

The Influence of Incidental Affect on Consumers' Food Intake

Although incidental affect has been shown to influence both attitude and purchase behavior, it has not been extended to actual consumption. This research investigates whether specific affective states influence food consumption and whether this influence is moderated by factors such as information and the nature of the product (hedonic versus less hedonic). The authors show that an integrative mood management and mood evaluation framework accounts for this relationship more effectively than a self-regulation explanation. A preliminary test and two lab studies show that people eat larger amounts of hedonic foods (buttered popcorn and M&M's) when they are in a sad state than when they are in a happy state and that this effect is attenuated when nutritional information is present. In contrast, they tend to eat larger amounts of a less hedonic product (raisins) when they are in a happy state than when they are in a sad state. The authors discuss implications for responsible marketers, health professionals, and health conscious consumers in the context of campaigns and individual efforts.

People often associate consumption-related behaviors with the affective state they are experiencing. Indeed, incidental affect—the affect consumers imbue from their environment in isolation to the task at hand—has been shown to influence in-store shopping (Woodruffe 1997) and in-home food choice (Hetherington and MacDiarmid 1993). In addition, although prior research has effectively examined how health claims and nutrition labels influence health beliefs and purchase intentions (Balasubramanian and Cole 2002; Kozup, Creyer, and Burton 2003; Moorman et al. 2004), a pressing issue for the Food and Drug Administration (FDA; 2003) is whether such information can realistically influence food intake on a single eating occasion. Given the U.S. obesity epidemic, understanding how incidental affect influences food intake and whether its influence can be moderated through warnings or nutritional labeling is an important topic.

Consumption research has tended to focus on issues such as how advertising (Wansink and Ray 1996), packaging (Wansink 1996), and stockpiling-induced promotions (Ailawadi and Neslin 1998) influence a person's consumption. A consistent finding across these studies is that a person's food consumption can be nontrivially influenced by various environmental elements, such as advertisements, promotions, and container size. Given the susceptibility of

consumption to contextual factors and the pervasiveness of incidental affect, valuable insights might be gained from combining these two research areas and studying the influence of affect on consumption.

Although no food companies would want to discourage consumers from purchasing their products, it is in their interest to understand how moods influence consumers' food consumption. For example, overconsumption can lead not only to weight gain but also to rapid satiation and delayed repurchasing (Inman 2001). Over the long run, helping consumers better control their consumption could also help promote more favorable attitudes toward the brand and company. This may result in what Rothschild (1999) refers to as a "win-win" policy-sensitive solution for both companies and consumers.

In this research, we examine how different discrete affective states (sad versus happy) influence consumption and whether this relationship is attenuated by nutritional information and product type (hedonically rewarding versus less so). Our research makes five important contributions. First, we show that incidental affect—sadness and happiness—influences food intake within a general population and not simply within select segments (Greeno and Wing 1994). Second, we show that nutritional information can effectively moderate the impact of incidental affect on consumption. Third, we find that the consumption patterns for people experiencing different emotions are dependent on the nature of the food product (hedonic versus less hedonic). Fourth, we establish the theoretical framework underlying this phenomenon and show that an integrative mood management and mood evaluation framework (Andrade 2005) accounts for this relationship more effectively than a self-regulation explanation (Baumeister, Heatherton, and Tice 1993). Fifth, we offer useful implications for public policy officials, health care professionals, and consumers who are interested in controlling their food intake. In turn, these findings become relevant to brand managers who are increasingly being held accountable for contributing to the obesity problem (Ellison 2003).

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In developing the framework for this investigation, we extend Andrade's (2005) work in three important ways. First, we manipulate specific, discrete emotions (sadness, happiness) rather than generalized positive and negative affective states. Most research in marketing has adopted a valence-based approach to conceptualize affect and has examined the impact of general positive and negative affective states on decision processes. However, recent research has demonstrated the importance of examining specific emotions rather than global (positive–negative) feelings (DeSteno et al. 2000; Garg, Inman, and Mittal 2005). Our work contributes to this growing body of literature.

Second, we show that whether a cue is interpreted as mood lifting or mood threatening depends on the person's affective state. Our findings suggest that happy people treat hedonic products, such as buttered popcorn and M&M's, as a mood-threatening cue and avoid them, whereas sad people consider them mood uplifting and overconsume them (relative to a control group). This is especially important from the perspective of policy makers who want to understand how consumers react to different food products to develop appropriate policies and interventions. In addition, we show that there is interdependence between mood state and product type (hedonic versus less hedonic), or a "product–affect asymmetry."

Third, in contrast to Andrade's (2005) work, we posit that though gender may be an important variable in understanding consumption patterns, it fails to be the distinguishing factor when restrained eaters (dieters) are removed from the sample. In keeping with much of the research in the consumption domain, Andrade shows a significant gender effect. Specifically, he finds that whereas women consider a product such as chocolate to have mood-changing properties, men do not. Our work provides an important caveat to this research and suggests that consumption as a mood management tactic seems to be prevalent in the general population, regardless of gender.

We begin by summarizing relevant research on incidental affect and consumption and by contrasting the affect regulation and affective evaluation model (Andrade 2005) with a self-regulation failure explanation. In support of affect regulation, three studies show that when people are sad, excessive consumption of a hedonic product is tied to mood management motivations, but lower consumption of a less hedonic product is linked to affective evaluation. We observe the reverse pattern for happy people. We close with a discussion of the implications for four key stakeholder groups: managers, policy makers, health care professionals, and consumers.

Literature Review and Hypothesis Development

Although it is well established that incidental affect influences many dimensions of consumer behavior (Mayer et al. 1992), most of the existing research has focused on the influence of generalized negative or positive affect on aspects of consumption, such as food preference and choice in specific groups (e.g., clinically depressed people, dieters). There is little nonanecdotal evidence that specific

affective states (e.g., sadness and, especially, happiness) influence the amount of food consumed in the general population (cf. Tice, Bratslavsky, and Baumeister 2001).

Recent research has hinted at a possible relationship between affect and consumption. For example, Woodruffe (1997) examines compensatory consumption in women's shopping behavior. Her findings suggest that shopping offers a means of compensation for some women when they are in a negative affective state. Participants in Mick and DeMoss's (1990) study also suggest that certain food products (e.g., ice cream, hot tea) are a form of compensatory consumption. However, Wansink, Cheney, and Chan (2003) suggest that this effect can vary according to a person's mood state. Importantly, in contrast to the current research, these studies focus on preference for certain food products and do not try to ascertain whether affect influences the amount consumed. We now discuss the theoretical framework that helps us establish the link between affect and consumption.

