaction mindsets lead to unilateral and bilateral processing, respectively.

Experiments 1 and 2 relied on the classification of thought listing data by external coders. Although coders were blind with respect to respondent condition, content analysis is inherently susceptible to several methodological concerns, including the potential for researcher bias (Kolbe and Burnett 1991). Thus, in our third experiment, rather than relying on a thought listing task, we test our lateral processing hypothesis more directly by allowing participants to reveal the valence of their thoughts on their own.

EXPERIMENT 3: SATISFACTION VS. HAPPINESS WITH A TELEVISION SET

The primary objective of Experiment 3 was to demonstrate the causal relationship between mindset type and lateral processing type by using a different methodology than the one employed thus far. We gave participants the chance to self-report the valence of their thoughts while evaluating a generally attractive product, a television set. No measures of behavioral intent were taken in Experiment 3 since the relationship between mindset type and behavioral intent had already been established in prior studies.

Procedure. Participants were undergraduates at Northwestern University who completed Experiment 3 on lab computers along with other unrelated studies in exchange for course credit. Participants were randomly assigned to a product satisfaction or a product happiness condition. Depending on condition, they were instructed to consider their satisfaction or happiness with their television set (or with the last television set that they had viewed, if they did not own a TV).

After the mindset manipulation, participants were simultaneously presented with a list of seven features directly or indirectly related to television sets. These items were: size of television screen, sound quality, picture quality, remote control, appearance/design of TV, TV stand, warranty/service plan. Next to the list were three empty boxes, respectively labeled “Positive,” “Negative,” and “Neutral.” Participants were instructed to use their mouse to drag and drop each of the seven features into whichever of the three boxes they perceived as being the “best fit” when thinking about the specific attributes of their own TV. The primary dependent variables were the number of items that were deposited into the “Positive” and “Negative” boxes.

Results. A total of 66 participants completed the study. Across both conditions, participants classified an average of 3.3 items as positive, 2.7 items as neutral, and 1.0 item as negative. We interpret the uneven ratio of positive to negative items as an indication that participants consider their television sets to be generally attractive. Consistent with our lateral processing hypothesis, participants in the satisfaction condition ($M = 2.9$) classified significantly fewer items as positive compared to those in the happiness condition ($M = 3.7$); $t(64) = 2.2$, $p < .04$. On the other hand, participants in the satisfaction condition ($M = 1.3$) classified significantly more items as negative compared to those in the happiness condition ($M = 0.7$); $t(64) = 2.1$, $p < .04$. There was no difference between conditions in terms of the number of items classified as neutral; M (Happiness) = 2.6, M (Satisfaction) = 2.8, $t(64) = 0.65$, $p > .51$. To directly evaluate the lateral processing hypothesis, we computed the difference between positive

and negative items for participants in each condition and found that it differed between conditions; $t(64) = 2.4, p = .02$. For each of the seven features, we also created a valence index, which was the number of respondents who categorized the feature as positive divided by the number of respondents who categorized the feature as negative. For each item, all neutral classifications were excluded. Thus, a valence index greater than 1 provides an indication that more participants classified the feature as positive than negative. For *each* of the seven items, the valence index was greater in the happiness condition compared to the satisfaction condition. In sum, these data provide additional evidence that mindsets affect lateral processing type.

Discussion. In Experiment 3, we used a novel method to identify the valence of participant thoughts during the product evaluation process. For a generally attractive product (i.e., one's television set), we again found that satisfaction mindsets produced relatively fewer positive thoughts and relatively more negative thoughts than happiness mindsets. This is supportive of the lateral processing hypothesis. In all three experiments reported thus far, consumers held a generally favorable impression of the products that were under investigation. We have proposed that product happiness mindsets lead to polarized evaluations. However, the evidence that we have presented thus far shows only that product happiness leads to more favorable behavioral intentions than product satisfaction. In order to more fully test our theorizing, we would like to manipulate product performance directly. If our theorizing is correct, a generally inferior product should generate more negative thoughts and fewer positive thoughts for individuals in a happiness mindset (compared to those in a satisfaction mindset). Consequently, for poor products, behavioral intentions should be more favorable for participants in a satisfaction mindset.

