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Environmental Cues and Food Consumption

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We examine self-control dilemmas in the presence of environmental cues. Across two studies, we find that cues associated with a special event lead non-dieters to relax their self-control, but lead dieters to heighten their efforts at self-control. A third study seeks to examine the mechanisms involved in the process.

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Although prior research on hunger has identified reasons why consumers ignore internal signals of hunger (i.e. impulsiveness) and in particular when external cues are present; we extend the research to explain why hungry consumers eat more of the utilitarian product even though the hedonic is more attractive. Research on hedonic versus utilitarian consumption has shown that consumers rate a hedonic alternative higher than a utilitarian alternative when each is presented by itself, but the utilitarian alternative tends to be chosen over the hedonic alternative when the two are presented together (Okada 2005). To the degree that presenting the utilitarian and hedonic products separately but within the same survey constitutes them being looked at singularly, we would expect the preference for hedonic products to be higher than utilitarian products, this effect being magnified when consumers are hungry and the hedonic products are food. The goal of study 1 is to examine whether hedonic items, (food and non-food), are shown more preference when hungry than when not hungry. We are interested in testing whether self-control moderates the relationship between hunger and preference for hedonic food items, specifically we will examine utilitarian food and non-food item preference when hungry and not hungry. As such, in study 1 we assess whether consumers find hedonic items more attractive than utilitarian items by asking them to rate them individually under situations of low and high cognitive load and under feelings of hungry and not hungry. The results of study 1 indicate that consumers view hedonic food items as being more attractive than hedonic non-food items and utilitarian items when hungry compared to not hungry. Participants rated food items as being preferred only when they were hedonic in nature. Additionally, participants did not consider non-food items more attractive when hungry. This demonstrates that hunger impacts consumer choices when evaluating food products, however this is only applicable to hedonic food products and does not appear to extend beyond this category. Previous research indicates that high cognitive load causes us to make choices based on impulse (choosing hedonic items), which might not occur if consumer's choices were free of cognitive load. These findings suggest that cognitive load moderates the relationship between hunger and product preferences in that only under high load and hunger do consumers prefer hedonic food items. Lastly, we identified no differentiation in product preference when participants were under low load. Study 2 attempts to test our second hypothesis by measuring actual consumption, as it relates to hunger using hedonic and utilitarian food items, under conditions of high and low cognitive load. We test consumption by using hedonic and utilitarian food items (M&M's versus Carrots) under conditions of hungry and not hungry. While attempting to replicate the results of study 1 under low load, study 2 shows that when we present the food item to the participant, hunger has no impact on the preference for hedonic food item (M&M's), which is consistent with the results of study 1. Additionally, results indicate that participants are able to employ self-control tactics when hungry that allowed them to avoid eating more of the hedonic food item but allowed them to eat more of the utilitarian food item. To better understand this, study 3 seeks to replicate the results of study 2 and turn off the over consumption of hedonic food items when hungry and under high load by providing participants with calorie or no calorie information. Study 3 finds that under high load with no calorie information present, participants ate significantly more when hungry than when not hungry. Under high load with calorie information present, the difference between hungry and not hungry failed to reach significance. Additionally, when no calorie information is present and participants were not hungry, the difference between low load and high load failed to reach significance. Study 4 seeks to understand the underlying processes associated with these results.

References

- Cornier, Marc-Andre, Gary K. Grunwald, Susan L. Johnson, and Daniel H. Bessesen (2004), "Effects of Short-Term Overfeeding on Hunger, Satiety, and Energy Intake in Thin and Reduced-Obese Individuals," *Appetite*, 43(3), 253-59.
- Goukens, Caroline, Siegfried Dewitte, Mario Pandelaere, and Luk Warlop (2007), "Wanting a Bit(e) of Everything: Extending the Valuation Effect to Variety Seeking," *Journal of Consumer Research*, 34(3), 386-94.
- Menon, Satya and Barbara E. Kahn (1995), "The Impact of Context on Variety Seeking in Product Choices," *Journal of Consumer Research*, 22(3), 285-95.
- Okada, Erica Mina (2005), "Justification Effects on Consumer Choice of Hedonic and Utilitarian Goods," *Journal of Marketing Research*, 42(1), 43-53.
- Rolls, Barbara J., Edmund T. Rolls, Edward A. Rowe, and Kevin Sweeney (1981), "Sensory Specific Satiety in Man," *Physiology & Behavior*, 27(1), 137-42.
- Schachter, Stanley (1968), "Obesity and Eating," *Science*, 161(3843), 751-56.

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Extended Abstract

Individuals often face self-control dilemmas, whereby temptations interfere with the pursuit of long term goals (Fishbach and Shah 2006). Choosing between vices, which provide immediate pleasure, and virtues, which are in line with long-term goals, is likely to generate guilt and intrapersonal conflict. Along these lines, individuals often seek justification for indulging in vices to reduce feelings of guilt (Giner-Sorolla 2001). Recent research provides support for the contention that specific occasions or special events (i.e., holidays, birthdays, etc.) engender a sense of entitlement for individuals in terms of their consumption behavior; this justification cue results in a greater likelihood of relaxing self-control and selecting vices (e.g., chocolate cake) over virtues (e.g., fruit salad; Kivetz and Zheng 2006). On the contrary, such cues can also result in a heightened defensive state for people who are particularly guarding against indulgence, such as dieters.