The Integrative Affective Evaluation and Affect Regulation Framework

Andrade's (2005) integrative approach suggests that rather than treating affective evaluation (e.g., mood congruency) and affect regulation (e.g., mood management theory) theories as being in opposition to each other, certain contingencies can explain when one versus the other will be operational. Affective evaluation theories propose that people's current states influence their evaluations, judgments, and actions in an affect congruent manner. That is, people experiencing positive affect have a favorable appraisal of the environment, which results in congruent behavior and promotes action or a more proactive approach. In contrast, people experiencing negative affect have a less favorable appraisal of the environment, which results in congruent behavior and impedes action or leads to a more passive approach. Conversely, affect regulation theories propose a more dynamic outlook in which people experiencing sadness look for options to repair their mood state, leading to a more action-oriented approach. Similarly, people experiencing happiness are motivated to maintain their mood state, leading to a more passive approach in which they refrain from action to avoid potentially mood-threatening consequences of those behaviors.

What are the circumstances under which one of these two processes, affect regulation and affective evaluation, dominate? Andrade (2005) proposes multiple moderators but suggests that the most critical aspect that separates the two processes is whether the activity/behavior that the person is considering has mood-changing properties. He argues that when mood-changing cues are present in the environment, people will be more likely to use mood management strategies. When mood-changing cues are not salient, people will be more likely to follow affective evaluative strategies and assess things/actions in congruence with their mood state. Tice, Bratslavsky, and Baumeister (2001) make a similar argument and find that people respond to distress by eating more fattening, unhealthful snack foods, but this tendency is reversed if they believe that eating will not change their mood state. Other studies similarly suggest

that people engage in mood management when a mood-changing cue is present (e.g., Mick and DeMoss 1990; Woodruffe 1997).

Overall, these studies provide some support for the mood management hypothesis in the presence of a mood-changing cue/opportunity (e.g., information, comfort food, shopping) and suggest that people in a sad state try to move away from their state, whereas people in a happy state try to be more protective of their state. As a result, we argue that happy people are more likely to try to maintain their positive state by refraining from consuming food items that might make them regret their consumption later (e.g., fattening or otherwise unhealthful food items). In effect, people in a happy affective state should avoid overeating both because they do not need food to feel emotionally better and because they do not want it if the consequences could make them feel emotionally worse. This suggests that they should consume less of a hedonic, mood-altering product than sad people.

Wansink, Cheney, and Chan (2003) find that happy people prefer more healthful food products. If we examine this finding from the perspective of Andrade's (2005) framework, it seems likely that happy (versus sad) people will be more likely to consume a food product whose perceived hedonic properties are not dominant or are relatively less prominent and, thus, does not possess the same perceived mood-changing properties as a hedonic product, such as M&M's or buttered popcorn. This is because in the absence of a mood-changing cue, the affective evaluative processes come into play, which should lead to people behaving in congruence with their mood state. Thus, happy people's positive evaluations of the environment and the product should lead them to eat more, whereas sad people's negative evaluations of the same should result in lower consumption. Thus, we expect the consumption pattern for a hedonic product to reverse for a relatively less hedonic product.

Compared with happy and sad people, those in a neutral affective state have neither a need for mood repair nor a need for mood maintenance. Thus, their consumption levels should fall somewhere in between those of sad and happy people for both the products. That is, they should consume more than happy people but less than sad people for a hedonic food product, and they should consume less than happy people but more than sad people for a less hedonic food product. This leads to our first two hypotheses. We test H_1 in the preliminary test and two studies, and we test H_2 in Study 2.

H_1 : Incidental affect influences people's consumption levels, such that for a hedonic product, (a) consumption levels are lower for people in a happy state than for people in a sad state, and (b) consumption levels for people in a neutral affective state fall between the levels for sad and happy people.

H_2 : Incidental affect influences people's consumption levels, such that for a less hedonic product, (a) consumption levels are lower for people in a sad state than for people in a happy state, and (b) consumption levels for people in a neutral affective state fall between the levels for sad and happy people.

A critical distinction between this theory and the self-regulation failure hypothesis (e.g., Baumeister, Heatherton, and Tice 1994) is in the consumption pattern that is predicted for these affect conditions across product types (hedonic versus less hedonic). The self-regulation stream of research has often shown how obese people, dieters, depressed people, and clinically ill people (e.g., those suffering from bulimia nervosa) are likely to break down under emotional stress and overconsume (e.g., Greeno and Wing 1994). Thus, although both theories predict that sad people should consume more of a hedonic product than happy people, the predictions diverge when a less hedonic product is considered. Unlike the self-regulatory failure explanation, the integrative framework (Andrade 2005) predicts that sad people should consume less when they are offered a less hedonic product. The reverse should occur for happy people because the more positive evaluation of the environment should lead to greater consumption of the less hedonic product. This is a key distinction from self-regulation theory (e.g., Baumeister, Heatherton, and Tice 1994), which makes the same overconsumption prediction for sad people, regardless of product hedonicity. This leads to our third hypothesis, which we test in Study 2:

H_3 : Incidental affect influences people's consumption levels, such that consumption levels are (a) higher for sad people when they are offered a hedonic product than when they are offered a less hedonic product and (b) higher for happy people when they are offered a less hedonic product than when they are offered a hedonic product.

Another robust finding in the self-regulation domain suggests that women are likely to be more restrained eaters than men and that they are more concerned about dieting and weight (Hawkins, Turell, and Jackson 1983; Rozin, Bauer, and Catanese 2003). Andrade (2005) also uses gender as one of the main factors that distinguishes whether a product such as chocolate is a mood-changing cue (he assumes that this pertains only to women). To examine this relationship further, the preliminary test and the two studies examine the influence of gender on a person's consumption. In the discussion, we elaborate on why gender might not be an important variable when examining the general population. We also explore self-regulation failure in consumption as an alternative explanation in light of our results and discuss how the integrative framework more fully accounts for the pattern of results.

Preliminary Test of the Affect-Consumption Link

The objective of the preliminary test is to examine the main effect of mood on the amount consumed. That is, this test examines how affect influences people's consumption quantity of a hedonic product, such as buttered popcorn.¹

¹We pretested buttered popcorn along with six other products (potato chips, M&M's, red grapes, an oatmeal bar, raisins, and a mixed-fruit cup) to examine people's perceptions of the products' hedonic and health aspects. The seven food products represented a mix of positive and negative nutritional value (e.g., fat content, calorie/unit, vitamins). For each product, participants indicated their level of agreement on a seven-point scale for six statements:

Specifically, we study whether manipulating sadness and happiness through the content of a movie has the predicted effect on consumption. A substantive advantage of using full-length feature films to manipulate affect is that it enables us to mimic the natural environment (e.g., the movie-going experience) in a laboratory. Another advantage is that examining the effect in a relatively naturalistic setting enables us to focus on specific affective states (e.g., sadness and happiness) rather than global affect. As discussed previously, we expect that sad people will attempt to repair their negative state, leading them to consume more than happy people.