In Experiment 4, we attempt to show that happiness mindsets can lead to lower evaluations for generally unattractive products. This finding would support our second

hypothesis (which has thus far not been tested) while also ruling out a strict affective interpretation of our earlier data, since an affective-based explanation would predict that reflecting on happiness enhances evaluations irrespective of product attractiveness.

EXPERIMENT 4: SATISFACTION VS. HAPPINESS WITH A CAMCORDER

The primary objective of Experiment 4 was to show that satisfaction mindsets would lead to higher evaluations of generally unattractive products than happiness mindsets. Reversing the effects of prior studies would rule out a strict affective explanation for the previously reported data.

Procedure. Experiment 4 utilized a 2 (mindset type: satisfaction, happiness) x 2 (product attractiveness: high, low) between-subjects factorial design. Participants were undergraduates at Northwestern University who completed Experiment 4 online with several other unrelated studies in exchange for \$5. In all conditions, participants were first instructed to imagine that they needed a new camcorder and were given a brief product review of a fictional camcorder, the VPC2, that had purportedly been written by an owner of the camcorder. The review of the camcorder either depicted the product as generally attractive (i.e. the review included a bulleted list of 7 positive attributes and 3 negative attributes) or generally unattractive (i.e. the review included a bulleted list of 3 positive attributes and 7 negative attributes). By manipulating product attractiveness via these descriptions, we do not allow product experience to create differences in experienced affect, thus creating a strong test of our hypothesis. Even if our stimuli somehow influenced affect, a strict affective account would predict a main effect of mindset type, whereas we hypothesize an interaction between mindset type and product attractiveness. After reading the description of the camcorder, participants were asked to reflect on either their likely satisfaction or their likely happiness with it, depending on their

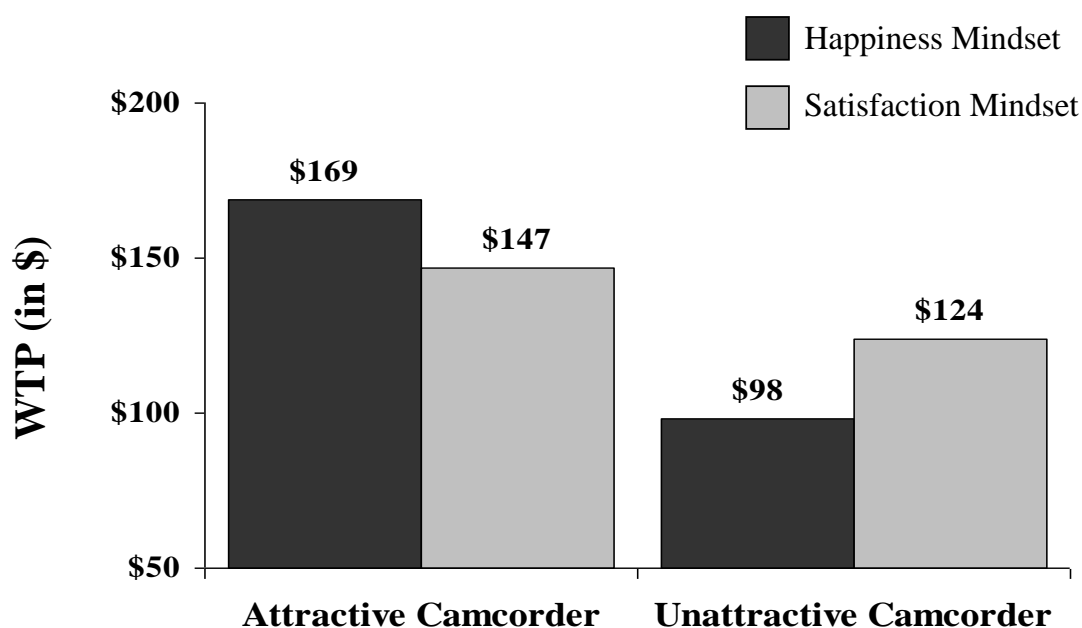
experimental condition. Next, this mindset manipulation was reinforced by requiring participants to list the thoughts that had crossed their mind when considering their satisfaction or happiness. As the primary dependent variable, all participants indicated the maximum price that they would be willing to pay (WTP) for the camcorder. To test if participants had carefully read the review that we had provided, we next asked them if they could recall the exact name of the camcorder. Finally, in order to test our lateral processing hypothesis, participants were asked to list as many pros and cons about the camcorder as they could remember.