In this research, we explore how individual differences in dieting behavior interact with the presence of an environmental cue, such as a special occasion or holiday, to either justify indulgence or bolster self-control, leading to a choice of more versus less indulgent

food items, respectively. We posit that dieters will exert more self-control when such environmental cues are present (vs. absent). We argue that for these individuals, cues involving a holiday or special event are interpreted as situations that are characteristic of indulging and, therefore, can automatically signal higher efforts at self-control. Instead of acting as justification for indulgence, these cues will act as triggers for guarding against dieters' long-term eating goals (Myrseth, Fishbach, and Trope 2009; Trope and Fishbach 2005). Additionally, we hypothesize that the absence of such cues will lead dieters to be unprepared to bolster their self-control efforts, thus resulting in a self-control failure and indulgence. On the other hand, since non-dieters do not exert the constant attempts at self-control and monitoring that dieters do, we expect that non-dieters will utilize holiday cues as justifications to indulge.

For our first study, we examined the effect of a specific environmental cue (i.e., a birthday) on people's consumption behavior. Participants were given a questionnaire in which they read about a hypothetical scenario where they were going to dinner with some friends. Half of the participants were told that the dinner was held in honor of their own birthday, while the other half were told that it was for a friend's birthday. All participants were then asked to choose the specific dessert they would order at the dinner. Dessert choices ranged from extremely unindulgent (i.e., a healthy fruit salad), to extremely indulgent (chocolate cake à la mode). A series of self-report measures followed, including measures of self-control and dieting behavior. Results support our hypotheses; dieting participants who were told that they were out to dinner in celebration of a friend's birthday chose the most indulgent dessert significantly more than dieting participants who were told that they were out to dinner celebrating their own birthday. By contrast, non-dieting participants chose the most indulgent dessert more when they were told that they were celebrating their own birthday. Additionally, we found that choice for the most indulgent option was significantly higher for dieting participants than non-dieting participants overall.

In our second study, we explored the impact of dieters' defense bolstering in the presence of a holiday justification cue on actual food consumption. We varied the saliency of the holiday cue by administering half our study on Halloween, and the other half on another day the week following the holiday. All participants were given a bag with 50 M&M candies and a questionnaire to complete. Participants were told that they could enjoy the candy as they filled out the questionnaire. Included on the questionnaire were questions assessing participants' self-control and dieting behavior. At the end of the study, participants were asked to count the number of candies remaining in their bag, which we used to calculate the amount consumed. Our results again support the hypothesis that dieters experience a bolstering of self-control when the holiday cue (i.e., Halloween) is available and consequently eat less than dieters who do not have such cues available (i.e., an ordinary day). Moreover, the opposite effects occur for non-dieting participants, who consumed less of the candy on an ordinary day compared to Halloween.

A third study (currently underway) seeks to examine the proposed psychological mechanisms underlying the effects found in our prior studies, with a particular emphasis on the processes involved in the heightened efforts of self-control for dieters when holiday cues are present. As in study 2, in this study we assess participants' actual consumption behavior, this time in the presence or absence of holiday-related food cues (i.e., highlighting the food-related characteristics of Thanksgiving versus the non-food characteristics). In addition to measures of self-control and dieting behavior, we implicitly assess the specific efforts involved in self-control that act to guard against indulgent consumption. It is hypothesized that, in line with our prior results, dieters will exhibit heightened self-control with the presence of a holiday cue, but will relax efforts at self-control when the holiday cue is framed as a non-eating holiday. We predict that these varying levels of self-control will impact actual food consumption.

In sum, our research demonstrates that certain cues in the environment that have been traditionally considered justifications for indulgence can also have the opposite effects for certain individuals, namely dieters. On one hand, this bodes well for dieters, who may be better equipped to handle holiday-related consumption cues (e.g., a big bowl of mashed potatoes and gravy). On the other hand, it also demonstrates that these individuals might be less well equipped to deal with everyday indulgences (e.g., the candy jar on a co-worker's desk). These findings carry implications for dieters as well as those individuals striving for weight maintenance. Future research might explore other factors that contribute to the bolstering versus licensing effects so that individuals might be better equipped to handle environmental cues linked to overconsumption.

References

- Fishbach, Ayelet, Ronald S. Friedman, and Arie W. Kruglanski (2003), "Leading Us Not Unto Temptation: Momentary Allurements Elicit Overriding Goal Activation," *Journal of Personality and Social Psychology*, 84(2), 296-309.
- Fishbach, Ayelet and James Y. Shah (2006), "Self-Control in Action: Implicit Dispositions Toward Goals and Away from Temptations," *Journal of Personality and Social Psychology*, 90(5), 820-832.
- Giner-Sorolla, Roger (2001), "Guilty Pleasures and Grim Necessities: Affective Attitudes in Dilemmas of Self-Control," *Journal of Personality and Social Psychology*, 80 (2), 206-21.
- Kivetz, Ran and Yuhuang Zheng (2006), "Determinants of Justification and Self-Control," *Journal of Experimental Psychology: General*, 135(4), 572-587.
- Myrseth, Kristian Ove R., Yaacov Trope, and Ayelet Fishbach (2009), "Counteractive Self-Control: When Making Temptation Available Makes Temptation Less Tempting," *Psychological Bulletin*, 20(2), 159-163.
- Trope, Yaacov and Ayelet Fishbach (2005), "Going Beyond the Motivation Given: Self-Control and Situational Control over Behavior," Pp.537-565 in *The New Unconscious*, Ran. R. Hassin, James S. Uleman, and John A. Bargh (eds.). New York: Oxford University Press.