Procedure

To induce the relevant affective state, participants watched full-length movies that evoked positive or negative affect. We used a one-factor, two-level, within-subjects, counter-balanced design in which half of the participants saw a happy movie and a sad movie on two consecutive days and the other half saw them in the reverse order. Participants were recruited for the two-hour, two-day study and were told that we were interested in their evaluations of the movies. They were not told which movies they would be viewing. We induced the sad state by having participants watch *Love Story*, and we induced the happy state by having them watch *Sweet Home Alabama*. We selected these films because they could be matched on several key variables, such as running time, quality (critic ratings), box office success, and broad content area (i.e., both are based on a romantic relationship). Subsequent manipulation checks established that the two movies were successful in inducing the relevant affect. The section on manipulation checks discusses this issue in greater detail.

Thirty participants completed the study by participating on both days. On arriving for the study, participants were randomly assigned to one of two viewing rooms. The viewing rooms were set up with couches and stuffed chairs and were decorated to look like family rooms. Five to eight people at a time viewed the movies, which were shown on a large 28-inch television using a VCR. Before the movie began, each participant was given a freshly popped, large bucket of microwave popcorn (buttery and salty) and a selection of noncaloric drinks (diet soda or water). Each

“makes me feel good,” “tastes great,” “lifts me up when I am down,” “is pleasurable,” “is comforting,” and “is healthy.” Five of these items (except “is healthy”) constituted the hedonic factor, and we averaged them to give the hedonic score for each food product. Reliability for all products was acceptable ($\alpha > .78$), except for potato chips ($\alpha = .59$), which we dropped from further analysis. Buttered popcorn (4.09) and M&M’s (4.22) had the highest means on the hedonic dimension, and the difference between the two means was not significant ($t = .44$, n.s.). Furthermore, buttered popcorn and M&M’s were both perceived as more hedonic than the oatmeal bar and raisins ($p < .05$). Moreover, M&M’s were perceived as more hedonic than even the mixed-fruit cup ($t = 2.96$, $p < .05$). On the health dimension, both M&M’s and buttered popcorn were perceived as less healthful than all the other alternatives ($p < .0001$) but comparable to each other (2.23 versus 1.87; $t = .90$, n.s.). Overall, these results establish that both buttered popcorn and M&M’s are perceived as the most hedonically rewarding but the least healthful products among those tested.

bucket of popcorn had been weighed before the movie began, and each contained an average of 180 grams of popcorn. Pretests indicated that this size was large enough that people would not finish the popcorn.

At the conclusion of each movie, participants were asked to indicate their assessments of the movie (1 = “sad, negative, not uplifting,” and 9 = “happy, positive, uplifting”). The same questions were then asked with respect to their affective state. They were also asked to describe what it was about the movie that made them either happy or sad. After they left, their container was weighed, and this weight was subtracted from the original weight to determine the amount of popcorn consumed. The procedure for the following day was the same, except that people saw the alternate movie, and after they completed the affect questionnaire at the end of the film, they were further asked to indicate on nine-point scales (1 = “unaware, little attention,” and 9 = “aware, much attention”) the extent to which they paid attention to how much they ate and were aware of how much they ate. They were also asked to indicate at which movie (*Love Story*, *Sweet Home Alabama*, or neither) they thought they ate more popcorn.

Results

Because we used the content of the movies to manipulate affect, it was first necessary to determine that the two movies had the intended effect of inducing either sadness or happiness. Cronbach’s alpha for the three affect measures provided adequate convergence ($\alpha_{\text{movie}} = .65$, $\alpha_{\text{affect}} = .59$). We then averaged the three measures to form a composite score for the perception of the movie and a composite score for the affective state the movie induced. Paired t-tests conducted on these scores verified that the movie scores for the happy movie versus the sad movie were significantly different ($M_{\text{sad}} = 4.50$ versus $M_{\text{happy}} = 7.02$; $t_{29} = 4.60$, $p < .01$). Similarly, the difference in the scores for the affective state induced by the two movies was significantly different ($M_{\text{sad}} = 4.10$ versus $M_{\text{happy}} = 7.33$; $t_{29} = 7.03$, $p < .01$).² Thus, the movies were successful in manipulating the desired emotions.

To test whether consumption levels differed across the two movies for the same people, we conducted a repeated measures analysis of variance (ANOVA) in which movie was a within-subjects factor and order, session time, and gender were covariates. As we predicted, participants consumed significantly more (28% more) while watching the sad movie than while watching the happy movie ($M_{\text{lovestory}} = 124.97$ grams versus $M_{\text{sweethome}} = 97.97$ grams; $F(1, 26) = 15.87$, $p < .01$), but none of the other main effects or interactions were significant. That is, this analysis revealed that the differences did not vary with the order of the movie ($F(1, 26) = .58$, $p = .46$), gender ($F(1, 26) = .36$, $p = .55$), or the session time (afternoon, evening; $F(1, 26) = 1.31$, $p = .26$).

A reason some people overeat is because they fail to monitor their intake effectively. For example, people may

²We also tested the differences on the sad–happy dimension alone, and the analysis indicated that for both the movie and the affect induced, the differences were significant ($t_{29} = 2.95$, $p_{\text{movie}} < .01$; $t_{29} = 9.29$, $p_{\text{affect}} < .01$).

tend to overeat while watching television, during which they are typically not conscious of their consumption (Baumeister, Heatherton, and Tice 1994). However, differences in monitoring do not account for our results, because participants did not monitor their consumption any differently across the two movies. Because we tested differences in consumption in a within-subjects setting, this test makes a persuasive argument in support of our thesis.

Using actual program content to manipulate affect has important practical implications because it shows how the content of a movie, television program, or perhaps even reading material can induce affect that has subsequent consumption implications. Conversely, using content to manipulate affect has its drawbacks. First, the treatment and consumption were concurrent, which makes it more difficult to argue a cause-effect relationship between the two. Second, some study participants might have known that *Sweet Home Alabama* is a happy movie and that *Love Story* is sad, so it could be argued that the mere anticipation of the forthcoming affect might have influenced consumption. Third, although the manipulation checks established that the movies were successful in manipulating the relevant affect, a movie cannot maintain the same affective tone for the entire period (100-plus minutes), and a movie necessarily associates mood with specific content. However, although mood manipulations are typically confounded with content, feelings have been shown to guide judgment and behavior independent of explicit thoughts (Pham 2004). Finally, a limitation of the current test is the low alphas for the self-reported affect measures. To address the concerns that can arise in such a naturalistic setting, Study 1 examines all three specific states—sadness, happiness, and neutral—using a different manipulation. Furthermore, Study 1 examines whether nutritional information acts as a moderator for this effect.

