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Free indulgences: Enhanced zero-price effect for hedonic options

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ABSTRACT

We find that the relative preference of hedonic products is disproportionately enhanced when they are offered at a free price. This "free price bounce" is more subdued for utilitarian products. This is surprising because rational choice theory posits that relative preference amidst two options – say a hedonic and a utilitarian product – remains intact as long as the price difference between them is constant. We propose and demonstrate that this axiom is violated when a hedonic product is offered for free.

1. Introduction

Shampanier, Mazar, and Ariely (2007) demonstrate that, while deciding about free products, people don't simply subtract costs from benefits but instead perceive the benefits associated with the free products as higher. These findings have significantly contributed to an academic interest in the psychology of zero-price, and Shampanier et al. (2007) is now the third most cited *Marketing Science* paper published in 2007. In their experiments, consumers typically chose from amidst, in one condition, a free product and a positively priced superior product that is priced at $X. In the second condition, consumers chose from amidst the same two products, but now the price of both products is increased by a fixed amount, say $Y. Please note that the difference in price between the two products is the same ($X) in both conditions.

- Condition 1: Choose from amidst {Option 1 (free); Option 2 ($X)}.
- Condition 2: Choose from amidst {Option 1 ($Y); Option 2 ($X + Y)}.

Rational choice theory posits that this should result in no change in the relative preference of these two products. In contrast to this prediction, Shampanier et al. (2007) demonstrate that the lower priced product's relative preference is significantly higher when it is priced at zero versus when it is positively priced. The authors contend that zero-price is used as a qualitatively different price point than other non-zero prices, with the transition from a small positive number to zero being discontinuous. This theoretical rationale for differential comparative frames is similar to the one offered in past research that has compared zero-price to other non-zero price offers (Chandran & Morwitz, 2006). These researchers find that since the monetary value of free promotions is often not explicit, 'free' promotions evoke a non-market transactional mindset instead of a monetary, cost-benefit based mindset evoked by non-zero prices. This causes an affective appraisal of the free product which enhances its appeal.

1.1. The affect-as-information hypothesis

This affective deconstruction of the zero-price effect is analogous to the affect heuristic (Slovic, Finucane, Peters, & MacGregor, 2007) and also to the "how do I feel about it" heuristic (HDIF) (Schwarz & Clore, 1988). Both the affect heuristic and the HDIF heuristic theories argue that integral affect (experienced feelings about the stimulus) is commonly and forcefully used as a source of information in evaluative judgments. Instead of rationally calculating utility from a target's attributes, consumers often base their choices on feelings as they hold the target's representation in their mind. In our reinvestigation of Shampanier et al.'s (2007) findings, we examine if product-level differences will differentially affect this zero-price effect.

Consumption of goods and services is often classified as hedonic (product for fun and feelings) or utilitarian (products for functional benefits) (Khan, Dhar, & Wertenbroch, 2005). When consumers evaluate (affect-poor) utilitarian products, they are more likely to be driven by the normative cost-benefit utility maximizing calculus. But when evaluating an (affect-rich) hedonic product, such deliberative rationality often breaks down and gives precedence to a more feelings-driven attitude-formation process (Pham, 1998). Therefore, attitudes and

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preferences for hedonic consumption are more emotionally driven, whereas those for utilitarian goods and services are more cognitively guided.

Since the use of affective appraisals has been shown to be the underlying basis of the zero price effect, it follows that this effect will influence preferences more for hedonic (vs. utilitarian) consumption items and situations. This theorizing enables us to develop a straightforward argument for a cross-category difference in the influence of "free price" in boosting product preference. We expect this effect to be greater in the case of hedonic (vs. utilitarian) products. More specifically, we propose the following hypothesis:

Hypothesis. "Free price" will disproportionately strengthen preference of hedonic (vs. utilitarian) products.

2. Study 1

2.1. Design

A 2 × 2 between-subjects design was used in which the product category (hedonic vs. utilitarian) and price condition (free vs. cost) were manipulated. The dependent variable was the choice of the low-value option while the independent variables were both the product categories (hedonic vs. utilitarian) and cost conditions (free vs. cost).

2.2. Procedure

Four hundred and six individuals participated in an online study. Participants were sourced through Amazon Mechanical Turk, and an undergraduate participant pool at a major U.S. public university. In the cost condition participants were asked to choose between a high- and a low-value hedonic (utilitarian) option. In the free condition participants chose from the same high- and low-value options, but the price of the low-value option was zero. Across all conditions, the price difference between the high- and the low-value options was constant. In this study, while the hedonic products were chocolate cakes, the utilitarian options were packed sugar. Please refer to appendix for a sample of the stimuli used.