Results. We excluded participants who did not correctly recall the name of the camcorder, leaving us with a sample of 133 participants. Unlike the earlier experiments when participants were considering products that they owned or with which they were familiar, the design of Experiment 4 required participants to read about a product that they did not actually own. Thus, we excluded participants who did not carefully attend to the product description that they read, since we suspected that these individuals may not have processed the information sufficiently to adopt either a satisfaction or happiness mindset.

As expected, two-factor analysis of variance (ANOVA) of WTP revealed a significant main effect of product attractiveness; $F(1,126) = 15.8, p < .001, \eta = .33$. Consistent with our theorizing, we also found a significant interaction between mindset and product attractiveness, $F(1,126) = 4.1, p < .05, \eta = .18$. When the camcorder was unattractive, participants in the satisfaction condition were willing to pay an average of \$124, whereas those in the happiness condition were willing to pay \$98. However, when the camcorder was attractive, participants in the happiness condition were willing to pay more ($M = \$169$) than participants in the satisfaction condition ($M = \$147$). As another comparison of the same data, participants in a happiness mindset were willing to pay significantly more for the attractive camcorder compared to the unattractive one; $t(126) = 4.4, p < .001$. However, this difference was not significant for

participants in a satisfaction mindset; $t(126) = 1.4, p > .18$. Thus, planned contrasts provide additional support for our claim that satisfaction mindsets result in more balanced evaluations (bilateral processing) whereas happiness mindsets produce more polarizing evaluations (unilateral processing).

Figure 2: Interaction of Mindset Type and Product Attractiveness on WTP (Experiment 4)



In an effort to more directly test the lateral processing hypothesis, we calculated a positivity index for each participant by subtracting the number of recalled negative attributes from the number of recalled positive attributes. We conducted a two-factor analysis of covariance (ANCOVA) with mindset and product attractiveness serving as the independent variables and total number of recalled thoughts as the covariate. After controlling for recall ability, we found a significant interaction between mindset and product attractiveness; $F(1, 128) = 3.8, p = .05$. Planned contrasts showed that when the product was attractive, the positivity

index was significantly more positive for Happiness participants as compared to Satisfaction participants; $F(1, 128) = 5.8, p < .02$. When the product was unattractive, the positivity index was more negative for Happiness participants as compared to Satisfaction participants, but this difference did not reach significance; $F < 1$.

Discussion. In Experiment 4, we find that the impact of happiness and satisfaction mindsets on product evaluation depends on the general attractiveness of the product. When a product is generally attractive, people in a happiness mindset tend to evaluate the product more positively than people in a satisfaction mindset. This is consistent with the results of the first three experiments. However, in Experiment 4, we also show that when a product is generally unattractive, people in a satisfaction mindset tend to evaluate the product more negatively than people in a happiness mindset. The demonstration of an interaction between product attractiveness and mindset in Experiment 4 rules out a strict affective-based explanation for our earlier results. Furthermore, the attribute recall data from Experiment 4 provides additional evidence that happiness mindsets lead to more polarized cognitions whereas satisfaction mindsets lead to more balanced thinking.

GENERAL DISCUSSION

This research aims to demonstrate that product satisfaction and product happiness mindsets can affect consumer evaluations. We posit that product satisfaction and product happiness mindsets can be evoked rather innocuously, and we repeatedly demonstrate that asking participants to reflect on either their satisfaction or their happiness with a product is sufficient to induce one mindset or the other. We present converging evidence from four empirical studies that evoking happiness vs. satisfaction mindsets affects behavioral intentions, including how

much consumers are willing to pay for a product and how likely they are to repurchase it or recommend it to others.