Study 1: How Nutritional Information Influences Mood-Related Consumption

One of the objectives of Study 1 is to replicate the findings of the preliminary test and to extend them by including a neutral state and testing H_1 in a more tightly controlled setting with a different affect manipulation. This establishes the robustness of our results. Second, the inclusion of the neutral affective state provides a baseline for the effect. This is important because differences in consumption across the positive versus neutral affect conditions support the mood management hypothesis over the self-regulatory failure explanation (the latter predicts no differences across the two conditions, because both happy and neutral people should be equally in control). A third objective of this study is to determine whether the presence of nutritional information attenuates the influence of affect on consumption.

The Moderating Role of Nutritional Information

The observation that consumption can be widely influenced by product-related factors is further supported by the findings related to nutritional labeling and product labeling (Balasubramanian and Cole 2002). Lenahan and colleagues

(1973) find that consumers believe that they benefit from nutritional information not only because they can choose a better product but also because they believe that it makes food manufacturers more accountable for the nutritional quality. When information is easy to understand, consumers tend to use it (e.g., Moorman 1990, 1996).

Although people may pay attention to nutritional data and may value positive nutrients, they are sometimes willing to trade off nutrition for taste in various product categories (Baltas 2001). Although researchers have examined the use of nutrition information, they have not examined how the focus on nutrition information might vary under different affective states. Moreover, they have not linked it to consumption. This possible linkage is becoming increasingly important. For example, restaurants are under pressure to provide nutritional information to their patrons (McLaughlin et al. 2003), and the FDA has begun negotiations with the restaurant industry to lay out standards for nutritional information displays in restaurants (Wilde 2003). However, it is not known whether such legislation will have the intended impact on consumption, because it is not known whether appropriate nutritional information can moderate consumption.

Research has shown that people tend to focus on negative information more than positive information (Russo et al. 1986); thus, we focus on a hedonic, negative, nutrient-rich product. We argue that when nutritional information is made salient to consumers, it will cause the consumption levels for the three groups (happy, sad, and neutral) to converge. Specifically, providing nutritional information should make the negative consequences of overconsumption more salient to people and negate any mood-changing benefit they might have otherwise expected from the consumption. Essentially, the negative consequences of consumption should outweigh the positive consequences when the (negative) nutritional information is made salient. Because happy people are already avoiding consumption to protect their affective state, we expect a decrease in consumption for sad and neutral people when they are exposed to negative nutrition information for a hedonic food product (which has negative nutrients), such as buttered popcorn:

H_4 : The presence of nutritional information for a hedonic product attenuates the influence of incidental affect on individual consumption levels, such that happy, sad, and neutral people tend to converge to similar levels of consumption.

Procedure

Participants were recruited from the undergraduate population of a large mid-Atlantic university. One hundred ten students participated in the study in exchange for extra credit. We used a 3 (affective state: sad versus neutral versus happy) \times 2 (nutritional information: absent versus present) between-subjects design. Participants were randomly assigned to one of the six cells and were scheduled in groups of five. On arrival, they were assigned seats in separate cubicles in a large room.³ The complete task took between 30 and 40 minutes.

³This controls for an alternative, social influence explanation for the results in Study 1.

The study consisted of three parts: the information examination task and/or the filler task, the affect-inducing part, and a story-reading task. To disassociate the nutritional information task from the affective induction, the former was presented to the participants as a “style-of-processing” study, and the latter was presented as a separate “life-events” survey. The participants completed the style-of-processing study in which they either examined the label with nutrition information for a bag of unpopped popcorn along with a filler task (information-present condition) or just answered the filler task (information-absent condition). The label was designed to resemble an actual product label as closely as possible. After examining the label, participants indicated how easy it was to process the information and how much fat, saturated fat, and calories they thought a serving size of popcorn has compared with similar amounts of other food products they consume.⁴ The filler task consisted of questions about the manner in which participants carried out mental tasks, such as learning words, reading, and imagination (Fitzsimons and Shiv 2001). The participants were given the information before the affect induction to avoid the mood state influencing their information-processing capabilities.

We then administered the incidental affect manipulation to participants using a methodology that Lerner and Keltner (2001) refined. The manipulation consisted of two questions. The first question asked participants to describe three or four things that make them happy/sad, depending on the assigned affect condition. The second question then asked them to describe in detail the one thing that makes (or made) them most happy/sad. They were encouraged to describe the incident in such a way that another person reading the description might experience the same affect. Participants in the neutral condition were asked to first describe three to five activities they did that day and then to describe in detail what their typical day was like and the activities they undertook on a routine day (e.g., Garg, Inman, and Mittal 2005). Emotions elicited by such manipulations last long enough to exert influence on subsequent tasks (Lerner and Keltner 2001).

The final task was called an “imagination and information-processing” study. It required participants to read a two-page event narrative and rate a series of statements on seven-point scales (1 = “strongly disagree,” and 7 = “strongly agree”). The statements assessed how well they could relate to the story, how happy/sad they thought the story was, and how interesting they found the narrative to be. The purpose of this task was to give participants time to consume popcorn, which had been offered to them as a refreshment along with a choice of diet soda and water after the affect induction. We pretested the narratives for their affective tone and designed them to help maintain each participant’s affective state (e.g., a participant in the happiness condition was asked to read a happy event description).⁵

⁴The means for the nutrients were between five and six on a nine-point scale, indicating that participants perceived buttered popcorn as similar or only slightly higher in fat, calories, and saturated fat than most products they consume.

⁵For participants who read the happy story (n = 10), the happiness score was higher than the sadness score (5.80 versus 2.13;

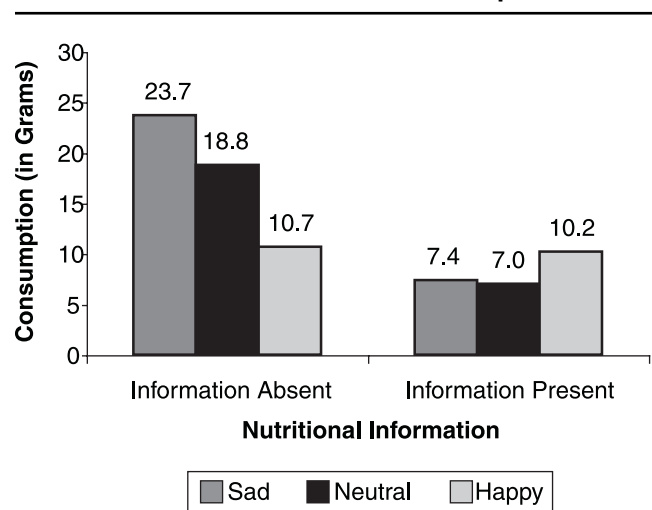
The happy story described the chance reunion of four friends after many years and an enjoyable evening they spent together. The sad story talked about the then-recent Columbia shuttle disaster and the feelings of loss and grief the families of the astronauts were experiencing. Finally, the neutral narrative described a day in the life of a typical undergraduate student, focusing on daily activities, such as getting ready, attending classes, going to the gym, and watching television.