Participants imagined that they were visiting a Wal-Mart that was running a limited time promotions on certain products. In the cost condition participants were asked to choose between a high-value hedonic (utilitarian) item priced at $1.47 and a low-value hedonic (utilitarian) item priced at $1.19. Great Value (Little Debbie's) chocolate cupcakes were presented as the low (high) value hedonic options. Great Value (Imperial) sugar was presented as the low (high) value utilitarian options. The free condition mirrored the cost condition except that the prices for both the options were reduced in a way that the low value option was offered for free. A pre-test indicated that the two products used in this study differed significantly on the hedonic–utilitarian dimensions, but not on familiarity.

2.3. Results and discussion

We employed a logistic regression model to analyze the proportion of individuals choosing the low-value option across all four conditions. The main effects of cost and product-type were insignificant. The interaction effect of product types (hedonic vs. utilitarian) × price conditions (free vs. cost) was significant ($\beta = -1.154$; Wald = 6.797, $p < .01$, Odds ratio = .315). This supports our hypothesis that the choice share of the hedonic option increases significantly in the free condition while that of the utilitarian option remains similar across the price conditions. Specifically, pre-planned comparison of proportions indicates that for hedonic consumption the zero-price disproportionately increases choice share of the low-priced option while for utilitarian consumption no such boost was evident{$H(\textit{Great Value Cupcake})_{\$0} = .702$ vs. $H(\textit{Great Value Cupcake})_{\$1.19} = .368$, $p < 0.0001$; $U(\textit{Great Value Sugar})_{\$0} = .769$ vs. $U(\textit{Great Value Sugar})_{\$1.19} = .723$, $p > .45$} (Fig. 1).

3. Study 2

3.1. Overview

Study 2 design differed significantly from the Shampanier et al. (2007) paradigm employed in Study 1. In this study participants had to choose amidst a hedonic and a utilitarian option under two conditions: when both the products were either (i) positively priced (cost condition), or (ii) available for free (free condition). We expect that the choice share of the hedonic option will be greater in the free (vs. cost) condition.

3.2. Design and procedure

One hundred and sixty one individuals recruited through M-Turk were randomly assigned to one of the two experimental conditions. In both conditions, participants chose from amidst a hedonic option (pack of Lindt Milk Chocolate) and a utilitarian option (can of Libby's Fruit Salad). Participants in both the conditions imagined that they were shopping at a newly opened Wal-Mart store in their neighborhood, and found these options as part of a store promotion. The original price of both items was $5.00. In the cost condition, both were being sold for $3.00, while in the free condition, participants could acquire one for free. In both conditions, participants could choose either of the two options, or choose neither. After responding to the choice task, the participants were asked 'How attractive do you find the offer for Lindt chocolate?' (1 = not attractive at all, 7 = very attractive).

3.3. Results and discussion

A binary logistic regression model was applied to the choice data. The key dependent variable was the proportion of individuals choosing the hedonic option across the two conditions (free vs. cost). The main effect of the cost condition on choice of the hedonic option was significant ($\beta = -.975$, Wald = 7.832, $p < .01$, Odds Ratio = .377). The choice share of the hedonic option increased significantly in the free condition (77%) relative to the cost condition (56%) (Fig. 2). This enhanced preference for the hedonic option in the zero-price condition was also reflected in the analysis of the attractiveness measure. Participants found Lindt, the hedonic option to be higher in attractiveness in the zero-price condition relative to the cost condition (M (Lindt)$_{\$0} = 5.91$ vs. M (Lindt)$_{\$3} = 5.23$, $F(1, 159) = 7.84$, $p < 0.01$).

Our next study manipulates the hedonic–utilitarian conditions within the same product category by framing it as either hedonic or utilitarian and confirms our proposition in a separate-evaluation setting.

4. Study 3

4.1. Design

Two hundred and sixty five individuals recruited through M-Turk completed an online study that utilized a 2 (goal type: hedonic goal vs. utilitarian goal) × 2 (price condition: cost vs. free) between-subjects design. Participants were briefly told about a massage promotion from a nearby spa. Participants were either primed with a hedonic goal or a utilitarian goal along the lines of Botti and McGill (2011, study 2). Then they were told that the massage was available for free (zero-price condition), or for a 50% discounted price (discounted cost condition). Immediately following the scenario description, participants rated their likelihood of availing the offer and its attractiveness (see materials and methods for detailed procedure). Both these measures were significantly correlated ($\rho = 0.847$) and were aggregated into an overall 'preference' measure (Cronbach