This research proposes a novel difference between satisfaction and happiness mindsets. Specifically, we find that happiness mindsets often lead people to consider *either* the positive or the negative aspects of a consumption experience, rather than both – a phenomenon which we describe as unilateral processing. On the other hand, we find that satisfaction mindsets result in bilateral processing, whereby people consider *both* the positive and the negative aspects of a consumption experience. The impact of lateral processing type on product evaluations and subsequent behavioral intentions is a function of product attractiveness. For generally attractive products, unilateral processing produces more favorable evaluations than bilateral processing; for generally unattractive products, the converse is true.

Our first three experiments focus on generally attractive products. In Experiment 1, we show that satisfaction mindsets and happiness mindsets can be elicited by innocuous question wording shifts and that the two mindsets do in fact lead to different behavioral intentions in a field setting. We also provide evidence that satisfaction and happiness mindsets affect the valence of thoughts that come to mind during evaluation. Experiment 2 provides a replication of the first study using a more conventional consumer product. Additionally, we present preliminary evidence that mindsets can impact evaluations without influencing experienced affect. Experiment 3 more directly examines how mindsets influence lateral processing type, even in the absence of an explicit evaluative task. Finally, in Experiment 4, we manipulate product attractiveness to show that for products that are perceived to be generally unattractive, the effects of earlier studies are reversed. Additionally, we rule out an affective-based explanation (i.e. thinking about happiness makes people happier which produces positive evaluations) for our earlier data. Across experiments, we find converging evidence that product

satisfaction mindsets lead to less extreme behavioral intentions than product happiness mindsets. Additionally, we show that these behavioral intentions may be a function of unilateral vs. bilateral processing, manifested as the relative number of positive and negative thoughts evoked by each mindset.

Theoretical and Managerial Implications

This research has important theoretical and managerial implications. From a theoretical standpoint, a primary contribution of this work is to shed light on how satisfaction differs from happiness. Unlike extant work which has focused on the effects of being in different affective states (e.g. happiness), we study how happiness and satisfaction mindsets influence evaluations and subsequent behavioral intentions. We introduce the concepts of unilateral and bilateral processing to show that mindset manipulations actually focus consumers on different aspects of their consumption experience that differ in terms of valence.

Much more research is required to fully understand the antecedents and consequences of happiness mindsets (and to a lesser extent, satisfaction mindsets). In this paper, we chose to activate mindsets as directly as possible, by simply asking participants to reflect on their satisfaction or happiness with a product. It would be useful to know other means of activating these mindsets without actually influencing experienced affect. We find both a potential antecedent and a potential consequence of happiness mindsets in the first study of a recent paper by Labroo and Patrick (2009). The authors showed that participants consistently describe items next to a smiling (☺) bullet point more abstractly than items next to a neutral (☹) bullet. Labroo and Patrick used these findings to support their claim that the affective state of happiness results in a higher level of construal (i.e., more abstract and less concrete thinking); however, this specific study did not measure affect directly. Thus, it is possible that smiling bullet points

activated a happiness mindset which in turn affected participants' level of construal.

This research also has a great deal of managerial relevance, since current market research has focused predominantly on assessing product satisfaction. We propose measuring product happiness (i.e., reflecting on one's happiness with a product) as a novel alternative to measuring product satisfaction. Product happiness merits further consideration from marketing practitioners since it may lead to more favorable behavioral consequences under certain circumstances (e.g., when consumption experiences are generally positive). Furthermore, based on our analysis of Amazon.com consumer reviews, we postulate that consumers may often find thinking about product happiness to be more natural than thinking about product satisfaction. If consumers are more likely to consider their happiness with a product (rather than their satisfaction with a product) when a specific mindset has not been induced by a market researcher's question, happiness mindsets may actually result in greater predictive validity than satisfaction mindsets. Further research should explore this intriguing possibility.

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