Toward the end of the final task (i.e., the imagination and information-processing study), participants answered additional questions about the perceived taste of the popcorn, the time elapsed since their last meal, and their average frequency of popcorn consumption. They were also asked to guess the objective of the studies and whether they thought that the different studies were connected in some way. Eight participants partially guessed the purpose of the study, and we excluded them from the analysis. After the completion of the study, participants were thanked for their participation, and their bags of popcorn were collected. As in Study 1, each bag of popcorn had been individually weighed beforehand and was reweighed to obtain the post-consumption weight.

Results

Although we expected that people in a happy affective state would consume less than those in a sad affective state, we also believed that these differences would be attenuated when people were given nutritional information. As Figure 1 indicates, the results were consistent with our expectations. To test whether these differences are significant, we conducted a 3 (affective states: sad, neutral, and happy) × 2

FIGURE 1
Moderating Role of Nutritional Information on the Influence of Affect on Consumption



$t_9 = 5.78, p < .001$), whereas for participants who read the sad narrative (n = 10), the sadness score was higher than the happiness score (2.26 versus 4.63; $t_9 = 3.96, p < .01$). As we expected, participants who read the neutral narrative (n = 9) showed no difference between their happiness and their sadness scores (3.22 versus 3.40; $t_8 = .33, n.s.$).

(nutritional information: present versus absent) ANOVA, in which grams consumed was the dependent variable and perceived taste, level of hunger, and gender were covariates. As H_4 predicted, a significant main effect of the presence of nutritional information on consumption levels emerged ($F(1, 100) = 13.33, p < .01$). Specifically, the average consumption level for participants with no information was 17.98 grams, whereas consumption for those who were given the nutritional information was only 8.25 grams. The main effect for incidental affect was not significant, but as we predicted, the interaction between affect and information was significant ($F(2, 100) = 4.41, p < .05$). That is, when nutritional information was not salient, people in the sad condition consumed the most, and those in the happy condition consumed the least. In this model, both taste and hunger emerged as significant factors ($F(1, 100) = 5.96, p_{\text{taste}} < .05; F(1, 100) = 5.96, p_{\text{hunger}} < .05$). This indicates that though hungry people and those who perceive the popcorn as tastier might consume more, it does not explain our results. Furthermore, as we expected, gender was not a significant factor ($F(1, 100) = .05, p = .82$).

H_1 predicted that incidental affect would influence consumption level such that people in a sad state would eat the most, those in a happy state would eat the least, and those in a neutral state would fall in between these states. To test this, we focus on the information-absent group. As Figure 1 shows, participants in the sad condition consumed the most, whereas those in the happy condition consumed the least (23.7 grams versus 10.7 grams). As we also predicted, those in the neutral condition fell between the happy and the sad groups in terms of their consumption (18.8 grams). One-tailed pairwise comparisons in the information-absent condition reveal that the difference in consumption between the sad and the happy groups is significant ($t_{104} = 3.00, p < .01$), as is the difference in consumption between the happy and the neutral groups ($t_{104} = 1.92, p < .05$), in support of the mood management hypothesis. The difference between the sad and the neutral groups is not significant, but it is in the right direction; people in the sad condition consumed 25% more on average than those in the neutral condition. Overall, the results show that the consumption levels are in a descending order from sad to neutral to happy people, as H_1 predicted.

We also predicted that the presence of nutritional information would attenuate the impact of affect on consumption such that the consumption levels of the three groups would tend to converge (H_4). When (negative) nutritional information was provided, consumption levels dropped for participants in the sad condition (7.4 grams versus 23.7 grams) and the neutral condition (7.0 grams versus 18.8 grams), but levels were unaffected in the happy condition (10.2 grams versus 10.7 grams). It appears that happy people are already managing their consumption, so providing such information has little impact. In contrast, the product information prevented people in the sad and neutral affect conditions from overconsuming this product. Thus, nutritional information serves as a boundary condition to the influence of affect on consumption, in support of H_4 .

Using a more tightly controlled setting in which the affect induction precedes consumption, Study 1 tests and

finds support for H_1 and H_4 and not only shows that incidental affect significantly affects consumption levels at the individual level but also establishes nutritional information (when salient) as a moderating factor for the influence of affect on consumption. Although differences emerged between the happy and the neutral participants in the information-absent condition, Study 1 was not designed to provide direct evidence to distinguish one theoretical mechanism from the other. Study 2 replicates and extends the results from the preliminary study and Study 1 and establishes the theoretical underpinnings responsible for this phenomenon.

Study 2: How Product Type Influences Mood-Related Consumption

One of the objectives of Study 2 is to validate H_1 further by replicating the consumption pattern we found in Study 1 for buttered popcorn with another hedonic product (M&M's). This will establish the robustness of our results and rule out product-specific effects. Second, and more important, Study 2 tests H_2 and H_3 by examining the pattern of consumption across the three affective states (sad, neutral, and happy) with a less hedonic product (raisins) as well.⁶ This is important because the comparison of the effects across a positive and a negative nutrient product will help us understand the underlying theoretical mechanism—the integrative framework versus the self-regulation failure—that is responsible for the influence of affect on consumption.

Procedure

Participants were recruited from the undergraduate population of a large southern university. We used a 3 (affective state: sad versus neutral versus happy) \times 2 (product type: hedonic M&M's versus less hedonic raisins) between-subjects design. One hundred thirty-nine students who had indicated they were not currently following a diet participated in the study in exchange for extra credit. To avoid the demand effects associated with asking potential participants if they were on a diet before the study, we allowed all students to participate, and we eliminated from the analysis those who indicated that they were on a diet at the end of the study ($n = 48$).

The procedure for this study was similar to that followed in Study 1. Participants were randomly assigned to one of the six cells and were scheduled in groups of eight. On arrival, they were assigned seats in separate cubicles in a large computer lab. As part of a preliminary questionnaire, participants completed baseline measures of affect (the Positive and Negative Affect Schedule; see Watson, Clark, and Tellegen 1988). After the preliminary questionnaire, we manipulated incidental affect using the same methodology

⁶In the same pretest, products such as the mixed-fruit cup, red grapes, and raisins were perceived as more healthful alternatives. Raisins are notable because, of these three products, raisins were perceived as the least hedonic food product ($p < .05$, for all except oatmeal bars); indeed, they were perceived as relatively healthful (they ranked third on the health dimension).

as in Study 1 (Lerner and Keltner 2001). One difference in the “imagination and processing study” was that the Columbia shuttle disaster had receded somewhat from the public memory. Thus, the sad narrative now described the tragic loss of seven children in a fire, along with the emotional responses of eyewitnesses. Again, we pretested the sad and neutral narratives for their affective tone.⁷

To control for potential confounds, participants answered a series of questions in the final questionnaire about the time elapsed since their last meal, the extent to which they felt hungry or full before and after the studies, their dieting status, and whether they tried to restrict or monitor their consumption. Finally, to collect emotion manipulation measures, participants reported the feelings they experienced when writing about an autobiographical event pertaining to a specific emotion (sad, happy, or neutral). To avoid revealing our interest in specific emotions, the form asked about 18 affective states, only 12 of which were of interest. “Gloomy,” “upset,” “downhearted,” and “sad” constituted the sadness factor ($\alpha = .94$); “unemotional,” “indifferent,” “neutral,” and “unaroused” constituted the neutral factor ($\alpha = .82$); and “happy,” “elated,” “joyful,” and “amused” constituted the happy factor ($\alpha = .83$). Responses ranged from “did not experience the emotion at all” (0) to “experienced the emotion more strongly than ever before” (8). Participants also answered questions about whether the emotion they felt was negative/positive and pleasant/unpleasant on a nine-point scale. Individual ANOVAs on reported experience of sadness ($F(2, 136) = 154.26$), happiness ($F(2, 135) = 88.20$), and neutral ($F(2, 135) = 22.77$) indicated strong emotion induction ($p < .0001$). Participants then answered a set of demographic measures pertaining to their sex, age, and race/ethnicity. After the completion of the study, participants were thanked for their participation and dismissed. As in Study 1, each bowl of food product was individually weighed before and after consumption to obtain the amount consumed (in grams).

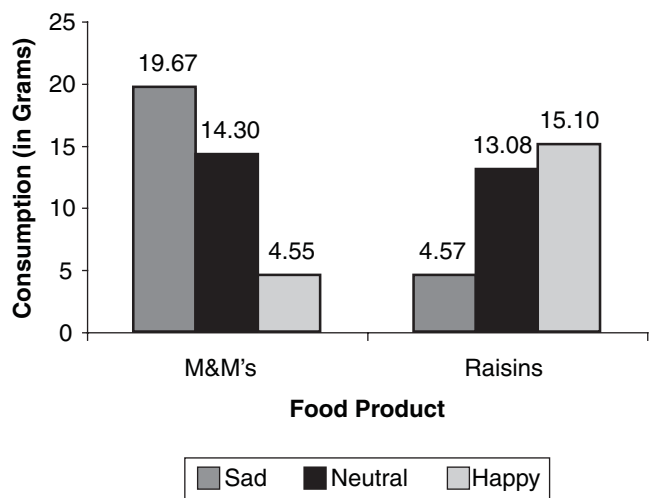
Results

Although we expected that different emotion groups in the hedonic unhealthy product condition (M&M’s) would replicate the pattern found in Study 1 (i.e., happy people would consume less than sad people), the key contrast in this study is in the relatively less hedonic but healthful product condition (raisins). On the basis of the integrative framework, we argue that the consumption patterns should reverse for raisins such that happy people will consume more than sad people. As Figure 2 indicates, the results are consistent with our expectations.

To test whether these differences are significant, we conducted a 3 (affective states: sad, neutral, and happy) \times 2 (product type: M&M’s versus raisins) ANOVA, in which

⁷For participants who read the sad narrative ($n = 22$), the sadness score was higher than the happiness score (6.27 versus 1.06; $t_{21} = 38.78, p < .0001$), and for the neutral narrative ($n = 17$, $M_{\text{sad}} = 3.31$ versus $M_{\text{happy}} = 3.00$, n.s.), there were no differences between the two scores.

FIGURE 2
Moderating Role of Product Type on the Influence of Affect on Consumption



hours since last meal, level of hunger at the beginning (Hunger 1) and at the end (Hunger 2) of the study, self-restraint items (e.g., participants’ tendency to “eat sensibly in front of others and splurge alone” and how many pounds over their ideal weight they felt they were at their maximum weight), gender, and age were covariates. The dependent variable in the analysis was the amount of food product consumed (in grams). Neither the main effect of incidental affect nor that of product type was significant, but as we expected, the interaction between affect and product type was significant ($F(2, 125) = 5.14, p < .01$). None of the covariates were significant. In particular, similar to the previous two studies, the effect of gender on consumption was not significant ($F(1, 125) = 1.15, p = .29$). This bolsters our conclusion that in the general population, consumption of hedonic alternatives is used to manage the mood state that a person is in, regardless of gender.

H_1 and H_2 predicted that affect and product type would interact such that happy (versus sad) people would consume more of the less hedonic food product (raisins), and sad people would consume more M&M’s, thus replicating the findings from Study 1 and the preliminary test. As Figure 2 shows, participants in the sadness condition consumed more M&M’s than those in the happiness condition (19.67 grams versus 4.55 grams), and this difference was significant in a one-tailed t-test ($t_{42} = 2.60, p < .01$). This pattern is reversed for raisins: Happy participants consumed the most, and sad participants consumed the least (15.10 grams versus 4.57 grams; $t_{45} = 1.88, p < .05$). People in the neutral condition fell between the happy and the sad groups in terms of their consumption for both products ($M_{\text{M&M's}} = 14.30$ and $M_{\text{raisins}} = 13.08$). In addition, in a one-tailed t-test, the difference between the sad and the neutral groups is significant for raisins (4.57 versus 13.08; $t_{49} = 1.65, p = .05$), and though it is not significant for M&M’s ($p = .15$), it is in the right direction; people in the sad condition consumed 38%

more than the average consumption for those in the neutral condition, as in Study 1. Moreover, neutral people consumed more M&M's than happy people (14.30 grams versus 4.55 grams), and this difference was significant in a one-tailed t-test ($t_{39} = 1.61, p = .05$). Thus, as H_1 and H_2 predicted and in line with the integrative framework, the consumption levels across the affective states are in the predicted direction for both products, with the levels in a descending order from sad to neutral to happy for M&M's and in the reverse order for raisins. Next, we discuss the theoretical mechanism underlying these results.

H_{3a} proposed that if the integrative framework rather than self-regulation failure were the responsible mechanism, sad people should consume more of the hedonic product than the less hedonic one. As we predicted, a one-tailed t-test finds that the consumption levels for sadness are significantly different across the two products ($t_{50} = 2.79, p < .01$). This offers direct evidence for the integrative framework and against self-regulation failure. Furthermore, H_{3b} predicted that happy people's consumption would be higher for the less hedonic product than for the hedonic product, and the results of a one-tailed t-test support this prediction ($t_{37} = 1.73, p < .05$). Thus, our results support H_3 and suggest that the integrative framework accounts for the findings rather than a breakdown in a person's self-control.

Discussion

Although prior research has investigated both incidental affect and consumption, our research illustrates the need to examine these two factors in conjunction. Given the pervasiveness of incidental affect and the necessity of consumption, it is important to understand how affect influences consumption and what responsible managers, health professionals, and consumers can do to attenuate or even negate its potentially deleterious influence. Across the preliminary test and the two studies, we manipulated specific emotional states using different methods (movies versus written induction) to test our hypothesis that in the absence of negative nutritional information, sad people consume more of a hedonic product than relatively happier people. The preliminary test used across-movie differences to determine whether this key relationship between affect and consumption emerged in a within-subjects context. We found that the same people consumed approximately 30% more when they watched a sad movie than when they watched a happy movie. More than three-quarters of the participants exhibited an increase in consumption in the sad film versus the happy film, and one-half of the participants exhibited a substantial (more than 20 grams) increase.

A key purpose of Study 1 was to test whether nutritional information could attenuate affect's influence on consumption. Whereas sad and neutral people showed a substantial decline in their consumption, happy people seemed to be uninfluenced by nutritional information. Thus, it appears that happy people are already avoiding consumption, and the presence of nutritional information does not drive their consumption any lower, as the mood management hypothesis predicts. Conversely, sad people acted consistently with what would be expected if people wanted to indulge them-

selves to try and overcome their negative state by consuming more (in the information-absent condition).

Study 2 helps disentangle the theories—the integrative affective evaluation and affect regulation framework versus self-regulation failure—by offering evidence to suggest that the integrative framework accounts for the findings, not a breakdown in self-control. The results from Study 2 support the affective evaluation process of the integrative framework by contrasting two products that differ on the hedonic dimension. In the case of raisins, happy people consumed more than sad people. This is consistent with the predictions of the affect regulation framework, which suggests that in the absence of mood-changing cues, affective evaluation dominates, leading people to behave in congruence with their mood state (i.e., happy people have positive evaluations and tend to eat more, whereas sad people have negative evaluations and tend to eat less). Thus, this study generalizes the results across different product categories and provides critical insight into the theoretical process behind this phenomenon.

Furthermore, the studies examined whether gender influences consumption, as the findings in the self-regulation domain suggest. However, no gender effects were evident in any of our studies. This implies that managing affect is a phenomenon independent of gender and that though gender might play a role when we consider restrained eating (dieters), in the general population, both men and women use consumption as a way to manage their affective state.

The link between mood and consumption has been puzzling for health care professionals, consumers, managers, and policy makers who are interested in better controlling food intake. Although recent work in comfort foods has shown that people are more likely to turn to comfort foods when they are in negative moods than when they are in positive moods, this research has not indicated how much they eat in these specific situations. The following sections discuss implications of our findings for different stakeholders—namely, managers, public policy makers, consumers, and health care professionals (see Table 1).

Implications for Managers

For farsighted food marketers, the goal is not simply to trick people into gorging themselves on a single occasion. Although this might appear to be the one-period game-theoretic solution to the unscrupulous food marketer, it may well backfire in a long-term, multiperiod setting. The potential for increased sales volume may be overwhelmed by satiety effects (e.g., Inman 2001) and lower brand equity when consumers eventually realize the ploy. When addressing food and overeating, it is important for firms to develop profitable win-win solutions to help consumers better control what they want to eat. No company would want to modify a product in a way that discourages consumers from purchasing it or consuming it. However, it may be in a company's best interest to help consumers better control how much they consume in a single setting. For example, the results from a survey of 770 North Americans indicated that 57% of the participants would be willing to pay up to 15% more for portion-controlled items (Wansink and Huck-

TABLE 1
Implications for Consumers, Managers, Public Policy Makers, and Health Professionals

| | Consumers and Health Care Professionals | Managers | Public Policy Makers |
|--|--|--|---|
| General View | <ul style="list-style-type: none"> •People overeat food for many reasons, including to manage mood. They eat to repair bad moods and to maintain good moods. •Overeating because of mood can have positive short-term and negative long-term consequences. •By eating less, people can probably still moderate negative moods. | <ul style="list-style-type: none"> •Overconsuming a food on a single occasion can lead to satiation, burnout, and longer repurchase periods. •The marketing goal is to increase intake incidence, not volume per occasion. •There is potential to develop profitable win-win opportunities by helping people eat less per occasion. | <ul style="list-style-type: none"> •Overeating is not always unintentional, particularly in good moods. •Nutritional information has its place but will be more effective with some people (those in bad moods) than with others. •It is important to encourage moderation and not avoidance. |
| Finding 1: Incidental Affect: People tend to eat more when sad than when happy. | <ul style="list-style-type: none"> •If people are in a sad mood or if they are taking medication for depression, they can (1) eat more healthful foods and (2) preplate their portions to prevent unintentional overeating. •People should realize that the guilt that can follow overeating can exacerbate negative moods. •People should remind themselves that they can still enjoy the mood-related benefits of food by eating less and enjoying it more. | <ul style="list-style-type: none"> •Targeting “sad” media programming may increase consumption incidence relative to competing products. •Such targeting should be accompanied with a nutrition message or an eat-less-enjoy-it-more message. •Drug companies selling antidepressants could consider a warning that depression can lead to overeating and to choose products and portion sizes wisely when taking medication. | <ul style="list-style-type: none"> •FDA warnings for antidepressant medications could also warn of the danger of overeating in such a condition. •Special attention needs to be given to situations in which people are most likely to be sad and possibly overeat. These might include various health facilities, selected cafeterias, and situations in which certain affect might be induced (e.g., movies). |
| Finding 2: Information Moderation: Nutrition information moderates consumption for sad people but not for happy people. | <ul style="list-style-type: none"> •Nutritional information influences how much people eat when they are in sad moods more than when they are in happy moods. •When people eat in a sad mood, they should either check nutritional information or simply try to eat a more healthful food. | <ul style="list-style-type: none"> •Nutritional information (in restaurants and on packages) may be a win-win solution. It can decrease overeating among people who want to eat (those in a bad mood) but not among those who are there to celebrate. •There is less need for concern that restaurant labeling will make people in a good mood enjoy their food less. | <ul style="list-style-type: none"> •Despite assertions to the contrary, nutritional information can decrease intake under some conditions and may have a role if labeling the nutrition information on restaurant menus or on packaged goods. •Developing strategies to make nutritional information salient is an important issue. |
| Finding 3: Product-Affect Asymmetry: Effects are asymmetric across healthful and less healthful hedonic foods. | <ul style="list-style-type: none"> •People need to be aware of the tendency to overeat certain products depending on their mood state. There is a danger they can still overeat (even if it is a relatively healthful product), if they are not warned about this tendency. •People should be encouraged to eat what they want but to do so in small quantities. Although switching to more healthful foods is wise, people still need to eat smaller portions. | <ul style="list-style-type: none"> •Product burnout is possible for both unhealthful and relatively healthful products, though in different consumer groups (sad versus happy). •Focus on information related to all products in targeted mood situations, such as during programming that is often associated with affect (e.g., news shows, movies, dramas). | <ul style="list-style-type: none"> •Do not focus efforts only on indulgent foods, such as snack foods and desserts. Salience of nutritional information seems relevant for all products. •An education and legislative focus should include both healthful and unhealthful foods because both have the potential to be overeaten. |

abee 2005). Moreover, it could help prevent product “burnout” and also help promote more favorable attitudes toward the brand and company.

Our findings raise the issue of how marketers might leverage something as exogenous as a person’s mood. Although marketers cannot (thankfully) easily manipulate people’s moods, there are many ways they can locate people who are likely to be in either good or bad moods. An approach is to target media or programming that attracts or instills the targeted mood. For example, although situation comedies might attract or induce a happy mood, news programs, dramas, or documentaries might attract or induce a more negative mood. Similarly, the location or events that people attend may induce different moods. People eating at the cafeteria of a “dead-end” job may be in a more negative mood than those going out to eat at a restaurant of their choice. To help reduce overconsumption, marketers can provide nutritional information, or they can simply remind consumers to “eat less, and enjoy it more.” For pharmaceutical companies selling antidepressants, including a warning note that sad mood can lead to food overconsumption provides a public service and underscores another implied benefit of their product.

Implications for Policy Makers

Policy makers and enforcers, including the FDA and the Federal Trade Commission, have been perplexed as to how to determine their role and that of companies in the area of obesity. Most of their efforts have focused on labeling and food choice. Although much of the information indicates that labeling does not have a sizable impact on purchase behavior, our findings offer a silver lining that though nutrition information may not influence what people eat, it can influence how much certain people eat. In addition, our results suggest the potential effectiveness of nutrition labeling among people in negative moods and in certain situations in which people are most likely to be sad and possibly overeat (e.g., while watching a sad program/movie). Our findings also point to a product–affect asymmetry in which happy people can overeat relatively healthful foods (versus the control). Thus, an important question for policy makers is to assess the effectiveness of information for different products and for people in different mood states.

Research has already established that particular information formats can be easier for consumers to understand and use (Russo et al. 1986). Our findings support the idea that if information is easy to understand, it should be made available to the consumer whenever possible, including places such as restaurants and movie theatres. Away-from-home dining raises an issue of nutrition labeling in restaurants, which is of relevance to the FDA (Wilde 2003). It can help decrease overeating among people in bad moods but not influence those who want to celebrate.

However, nutritional information should not be considered a panacea, because consumers do not always notice the information and eating behaviors are often not cognitively involving. In Study 1, to test the effect of nutritional information, it was made more salient than is usually the case in real life. This can potentially be considered a limitation because people do not always pay attention to the informa-

tion even if it is present; thus, an important issue in the real world is to make information salient. Notably, the FDA recently seems to have achieved that with trans-fat information. It has mandated that beginning in 2006, all food manufacturers must make information about trans-fats available. This has received a lot of press and has gained salience in public consciousness. The same end can hopefully be achieved by promoting the findings here.

Implications for Consumers and Health Care Professionals

People overeat for many reasons, including trying to manage their mood. They eat to repair bad moods and to maintain good ones. In light of this deliberate role that eating plays, it is unreasonable to suggest that consumers simply not eat when in a bad or good mood. The results of this research show that education (information) has the greatest impact on people in a negative mood. Yet in addition to suggesting that people in negative moods are more susceptible, it also implies that they might not realize how much they actually eat (preliminary test and Study 1).

Therefore, an important implication of our findings for consumers is that they understand the role of affect in everyday consumption and how it can be better controlled to help improve their welfare. Prior research has established that recognizing the source of affect might not always be helpful, because it can lead to overcorrection (DeSteno et al. 2000). Fortunately, overcorrection in the food consumption domain is desirable in the general population (the focus of our research) and in special groups, such as dieters and overweight people (though not for groups on the other end of the spectrum, such as anorexics).⁸ When people become aware of the link between affect and consumption, they are more likely to take deliberate steps to be more conscious of how much they eat. For example, they could preplate their food, move the serving bowl or bag into the kitchen, eat only when sitting at a table, or preportion snacks.

From the consumer perspective, another important question that arises from these results is that because it is now known that people in a sad mood might use food as a hedonic reward, is it feasible to make people aware of this tendency and then to direct them toward more innocuous domains for repairing their mood, such as watching movies, exercising, or talking to a friend? Furthermore, should happy people be worried about the overconsumption of relatively healthful foods (product–affect asymmetry)? These are important questions for both health care professionals and researchers because they have major implications for dealing with rising obesity and associated health costs, and they need to be examined in greater detail.

Limitations and Further Research

In our studies, we focused on the consumption patterns of people who are experiencing different affective states. We generalize the findings across different product categories and across different settings (seminalistic and lab) using different manipulations (movies and autobiographical write-up). However, to enhance the external validity of our

⁸We thank an anonymous reviewer for pointing out this caveat.

findings, it would be useful to examine this phenomenon in a field setting, such as at a theater. Validation of the results in such a setting would provide greater credibility and generalizability.

Although we examined two moderating factors—the presence of nutritional information and the nature of the product—it is probable that other factors moderate the affect–consumption relationship. For example, further research could examine how awareness of the source of the affect (internally versus externally generated awareness) moderates this relationship. This factor has been examined in social psychology settings, but it would be useful to examine this in a more consumer research–oriented setting to ascertain its efficacy. Moreover, it would be worthwhile to observe how information moderates the consumption of a less hedonic food product, such as raisins. Another related issue for further research is to examine whether guilt due to consumption of a hedonic product influences our results. Specifically, does information salience make guilt more salient and thus reduce overconsumption in sad people?

Another direction for further research would be to examine the dependence of our results on the relationship between the construct of hedonicity and nutrition. For example, what is the consumption pattern for a food product that is low in both hedonic aspect and nutrition, such as white rice, or high in both, such as low-fat ice cream?

Pham (2004) draws on a vast array of affect literature and comments on the “logic of feelings.” He argues that contrary to common belief, relying on affect to guide judgments and behavior is not necessarily detrimental in nature and that it can actually be useful. Further research should examine the long-term consequences of consumption (e.g., eating, shopping) undertaken by people to manage their mood state. Although for some consumers, such as restrained eaters, using consumption to manage mood might lead to self-defeating behaviors (Leith and Baumeister 1996), it seems plausible that in the general population, it might be an efficient and, in the long run, an innocuous solution to deal with mood management issues and maintain a healthful, balanced outlook on life.

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